2015

Academic Coaching, Student Engagement, and Instructor Best Practices

Jainie Denisse Miranda Martinez
Walden University

Walden University

COLLEGE OF EDUCATION

This is to certify that the doctoral study by

Jainie Miranda

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Delmus Williams, Committee Chairperson, Education Faculty
Dr. Vicki Underwood, Committee Member, Education Faculty
Dr. Richard Hammett, University Reviewer, Education Faculty

Chief Academic Officer

Eric Riedel, Ph.D.

Walden University
2015

Abstract

Academic Coaching, Student Engagement, and Instructor Best Practices

by

Jainie Miranda Martinez

MEd, Arizona State University, 2008

BS, University of Puerto Rico at Humacao, 2007

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

August 2015

Abstract

Academic coaching has demonstrated positive relationships with college students' academic engagement and performance. A university campus in Puerto Rico implemented academic coaching for at-risk students, but the program has not been studied for its impact on student engagement. Guided by self-regulation theory and constructivism, this quasi-experimental study examined differences in engagement and identification of best teaching behaviors between students who experienced academic coaching (n = 115) and those who did not (n = 55). Students completed the Classroom Survey of Student Engagement (CLASSE) before and after the 4-week instructional unit and the Instructor Behavior Checklist (IBC) after the instructional unit. The data from the CLASSE and IBC were analyzed using mixed analysis of variance for engagement activities and student identification of effective teaching practices. There were no significant findings relating academic coaching to engagement; however, the experimental group identified significantly more best teaching practices used by their instructor. A Pearson correlation also yielded a significant positive relationship between students' engagement and the identification of instructor best practices. Based on these findings, a professional development program was created for instructors, which fosters student engagement and learning by encouraging instructor best practices through a classroom coaching model. The findings from this study may promote positive social change by helping to prepare faculty to integrate academic coaching and best teaching practices related to student engagement.

Academic Coaching, Student Engagement, and Instructor Best Practices

by

Jainie Miranda Martinez

MEd, Arizona State University, 2008

BS, University of Puerto Rico at Humacao, 2007

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

August 2015

Dedication

To my husband, Cristian O. Zuniga Lopez, and my boys, Alexander Ronaldo Zuniga Miranda and Andreus Zuniga Miranda, I dedicate my research work to you for patiently supporting my academic endeavors; and to my parents, Maria Martinez and Encarnacion Miranda, and my family for their support. I also want to say thank you to my friend Samuel Frances for all the encouragement and support. In addition, I give my sincerest appreciation and thank you to my colleagues for supporting my journey.

Acknowledgments

I would like to thank all my Walden University professors for making this an extraordinary, life-changing experience. I want to offer a special acknowledgement to my committee members, Dr. Williams, Dr. Underwood, and Dr. Hammett, for your professionalism and academic guidance. Thank you for all the feedback and support that you provided me to improve my research and academic experience.

Table of Contents

List of Tables v

List of Figures vi

Section 1: The Problem 1

Introduction 1

Definition of the Problem 2

Local Problem 3

Evidence of the Problem at the Local Level 4

Problem Statement 4

Rationale for the Study 5

Purpose of the Study 6

Definitions of Terms 6

Significance of the Study 7

Research Questions 8

Review of the Literature 9

Theoretical Framework 10

Student Engagement and Coaching 13

Academic Coaching 14

Interventions 18

Student-Centered Learning 20

Student at Risk 21

Implications 22

Summary 23

Section 2: The Methodology....24
Introduction....24
Reasearch Design and Approach....24
Setting and Sample....25
Instrumentation and Materials....28
Instructor Behavior Checklist (IBC)....28
Classroom Survey of Student Engagement (CLASSE)....29
CLASSE Development....29
Treatment....30
Data Collection and Analysis....32
Type of Data Generated....32
Instructor Behavior Checklist....32
Student Engagement Data....32
Statistical Analysis....33
Protection of Participants....34
Ethical Procedures....34
Permissions....35
Assumptions, Limitations, and Delimitations for the Study....35
Results and Data Analysis....37
Results....37
Data Analysis....38
Evaluation of Findings....48
Student Engagement Academic Coaching Practices....48

Teacher Practices and Communication....49
Conclusion....50
Section 3: The Project....52
Introduction....52
Description and Goals....53
Rationale....54
Review of Literature....54
Teaching Practices....56
CLASSE and Student Engagement....57
Professional Development....58
Project Description: Faculty Training for Academic Coaching....59
Need for Faculty Training....60
Potential Resources and Existing Support....61
Potential Barriers....61
Training, Implementation, and Timetable....62
Roles and Responsabilities....62
Researcher....62
Faculty....63
Project Evaluation Plan....63
Project Implications....63
Conclusion....64
Section 4: Reflections and Conclusions....65
Introduction....65

Project Strengths and Limitations 65
Project Strenthgs 65
Project Limitations and Future Reasearch 65
Scholarship, Project Development, and Leadership and Change 66
Scholarship 66
Project Development and Evaluation 66
Leadership and Change 67
Reflection on Importance of the Work 67
The Project's Potential Impact on Social Change 68
Implications, Applications, and Directions for Future Research 68
Implications and Applications of the Study 68
Future Research 68
Conclusion 69
References 70
Appendix A: The Project 81
Appendix B: Course Syllabus 91
Appendix C: Instructor Behavior Checklist 96
Appendix D: Data Collection Coordination 99
Appendix E: Classroom Survey of Student Engagment Agreement 101
Appendix F: CLASSE 103
Appendix G: IRB Approval 106
Appendix H: NIH Certificate 108

List of Tables

Table 1. Participants' Characteristics (*N*=170) 38

Table 2. Variables and Statistical Techniques for Hypotheses 1-2 39

Table 3. Mixed ANOVA Group by Pre/Posttest for Hypothesis 1, CLASSE Data 41

Table 4. Descriptive Statistics for CLASSE Pre- and Posttest..... 42

Table 5. Mixed ANOVA Group by Pre/Posttest for Hypothesis 2, IBC Data..... 44

Table 6. Descriptive Statistics for IBC Pre- and Posttests..... 45

Table 7. Correlation Between IBC Teaching Practices and CLASSE Engagement Scores 46

Table 8. IBC Descriptive Statistics (by Question) for Experimental and Control Groups 47

List of Figures

Figure 1. CLASSE group means from mixed ANOVA 42

Figure 2. IBC group means from mixed ANOVA showing interaction of group with teaching practices/teacher-student communication 45

Section 1: The Problem

Introduction

Many higher education institutions are experiencing increased pressure to improve student academic performance and retention. In response, many colleges and universities have implemented changes in their teaching methodologies and services to engage students in their learning experiences (Bonner, 2010). However, according to the U.S. Department of Education (2006), college graduates' literacy, as measured by the National Assessment of Adult Literacy, has declined from 40% to 31% in the past decade. A number of colleges and universities have reacted to this by implementing academic interventions to help struggling students perform and improve academic achievement (Dignath & Büttner, 2008). In particular, coaching has been shown to help learners develop self-reflection and critical-thinking skills by allowing them to examine their learning experiences, which Stelter, Law, Allé, Campus, and Lane (2010) highlighted as a prerequisite for academic success.

Coaching is defined as a process in which a tutor, mentor, or advisor guides a student in developing alternative skills and understanding and helps the student appreciate new forms of knowledge (Stelter et al., 2010). The coaching process allows learners to focus on their learning experience, a problem that they need to address, and the goals they seek to achieve. Anderson (2011) stated that coaching assists students as they identify factors that can influence their academic experience and examine the learning environment by exposing students to self-assessment, reflection, and goal setting. The coaching model represents a nonevaluative teaching strategy based on

constructive feedback used by the academic coach to enhance student learning (Truijen & Woerkom, 2008). The academic coach's feedback enables learners to identify areas of improvement and gain a deeper understanding of the learning experience and their own behaviors.

For this study, the focus population consisted of students enrolled in undergraduate bachelor's degree programs at one of the 11 campuses operated by a university in Puerto Rico. This campus had a total enrollment of over 3,000 students during the 2012-2013 academic year. According to the available enrollment data from the institution, 80% of these students came from the Puerto Rican public school system. This campus offers undergraduate degrees in biology, industrial chemistry, physics, education, communication, management, and office administration, among other disciplines. Every term, an average of 400 students on this campus enroll in INGL 3102 (Basic English), a course designed to develop students' English oral communication skills that students must complete as part of their program requirements.

Definition of the Problem

Low graduation rates can adversely impact the capacity of a university to effectively address its mission statement; however, student coaching may be an effective intervention strategy to mitigate the problems related to poor academic performance, including low student satisfaction as well as low retention and graduation rates. *Student coaching* can be defined as a process in which a tutor, mentor, or advisor guides a student to develop alternative skills while also understanding and appreciating new forms of knowledge (Stelter et al., 2010). Anderson (2011) further stated that coaches assist

students by helping them identify factors that can enhance their academic experience and by helping them to understand their learning environment. Academic coaches expose students to self-assessment, reflection, and goal setting to help them identify areas needing improvement and to gain a deeper understanding of the learning experience and their own behavior (Truijen & Woerkom, 2008).

Local Problem

Colleges and universities work to identify resources that can improve students' educational attainment and performance as they address state, accreditation, and professional requirements (Allen, Robbins, Casillas, & Oh, 2008). As part of this effort, U.S. higher education institutions have begun to offer academic coaching and other support programs for struggling students in order to engage those students in the learning process. Educational support services can directly influence student academic performance and students' decisions to continue in college or at a university (Veenstra, 2009). Additionally, support services help the institution and students improve their academic experience by increasing their participation in academic activities.

Higher education institutions continue to implement academic strategies that support student engagement and motivate students to increase academic performance and graduation rates. Accreditation agencies and the state and federal government require these institutions to assess this effort and to demonstrate steps to improve their success rates in those areas when necessary (Grummon, 2010). As a result, higher education institutions have designed and implemented new academic plans and interventions to address student retention, performance, and completion rates.

Evidence of the Problem at the Local Level

The campus of the university in Puerto Rico where I conducted this study had a total enrollment for the 2012-2013 academic year of over 3,000 students. The institution offers 23 baccalaureate, associate, and transfer degrees. This institution has been experiencing a decline in retention rates and academic performance: The number of degrees at this institution awarded in 2012 dropped by 17% when compared to previous years. This university campus reported a reduction in enrollment of 8% in that year, and its graduation rate was 44%, suggesting the need to implement instructional intervention strategies to improve student engagement and academic performance to help students complete their academic programs.

Problem Statement

The problem that compelled this study was the need to assess the effectiveness of academic coaching programs to increase student success. As part of the process used in seeking improvement in students' academic performance, the campus chosen for this study has begun to implement coaching strategies in its academic offerings; however, no assessment of the effectiveness of these coaching strategies has been conducted to date. This particular university in Puerto Rico provides academic coaching services to students enrolled in the Supplemental Educational program, which supports students during their transition from high school to the university. Students who participate in this program have access to an instructor trained as an academic coach to discuss academic skills, concerns, and program information.

Academic coaching is a self-learning intervention strategy based on collaboration that helps students improves their academic experience by encouraging them to reflect on and manage their learning activities (Barkley, 2011). The academic coaching process consists of coaches and students identifying goals, selecting a procedure to identify the students' problems, and analyzing the results. Academic coaching provides an intervention approach in which the coach helps the learner set up academic goals that target a specific academic skill and then monitors the student's development by providing continuous feedback and evaluating the results (Grant, 2011).

Rationale for the Study

The coaching model has been used by academic and professional organizations to improve performance and engagement levels. Coaching mainly focuses on holding the learner responsible for his or her learning process and success in meeting pre-established goals (Tofade, 2010). An effective coaching experience includes continuous feedback, promotion of self-reflection and self-awareness, and making students responsible for their own learning. Coaches work with students on achieving their academic goals and becoming engaged in academic activities (Robinson & Gahagan, 2010).

While academic performance can be impacted by the learning environment, home conditions, and academic experience, academic coaching promotes the development of the social and academic skills necessary for students to bridge the gap between their experiences and their learning environment (Alkadounmee, 2012). The campus where I conducted this study provides academic coaching to students enrolled in its

Supplementary Services Program; however, the academic coaching there lacks a connection to individual courses or to the student's program of study.

Current research supports the idea that learning occurs because of the students' conceptions and their learning environment (Clarebout, Elen, Léonard, & Lowyck, 2007). Additionally, the literature supports the conclusion that adequate interventions, such as academic coaching efforts, can help at-risk students close academic gaps and gain the skills needed to improve their academic performance (Bonner, 2010). Adequate interventions help the coach monitor student academic progress and identify academic gaps. Academic coaching, when used as an intervention strategy, helps at-risk students improve their academic performance (Hu & Ma, 2010).

Purpose of the Study

The purpose of this study was to determine the impact of academic coaching on students' academic engagement at a university in Puerto Rico. Academic coaching has been shown to improve students' self-regulation and other skills related to improved performance (Bonner, 2010). Student engagement is deemed to be an important variable in students' learning and academic performance (Kuh, 2009). Thus, the effectiveness of academic coaching may rest, in part, in improvements in students' levels of engagement.

Definition of Terms

Academic coaching: Proactive relationship between teacher and students that is focused on student learning outcomes (Barkley, 2011). A process that involves supporting, helping, and encouraging less experienced learners to improve their skills (Melendez, 2007)**.**

Cognitive constructivism: A model in which learners actively construct their own knowledge (Piaget, 1953, as cited by Powell & Kalina, 2009).

Reflection: The process used in making meaning of experiences (Dewey, 1910, as cited by Truijen & Woerkom, 2008).

Retention: Students' progression toward completing their programs in a determined period of time (Hewitt & Rose-Adams, 2013).

Self-regulation: A characteristic that includes a series of steps encouraging students to evaluate their learning and then using the results of that evaluation to determine their next steps in the process (Glenn, 2010).

Student engagement: The positive relationship between cognition and behaviors (Solominedes, 2012).

Significance of the Study

In recent years, performance and retention have become central issues in postsecondary education. Institutions of higher learning have implemented a diverse set of teaching strategies to help students improve their academic performance and persistence. Supplemental instruction and intervention strategies, to include coaching, advising, and tutoring, have, in some instances, been shown to improve persistence rates among students (Allen et al., 2008). To ensure that investments made in this effort are effective, it is critical to know how these tactics might apply to this Puerto Rican university campus. Veenstra (2009) stated that the quality of the student support services influences students' academic performance and persistence, but prior to this study, this hypothesis had not been tested at the targeted campus.

Early interventions with students who may be at risk have been shown to help faculty as well, while the institution's academic coaches identify possible gaps and monitor student progress (Melendez, 2007). Academic coaches promote self-regulation and motivate students to achieve their academic goals. The core concept of academic coaching reflects the notion that, regardless of a student's academic status or experiences, those being coached can identify and achieve their academic goals. The results of this study provide information about the impact of coaching on student academic engagement at the participating campus, but it is likely that the insights gained can also be helpful elsewhere. Currently, institutional administrators and educational researchers are interested in addressing academic engagement, performance, and persistence (Veenstra, 2009).

Academic coaching facilitates social and academic integration, resulting in a higher level of connectedness with the institution and the academic environment. Findings from this study may help faculty and higher education administrators understand the impact of academic coaching as an intervention strategy used to improve student academic engagement and performance.

Research Questions

This study was designed to investigate the impact of an academic coaching program at the target university in Puerto Rico. The following research questions were developed to address the impact of this academic coaching program:

RQ1: Does implementation of an academic coaching model in the classroom affect student engagement as measured by the Classroom Survey of Student Engagement?

$H1_0$: There is no significant difference in degree of engagement between students who are exposed to academic coaching and students who are not.

$H1_a$: Students who are exposed to academic coaching are more engaged in their academic program than students who are not.

RQ2: Does implementation of an academic coaching model in the classroom affect students' identification of best teaching behaviors, as measured by the Instructor Behavior Checklist?

$H2_0$: There is no significant difference in the identification of best teaching behaviors between students who are exposed to academic coaching and students who are not.

$H2_a$: There is a significant difference in the identification of best teaching behaviors between students who are exposed to academic coaching and students who are not.

Review of the Literature

This review of the literature includes current educational research and literature about academic coaching practices. The theoretical frameworks addressed in this study are self-regulation and constructivist theory. The review was conducted within the Academic Search Complete databases using the following terms: *student engagement*,

constructivism, *self-regulation*, *teaching practices*, *student motivation*, *National Survey of Student Engagement (NSSE),* and *Classroom Survey of Student Engagement (CLASSE).*

Theoretical Framework

For this study, I evaluated academic coaching programming implemented at a single campus of a university in Puerto Rico. Researchers have recently studied the effectiveness of academic coaching in institutions of higher education as a support and supplemental instruction strategy that can be used to improve student academic engagement and performance (Robinson & Gahagan, 2010). The academic coaching model is based on self-regulation (Boekaerts, 1999) and constructivist theory (Piaget, 1953, as cited in Powell & Kalina, 2009). According to Loyens, Rikers, and Schmidt (2008), self-regulation and constructivist theories contain the frameworks that describe the process through which learners manage and control their knowledge construction process. Academic coaching allows students to control their academic learning process by planning, executing, and gathering feedback from their coach.

