ADDRESSING PERSISTENCE OF COMMUNITY COLLEGE STUDENTS TO
INCREASE TRANSFER AND GRADUATION RATES

by
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Abstract

Community college students are often identified by the support and resources that they

lack (i.e., academic preparation for college, parental support at home, and financial

resources). Faculty acting as institutional agents have been reported to provide emotional

and practical curricular support to help students navigate the complexities of transfer.

This mixed-methods study of first-time-in-college business students at a suburban

community college assessed whether connecting students with full-time faculty

institutional agents and employing the LMS as an information repository with program

pathways, transfer institution requirements, and faculty contacts, would affect persistence

and progress toward transfer and degree completion. Faculty were trained in the role of

an institutional agent and then tracked their meetings with students. Fall-to-spring

persistence, completion of developmental education, course selection based on program

pathways, GPA, and achievement of credit milestones were compared for an active

treatment cohort to the previous year's treatment-naïve cohort. The faculty participants

leveraged the relationships they developed with students based on coursework and

engaged in advising conversations about transfer and career goals. However, first year

students did not frequently avail themselves of meetings with faculty participants. The

routine use of the LMS offers promising opportunities to support advising efforts.

Although there was no association between cohort and fall-to-spring persistence, there

was a positive association between cohort and developmental education completion.

There was a trend toward following program pathways by taking the introductory

business and economics courses in the first year and an association between the treatment

cohort and delaying the accounting course. Although the chi-square test showed no

association between cohort and earning 30 total credits or 30 college-level credits, there were trends in favor of the active treatment group. The one-tailed *t*-test indicated a significant difference between groups in favor of the treatment group for mean number of total credits completed and college-only credits completed. More study is necessary to determine how students can be encouraged to develop relationships with faculty from their first semester at community college. Following the active treatment cohort will reveal if their first year persistence yields higher rates of transfer and graduation.

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iv

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Table of Contents

List of Tables

List of Figures

Executive Summary

Community colleges offer a relatively inexpensive route for all students, regardless of academic ability, to enter higher education. Community college students are often academically underprepared (Bailey, 2012; Fike & Fike, 2008), financially under-resourced (Dowd & Coury, 2006; Mendoza, Mendez, & Malcolm, 2009), and more often first generation college students without knowledgeable support at home of college processes including registration, financial aid, and transfer (Dowd, Pak, & Bensimon, 2013; Goldrick-Rab, 2010, Lareau, 2011). As Melinda Gates said in her 2010 address to the American Association of Community Colleges, "Community colleges led the way on college access. Now it is time to lead the way on college completion" (Gates, 2010, para. 21). The goal of Maryland's College and Career Readiness and College Completion Act of 2013 (2012) is "that all degree-seeking students enrolled in a public community college earn an associate's [sic] degree before leaving the community college or transferring to a public senior higher education institution" (p. 6). The gap between the legislative goal and the current situation is significant. Nationally, the average graduation rate for community colleges is approximately 20% (Bailey, 2012; Martin, Galentino, & Townsend, 2014).

There are few barriers to registering for courses or opting for a program of study in the open-access community college environment, which may lead to students taking unnecessary courses or those not covered by financial aid (Goldrick-Rab, 2010). Among the many ways community college students differ from their four-year university counterparts is that they tend not to seek student support services or integrate themselves in campus life (Martin et al., 2014). Thus, despite the many institutional supports

1

available, community college students often make decisions about curriculum and transfer without professional advice. Taken together, these factors lead to the problem of low graduation and transfer rates for community college students.

Theoretical Framework

The literature demonstrates the importance of faculty engagement with students to achieve the goals of transfer and/or graduation (Dowd et al., 2013; Nitecki, 2011; Tatum et al., 2006). Halpin (1990) built upon work by Tinto (1975) studying first time, full-time freshman at a community college to determine the impact of social and academic integration on persistence and retention. Most of the variance between those students who persisted, were dismissed, or withdrew from the community college was explained by factors that prominently included faculty: concern for teaching, academic and intellectual development, and faculty-student interaction. Institutional agents are individuals who have the authority and status to provide resources to students or connect students to resources (Stanton-Salazar, 2011). Faculty, particularly full-time faculty, have this status on campus and the connections to other professionals at the institution that may facilitate degree completion, graduation, and/or transfer for students. Dowd, Pak, and Bensimon (2013) examined the role of institutional agents to support students. The faculty were credited with being inspirational and supportive of students ultimately providing the positive reinforcement they needed to graduate and/or transfer.