Academic coaching involves establishing an ongoing partnership that helps students identify academic goals, adapting teaching to allow students to self-manage the academic experience, and having the coach ask questions that address the desired results. During the questioning session, the coach can provide feedback and assess student learning. According to Webberman (2011), the most important sessions for students were those in which the coach asked powerful questions that allowed the students to converse about their learning experience. Webberman argued further that the questioning session outlined in the academic coaching model leads to active discussion and reflection.

Self-regulation theory. The self-regulation model proposed by Boekaerts (1999) divides the learning process into three layers—planning, execution, and evaluation—and focuses on the importance of the student's ability to plan and evaluate the learning process (Kistner et al., 2010). The main thrust of the self-regulation model is its commitment to encouraging learners to determine the approach that is most effective in helping them grasp a concept and to regulate the learning process to meet their particular needs. Wirth and Leutner (2008) defined *self-regulation* as the learners' ability to identify and plan the best, most appropriate learning activity, execute the plan, and learn by reflecting upon the outcomes. The self-regulation model promotes the students' ability to think about and come to understand their own individual learning process. Students with high self-regulation skills and self-efficacy are more likely to take control of the learning process, persist longer, and demonstrate higher achievement in school-related activities (Schunk & Ertmer, 2012).

The students' ability to control their learning processes exemplifies a significant segment of the academic coaching model. In academic coaching, students regulate the learning activities in which they engage and reflect on their outcomes, promoting self-discipline in the learning process. Research focused on self-regulation supports the idea that self-reflection increases the learners' ownership of the learning process and, as a result, improves students' academic experiences and performance (Dignath & Büttner, 2008). According to Boekaerts (1999), when self-regulation relates to content, the model encourages a higher level of student participation, reflection, and assessment.

Constructivist theory. Academic performance, motivation, and social connectedness can impact academic persistence and assessment. Cognitive constructivist theory, as developed by Piaget (1953, as cited in Powell & Kalina, 2009), focuses on students' ability to construct their knowledge through the process of assimilation and accommodation. A cognitive constructivist approach is designed to support learning by providing adequate developmental activities that promote knowledge construction, which, in turn, promotes academic motivation and social connectedness.

In the higher education setting, it is important to understand how individual students' learning relates to their developmental ability in order to identify teaching strategies that encourage knowledge construction. Piaget's constructivist theory indicates that knowledge is constructed based on four stages of development that relate to the age of the person: the sensory stage (from 0 to 2 years), the preoperational stage (from 2 to 7 years), the concrete operational stage (from 7 to 11 years), and the formal operational stage (11 to adulthood). The four constructivist theory stages indicate that the way students learn changes as their learning ability develops and as they mature. Cognitive construction includes the assimilation and accommodation stages. The assimilation stage is characterized by learners' exposure to concepts, and the accommodation stage is marked by learners' incorporation of concepts into their daily lives.

Cognitive constructivism may be used to explain how a learner takes ownership of a developmentally appropriate learning activity. Clarebout et al. (2007) stated that the relationship between student conceptions and the environment affects the learner's ability to learn. An approach based on cognitive constructivism fosters the development of an

optimal relationship between the environment and the learner's academic experience. According to Powell and Kalina (2009), cognitive constructivism has a positive impact on students' cognitive and social development. The main purpose of implementing it in the classroom is to promote the assimilation and accommodation process by providing sufficient developmental learning activities. In this model, students are expected to take ownership of their learning activities by planning, organizing, and continuously assessing the results derived from the learning activity.

Student Engagement and Coaching

Research supports the importance of improving students' levels of engagement and academic performance. Improving engagement and academic performance are key objectives addressed by institutional retention strategies (Barkley, 2011). Taylor (2008) stated that outcome-based teaching addresses important issues related to students' persistence and completion rates by providing them with a meaningful learning experience. Academic coaching emphasizes the need to improve students' level of engagement and academic performance in the classroom.

Students' instructional conceptions and learning experiences influence their engagement. According to Barkley (2011), students' attitudes and performance affect their academic and personal growth. Education literature indicates that the best strategy available to support struggling students is to implement supplemental instruction and intervention strategies such as academic coaching that are based on self-regulation and knowledge construction (Glenn, 2010). Academic coaching improves students' levels of assimilation, reflection, and performance, helping them to master a process they can then

use to plan and monitor their learning and to reflect on the feedback received from their coach.

Academic Coaching

Academic coaching can be defined as one-on-one interaction that targets students' strengths, goals, study skills, level of engagement, and academic performance (Robinson & Gahagan, 2010). Academic coaches promote self-regulation and academic ownership and encourage reflection. Effective academic coaching emphasizes verbal and nonverbal feedback and social-behavioral interventions (Stormont, Reinke, Newcomer, Marchese, & Lewis, 2014). Truijen and Woerkom (2008) stated that coaches are powerful instruments who can stimulate reflection. Reflection typically involves receiving feedback that encourages students to learn from their experiences. The foundation of academic coaching is a student-coach relationship based on trust and confidentiality (Van Nieuwerburgh, 2012).

Academic coaching is a nonevaluative process in which the student plans, executes, and uses feedback to develop or improve skills (Truijen & Woerkom, 2008). Students receive continuous feedback and support from their coaches that are designed to encourage them to think about their learning and assume ownership of the process. Robinson and Gahagan (2010) stated that academic coaching focuses on three critical steps: (a) goal setting (planning), (b) self-assessment (regulation), and (c) reflection (to develop or improve skills). During the planning process, the instructor becomes a coach by helping students choose the appropriate learning resources and providing them direction and motivation as they take advantage of the advice offered. Additionally,

students actively participate in the process, increasing their level of engagement in learning. The academic coach also provides adequate resources to encourage students to reflect on their academic experience (Robinson & Gahagan, 2010).

Academic coaching helps students reach their educational goals by encouraging ownership of their learning experiences. Truijen and Woerkom (2008) stated that academic coaching stimulates reflection and encourages students to develop a deeper understanding of their academic behaviors. Dewey (1910) defined reflection as the process of identifying the meaning within experiences. Students who have academic coaches during the planning and implementation processes can be expected to be better prepared to reflect on how to develop different methods or incorporate new skills.

As noted earlier, the main purpose of implementing academic coaching in the classroom is to help develop a constructivist learning environment based on knowledge construction and self-regulation. According to Loyens et al. (2008), the emphasis of a constructivist learning environment is helping learners build their individual knowledge bases. Academic coaching exposes students to a problem-based curriculum in which they can motivate themselves to learn. Powell and Kalina (2009) stated that students who are exposed to a problem-based teaching environment using tools such as academic coaching are more likely to get involved in the learning process. Purwa, Srinovita, and Si (2015) emphasized that academic coaching need to be focused on skills, problem-based teaching, knowledge, and attitudes.

In the academic coaching model, the student needs to plan the learning activity or strategy and reflect on the feedback received from the coach. According to Kistner et al.

(2010), self-regulation is the process through which the student plans and executes the learning process and makes continuous decisions on the cognitive, motivational, and behavioral aspects of the learning cycle. Academic coaching is based on student self-regulation. An academic coach needs to monitor the planning and implementation process as it relates to learning. The academic coaching model offered by Grant (2011) includes a three step process designed to promote student involvement in the learning process. The first step, which Grant called goal orientation, offers an explanation of the purpose of the activity. During this phase, the student will be expected to identify learning activity goals and expectations. The second step, problem-focused thinking is designed to help the student recognize a solution-focused approach to problem solving and identifies resources that might be used to help forge a solution. During this phase, the coach is expected to monitor the student's progress and meet with the student one on one to discuss progress in dealing with issues. The third step, reflection, calls for the coach to encourage discussion about the student's progress and ask questions designed to encourage the student to reflect on the outcomes achieved.

During the course of an academic coaching program, the coach sets up learning activities to foster the desired results. Martinek (2006) stated that the role of an academic coach is to assist students by establishing measurable goals and identifying acceptable learning activities. The academic coaching process includes problem-solving activities with clear instructions, which are then reinforced when the task is completed. As part of the implementation of the academic coaching model, the coach (instructor) may need to adapt course structures or teaching methods to promote a student-centered approach

based on self-regulation and knowledge construction. Academic coaching needs to be integrated into curriculum-related activities, given that these are the main frameworks that support academic coaching (Bonner, 2010). Loyens et al. (2008) stated that constructivism presupposes that learners will actively participate and socially engage in the learning activity and then use the coach's feedback to assess their progress and help them construct new knowledge.

Effective academic coaching involves observation, questioning, and allowing time for practice, reflection, and discussion. The academic coach or mentor plays a critical role in the students' success and teaching by targeting struggling students (Dilmore et al., 2010). Academic coaches can use the coaching model with a whole class or with struggling students individually to help them improve their academic performance (Barkley, 2011). As a result, the coaching model can either be offered as part of the curriculum or concentrate on one-on-one interventions with at-risk students. Educators and staff can promote the coaching model by encouraging problem-focused behaviors (Webberman, 2011).

Melendez (2007) stated that academic coaching helps students achieve their personal and academic goals, regardless of their academic experiences, as colleges and universities use it to engage students in the learning process. Melendez found that students who are exposed to academic coaching tend to develop higher reflective and collaborative skills that help them improve their academic performance and enhance their learning experience.

An academic coach not only monitors the learning experience, but also provides the learning resources needed to help students during the academic activity. According to Tofade (2010), the main difference between academic coaching and mentoring is that coaching focuses on the student's ability to reach the desired results and guides that student academically, socially, and emotionally, whereas mentoring helps students understand individual concepts (Webberman, 2011). Grant (2011), as part of a study of academic coaching and solution-focused learning, found that instructors who also act as academic coaches provide a solution-focused learning environment that encourages learners to pursue their goals.

Academic coaching also helps students to develop a collaborative learning environment in which communication stimulates them to build self-regulation skills, self-awareness, and self-esteem. An academic coach can hold students accountable for their learning by requesting that they perform in a given role or by encouraging collaboration. To do this, the coach must use probing questions and related educational activities to monitor student progress and provide appropriate feedback (Tofade, 2010).

Interventions

Academic motivation and levels of engagement impact a student's motivation to learn. According to Allen et al. (2008), adequate academic involvement and supplemental instruction improve student persistence. As a result, higher education institutions are implementing supplemental instruction and intervention strategies, including academic coaching, to improve student performance and close academic gaps. Supplemental

instruction and intervention strategies also positively influence the quality of the students' academic experience (Allen et al., 2008).

Interventions and supplemental instruction need to relate to academic content within a student–centered learning environment. The main outcome of effective and targeted interventions is to change the learner mind-set so that they concentrate on growth-mind-set questions like "Can I learn and grow my intelligence?" and sense-of-purpose questions like "Why should I learn?" (Paunesku et al., 2015). Academic coaching needs to be fully planned, and the instructional activities employed need to promote academic development (Bonner, 2010). Clarebout et al. (2007) stated that, in order to promote academic development, the instructor needs to provide adequate feedback and assessments that offer concrete opportunities for students to reflect on their learning and assess opportunities to promote meaningful learning.

Student engagement is the positive relationship between cognition and behaviors (Solominedes, 2012). Adequate motivation and academic engagement can improve students' academic performance, retention, and graduation rates (Veenstra, 2009). Students exposed to academic coaching reported benefits from the process because of its emphasis on connecting concepts (Robinson & Gahagan, 2010). As part of the process of improving student performance and retention, colleges and universities are implementing supplemental instruction and constructivist strategies such as academic coaching to boost student engagement and encourage them to complete their programs. The quality of their academic experience affects their decision to continue in their programs or at the institution (Veenstra, 2009).

Academic coaching is used as an intervention strategy that targets students at risk, defined as those who are likely to experience difficulties in achieving their academic goals. Academic interventions improve school readiness by closing the academic gaps between students and improving academic and social skills **(**Chittleborough, Mittinty, Lawlor, & Lynch, 2014). Academic coaching, used as an intervention strategy, can help at-risk students develop nonacademic skills such as time management and study skills (Bettinger & Baker, 2013). Students who are at risk for academic failure are those who are more likely to not graduate or finish their programs (Alkadounmee, 2012). Academic coaching helps these students build confidence and self-control and acquire the academic skills needed to improve their level of engagement in educational activities and their academic performance. Academic coaches help students integrate their academic and social skills and provide activities that support academic and social integration of at-risk students in a way that limits the likelihood of academic failure (Hu & Ma, 2010).

Student-Centered Learning

Student-centered learning environments promote more academic independence and reflective inquiry by allowing students to plan and monitor their own learning experience. A student-centered learning environment balances the power in the classroom and purpose and process of evaluation (Wright, 2011). It focuses on students' academic needs and strengths to promote academic development (Andrade, Huff & Brooke, 2012). In a student-centered learning environment, the learners engage in the regulation of their own learning experiences. Instructors in a student-centered classroom deliver content to students by promoting higher-order thinking (Sams & Bergmann, 2013). Ouimet (2010)

stated that good teaching practices, a student-centered classroom, and innovative assessment techniques all have a positive relationship with student success.

Research supports the concept that academic choices positively affect academic performance by improving assignment completion rates, quality of work, and attitudes toward academic work (Williams & Mizener, 2009). A student-centered environment helps at-risk students improve their academic confidence, develop academic and social skills, and improve their performance. It helps learners identify their weaknesses and strengths by providing evaluative feedback about their experience and performance during the course of the academic activity.

Student at Risk

At-risk students are learners who are in danger of not completing their degrees. According to Alkadounmee (2012), the lack of connection to school is the first sign that a student is at risk. At-risk students tend to score significantly lower on standardized tests and are more likely to struggle in academic-related activities (Lagana-Riordan et al., 2011). The lack of interest in an assignment increases the student's risk of low performance. Current research in student learning supports the idea that the lack of adequate social skills and motivation has an impact on student academic performance. Researchers divide at-risk students into four main groups: (a) those disrupting school, (b) those chronically struggling with academics, (c) those bored with the process, or (d) quiet dropouts (Freeman & Simonsen, 2014).

Institutional climate also influences student academic behaviors, motivation, and social skills. Academic and social risk factors require the institution to provide additional

support to those students. Students exposed to risk factors need to be trained to manage their behaviors, gain adequate social and academic skills, and develop planning processes (Fan,Williams & Corkin, 2011).

In conclusion, as Veenstra (2009) noted, strong intervention strategies are required to identify students who may be at risk to limit that risk. An academic coach can assist in this effort by providing one-on-one interaction that allows for monitoring the academic process and the development on the part of the student of an ability to act proactively when necessary. Academic coaching, when used as an intervention strategy, encourages high levels of self-planning and reflection that help students to connect ideas (Robinson & Gahagan, 2010) and should, therefore, be one of the intervention strategies considered when addressing this problem.

Implications

In this quantitative study I addressed the need to understand the efficacy of a student academic coaching program implemented at one campus of a university in Puerto Rico as an intervention strategy to support student success. The findings of the study may help faculty and other academic leaders understand how nontraditional teaching styles affect student engagement in the classroom. Institutions can implement interventions like academic coaching to promote academic persistence and improve student performance among at-risk students. As stated by Hu and Ma (2010), academic coaching promotes social change by encouraging social and academic integration.

Summary

Research on academic coaching has suggested that adequate intervention and mentoring have a positive effect on academic performance and persistence (Hu & Ma, 2010), and it also provides insight into the practice and potential of academic coaching. In the study that is described below, I examined the impact of academic coaching on student engagement levels at a campus of a university in Puerto Rico, comparing the levels of academic engagement of students who were exposed to academic coaching to those of students who were not exposed to it in order to assess the model's effectiveness. A description of the methods employed and the results of the study follow.

Section 2: Methodology

Introduction

The purpose of this study was to determine the impact of academic coaching on students on a campus of a university in Puerto Rico. Employing a quasi-experimental pretest-posttest control group design, the study collected detailed data about teachers' academic behaviors (based on the Instructor Behavior Checklist [IBC]) and engagement levels (Classroom Survey of Student Engagement [CLASSE]). During the study, all participants completed the CLASSE before and after academic coaching, and the IBC after academic coaching was implemented. A quantitative approach was used to analyze the data generated using these assessment tools. This section of the research report includes a description of the research design, methodology, and data collection strategies as well as a summary of methods used in the data analysis, a description of the scope of the study, and a discussion of its limitations.

Research Design and Approach

The purpose of this study was to determine the impact of academic coaching on students' engagement and their identification of the instructor's teaching behaviors on a university campus in Puerto Rico. The questions to be answered and the hypotheses driving the study included the following:

RQ1: Does implementation of an academic coaching model in the classroom affect student engagement as measured by the Classroom Survey of Student Engagement?

$H1_0$: There is no significant difference in degree of engagement between students who are exposed to academic coaching and students who are not.

$H1_a$: Students who are exposed to academic coaching are more engaged in their academic program than students who are not.

RQ2: Does implementation of an academic coaching model in the classroom affect students' identification of best teaching behaviors, as measured by the Instructor Behavior Checklist?

$H2_0$: There is no significant difference in the identification of best teaching behaviors between students who are exposed to academic coaching and students who are not.

$H2_a$: There is a significant difference in the identification of best teaching behaviors between students who are exposed to academic coaching and students who are not.

The CLASSE and IBC results provided data that identified how coaching (teaching methods) affected student engagement. The behavior checklist and survey were used to describe students' observations about instructor teaching behaviors and students' engagement level before and after they participated in the campus coaching program.

Setting and Sample

The setting for the study was a campus of a university in Puerto Rico that had reported a reduction of 8% in its enrollment and a reduction of 17% in the number of degrees conferred since 2001-2002. The administration of the institution approved the study and completed the Data Collection Coordinator Request (Appendix D).

The participating campus offered a total of 23 undergraduate, associate, and transfer programs and enrolled a total of over 3,000 students for the 2012-2013 academic year. It is currently implementing academic coaching sessions through the Supplementary Education Program, which is designed to target students who are considered to be at risk. Within this program, an academic tutor is provided to help at-risk students develop academic skills by offering direct mentoring to each of these students. During academic coaching sessions, the coach is expected to address questions that the students have, but the coach does not provide direct support during lessons.

Students need to be considered at risk by the institution in order to participate in the program. According to the Institution's Supplementary Education Program requirements, *at-risk students* are learners whose parents did not complete a higher education degree, who receive financial aid, and who show academic gaps (as measured by the College Board Programa de Evaluación y Admissión Universitaria test). The Programa de Evaluación y Admissión Universitaria (PEAU) test is the university's evaluation and admission test and is provided by the College Board of Puerto Rico. The main challenge of the program has been that it cannot meet the needs all of the students within their academic environment.

All participants in the study were enrolled in sections of the same course at the participating campus; these sections were instructed by three different faculty members who followed the same curriculum. During the students' first year at the institution, they are required to complete Spanish, English, and humanities courses, and, as a result, they enroll in INGL 3102 (Basic English II), a semester-long course that carries three credit

hours. The study was conducted during the grammar unit of this Basic English course, in which students are taught how to use grammatical English. This academic unit is the second main topic in the course and lasts approximately 4 weeks (see Appendix B).

Cluster sampling was used to identify participants for the study. Cluster sampling produces a nonprobability sample that includes individuals in groups because they are available to participate in the study (Creswell, 2012). Cluster sampling allows the researcher to select homogeneous groups (i.e., classrooms) and is particularly beneficial to a researcher with limited time and resources to collect data. The sample clusters for this study consisted of all of the undergraduate students who were enrolled in seven sections of INGL 3102 (Basic English II) for the spring term of 2014, a course that all students enrolled in an undergraduate program at the campus are required to complete prior to graduation.

Although students were offered the option to not participate in the study, no participant requested to be excluded. A sample calculator (National Statistical Service, n.d.) indicated that a minimum sample of 243 students would be necessary to achieve results meeting the 95% confidence level, which is the standard for most education research (Creswell, 2007). However, due to course scheduling, only 170 students were able to participate in the study.

Assignment of intact classes to the experimental and control groups was determined by first numbering each of the seven class sections. Students in sections assigned even numbers became part of the experimental group, and those in odd-numbered sections became the control group. Numbering groups provided equal

opportunity for students to be selected to be part of the experimental group (Creswell, 2012).

Instrumentation and Materials

Instructor Behavior Checklist (IBC)

The IBC is a peer/faculty evaluation tool used by faculty or administrators to assess instructor teaching practices. The IBC (see Appendix C) is divided into two subscales of instructor behaviors: teaching practices (Questions 1-13) and teacher-student relationship (Questions 14-20). These teacher behaviors are reported as being observed using a 3-point scale: *yes*, *no*, and *N/A*. For the study, the IBC was administered in Spanish, but for the information of the reader, both the Spanish version and an English translation are included in Appendix C. The IBC was developed by the Academic Dean's Office at the participating campus to evaluate teacher behaviors and teaching methodologies. The Academic Dean's Office did not provide validity and reliability data for the IBC instrument.

The IBC was used to provide quantitative data on faculty teaching practices. The students used the IBC to assess the instructors' teaching practices at the end of the instructional unit in which the study was implemented. The IBC allowed the student evaluators to add comments, but for the purpose of this study, the comments were not considered during the data analysis phase. To ensure participants' privacy, I removed the names of both instructors and students from the evaluation prior to the analysis of results.

Classroom Survey of Student Engagement (CLASSE)

The data collection process included an assessment (pre-evaluation and postevaluation) using the CLASSE to determine changes in student levels of engagement over the course of this academic unit. A copy of the CLASSE can be found in Appendix F. In completing this survey, the students provided information about their participation in educational activities. The CLASSE asked the students to report the frequency with which they engaged in good learning practices for a specific class, such as using technology, classroom discussions, critical thinking, curricular programs, and other opportunities for learning and skill development (Smallwood & Ouimet, 2005). The CLASSE included 38 questions divided into four subscales: (a) engagement activities (Questions 1-19), (b) cognitive skills (Questions 20-24), (c) other educational practices (Questions 25-34), and (d) class atmosphere (Questions 35-38). The participants completed the entire survey, but only Questions 1-19 were used to determine academic engagement for this study. These questions from the CLASSE survey used the following Likert scale: 1—*Never*, 2—*1-2 times*, 3—*3-4 times*, and 4—*5 or more times*. The CLASSE includes questions that provide useful feedback to an instructor about the instructor's course, teaching, and students' engagement (Savory, Goodburn, & Kellas 2012).

CLASSE Development

The CLASSE was developed in conjunction with the originators of the National Survey of Student Engagement (NSSE) instrument. There are two separate CLASSE versions, one for students and one for faculty. The student version of the CLASSE was

used in this study. The CLASSE survey instrument collects data concerning students' engagement activities in the classroom. Questions 1-28 from the CLASSE survey are based on questions from the NSSE instrument (Smallwood & Ouimet, 2005). According to J. A. Ouimet (personal communication, March 11, 2015), "The CLASSE was designed for use at the classroom level where there is considerable variability across classes; therefore, reliability was not assessed."

According to Savory, Goodburn, and Kellas (2012), the survey was initially pilot tested in 13 different courses with a total of 356 students and then was administered in 22 additional courses with a population ranging from undergraduate students to doctoral students. During the pilot study, a total of 1,856 students completed the CLASSE.

Treatment

The academic coaching sessions were offered during the 4-week grammar component of INGL 3102 (Appendix B). The academic coaching sessions started with a teaching session in which the instructor discussed the main concepts and available resources to support the students as they completed this set of assignments. During the INGL 3102 course, the instructor conducted group and individual sessions with participants to discuss possible solutions students believed might address the problems presented in the assignments.

The academic coaching model implemented for the study used the self-regulation theory offered by Boekaerts (1999). The model indicates that students need to plan, execute, and reflect on the learning activity presented to them; the coach seeks to enhance those behaviors. The instructor monitored student progress during the learning activity.

During academic coaching, students participated in group teaching sessions that offered them the opportunity to discuss concepts related to the main academic topic. At the beginning of the unit, the instructor conducted the group teaching session. According to Webberman (2011), coaches need to encourage critical thinking and analysis. The planning phase provided a time and setting that allowed students to identify educational objectives and potential solutions to problems that were addressed in the class.

The academic coaching sessions included one-on-one sessions with the instructor/coach, group activities, reflection sessions, and analysis. During the reflection and discussion phases, the instructor/coach asked open-ended questions to assess student learning and performance (Webberman, 2011). During the planning and implementation phase, the academic coach monitored the students' progress and assessed their understanding of the materials covered in one-on-one sessions with the students. During the one-on-one sessions, the academic coach encouraged critical thinking by asking probing questions that encouraged reflection. Through the reflection phase, the learners were asked to consider how they might apply critical thinking to address the academic goals and objectives they hoped to meet. To monitor their academic engagement, the students participated in follow-up coaching sessions in which they shared information about the kinds of interactions or experiences that helped them develop the academic and social skills needed to improve their academic performance.

Grant (2011) suggested that, in a solutions-based learning environment, the instructor should guide content application and encourage good academic practices in the classroom. During the academic coaching process, the coach allows the participants to set

up academic goals and objectives based on the expectations of the person teaching the course. During the planning and implementation phases, the coach facilitates the construction of solutions (Grant, 2011).

Data Collection and Analysis

The purpose of the data collection process was to determine the relationship between exposure to academic coaching and student engagement. The data used in the study included the student pre- and posttest evaluations from the CLASSE (completed before and after implementing academic coaching) and the IBC (completed after implementing academic coaching).

Type of Data Generated

Instructor Behavior Checklist

The data collected from the IBC after the instructional unit included the students' observations of the class and their experiences with academic coaching (teaching practices). The IBC used a 3-point scale to measure the instructor teaching practices during the intervention: *yes* (if the teaching practice was observed), *no* (if the teaching practice was not observed), or *N/A* (if the teaching practice did not apply to that class). The *yes* responses were added to create a teaching-practices and a teacher-student communication score for each student.

Student Engagement Data

The participants completed the CLASSE survey before and after academic coaching were implemented for the experimental group. Engagement for each student was measured by totaling responses to Questions 1 through 19, which used a 4-point

Likert scale: 1 (*Never*), 2 (*1-2 times*), 3 (*3-4 times*), and 4 (*5 or more times*). Questions 1-19 from the CLASSE were used because they addressed only students' engagement levels and no other variables (CLASSE, 2012). To ensure that participants only responded once while maintaining confidentiality, those who completed the CLASSE were asked to provide the last four digits of their student ID numbers.

Statistical Analysis

The Statistical Package for the Social Sciences (SPSS) program was used to analyze the data collected from the CLASSE and the IBC. The analyses of the pre- and posttest scores included descriptive analyses and inferential statistics. The purpose of the descriptive statistics was to determine the central tendency and variability of the data.

The statistical test used to analyze the results for the IBC was a mixed ANOVA with one independent variable (group) and one repeated measure (teaching practices and teacher-student communication). This analysis allowed for comparisons of teaching practices and student-instructor relationship during the academic coaching sessions.

The CLASSE data were analyzed using a mixed ANOVA with one independent variable (group) and one repeated measure (pre and posttest) to determine if the treatment (coaching) and control (no coaching) groups differed significantly on their engagement scores. This analysis allowed for simultaneously examining the effects of two variables (the presence or absence of academic coaching and the pretest and posttest). The inferential statistics also included computation of a Pearson correlation coefficient between the posttest CLASSE scores and the IBC scores (across all students) to compare engagement scores with identification of good teaching practices (*yes* scores).

Protection of Participants

Ethical Procedures

This quantitative study used student surveys to determine the impact of academic coaching. I obtained permission from the Institutional Review Boards (IRBs) from both the participating campus and Walden University (Appendix G). The IRB reviews ensured that the study and data collection methods met all of the institutional and ethical guidelines for working with human subjects and managing information.

I verbally informed participants of the purpose and benefits of the study. The participants also were advised that they would not be required to share personal information in the course of the research project. They were told how the information generated in the study would be processed and how and with whom it would be shared. The data collected were only reported in aggregate and those who participated in the research remain anonymous in reports of the study. Students were also offered the option to opt out of the study without academic penalty, though none chose to do so. Consent forms were not required because the participants completed the assessments as part of normal course assessment activities. Precautions were taken when collecting and analyzing the data to ensure participants' confidentiality.

I completed a web-based training course on protecting human research participants, an online course provided by The National Institutes of Health (NIH) Office of Extramural Research. The training was completed prior to commencing the study. The date of completion was 06/27/12. The certification number for the training is 420339 (see Appendix H).

Permissions

Educational research requires that researchers receive the appropriate permissions to study individuals and institutions with which they and the study are associated (Creswell, 2012). For research collaboration, the participating campus only required approval from the chancellor, program director, and faculty. Permission was obtained from these individuals before the distribution of the survey and implementation of the intervention (Appendix D). The academic dean is the person responsible for providing the permission to collect the data at the institution. The Walden University IRB approval for the study (#11-25-13-0173283) expired on November 24, 2014 (Appendix G). All data were collected prior to that date. The National Survey for Student Engagement (NSSE) director approved the use of the Classroom Survey of Student Engagement (Appendix E).

Assumptions, Limitations, and Delimitations for the Study

This quantitative study was delimited to current students at a campus of a university in Puerto Rico, which operates 11 campuses throughout Puerto Rico. The study was based on the assumption that all the participants would answer questions honestly and accurately based on their academic experiences before, during, and after the instructional unit.

There were several limitations related to the sample used in this study. The first limitation was associated with the number of participants. The recommended sample with a 95% confidence level was 243 students, but, due to course scheduling, only 170 students were available to complete the assessments and participate in the coaching

sessions. A sample of 170 students provides a confidence level of 90%. A second limitation of the study is that the data collected reflects the academic readiness and options of the students enrolled in the course at the participating campus. The sample included all enrolled students from seven of the 14 sections of the course offered during the spring semester of 2014. Participation in the study was contingent upon the willingness of faculty members to have their classes included in the study, and several opted out, making it impossible to attract the higher number of participants.

Participants were recruited from a specific postsecondary institution; therefore, the results reflected the perceptions and experiences of the students who attend that institution, limiting the capacity of the study to be used to predict behavior elsewhere. However, the results can provide useful information about how similar academic coaching methods can be used as a support strategy to promote adequate academic performance if it is adapted to address local issues elsewhere. This study also did not seek to measure faculty effectiveness, focusing instead on questions about how nontraditional and traditional teaching techniques influenced students' attitudes by measuring student engagement and classroom teaching behaviors.

During the data collection process, I acted as an external evaluator for the purpose of the study. In that capacity, I was responsible for preparing faculty and students for the implementation of academic coaching in the classroom. The faculty members were not present in classrooms during the assessments to guarantee the privacy of the students.

Results and Data Analysis

This quantitative study evaluated the impact of academic coaching on student's academic engagement. The research data included the results from two measures, the CLASSE and the IBC. The data from the CLASSE assessed the levels of student engagement, and IBC showed the various teaching practices used in the classroom. The assessments were completed by all student participants before (CLASSE) and after (CLASSE and IBC) implementing the coaching sessions. Test-retest measures from the CLASSE allowed me to determine the level of engagement before and after academic coaching or traditional instruction sessions. The IBC allowed me to validate the students' identification of good teaching practices that may impact student's engagement and their academic experience.

Results

The proposed sample was 243 students to ensure a 95% confidence level, but the final sample in the study included only 170 students resulting in a 90% confidence level. The sample of N =170 students was divided into a control group (55 students) and experimental group (115 students). Table 1 shows the characteristics of the participants that were part of the study.

Table 1

Participants' Characteristics (N= 170)

Characteristics	Percentage
Gender	
Male	31.6
Female	68.4
Race/Ethnicity	
American/Indian	0
Asian	0
Black/African American	0
White	1.8
Two or more races	9.4
Hispanic/Latino	88.3
Language known best	
English	17.3
English and another language	19.9
A language other than English	62.6

Note. N = 170.

Data Analysis

Table 2 provides an illustration of each hypothesis in terms of the variables and the statistical analysis technique used to test the hypothesis. The posttest scores from the CLASSE and the IBC were analyzed with a Pearson correlation coefficient to determine the relationship between engagement and teaching practices.

Table 2

Variables and Statistical Techniques for Hypotheses 1-2

Hypothesis	IV	DV	Statistical test
1	Academic coaching	CLASSE engagement	Mixed ANOVA
2	Academic coaching	IBC teaching practices	Mixed ANOVA
1 and 2		CLASSE engagement and IBC teaching practices	Pearson correlation coefficient

Research Question 1. Does implementation of an academic coaching model in the classroom affect student engagement as measured by the Classroom Survey of Student Engagement?

$H1_0$: There is no significant difference between the degree of engagement for students exposed to academic coaching and students who are not.

$H1_a$: Students who are exposed to academic coaching will be more engaged in their academic program than will students who are not.

The academic engagement level of the participating students was measured by utilizing the pre-test and posttest data from the CLASSE. The results from the pre and postassessments were analyzed using a mixed ANOVA with one independent variable (group) and one repeated measure (pre and posttest) to evaluate the impact of academic coaching on students' engagement.

Table 3 shows the results from the mixed ANOVA. The difference between groups (experimental and control) was not significant, F (1,168) = 2.409, p =.123, *partial* η^2 = .014. The difference within groups (pre and postassessment) was significant, (F

(1,168) = 170.201, $p < .001$, *partial* $\eta^2 = .503$, indicating that both the treatment and control groups increased engagement levels from pre to posttest. However, the interaction of groups and testing period was not significant, F (1,168) =.004, p =.95, *partial* $\eta^2 = .000$. A significant interaction would be expected if academic coaching had increased students' engagement to a greater degree than the traditional instruction methods; based on this test, the null hypothesis was not rejected.

It seems that the coaching intervention was not successful in increasing student engagement. Figure 2 shows the difference between the control and experimental groups for the pre and post assessment. Although CLASSE engagement scores increased for both groups, the increases were nearly identical in both groups with no greater gain for the experimental group (coaching) as would be expected if the alternate hypothesis were true and the academic coaching program had increased the students' levels of engagement. This can also be seen in Table 3, which shows the descriptive statistics for the experimental and control groups.

Table 3

Mixed ANOVA Group by Pre/Posttest for Hypothesis 1, CLASSE Data

Source	*SS*	*df*	*MS*	*F*	*p*	Partial η^2
Between subjects (exp and control)	194.27	1	194.27	2.40	.123	.014
Error	13548.02	168	80.64	13548.02	168	80.643
Within subjects (pre and post)	955.08	1	955.08	170.20	.000	.503
Interaction WSxBS	.02	1	.02	.004	.950	.000
Error	942.73	168	5.61			

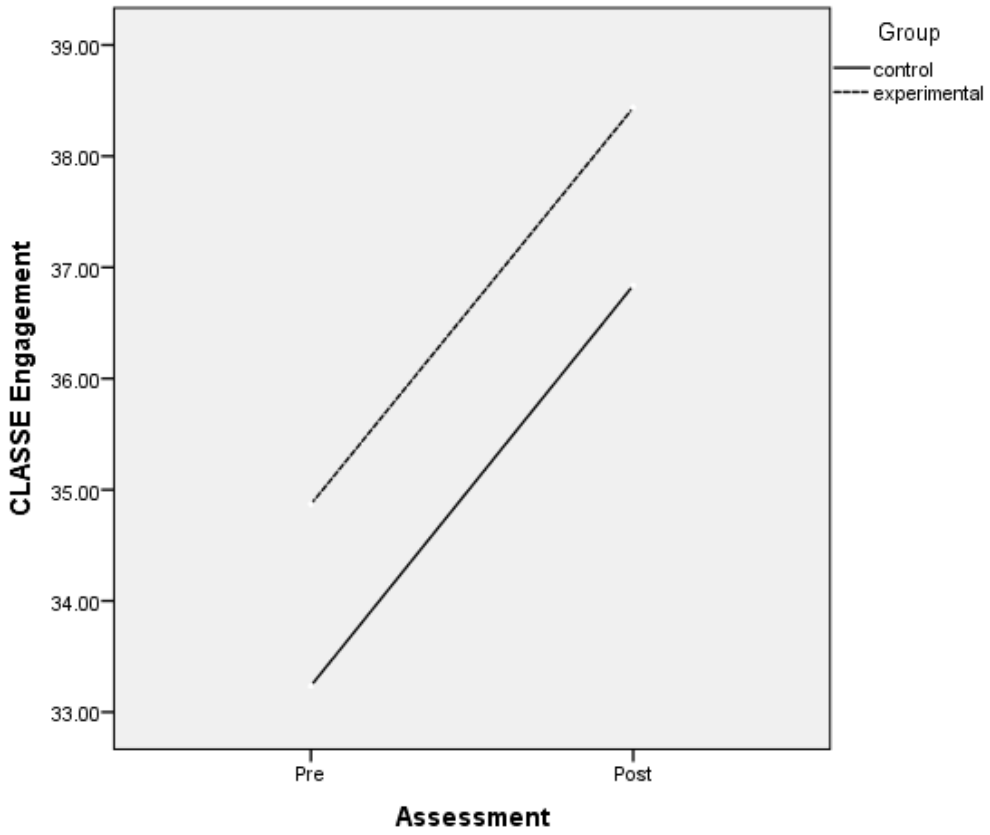


Figure 1. CLASSE group means from mixed ANOVA.

Table 4

Descriptive Statistics for CLASSE Pre- and Posttests

Group	*M*	*SD*	*n*
CLASSE pre			
Control	33.23	6.19	55
Experimental	34.86	6.39	115
CLASSE post			
Control	36.83	6.05	55
Experimental	38.43	7.12	115

Research Question 2. Does implementation of an academic coaching model in the classroom affect students' identification of best teaching behaviors, as measured by the Instructor Behavior Checklist?

$H2_0$: There is no significant difference in best teaching behaviors identified by students who are exposed to academic coaching and students who are not.

$H2_a$: There is a significant difference in best teaching behaviors identified by students who are exposed to academic coaching and students who are not.

The teaching practices were measured by the IBC at the end of the instructional unit for both the experimental and control groups. The IBC is divided into two subscales: teaching practices and teacher-student communication. A mixed ANOVA with one independent variable (group) and one repeated measure (teaching practices and teacher-student communication) was used to compare the students who were coached and those who were not to see if there was a significant difference in teaching practices they identified based on the IBC results. Table 5 shows the results of the mixed ANOVA. The difference between groups (experimental and control) was not significant, F (1,168) = .135, p = .714, and *partial* η^2 = .987. The difference within groups (teaching practices and teacher communication) was significant, F (1,168) =11.095, p =.001, and *partial* η^2 = .062, which was primarily due to different numbers of items in the two subscales. However, there was a significant interaction between group and teaching practices, F (1,168) = 11.096, p = .001, and *partial* η^2 = .062. As can be seen in Figure 3, the experimental group who received coaching identified significantly more best teaching practices, but reported less teacher-student interaction than did the control group who did

not receive coaching. This can also be seen in Table 6 which shows the descriptive statistics for the experimental and control groups.

Table 5

Mixed ANOVA Group by Pre/Posttest for Hypothesis 2, IBC Data

Source	*SS*	*df*	*MS*	*F*	*p*	Partial η^2
Between subjects (exp and control)	1.04	1	1.04	.135	.714	.001
Error	1305.0	168	7.76			
Within subjects (pre and post)	6511.0	1	6511.03	1302.740	.000	.886
Interaction WSxBS	55.45	1	55.45	11.090	.001	.062
Error	839.65	168	4.99			

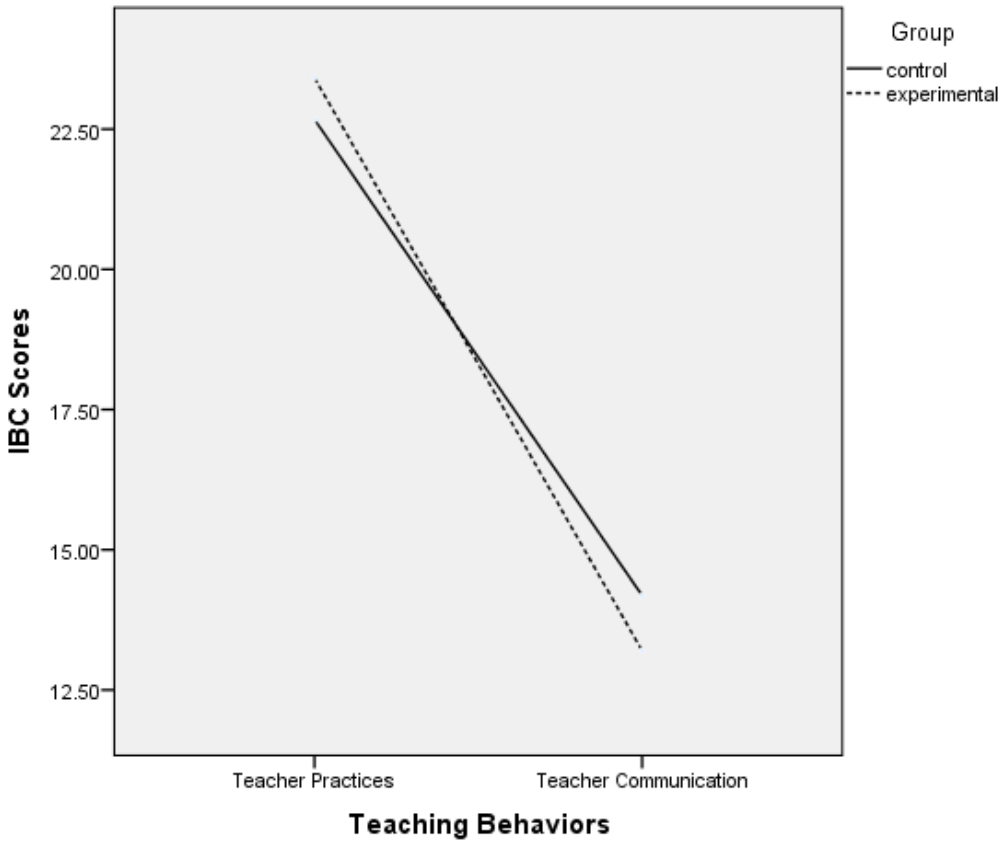


Figure 2. IBC group means from mixed ANOVA showing interaction of group with teaching practices/teacher-student communication.

Table 6

Descriptive Statistics for IBC Pre- and Posttests

Group	*M*	*SD*	*n*
Teaching practices			
Control	22.67	3.59	55
Experimental	23.41	3.23	115
Teacher-student communication			
Control	14.18	1.64	55
Experimental	13.20	.95	115

A Pearson correlation coefficient was computed to assess the relationship between each of the IBC scales (teaching practices and teacher-student communication) and CLASSE engagement scores for both groups combined. Table 9 shows the results of these correlations. There was not a significant correlation between the teacher-student communication and student academic engagement (r = .098, N =170, p = .206). However, there was a significant positive correlation between the teaching practices identified and student engagement (r = .231, N =170, p =.002). The results indicated that students with higher levels of engagement identified more best teaching practices engaged in by their teacher.

Table 7

Correlation Between IBC Teaching Practices and CLASSE Engagement Scores

		IBC	
		Teaching practices	Teacher-student communication
CLASSE engagement	Pearson correlation	.231	.098
	p (2-tailed)	.002	.206
	N	170	170

The IBC is divided into two categories, teaching practices (Questions 1-13) and teacher communication (Questions 14-20). The difference in mean scores from the IBC (see Table 6) indicates that the experimental group scored higher on teaching practices than the control group, but that the control group scored higher on teacher-student communication.

Table 8

IBC Descriptive Statistics (by Question) for Experimental and Control Groups

Teacher Behaviors	Experimental		Control	
	M	*SD*	*M*	*SD*
1. Knowledge about the subject, clarity and organization.	1.96	.20	1.87	.33
2. Establishes course objectives.	1.56	.49	1.67	.47
3. Revises assigned work, clarifies questions and corrects mistakes.	1.56	.49	1.71	.45
4. Directs class discussion towards the achievement of the course objectives.	2.17	2.6	1.69	.46
5. Follows a proper sequence to present the material.	1.98	.13	1.84	.37
6. Directs discussion, clarifies and enriches the course readings and topics.*	1.99	.09	1.87	.33
7. Emphasizes the key thoughts related to the materials under study.*	1.97	.18	1.75	.44
8. Stimulates students' critical thinking and analysis by asking questions or examples from the class discussion.*	1.93	.25	1.65	.48
9. Makes reference to previous or future class topics.	1.72	.45	1.56	.50
10. Corrects mistakes and clarifies concepts.	1.42	.49	1.55	.50
11. Provides a variety of exercises that promote skills development, when needed.*	1.59	.49	1.56	.50
12. Summarizes and explains concepts during the class.	1.62	.48	1.76	.42
13. Shows different points of view related to the concepts explained in class.*	1.90	.30	1.95	.22
Teacher-Student Communication				
14. Promotes active participation.*	1.89	.31	1.96	.18
15. Recognizes students' efforts and participation.*	1.83	.37	1.84	.37
16. Maintains a climate of mutual respect during the development of the class.	1.85	.35	1.91	.29
17. Expresses with clarity.	1.90	.30	1.42	.49
18. Accepts ideas or suggestions provided by the students.	1.86	.34	1.96	.18
19. Asks questions focused on the development of analysis and evaluation of situations.*	1.75	.43	1.84	.37
20. Respects the students' right to have different opinions in class.*	1.85	.35	1.95	.22

Note. * indicates behaviors associated with academic coaching.

Of the IBC questions that reflect instructor behaviors specifically associated with academic coaching, the experimental group scored higher on seven (Questions 6-8, 11, 13, 15, and 20). On Questions 14 and 19, the control group scored higher than the experimental group. Questions 6-8 and 15 from the IBC are related to academic coaching, addressing how the instructor encourages problem-focused thinking. Questions 11, 13, and 20 from the teacher behaviors subscale are related to academic coaching. Questions 11, 13, and 20 assessed how the instructor encouraged reflection during the learning activity. Question 8 shows that the students in the experimental group perceived that their instructors encouraged critical thinking more than did the students in the control group.

Evaluation of the Findings

The data collected before and after implementing the academic coaching sessions revealed three themes that address the impact of academic coaching on student engagement. The themes were included in the faculty training provided on academic coaching. The themes are discussed below.

Student Engagement Academic Coaching Practices

The participants from the experimental group reported higher engagement levels before implementing academic coaching sessions in the classroom based on the CLASSE data. Participants (N =170) completed the assessment before and after implementing academic coaching in the classroom for the experimental group.

The results from the mixed ANOVA of CLASSE scores indicated that the difference within groups (pre and postassessment) was significant, $p < .001$, indicating

that both groups' engagement increased to an equivalent degree. Neither the difference between groups (experimental and control) nor the interaction of groups and testing periods was significant (p =.123 and p =.950, respectively). Based on this test, the null hypothesis for student engagement that there is no significant difference between the degree of engagement for students exposed to academic coaching and students who are not was not rejected. The result from the mixed ANOVA indicated that academic coaching on this campus did not increase the participants' engagement levels to a greater extent than traditional teaching practices.

Teacher Practices and Communication

The participants from the experimental and control groups reported positive teaching and communication practices during the instructional unit using the IBC. The results from a mixed ANOVA indicated that the difference between groups (experimental and control) was not significant (p = .714). However, there was a significant within groups effect (p < .001) and significant interaction indicating that there was a difference between the groups (experimental and control) for teaching practices and communication (p = .001 and *partial* η^2 = .062). This interaction reflects the significantly higher level of identification of best teaching practices and significantly lower level of teacher-student interaction reported by the experimental group as compared to the control group. A Pearson correlation coefficient computed to assess the relationship between teacher communication and student engagement was not significant (p =.206), but there was a significant positive correlation between the teaching practices identified and student engagement (p =.002).

Analysis of IBC data shows a significant difference between scores generated from the experimental and control groups; the experimental group identified more teaching practices than the control group. However, the coaching methods did not have a significant positive effect on students' levels of engagement as measured by the CLASSE. It is possible that the short duration of the coaching treatment was not sufficient to produce changes in the results generated using this instrument whose frequency scale ranges from *never* to *4-5 times*. As a result, it may be that implementation of the coaching treatment for an entire semester might result in measurable increases in student engagement, but that was not established within this study. Another contributing factor to the lack of statistically significant findings may have been the actual sample size for my study, which at N =170 was 73 fewer than the 243 minimum suggested through my power analysis.

Conclusion

The research questions for the study were addressed by the data collected using the Classroom Survey of Student Engagement and the Instructor Behavior Checklist. The result from the mixed ANOVA indicated that academic coaching on this campus did not increase the participants' engagement levels to a greater extent than traditional teaching practices. The Pearson correlation analysis did show that there was a positive correlation between the number of best teaching practices identified by students and their academic engagement.

The results from the Instructor Behavior Checklist, which measures students' observations about the faculty teaching practices, revealed statistically significant

differences between the experimental and control groups for teacher practices and communication. The results from the Pearson correlation showed that there was not a significant correlation between the teacher communication and student engagement (p = .206), but the correlation between teaching practices identified and student engagement was significant (p = .002), which may indicate that students who are more highly engaged are more aware of best teaching practices when used by their instructor.

This study provided useful information for faculty and postsecondary academic leaders interested in supporting students' learning processes and improving academic performance. Learning communities may find the information presented in the study useful and may apply academic coaching as an intervention strategy designed to support academic performance and the level of academic engagement.

Section 3: The Project

Introduction

This project offers background data to support a plan for a professional training program for faculty at the participating campus. As part of the study, I presented the professional development training sessions to all faculty members during in-service sessions conducted during faculty meetings. I focused on justifying the use of academic coaching to enhance student engagement and chose training topics based on the results of the Classroom Survey of Student Engagement and Instructor Behavior Checklist during the coaching sessions. The three training topics covered were as follows:

- Using academic coaching to stimulate learning.
- Methods for implementing academic coaching in the classroom to increase engagement.
- Incorporating academic coaching strategies based on the student's academic readiness and engagement levels.

Self-paced training programs were made available after the in-service training was completed. The PowerPoint presentation used to outline the training is included in Appendix A. This PowerPoint presentation contains classroom examples of how to apply academic coaching to best advantage, as well as coaching strategies, readings, and practice activities that faculty can use during their lessons.

I created the project to address the problems identified in the quantitative study about the impact of academic coaching on students' engagement. The project (see Appendix A) could be used (a) as an institutional program to promote student learning

and (b) as a curriculum planning session in which faculty include academic coaching strategies. I addressed the impact of alternative teaching strategies and promoting students' academic engagement and performance. The purpose of measuring students' academic engagement during the academic coaching sessions was to evaluate the effectiveness of an academic coaching program at this campus of the targeted university in Puerto Rico. The training prepared faculty to incorporate academic coaching into their teaching methods and content.

The project began as a work session and presentation in which faculty worked together to incorporate academic coaching strategies into their lesson plans. I included PowerPoint presentations on the academic coaching model, student engagement, and assessment based on the coaching sessions and students' feedback. Faculty discussed with school officials and academic leadership all of the needed resources and the additional support required to implement academic coaching effectively and improve student engagement.

Description and Goals

The main goal of the project was to provide faculty and academic leadership with the tools they need to implement an academic coaching strategy that can promote adequate student engagement. The project provided the opportunity for faculty to learn about student-centered teaching methodologies that promote engagement and self-reflection as well as to develop lesson plans that promote academic independence, academic engagement, and reflection.

Rationale

The rationale for implementing academic coaching training is to enhance students' engagement and performance. Within academic coaching, learners are held accountable for promoting opportunities to share their work and knowledge (Tofade, 2010). This project was designed and implemented to train faculty members on how to implement academic coaching correctly, what its potential impact on classes is, how to track students' behaviors, how to identify student academic readiness, and how to provide constructive feedback.

Review of Literature

The literature review is based on the areas in which the faculty was trained during the 2014-2015 academic year. The training included the following topics:

- Using academic coaching to increase learning.
- Implementing academic coaching in the classroom to increase engagement.
- Incorporating academic coaching strategies based on the students' academic readiness and engagement levels.

I chose the training subjects based on the results of the academic coaching sessions, the Classroom Survey of Student Engagement, and the Instructor Behavior Checklist.

Mehdinezhad (2011) stated that engagement includes collaboration, project-oriented activities, and effort invested in purposeful learning. In a similar study, Hu (2011) reported that adequate academic and social interactions in the classroom provide a sense of belonging to the learner. The faculty training project, therefore, must include an

introduction to engagement and collaboration techniques that can be implemented to promote social interaction among students.

Incorporating active learning and coaching into the classroom promotes the development of academic skills and improves engagement. According to Zuntiryaki-Kondakci, and Capa-Aydin (2013), classroom-based interactions and feedback encourage students to write, to read, to engage in academic conversations, and to ask questions. Academic engagement makes transitions smoother, reduces off-task time, and increases instructional time. A performance-based classroom allows faculty to monitor the students' behaviors, engagement levels, and interactions during academic coaching sessions. Shinde (2010) reported that active student learning and collaborative techniques in the classroom enhance the academic experience by promoting critical thinking. The academic coaching training developed here will effectively prepare faculty to implement collaborative techniques to improve student participation.

Academic coaching provides more ways to engage students in academically-related activities and to monitor their progress (Hu, 2011). Faculty will monitor academic progress and engagement during the one-on-one sessions with the students. The faculty will promote critical thinking and the innovation-decision process. According to Henderson, Dancy, and Niewiadomska-Bugaj (2012), academic engagement promotes the knowledge development stage of the learning process and improves motivation. During instruction, faculty members need to measure student academic progress and engagement to identify individual students' knowledge gaps, knowledge development, and satisfaction level with the course content (Lawson, Leach, & Burrows, 2012). The

faculty training will address effective classroom-based interactions, such as academic coaching, and focus on the students' academic engagement, skill development, and self-management. Price and Baker (2010) found that an effort to increase students' academic engagement, when implemented as an intervention, increases the likelihood that students will attempt to initiate academic interactions.

Incorporating academic coaching into the classroom promotes collaborative learning and a team-based work environment (Stormon et al., 2014). Academic coaches motivate students by providing adequate feedback that improves the learners' self-regulation, motivation, and sense of belonging (Anderson, 2011). Academic coaching for higher education starts with the assumption that all students have academic gaps due to the diversity in each class. Similar to Barkley (2011), Lysne, Miller, and Eitel (2013) analyzed the effect of self-regulation and reported that learning happens when a student gets involved in the learning process. Academic coaches seek to enhance student involvement by providing opportunities for learners to self-regulate and monitor their learning experience (Stelter, Alle, Campus, & Lane, 2010). During the academic coaching sessions conducted during this study, the learners used journals to monitor their academic experience, participated in collaborative teams, identified objectives, and engaged in one-on-one discussions to demonstrate learning (Savory, Goodbarn, & Kellas, 2012).

Teaching Practices

Research evaluating how teacher effectiveness and best teaching behaviors impact students' success and engagement continues. Kane, Taylor, Tyler, and Wooten (2011)

stated that teacher effectiveness needs to be measured by student performance and teaching practices in the classroom. Colleges and universities are implementing peer observation and evaluation to measure the use of best teaching practices and their effectiveness. Effective teaching practices and behaviors help teachers promote and maintain a positive classroom environment, which plays an important role in student motivation, engagement, and academic achievement (Stappenbelt, 2010). Best teaching practices include teacher academic and emotional support, involve mutual respect, and promote students' motivation and higher level thinking (Patrick, Kaplan, & Ryan, 2011).

Increasing students' motivation and engagement is the main goal of academic coaching. Ahmad and Rana (2011) reported that low motivation negatively impacts students' academic performance, social and academic self-confidence, and persistence. During the academic coaching sessions, faculty provided feedback that reinforced positive behaviors and encouraged the learners to reflect on their learning experience and the difficulties encountered, as well as to identify gaps in their knowledge.

CLASSE and Student Engagement

Student academic engagement can be measured by identifying behaviors related to a high-performance classroom environment. The CLASSE questions address students' academic behaviors and experiences in the classroom. Measuring student engagement in the classroom is important in order to identify best practices and promote academic success.

Student engagement is an indicator of academic success. Dixson (2010) suggested that faculty use academic engagement data to determine students' time on task, classroom

dynamics, and the effectiveness of the learning activities. According to the most recent report from the Center for Community College Student Engagement (2015), teaching best practices have been found to help increase faculty-student positive interactions in the classroom from 79% to 96% and student engagement from 57% to 64%. Student engagement data allow faculty to answer an important question in higher education: How can we best help the most students succeed? Actively engaged students are more likely to learn and complete a degree (McClenney, Marti, & Adkins, 2012).

Professional Development

Professional development focused on student performance and engagement allows faculty to identify best practices to promote student success. Adequate professional development opportunities permit faculty to coteach and identify strategies to help students to succeed. Higher education institutions are implementing professional development opportunities to improve teaching and promote student learning (Devlin-Scherer & Sardone, 2011). Professional collaboration facilitates faculty members' identification of how their teaching impacts learning. Moore and Bruckner (2010) noted that professional development opportunities not only promote student engagement and best teaching practices, but also allow faculty to develop learning communities.

Faculty training assists academic leaders in closing performance gaps between faculty members. Austin and Sorcinelli (2013) stated that effective faculty training founded on student performance and best teaching practices is the key to supporting institutional quality. Professional development focused on student-centered teaching, like academic coaching, assists faculty in moving from traditional teaching to active-learner-

centered instruction. Ebert-May et al. (2011), in their study of professional development efforts, concluded that 89% of the faculty implemented changes to move from faculty-centered instruction to active-learner instruction after appropriate professional development and training sessions were offered. According to Budd, Van der Hoeven Kraft, McConnell, and Vislova (2013), when an instructor implements small changes to move from a faculty-centered to a student-centered environment, the transition to a student-centered learning environment becomes a more approachable and effective process. Professional development efforts to support academic coaching assisted faculty in gaining a fuller understanding of how student-centered learning promotes conceptual learning.

Effective teaching is associated with student engagement, and adequate professional development helps to sustain or improve teacher effectiveness (Zhu, 2012). Academic leaders can use professional development to reinforce institutional policies and performance. Effective professional development needs to target teaching practices, students' behaviors, and academic performance (Bendickson & Griffin, 2010).

Project Description: Faculty Training for Academic Coaching

The purpose of this training is to prepare faculty and academic leaders to implement academic coaching in the classroom in order to improve student engagement. Mehdinezhad (2011) stated that engagement includes collaboration, project orientation, and feedback. When conducting the faculty training, I addressed how academic coaching can support engagement levels.

To assist faculty and academic leaders in understanding how academic coaching can support learning, the project consisted of a 3-day in-service training program on academic coaching strategies, including providing adequate feedback, encouraging student collaboration and effective communication, and monitoring students' academic engagement (see Appendix A). When conducting the faculty training, I outlined an academic coaching program for use in the school and demonstrated how it might be implemented and evaluated.

Need for Faculty Training

The purpose of conducting the training at this campus of a university in Puerto Rico was to help faculty implement student-centered teaching techniques that target students' performance. Codding and Smyth (2008) found that teacher behaviors and instructional strategies influence students' engagement. Faculty and school officials were trained in how to apply academic coaching to maximize instructional time and monitor students' levels of engagement. Shinde (2010) reported that adequate faculty support and training enhance faculty-student academic experiences by emphasizing higher order cognitive skills.

To reinforce positive behaviors, faculty members were shown how to use academic engagement data to identify learners' academic gaps and monitor their progress during coaching sessions. Faculty received training on how to use academic engagement data to provide feedback regarding the learners' engagement levels and areas that would be targeted in the classroom. Academic readiness data provided information about academic gaps, engagement, and motivation (Allen et al., 2008). Faculty used academic

engagement data to determine the type of activities and support they would implement during the academic coaching sessions.

In conducting the faculty training, I addressed students' academic engagement and suggested ways to implement academic coaching (teaching practices) to improve students' engagement. The training ensured that faculty members were able to implement academic coaching strategies to identify and target academic gaps and enhance student learning. The training prepared faculty to provide positive feedback that would enhance students' motivation, self-regulation, and self-confidence.

Potential Resources and Existing Support

The project developed as a result of this study included faculty training in academic coaching strategies. The in-service training materials included a PowerPoint presentation on academic coaching and student engagement, the Classroom Survey of Student Engagement testing instructions and materials, and examples of academic coaching activities that can be implemented in the classroom. The university chancellor reviewed all of the training materials before implementing the training. Faculty members and academic leadership received a copy of all learning and training materials. Faculty training sessions began with an introduction to the results of the study of how academic coaching impacts student learning and engagement at the participating campus. The training materials will be available for use elsewhere if the demand arises.

Potential Barriers

Potential barriers to the project included the possibility that the faculty and academic leadership would be reluctant to commit to incorporating and implementing

academic coaching in the classroom. In addition, if faculty and academic leadership participation were optional, those who were unwilling to participate would decrease the effectiveness of the project at the institutional level. Other potential barriers included lack of time for faculty to coach students and provide adequate feedback to promote engagement and self-reflection.

Training, Implementation, and Timetable

The faculty training included 3 days of in-service activities that I used to address academic techniques and methodologies for implementing academic coaching in the classroom. The faculty training included an initial presentation of the findings of the study. The project implementation was divided into three major areas: (a) understanding academic coaching, (b) implementing academic coaching, and (c) monitoring student progress. The project was divided into three stages (see Appendix A). The initial stage for the faculty training (Day 1) included a presentation about academic coaching strategies, findings of the study, and meetings with program directors and faculty leaders. The second stage (Day 2) included roundtables with faculty and staff to discuss student engagement, best practices, and how to apply academic coaching in the classroom. The third stage (Day 3) included faculty and staff designing an implementation plan based on the training and resulting recommendations.

Roles and Responsibilities

Researcher

I facilitated the faculty training and presentations, and, at the end of the training, provided a summary that included a copy of the assessments used to collect the data

along with the findings of the study. I ensured that all workshop/training locations and resources (presentations and copies of assessments) were available on the date and time agreed upon by the academic officials.

Faculty

School officials and faculty members were part of the academic coaching program. The participants were responsible for implementing academic coaching techniques and monitoring the students' academic progress and engagement. Faculty and school officials collaborated with colleagues during the training and planning sessions. The training participants actively engaged during the workshops, presentations, and discussion sessions.

Project Evaluation Plan

This training promoted the implementation of academic coaching techniques in the classroom. The main purpose of the training was to assist faculty in implementing academic coaching in the classroom to improve student academic engagement and performance. An evaluation is a systematic process of analyzing data, methods, and procedures (Creswell, 2012). In conducting the program evaluation, one must examine the training outcomes and oversee the implementation of the appropriate academic coaching techniques in the classroom. Faculty and students completed the assessments used in the study to evaluate the program effectiveness.

Project Implications

This training program promotes the implementation of student-centered coaching strategies designed to enhance the students' sense of responsibility for their academic

success and higher academic performance. The study findings, as well those of Barkley (2011), demonstrate that academic coaching, may help students improve their social connectedness and student-teacher communication. Lysne, Miller, and Eitel (2013) stated that adequate engagement allows the learner to get more involved intellectually, socially, and physically in academic-related activities. This project will promote social change by preparing faculty and academic leaders to support at-risk students through an effective academic coaching program.

Conclusion

Academic coaching can be an important means of addressing student engagement and providing adequate support for at-risk students. Academic engagement and performance influence retention by improving students' commitment to college and their persistence (Allen et al., 2008). Although the study did not demonstrate a positive relationship between academic coaching and students' engagement, the assessments revealed the importance of adequate faculty support and the implementation of student-centered strategies to promote a high-performance classroom.

Section 4: Reflections and Conclusions

Introduction

The purpose of this quantitative study was to determine the impact of academic coaching on student engagement. The study was completed using the Classroom Survey of Student Engagement (CLASSE) and Instructor Behavior Checklist (IBC). Findings from the study indicated that there was no significant relationship between academic coaching and student engagement. However, Horstmanshof and Zimital (2007) stated that academic application and engagement impact educational behaviors.

Project Strengths and Limitations

Project Strengths

The strength of the study was the use of formative evaluations to assess students' engagement and instructors' teaching practices. The data were validated by using the CLASSE and the IBC. The two different assessments addressed the variables of the study.

Project Limitations and Future Research

The results of this study did not establish a statistically significant relationship between academic coaching and student engagement on the campus studied. Program and student evaluations can be influenced by external factors such as academic experience, content, instructor-student relationship, assessments, and readiness. A purposive sample was used for this study, suggesting that the findings relate only to the campus studied and cannot be generalized to predict behavior elsewhere. However, findings might help inform others on other campuses, as long as the general findings are adapted based on

their specific circumstances. One of the limitations of the study was that course scheduling adversely impacted access to participants who might have been included in the sample. The Instructor Behavior Checklist data were affected by student-faculty interactions prior to implementing the academic coaching program. Validity and reliability data were not available for the Instructor Behavior Checklist and CLASSE survey, although validity of the CLASSE can be inferred based on it being derived from the National Survey of Student Engagement (NSSE).

Scholarship, Project Development, and Leadership and Change

Scholarship

The main achievement of this project was the provision of quantitative data offering insight into the effectiveness of academic coaching strategies used on this campus to improve student engagement. The findings also provided additional information about how faculty teaching and student-centered methods can affect student learning processes.

Project Development and Evaluation

Project development included insights drawn from the data collected from the Classroom Survey of Student Engagement and Instructor Behavior Checklist. The planning process included feedback from faculty and academic leadership about adequate implementation of academic coaching. The project objectives and timetables were developed based on the planned faculty training, academic coaching model, and reviews of the study findings.

Evaluation of the project will be based on faculty feedback and continuous implementation of academic coaching in the classroom going forward. Faculty will determine future needs and improvements for academic coaching based on students' evaluations. Future research is recommended to determine the effectiveness of academic coaching in a different higher education setting and with different student populations.

Leadership and Change

Educators have the opportunity to empower and support students' academic and personal development. Effective educators adjust their teaching and the class environment to meet specific student needs identified in the classroom in order to support retention and mitigate academic failure (Horstmanshof & Zimitat, 2007). Academic coaching promotes peer support and academic integration, which, along with student experience, are major concerns of school leaders (Shinde, 2010).

Reflection on Importance of the Work

During the process of gathering the data and developing the project, I realized the importance of self-reflection. Reading and writing about academic coaching and student engagement allowed me to understand the importance of implementing student-centered strategies to improve student performance and engagement. During the process of collecting the data and developing the project, I learned that not all instructors change their teaching methods based on student performance and academic development. The planning phase allowed me to understand the process and importance of properly addressing the research questions. As a scholar-practitioner, I was able to investigate the

problem of the study, analyze the findings, and develop a project that directly related to the study.

The Project's Potential Impact on Social Change

Student retention and performance represent one of the main challenges that higher education institutions face today (Shinde, 2010). Student-centered strategies such as academic coaching promote the learner's sense of belonging, motivation to learn, and academic performance. The findings from this study will promote academic discussions among faculty and academic leaders about students' readiness, engagement, interventions, and student-centered strategies. Ahmad and Rana (2012) reported that higher motivation positively impacts engagement and persistence. The findings from the study will also promote social change by encouraging and preparing faculty to use academic coaching to improve student engagement.

Implications, Applications, and Directions for Future Research

Implications and Applications of the Study

The findings did not clearly establish a relationship between student engagement and academic coaching. The findings of the study suggested a need for additional research to determine the impact of academic coaching over a longer time period and with a larger student sample.

Future Research

To gain a better understanding of how coaching impacts student engagement and academic experiences in general, it is important to implement additional studies of academic coaching over a longer time period and with a larger sample. The sample needs

to include a wider variety of learners with different academic backgrounds to help in understanding how coaching impacts various kinds of students. Further research is also needed that replicates this work with students from several higher education institutions and in classes covering different content areas. A similar study using random sampling with large numbers of diverse students from multiple programs would add greatly to the generalizability of the results relating to the impact of academic coaching on student engagement.

Conclusion

In conclusion, the results of this study did not demonstrate a positive relationship between academic coaching and student engagement. However, the data showed a relationship between student engagement and students' identification of best teaching practices on the Instructor Behavior Checklist. Implications for both student support and faculty development include a greater emphasis on promoting active participation, academic readiness, and early intervention. The findings of the study indicated that students respond to positive teaching practices including adequate support, positive feedback, and motivation.

References

Ahmad, I., & Rana, S. (2011). Affectivity, achievement motivation, and academic performance in college students. *Pakistan Journal of Psychological Research, 27*, 107-120. Retrieved from http://www.pjprnip.edu.pk/pjpr/index.php/pjpr/article/view/35

Alkadounmee, K. (2012). The effect of a training program for developing the social skills in reducing the chaotic behavior of at-risk students of academic failure. *European Journal of Social Sciences, 29,* 537-552. Retrieved from http://connection.ebscohost./

Allen, J., Robbins, S. B., Casillas, A., & Oh, I. S. (2008). Third-year college retention and transfer: Effects of academic performance, motivation, and social connectedness. *Research in Higher Education, 49*, 647-664. doi:10.1007/s11162-008-9098-3

Anderson, L. (2011). A learning resource for developing effective mentorship in practice. *Nursing Standard, 25*(51), 48-56. doi:10.7748/ns2011.08.25.51.48.c8661

Andrade, H., Huff, K., & Brooke, G. (2012). Assessing learning. *Education Digest, 78*(3), 46-53.Retrieved from http://www.studentsatthecenter.org/sites/scl.dl-dev.com/files/Assessing%20Learning.pdf

Austin, A. E., & Sorcinelli, M. D. (2013). The future of faculty development: Where are we going? *New Directions for Teaching and Learning,* 133, 85-97. doi:10.1002/tl.20048

Barkley, A. (2011). Academic coaching for enhanced learning. *NACTA Journal, 55,* 77-81. Retrieved from ebscohost.com (Accession No. 72019885).

Bendickson, M., & Griffin, K. (2010). An approach to a faculty professional development seminar. *New Directions for Community Colleges, 152,* 25-32. doi.10.1002/cc.424

Bettinger, E. P., & Baker, R. B. (2013). The effects of student coaching: An evaluation of a randomized experiment in student advising. *Educational Evaluation and Policy Analysis, 36(*1*),* 13-19. doi:0162373713500523

Boekaerts, M. (1999). Self-regulated learning: Where we are today. *International Journal of Educational Research, 31,* 445-457. doi:10.1016/S0883-0355(99)00014-2

Bonner, J. (2010). Taking a stand as a student-centered research university: Active and collaborative learning meets scholarship of teaching at the University of Alabama. *Journal of General Education, 59,* 183-192. doi:10.1353/jge.2010.0022

Budd, D. A., van der Hoeven Kraft, K. J., McConnell, D. A., & Vislova, T. (2013). Characterizing teaching in introductory geology courses: Measuring classroom practices. *Journal of Geoscience Education, 61,* 461-475. doi:10.5408/12-381.1

Center for Community College Student Engagement. (2015). *Engagement rising: A decade of CCSSE data shows improvements across the board.* Retrieved from http://www.ccsse.org/center/publications/

Chittleborough, C. R., Mittinty, M. N., Lawlor, D. A., & Lynch, J. W. (2014). Effects of simulated interventions to improve school entry academic skills on

socioeconomic inequalities in educational achievement. *Child Development, 85,* 2247-2262. doi:10.1111/cdev.12309

Clarebout, G., Elen, J., Léonard, R., & Lowyck, J. (2007). Assessing instructional conceptions: A task-based approach. *Educational Research and Evaluation, 13,* 109-125.doi:10.1080/13803610601146325

Codding, R. S., Smyth, & Carol. A. (2008). Using performance feedback to decrease classroom transition time and examine collateral effects on academic engagement. *Journal of Educational and Psychological Consultation, 18,* 325-345. doi:1080/10474410802463312

Creswell, J. W. (2012). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Thousand Oaks, CA: Sage.

Devlin-Scherer, R., & Sardone, N. B. (2013). Collaboration as a form of professional development: Improving learning for faculty and students. *College Teaching, 6,* 30-37. doi:10.1080/87567555.2012.714815

Dignath, C., & Büttner, G. (2008). Components of fostering self-regulated learning among students: A meta-analysis on intervention studies at primary and secondary school level. *Metacognition and Learning, 3,* 231-264. doi:10.1007/s11409-008-9029-x

Dilmore, T. C., Rubio, D. M., Cohen, E., Seltzer, D., Switzer, G. E., Bryce, C., & Kapoor, W. N. (2010). Psychometric properties of the mentor role instrument when used in an academic medicine setting. *Clinical and Translational Science, 3,* 104-108. doi:10.1111/j.1752-8062.2010.00196.x

Dixson, M. D. (2010). Creating effective student engagement in online courses: What do students find engaging? *Journal of the Scholarship of Teaching and Learning*, *10*(2), 1-13.Retrieved from https://www.iupui.edu/~josotl/archive/vol_10/no_2/v10n2dixson.pdf

Ebert-May, D., Derting, T. L., Hodder, J., Momsen, J. L., Long, T. M., & Jardeleza, S. E. (2011). What we say is not what we do: Effective evaluation of faculty professional development programs. *BioScience, 61,* 550-558. doi:10.1525/bio.2011.61.7.9

Fan, W., Williams, C. M., & Corkin, D. M. (2011). A multilevel analysis of student perceptions of school climate: The effect of social and academic risk factors. *Psychology in the Schools, 48*(6), 632-647. doi: 10.1002/pits.20579

Freeman, J., & Simonsen, B. (2014). Examining the impact of policy and practice interventions on high school dropout and school completion rates: A systematic review of the literature. *Review of Educational Research, 85,* 205-248. doi:0034654314554431

Glenn, D. (2010). How students can improve by studying themselves. *The Chronicle of Higher Education*, *56*, 22. Retrieved from http://web.calstatela.edu/faculty/elipton/Course_Pages/ENGR%20150/Chron_Feb.%207.pdf

Grant, A. M. (2011). The solution-focused inventory: A tripartite taxonomy for teaching, measuring and conceptualizing solution-focused approaches to coaching. *The*

Coaching Psychologist, *7*, 98-106. Retrieved from http://vbn.aau.dk/files/58698528/oms_coach_psy_2011.pdf#page=16

Grummon, P. T. (2010). Trends: In higher education. *Planning for Higher Education*, *38*(3), 51. Retrieved from http://carl-abrc.ca/uploads/h_ed_articles/Grummon.pdf

Henderson, C., Dancy, M., & Niewiadomska-Bugaj, M. (2012). Use of research-based instructional strategies in introductory physics: Where does faculty leave the innovation-decision process? *Physical Review Special Topics-Physics Education Research 8*(2), 1-15. Retrieved from http://journals.aps.org/prstper/issues/8/2

Hewitt, L., & Rose-Adams, J. (2013). What 'retention' means to me: The position of the adult learner in student retention. *Widening Participation and Lifelong Learning*, *14*, 146-164. doi:10.5456/WPLL.14.S.146

Horstmanshof, L., & Zimitat, C. (2007). Future time orientation predicts academic engagement among first-year university students. *British Journal of Educational Psychology*, *77*, 703-718. doi:10.1348/000709906X160778

Hu, S. (2011). Reconsidering the relationship between student engagement and persistence in college. *Innovative Higher Education*, *36*, 97-106. doi:10.1007/s10755-010-9158-4

Hu, S., & Ma, Y. (2010). Mentoring and student persistence in college: A study of the Washington State Achievers Program. *Innovative Higher Education*, *35*, 329-341. doi:10.1007/s10755-010-9147-7

Kane, T. J., Taylor, E. S., Tyler, J. H., & Wooten, A. L. (2011). Identifying effective classroom practices using student achievement data. *Journal of Human Resources*, *46*, 587-613. Retrieved from Education Research Complete (Accession No. 62824455).

Kistner, S., Rakoczy, K., Otto, B., Dignath-van Ewijk, C., Büttner, G., & Klieme, E. (2010). Promotion of self-regulated learning in classrooms: Investigating frequency, quality, and consequences for student performance. *Metacognition and Learning*, *5*, 157-171. doi:10.1007/s11409-010-9055-3

Kuh, G. D. (2009). The National Survey of Student Engagement: Conceptual and empirical foundations. *New Directions for Institutional Research*, *141*, 5-20. doi:10.1002/ir.283

Lagana-Riordan, C., Aguilar, J. P., Franklin, C., Streeter, C. L., Kim, J. S., Tripodi, S. J., & Hopson, L. M. (2011). At-risk students' perceptions of traditional schools and a solution-focused public alternative school. *Preventing School Failure*, *55*(3), 105-114. doi:10.1080/10459880903472843

Lawson, A., Leach, M., & Burrows, S. (2012). The implications for learners, teachers and institutions of using student satisfaction as a measure of success: A review of the literature. *Education Journal*, *138*(21), 7-11. Retrieved from http://elsru.ir/wp-content/uploads/2012/12/literature-review-paper.pdf

Loyens, S. M., Rikers, R. M., & Schmidt, H. G. (2008). Relationships between students' conceptions of constructivist learning and their regulation and processing strategies. *Instructional Science, 36*, 445-462. doi:10.1007/s11251-008-9065-6.

Lysne, S. J., Miller, B. G., & Eitel, K. B. (2013). Exploring student engagement in an introductory Biology course. *Journal of College Science Teaching*, *43*(2), 14-18. Retrieved from Education Research Complete (Accession No. 91713427).

Martinek, G. (2006). Coaching positive behavior support in school settings tactics and data-based decision making. *Journal of Positive Behavior Interventions*, 165-173. doi:10.1177/10983007060080030501

McClenney, K., Marti, C. N., & Adkins, C. (2012). Student engagement and student outcomes: Key findings from "CCSSE" validation research. C*ommunity College Survey of Student Engagement,* 1-5. Retrieved from http://eric.ed.gov/?id=ED529076

Mehdinezhad, V. (2011). First year students' engagement at a university. *International Online Journal of Educational Science, 3,* 47-66. Retrieved from Education Research Complete (Accession No. 60389662).

Melendez, R. (2007). Coaching students to achieve their goals: Can it boost retention? *The Hispanic Outlook in Higher Education, 17*(21), 60. Retrieved from ProQuest.

Moore, M., & Bruckner, I. (2010). A case for collaboration: Faculty experiences within a multidisciplinary, multi-media, multi-campus learning community in an urban community college district. *Mountain Rise: The International Journal of Teaching and Learning*, *6*(2*)*, 1–24. Retrieved from http://mountainrise.wcu.edu/index.php/MtnRise/article/view/135/104

Ouimet, J. A. (2010). Enhancing student success through faculty development: The Classroom Survey of Student Engagement. *Journal of Higher Education and*

Lifelong Learning, 18, 115-120. Retrieved from http://eprints.lib.hokudai.ac.jp/dspace/handle/2115/56770

Patrick, H., Kaplan, A., & Ryan, A. M. (2011). Positive classroom motivational environments: Convergence between mastery goal structure and classroom social climate. *Journal of Educational Psychology, 103,* 367. doi:10.1037/a0023311

Paunesku, D., Walton, G. M., Romero, C., Smith, E. N., Yeager, D. S., & Dweck, C. S. (2015). Mind-set interventions are a scalable treatment for academic underachievement. *Psychological Science*. Published online before publication April 15, 2015. doi:10.1177/0956797615571017

Powell, K., & Kalina, C. (2009). Cognitive and social constructivism: Developing tools for an effective classroom. *Education, 130* (2), 241-249. Retrieved from search.proquest.com.

Price, K., & Baker, S. N. (2012). Measuring students' engagement on college campuses: Is the NSSE an appropriate measure of adult students' engagement? *The Journal of Continuing Higher Education, 60*(1), 20-32. doi:10.1080/07377363.2012.649127

Purwa Udiutoma, S. T., Srinovita, Y., & Si, S. (2015). The effect of coaching and mentoring programs to improve students' competencies: a Case study of Beastudi Etos scholarship. *Universal Journal of Educational Research, 3,* 163-169. doi:10.13189/ujer2015.030302

Robinson, C., & Gahagan, J. (2010). In practice: Coaching students to academic success and engagement on campus. *About Campus, 15*, 26-29. doi:10.1002/abc.20032

Sams, A., & Bergmann, J. (2013). Flip Your Students' Learning. *Educational Leadership, 70,* 16-20. Retrieved from Education Research Complete (Accession No. 85833625).

Savory, P., Goodburn, A., & Kellas, J. K. (2012). Measuring classroom engagement by comparing instructor expectations with students' perceptions. *Mountain Rise, 7,* 1-20. doi:10.1234/mr.v7i1.162

Schunk, D. H., & Ertmer, P. A. (2012). Self-regulation and academic learning: Self-efficacy enhancing interventions. *Journal of Educational Psychology, 91,* 251-260. doi:10.1016/B978-012109890-2/50048-2

Shinde, G. (2010). The relationship between students' responses on the National Survey of Student Engagement (NSSE) and retention. *Review of Higher Education and Self-Learning, 2,* 54-67. Retrieved Education Research Complete (Accession No. 63480016).

Smallwood, R., & Ouimet, J. A. (2005). Assessment Measures: CLASSE-The Class-Level Survey of Student Engagement. *Assessment Update, 6,* 13-15. Retrieved from Academic Search Complete (Accession No. 19466749).

Solominedes, I. (2012). A critique of the nexus between student engagement and lifelong learning. *International Journal of Continuing Education & Lifelong Learning, 5,* 65-82. Retrieved from Education Research Complete (Accession No. 84039632).

Stappenbelt, B. (2010). The influence of action learning in student perception and performance. *Australasian Journal of Engineering Education,* 16*(1),* 1-10. Retrieved from Academic Search Complete (Accession No. 52159805).

Stelter, R., Law, H., Alle, N., Campus, S., & Lane, W. (2010). Coaching–narrative collaborative practice. *International Coaching Psychology Review*, *5*, 152-164. Retrieved from Search Complete Academic (Accession No. 52596362).

Stormont, M., Reinke, W. M., Newcomer, L., Marchese, D., & Lewis, C. (2014). Coaching teachers' use of social behavior interventions to improve children's outcomes: A review of the literature. *Journal of Positive Behavior Interventions, 17*, 69–82. doi:1098300714550657

Taylor, M. (2008). Meet the students: Finding common ground between student and institutional goals. *Higher Education Learning Commission, 3,* 3-9. Retrieved from http://www.taylorprograms.com/images/HLC_paper_08.pdf

Tofade, T. (2010). Coaching younger practitioners and students using components of the co-active coaching model. *American Journal of Pharmaceutical Education*, 74 (3), 1-5. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2865417/

Truijen, K., & Woerkom, M. (2008). The pitfalls of collegial coaching: An analysis of collegial coaching in medical education and its influence on stimulating reflection and performance of novice clinical teachers. *Journal of Workplace Learning, 20,* 316-326. doi:10.1108/1366520810882923

U.S. Department of Education. (2006). *A national dialogue: The Secretary of Education's Commission on the Future of Higher Education.* Retrieved from: http://www2.ed.gov/about/bdscomm/list/hiedfuture/index.html

Van Nieuwerburgh, C. (Ed.). (2012). *Coaching in education: Getting better results for students, educators, and parents*. London: Karnac Books.

Veenstra, C. (2009). A strategy for improving freshman college retention. *The Journal for Quality and Participation, 31,* 19-23. Retrieved from http://static1.squarespace.com/static/51fafa0ee4b0d906af53ce83/t/521dfdffe4b0912f523f841e/1377697279293/JQP+article+long.pdf

Webberman, A. (2011). Academic coaching to promote student success: An interview with Carol Carter. *Journal of Developmental Education, 35,* 18-20. Retrieved from Academic Search Complete (Accession No. 77427108).

Williams, R., & Mizener, B. (2009). The effects of student choices on academic performance. *Journal of Positive Behavior, 11,* 110-128. doi:10.1177//1098300708323372

Wirth, J., & Leutner, D. (2008). Self-regulated learning as a competence: Implications of theoretical models for assessment methods. *Zeitschrift für Psychologie/Journal of Psychology, 216,*102-110. doi:10.1027/0044-3409.216.2.102

Wright, G. B. (2011). Student-centered learning in higher education. *International Journal of Teaching and Learning in Higher Education, 23,* 92-97.Retrieved from http://files.eric.ed.gov/fulltext/EJ938583.pdf

Zhu, C. (2012). Student satisfaction, performance, and knowledge construction in online collaboration learning. *Educational Technology & Society, 15,* 127-136.

Zuntiryaki-Kondakçi, E., & Capa-aydin, Y (2013). Predicting critical thinking skills of university students through metacognitive self-regulation skills and chemistry self-efficacy. *Educational Sciences: Theory & Practice, 13,* 666-670. Retrieved from Education Research Complete (Accession No. 85466220).

Appendix A: The Project

Project Training Plan

Project Name	Academic Coaching Training
Date	Spring 2015

1. Introduction

This project was created to address the problems identified in the quantitative study of the impact of academic coaching on students' engagement. The project addresses the impact of alternative teaching strategies and promotes students' academic engagement and performance.

2. Objectives

2.1. Using academic coaching to stimulate learning.

2.2. Methods for implementing academic coaching in the classroom to increase engagement.

2.3. Incorporating academic coaching strategies based on the student's academic readiness and engagement levels.

3. Goals

3.1. The main goal of the project is to provide faculty and academic leadership with the tools they need to promote adequate student engagement.

3.2. The project will provide the opportunity for faculty to develop lesson plans that promote academic independence, academic engagement, and reflection.

4. Training Program

4.1 Roles and Responsibilities

Roles	**Responsibilities**
Researcher	The researcher will facilitate the faculty training and presentations. The researcher will provide a summary that includes a copy of the assessments used to collect the data along with the findings of the study.
Stakeholders	Faculty and school officials will collaborate with colleagues during the training and planning sessions. The training participants will actively engage during the workshops, presentations, and discussion sessions.

4.2 Training Agenda

Schedule

Stage	Training Activity	Evaluation
Day 1	8:00 AM Introduction/Objectives 8:30 – 9:30 AM Study Findings Presentation 9:45 – 11:00 AM Academic Coaching Presentation 1:00 – 3:00 PM Roundtables/Application	Ticket at the door questions/ summary
Day 2	8:00 AM Introduction 8:30 – 9:30 AM Discussion/Student Engagement 9:45 – 11:00 AM Roundtables/Academic Coaching Evaluation 1:00 – 3:00 PM Lesson Plan Development/Planning	Lesson Plans
Day 3	8:00 AM Introduction/Objectives 8:30 – 9:30 AM Faculty will share lesson plans 9:45 – 11:00 AM Faculty will discuss lesson plans 1:00 – 3:00 PM Lesson Plan/Planning 3:00 – 4:00 PM Discussion with academic officials	Faculty Survey

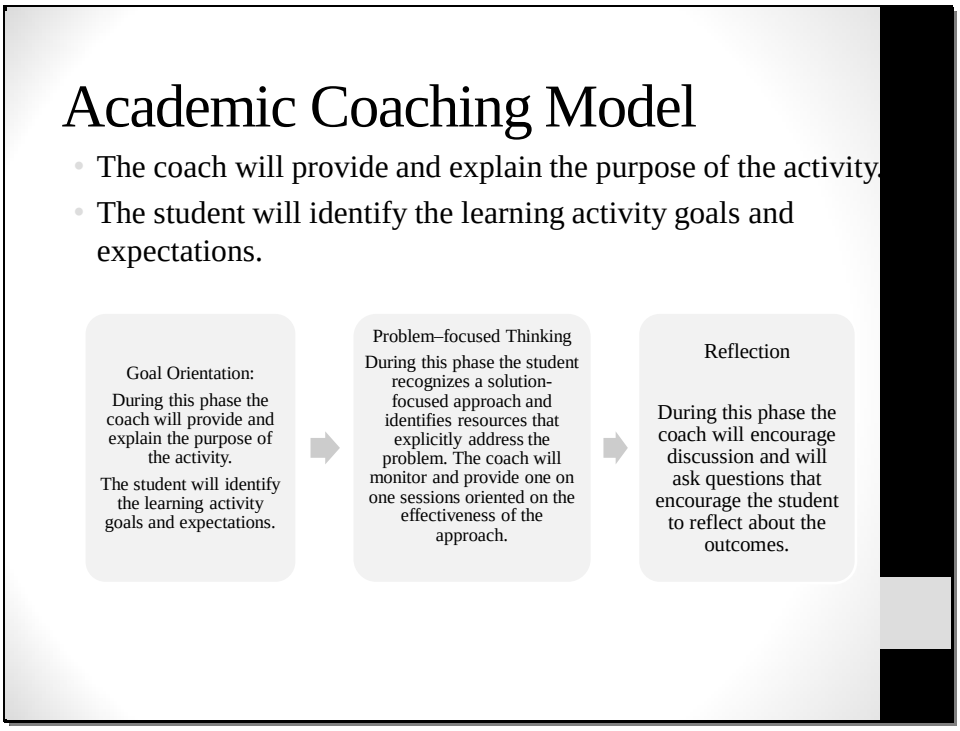

Academic Coaching Professional Development
Jainie Miranda
Walden University

Slide 2

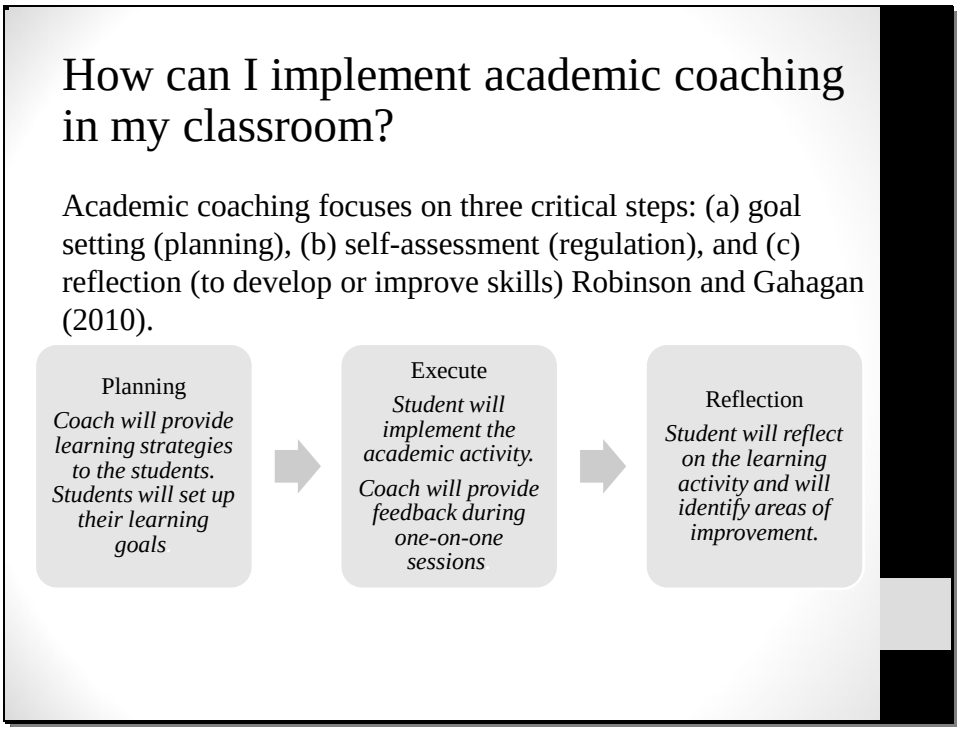
What is academic coaching

- Proactive relationship between teacher and students that is focused on student learning outcomes (Barkley, 2011).
- *Coaching.*
  - The process that involves supporting, helping, and encouraging less experienced learners to improve their skills (Melendez, 2007).

Slide 3


Academic Coaching Model
The coach will provide and explain the purpose of the activity.
The student will identify the learning activity goals and expectations.
Goal Orientation:
During this phase the coach will provide and explain the purpose of the activity.
The student will identify the learning activity goals and expectations.
Problem–focused Thinking
During this phase the student recognizes a solution-focused approach and identifies resources that explicitly address the problem. The coach will monitor and provide one on one sessions oriented on the effectiveness of the approach.
Reflection
During this phase the coach will encourage discussion and will ask questions that encourage the student to reflect about the outcomes.

Slide 4

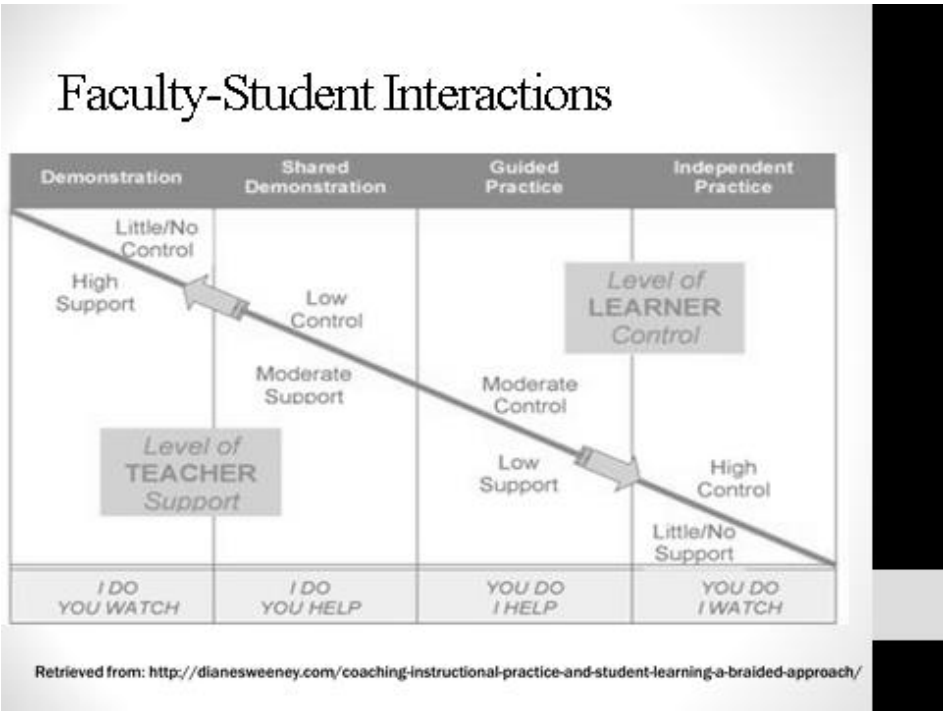

How can I implement academic coaching in my classroom?
Academic coaching focuses on three critical steps: (a) goal setting (planning), (b) self-assessment (regulation), and (c) reflection (to develop or improve skills) Robinson and Gahagan (2010).
Planning
Coach will provide learning strategies to the students. Students will set up their learning goals
Execute
Student will implement the academic activity.
Coach will provide feedback during one-on-one sessions
Reflection
Student will reflect on the learning activity and will identify areas of improvement.

Slide 5

What is the benefit of implementing academic coaching in my course?

- Academic coaches promote self-regulation, academic ownership and encourage reflection.
- Effective coaching promotes collaboration and reflection.
- Promotes learning and reciprocal accountability (self-regulation).

Slide 9


Faculty-Student Interactions
Demonstration
Shared Demonstration
Guided Practice
Independent Practice
Little/No Control
High Support
Low Control
Moderate Support
Moderate Control
Low Support
High Control
Little/No Support
Level of TEACHER Support
Level of LEARNER Control
I DO YOU WATCH
I DO YOU HELP
YOU DO I HELP
YOU DO I WATCH
Retrieved from: http://dianesweeney.com/coaching-instructional-practice-and-student-learning-a-braided-approach/

Slide 10

How does academic coaching enhance learning?

- Instructional Coaching
- Explain
- Model (You watch me)
- Observe (I watch you)
- Explore (Collaborative Exploration of Data)
- Support
- Reflect

Slide 11

Appendix B: Course Syllabus

ENGLISH DEPARTMENT

COURSE SYLLABUS

I. Title:	Basic English II
II. Codification:	INGL 3102
III. Number of Credits/hours:	3 credits/4 contact hours, per week/60 hrs per semester
IV. Prerequisites:	Successful completion of English 3101
V. General Description:	Continuation of INGL-3101.

VI. Course Objectives:

Upon completion of the course, students will:

1. Demonstrate communication ability through accurate usage of basic English grammar skills.

2. Develop oral proficiency by listening and speaking English in task based related instructions and through interpolating language and personal experiences.

3. Integrate and demonstrate accurate English writing skills for efficient written communication in English and across the curriculum.

4. Assess and apply critical thinking skills to a variety of context such as readings and media materials on the internet, textbook, and library resources.

VII. Content

<u>Grammar Component</u>:

The following grammatical structures will be emphasized:

- Past Continuous Modal Auxiliaries Present Perfect

Degrees of Comparison

Pronouns

-Possessive

-Reflexive

Reading Component:

- Reading selections from a current text supplemented by materials from the internet and media.

Writing Component:

- Production of clear and grammatically correct statements, question, answers, summaries, grammatical exercises, dialogues, and short reports
- Responding adequately to instructions and question. Reacting orally to videos, documentaries short lectures, panel discussion and debates.
- Presenting oral reports about pertinent issues of the time. Oral practicing of targeted vocabulary.

VIII. Instructional Strategies

A. Class activities will include the discussion of reading selections and media information, critical thinking analysis, and vocabulary practice. Asking and responding to oral questions, recalling information and summarizing in their own words.

B. Students will produce logical, coherent and clear sentences, paragraphs, short composition, short reports and written summaries, using the grammatical structure and mechanics of English.

C. Students will engage in library research utilizing technological resources, like the internet and information media, to design and produce oral creative presentations.

D. Students may choose the mode of presentation (preparation of videos, recorded dialogues, recorded monologues, dramatization, panel format, among others) for their oral projects.

E. Students are encouraged to view, read and discuss information about their own culture, tradition and values, analyze social situation and present possible problem solving solutions.

IX. Learning Resources

The teacher and students will choose from among the following resources to enhance the teaching/learning process.

- CD Player
- Television/DVD Player
- Instructional Videos/Documentaries
- Movies
- Computer/LCD Proyector/Laptop
- Newspapers and Magazines
- Other resources as needed

X. Evaluation

Individual teachers may set evaluation criteria at their own discretion. The following is a model:

A. Exams	35%
B. Quizzes	15%
C. Oral Reports	20%
D. Assignment 15%	
E. Class Work	15%
	100%

XI. Grading System

100-90	A
89-80	B
79-70	C
69-60	D
59-	F

Bibliography

A. Textbook

Broukal, M. (2010). *Grammar: Form & function 3 (*2nd ed). New York: McGraw Hill.

B. References

Azar, S. (2003). *Fundamentals of English grammar* (3rd ed.). New York: Longman Publishing.

Baker-González, J. & Blau, E. (2009). *World of reading 2: A thematic approach to reading comprehension.* New York, Pearson Longman.

Cáceres, A., comp. (2005). *English grammar with readings for 3102 (* 2nd ed.). New York: Thomsom Publishing.

Mayfield, M. (2004). *Thinking for yourself: Developing critical thinking skills through reading and writing*. Boston: Thomson Wadsworth Publishing.

Murphy, R. and Amalzer, W. (2002). *Basic grammar in use* (2nd ed.) Cambridge: Cambridge University Press.

Schmitt, D. & Schmitt, N. (2005). *Focus on vocabulary*. New York: Longman Publishing.

UnsTworth, L. (2001). *Teaching multiliteracies across the curriculum.* New York: Open University Press/McGraw Hill.

C. Online Resources:

http://www.eslgo.com

http://www.esl-lounge.com

http://www.esl.about.com

Revised by Dr. Aida Cáceres Hernández

February, 2006

This institution complies with ADA (Americans with Disabilities Act) and Law 51 (Integrated Educational Resources for Persons with Disabilities) to guarantee equal access to education and services. Students with disabilities should inform the professor of the course about special needs and/or reasonable accommodations for the course on the student information card filled out during the first week of classes. He/she should also visit the Services for Students with Disabilities Office. **Strict confidentiality will be maintained.**

Appendix C: Instructor Behavior Checklist (Spanish)

FORMULARIO PARA LA VISITA AL SALÓN DE CLASES

Nombre_____Departamento_____

Curso_____Sección_____Semestre_____Año Académico_____

Número de la visita al profesor_____

Instrucciones al evaluador:

Observe que se ha incluido una columna para comentarios al lado de cada renglón de respuestas para los items. Se considera altamente necesario que se anoten allí todos los detalles que sirvan para explicar las respuestas suyas en cada caso. Esta es la columna que sirve para orientar al profesor evaluado y es en este sentido que debe utilizarse.

Al final del cuestionario se provee suficiente espacio para que vierta sus comentarios sobre los aspectos positivos de la clase, sugerencias al profesor y observaciones sobre cualquier situación que pueda haber afectado el resultado de la visita.

I. Conducta Docente Observada	**Si**	**No**	**N/A**	**Comentarios**
Área A. Dominio de la materia, claridad y organización.				
Establece los objetivos a ser alcanzados en la clase.				
Revisa los trabajos asignados previamente, aclara dudas y corrige los errores cometidos.				
Encausa la discusión hacia la consecución de los objetivos de la clase.				
Sigue una secuencia adecuada al presentar el material.				
Dirige la explicación y/o discusión para complementar, aclarar y enriquecer la temática del texto o las lecturas.				
Da énfasis a las ideas fundamentales correspondientes al material bajo estudio.				
Estimula en el estudiante el juicio crítico y el análisis por medio de preguntas y/o ejemplos acerca de las situaciones que se discuten.				
Hace referencias a clases anteriores y/o futuras relacionadas con el tema en discusión.				

Visita al Salón de Clases Página 2

Conducta Docente Observada	Si	No	N/A	Comentarios
Corrige errores y aclara conceptos.				
Provee ejercicios variados para continuar el desarrollo de las destrezas correspondientes al material bajo estudio cuando es necesario.				
Resume los conceptos que ya ha explicado durante la clase.				
Expone más de una teoría o puntos de vista referente al material que explica cuando tal diversidad existe.				
Area B. Comunicación Estudiante-Profesor				
Estimula la participación activa de los estudiantes.				
Reconoce los esfuerzos y la participación de los estudiantes en la clase.				
Mantiene un clima de respeto mutuo durante el desarrollo de la clase.				
Se expresa con propiedad, claridad y corrección.				
Acepta y/o usa las ideas o sugerencias de los estudiantes.				
Formula preguntas dirigidas al desarrollo del análisis, síntesis y evaluación de las situaciones.				
Respeta el derecho de los estudiantes a disentir de las opiniones vertidas en clase.				

Instructor Behavior Checklist (English)

CLASSROOM VISIT EVALUATION

Name_____Departament_____

Course_____Section_____Semester_____Acadrmic year_____

Visit number for the instructor_____

Instructions for the Evaluator

At the end the evaluation a column for comments has been included next to each line of responses to the items. It is highly necessary to write down all the details that will help to explain your answers in each question. This column serves to guide the instructor and the evaluator.

The questionnaire provides enough space to write your comments about the positive aspects of the class, suggestions and comments to the professor about any situation that might have affected the outcome of the visit.

I. Instructor Behavior Observed	Yes	No	N/A	Comments
Section A. Knowledge about the subject, clarity and organization.				
Establishes course objectives.				
Revises assigned work, clarifies questions and corrects mistakes.				
Directs class discussion towards the achievement of the course objectives.				
Follows a proper sequence to present the material.				
Directs discussion, clarifies and enriches the course readings and topics.				
Emphasizes the key thoughts related to the materials under study.				
Stimulates students' critical thinking and analysis by asking questions or examples from the class discussion.				
Makes reference to previous or future class topics.				

Classroom Visit Page 2

Instructor Behavior Observed	Yes	No	N / A	Comments
Corrects mistakes and clarifies concepts.				
Provides a variety of exercises that promote skills development, when needed.				
Summarizes and explains concepts during the class.				
Shows different points of view related to the concepts explained in class.				
Section B. Communication Student-Professor				
Promotes active participation.				
Recognizes students' efforts and participation.				
Maintains a climate of mutual respect during the development of the class.				
Expresses with clarity.				
Accepts ideas or suggestions provided by the students.				
Asks questions focused on the development of analysis and evaluation of situations.				
Respects the students' right to have different opinions in class.				

Appendix D: Data Collection Coordination

Letter of Cooperation from Community Research Partner

English Department

11/07/13

Dear Jainie Miranda,

Based on my review of your research proposal, I give permission for you to conduct the study entitled *Academic Coaching to Increase Student Learning* within a university in Puerto Rico at Humacao, English Department. As part of this study, I authorize Jainie Miranda to implement academic coaching in the Basic English classes, invite students enrolled in the Basic English courses to participate in academic coaching sessions and collaborate with faculty. Additionally, I authorize you to utilize the National Survey for Student Engagement and ACT Class Engage to measure student academic engagement during the coaching sessions. The ACT Engage, National Survey for Student Engagement, and course evaluations will be administrated by the school during the course. Data collected from the ACT Engage, National Survey for Student Engagement, and course evaluation will be release to Jainie Miranda, as part of our collaboration agreement.

As part of the collaboration, you will be sharing un-identified data (after removing student identifiers) with participating faculty and administrative faculty from the English Department. During the academic coaching sessions, faculty will oversee the implementation and use of academic coaching strategies in the classroom.

We understand that our organization's responsibilities include: providing access to the courses that will be participating in the research and allow faculty to participate in the academic coaching sessions and surveys (National survey for Student Engagement and ACT Class engage). We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Sincerely,

Dra. Nilsa Lugo

English Department Program Director

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verify any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).

Appendix E: Classroom Survey of Student Engagement Agreement

NSSE
national survey of
student engagement

The College Student Report
Item Usage Agreement

The National Survey of Student Engagement's (NSSE) survey instrument, *The College Student Report*, is copyrighted and the copyright is owned by The Trustees of Indiana University. Any use of survey items contained within *The College Student Report* is prohibited without prior written permission from Indiana University. When fully executed, this Agreement constitutes written permission from the University, on behalf of NSSE, for the party named below to use an item or items from *The College Student Report* in accordance with the terms of this Agreement.

In consideration of the mutual promises below, the parties hereby agree as follows:

1) The University hereby grants **Jainie Miranda** ("Licensee") a nonexclusive, worldwide, irrevocable license to use, reproduce, distribute, publicly display and perform, and create derivatives from, in all media now known or hereafter developed, the item(s) listed in the proposal attached as Exhibit A, solely for the purpose of including such item(s) in the survey activity described in Exhibit A, which is incorporated by reference into this Agreement. This license does not include any right to sublicense others. This license only covers the survey instrument, time frame, population, and other terms described in Exhibit A. Any different or repeated use of the item(s) shall require an additional license.

2) In exchange for the license granted in section 1, Licensee agrees:

   a) there will be no licensing fee to use NSSE items for the purposes described in Exhibit A;

   b) to provide to NSSE frequency distributions and means on the licensed item(s);

   c) on the survey form itself, and in all publications or presentations of data obtained through the licensed item(s), to include the following citation: "Items 1-28 used with permission from *The College Student Report,* National Survey of Student Engagement, Copyright 2001-14 The Trustees of Indiana University";

   d) to provide to NSSE a copy of any derivatives of, or alterations to, the item(s) that Licensee makes for the purpose of Licensee's survey ("modified items"), for NSSE's own nonprofit, educational purposes, which shall include the use of the modified items in *The College Student Report* or any other survey instruments, reports, or other educational or professional materials that NSSE may develop or use in the future. Licensee hereby grants the University a nonexclusive, worldwide, irrevocable, royalty-free license to use, reproduce, distribute, create derivatives from, and publicly display and perform the modified items, in any media now known or hereafter developed; and

   e) to provide to NSSE, for its own nonprofit, educational purposes, a copy of all reports, presentations, analyses, or other materials in which the item(s) licensed under this

Indiana University Center for Postsecondary Research
1900 East Tenth Street • Eigenmann Hall, Suite 419 • Bloomington, IN 47406
Phone: (812) 856-5824 • Fax: (812) 856-5150 • E-mail: nsse@indiana.edu • Web Address: www.nsse.iub.edu
Last revised June 2006

NSSE
national survey of
student engagement

Agreement, or modified items, and any responses to licensed or modified items, are presented, discussed, or analyzed. NSSE shall not make public any data it obtains under this subsection in a manner that identifies specific institutions or individuals, except with the consent of the Licensee.

3) This Agreement expires on September 30, 2014.

The undersigned hereby consent to the terms of this Agreement and confirm that they have all necessary authority to enter into this Agreement.

For The Trustees of Indiana University:

Alex McCormick — 9/19/2013
Alexander C. McCormick — Date
Director
National Survey of Student Engagement

For Licensee:

Jainie D. Miranda — 9/27/13
Jainie Miranda — Date
Doctoral Candidate
Walden University

D. Williams — 9/30/13
Dr. Delmus Williams — Date
Dissertation Advisor
Walden University

Indiana University Center for Postsecondary Research
1900 East Tenth Street • Eigenmann Hall, Suite 419 • Bloomington, IN 47406
Phone: (812) 856-5824 • Fax: (812) 856-5150 • E-mail: nsse@indiana.edu • Web Address: www.nsse.iub.edu
Last revised June 2006

Appendix F: CLASSE

CLASSE Student
Classroom Survey of Student Engagement*

This survey includes items that ask about your participation in INGL 3102 and about educational practices that occur in this class. Your honest and straightforward responses to these questions will help us identify targets for improvements and enable us to provide an even higher quality academic experience.

PART I: ENGAGEMENT ACTIVITIES

So far this semester, how often have you done each of the following in your INGL 3102 class?	Never	1 or 2 times	3 to 5 times	More than 5 times
1. Asked questions during your INGL 3102 class	☐	☐	☐	☐
2. Contributed to a class discussion that occurred during your [Course XYZ] class	☐	☐	☐	☐
3. Prepared two or more drafts of a paper or assignment in your INGL 3102 class before turning it in	☐	☐	☐	☐
4. Worked on a paper or a project in your INGL 3102 class that required integrating ideas or information from various sources	☐	☐	☐	☐
5. Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments in your INGL 3102 class	☐	☐	☐	☐
6. Came to your INGL 3102 class without having completed readings or assignments	☐	☐	☐	☐
7. Worked with other students on projects during your INGL 3102 class	☐	☐	☐	☐
8. Worked with classmates outside of your INGL 3102 class to prepare class assignments	☐	☐	☐	☐
9. Put together ideas or concepts from different courses when completing assignments or during class discussions in your INGL 3102 class	☐	☐	☐	☐
10. Tutored or taught other students in your INGL 3102 class	☐	☐	☐	☐
11. Used an electronic medium (list-serv, chat group, Internet, instant messaging, etc.) to discuss or complete an assignment in your INGL 3102 class	☐	☐	☐	☐
12. Used email to communicate with the instructor of your INGL 3102 class	☐	☐	☐	☐
13. Discussed grades or assignments with the instructor of your INGL 3102 class	☐	☐	☐	☐

14. Discussed ideas from your INGL 3102 with others outside of class (students, family members, coworkers, etc.) ☐ ☐ ☐ ☐

15. Made a class presentation in your INGL 3102 class
☐ Never ☐ Once ☐ 2 times ☐ More than 2 times

16. Participated in a community-based project (e.g., service learning) as part of your INGL 3102 class
☐ Never ☐ Once ☐ 2 times ☐ More than 2 times

17. Discussed ideas from your readings or classes with your INGL 3102 instructor outside of class
☐ Never ☐ Once ☐ 2 times ☐ More than 2 times

18. Received prompt written or oral feedback on your academic performance from your INGL 3102 instructor
☐ Never/Rarely ☐ Sometimes ☐ Often ☐ Very Often

19. Worked harder than you thought you could to meet your INGL 3102 instructor's standards or expectations
☐ Never/Rarely ☐ Sometimes ☐ Often ☐ Very Often

PART II: COGNITIVE SKILLS

So far this semester, how much of your coursework in your INGL 3102 class emphasized the following mental activities?	Very Little ▼	Some ▼	Quite a Bit ▼	Very Much ▼
20. Memorizing facts, ideas, or methods from your courses and readings so you can repeat them in pretty much the same form	☐	☐	☐	☐
21. Analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components	☐	☐	☐	☐
22. Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships	☐	☐	☐	☐
23. Making Judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions	☐	☐	☐	☐
24. Applying theories or concepts to practical problems or in new situations	☐	☐	☐	☐

PART III: OTHER EDUCATIONAL PRACTICES

So far this semester

25. How often in your INGL 3102 class have you been required to prepare written papers or reports of more than 5 pages in length?
☐ Never ☐ Once ☐ 2 times ☐ 3 or more times

26. To what extent do the examinations in your INGL 3102 class challenge you to do your best work?
☐ Very little ☐ Some ☐ Quite a bit ☐ Very much

27. In a typical week in your INGL 3102 class, how many homework assignments take you more than one hour each to complete?

□ None □ 1 or 2 □ 3 or 4 □ 5 or more

28. In a typical week, how often do you spend more than 3 hours preparing for your INGL 3102 class (studying, reading, doing homework or lab work, analyzing data, rehearsing, and other academic matters)?

□ Never/Rarely □ Sometimes □ Often □ Very Often

29. How many times have you been absent so far this semester in your INGL 3102 class?

□ None □ 1 - 2 absences □ 3 – 4 absences □ 5 or more absences

30. How frequently do you take notes in your INGL 3102 class?

□ Never/Rarely □ Sometimes □ Often □ Very Often

31. How often do you review your notes prior to the next scheduled meeting in your INGL 3102 class?

□ Never/Rarely □ Sometimes □ Often □ Very Often

32. How often have you participated in a study partnership with a classmate in your INGL 3102 class to prepare for a quiz or a test?

□ Never □ Once □ 2 times □ 3 or more times

33. How often have you attended a review session or help session to enhance your understanding of the content of your INGL 3102 class?

□ Never □ Once □ 2 times □ 3 or more times

34. How interested are you in learning the INGL 3102 course material?

□ Very uninterested □ Uninterested □ Interested □ Very Interested

PART IV: CLASS ATMOSPHERE

So far this semester, what are your general impressions of the INGL 3102 class atmosphere?

35. How comfortable are you talking with the instructor of your INGL 3102 class?

□ Uncomfortable □ Somewhat Comfortable □ Comfortable □ Very Comfortable

36. How much do you enjoy group work with your classmates in your INGL 3102 class?

□ Very Little □ Some □ Quite a Bit □ Very Much

37. How difficult is the course material in your INGL 3102 class?

□ Easy □ Somewhat Difficult □ Difficult □ Very Difficult

38. How easy is it to follow the lectures in your INGL 3102 class?

□ Difficult □ Somewhat Easy □ Easy □ Very Easy

Please enter your student identification number here:_____
If you do not know your ID number, please print your first and last name.

We ask you to identify yourself by student identification number in order to permit us to relate your responses to the particular educational experience you've had at the University. Please know that your individual responses will remain confidential. No individual responses will ever be identified in any report, shared with your faculty instructor, or in any other way made available. As a student-centered university, we know we will make the best decisions to improve the educational experience when those decisions are informed by student feedback. Thank you for helping us attain this goal.

Thank you for taking the time to complete this survey

* Items 1-28 used with permission from *The College Student Report*, National Survey of Student Engagement, Copyright 2001-13 The Trustees of Indiana University.

Appendix G: IRB Approval

Dear Ms. Miranda,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "Academic Coaching to Increase Student Learning."

Your approval # is 11-25-13-0173283. You will need to reference this number in your doctoral study and in any future funding or publication submissions.

Your IRB approval expires on November 24, 2014. One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application document that has been submitted as of this date. This includes maintaining your current status with a university. Your IRB approval is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, your IRB approval is suspended. Absolutely NO participant recruitment or data collection may occur while a student is not actively enrolled.

If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 1 week of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and a university will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB application, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden web site or by emailing irb@waldenu.edu: http://researchcenter.waldenu.edu/Application-and-General-Materials.htm

Researchers are expected to keep detailed records of their research activities (i.e., participant log sheets, completed consent forms, etc.) for the same period of time they

retain the original data. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Please note that this letter indicates that the IRB has approved your research. You may not begin the research phase of your doctoral study, however, until you have received the **Notification of Approval to Conduct Research** e-mail. Once you have received this notification by email, you may begin your data collection.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZegKlmdiQ_3d_3d

Appendix-H: NIH Certificate

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Jainie Miranda** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 06/27/2012

Certification Number: 420339