Research Questions

Students were provided information about program pathways, transfer schools, and discipline-specific faculty from the outset of their first semester through the first year. It was hypothesized that engagement with the information and trained faculty would

encourage persistence and progress toward earning an associate degree. The research questions examined (a) the experience and engagement of faculty and students with the intervention and (b) the comparison of the 2015 cohort with a treatment-naïve 2014 comparison group on accepted measures of student success (i.e., persistence, completion of developmental education, following a pathway to completing an associate degree, grade point average, and reaching credit milestones).

Method

Consistent with an emergent mixed methods approach (Creswell & Plano Clark, 2011), the procedure included capturing both qualitative and quantitative data. This approach was used to add narrative depth to the quantitative results and objectivity to the qualitative results. Fidelity of implementation and proximal outcomes were evaluated.

Faculty participants were six full-time faculty, including the principle investigator, in the business division at a suburban community college. Each of the faculty participants was directly involved in the management of seven programs. Faculty participated in a professional development program that provided information about the demographic characteristics of the students, transfer requirements, the role of institutional agents, and an opportunity to role-play conversations.

Student participants included an active treatment group, the cohort of first-time-in-college students registered for one of seven business programs who entered the community college following a May high school graduation. Measures of student success for this group of student participants were compared to a treatment-naïve group from the previous fall, also first-time-in-college students, enrolling in the same seven business programs. Students in the active treatment cohort and faculty were enrolled in a learning

management site that contained the program pathways, transfer requirements, online discussions, announcements of transfer events, and faculty contact information. Data were collected and analyzed from faculty and student interviews, the community college student database, and the learning management system database.

Findings

The faculty leveraged the relationships they developed with students based on coursework to engage in advising conversations about transfer and career goals. Faculty used the knowledge provided about program pathways and transfer schools to act as institutional agents, connecting students to resources as necessary. However, the first-year students in the treatment cohort did not frequently avail themselves of meetings with full-time faculty who offered assistance, nor did faculty emphasize the benefits of degree completion prior to transfer. Students in the intervention accessed the learning management site, which housed the program pathways and transfer school requirements, often ($M = 15.3$ pages, $SD = 10.3$) and last accessed the site in May, when registration for summer and fall courses became available.

Although there was no association between the cohort and persistence from the fall to spring semesters, there was a positive association between cohort and developmental education completion ($p < .05$) and a trend in the data toward a higher completion rate for remedial courses. Adherence to program pathways, which stipulated the timing of the business foundation courses ACCT-111 Principles of Accounting, BMGT-100 Introduction to Business, and ECON-101 Macroeconomics was investigated. There was a trend toward following the pathway prescribed by taking the introductory business and economics courses in the first year and an association between the treatment

cohort and delaying the accounting course. The *t*-test for two independent samples showed there was no statistical difference in mean cumulative GPA. There was a trend pointing toward more students in the 2015 cohort completing half of the credits necessary for an associate degree than in the 2014 cohort. This marker increases the rate of degree completion by "a factor of 15.5" (Calcagno et al., 2007, p. 794). Given that nearly 80% of each cohort required remediation in mathematics, reading, and/or writing, progress toward accumulating credits including developmental courses was measured. Although the chi-square test showed no association between cohort and earning 30 total credits or 30 college-level credits, there was a trend in favor of the active treatment group for reaching these milestones. The one-tailed *t*-test indicated a significant difference between groups in favor of the treatment group for mean number of total credits completed and college-level only credits completed. In summary, the trends in the data indicated a positive outcome for students in the active treatment group on measures of adherence to the program pathways, completion of developmental education, and the achievement of credit milestones.

The challenge of increasing the completion rates of community college students so that they persist to transfer and graduation requires a multi-pronged approach. Faculty and technology managed by faculty (i.e., the learning management system) offer promising opportunities to support advising efforts. More faculty knowledge of the value of an associate degree was recommended to change the business division's culture to one that expects students will complete their associate degree and continue to pursue a bachelor's degree. More study is necessary to determine how students can be encouraged to develop relationships with faculty who can provide curricular and moral support from

their first semester at community college. More follow-up for the active treatment cohort will determine if their first-year persistence yields higher rates of transfer and graduation.

Chapter 1

Introduction of the Problem of Practice

Within the spectrum of higher education choices, community colleges are a relatively inexpensive option open to all students, including the academically underprepared. Community colleges thus serve a population considerably different from traditional four-year universities. This chapter illuminates the challenges facing community colleges and discusses the purpose of community colleges, student profiles, and persistence factors ultimately leading to university transfer to earn a baccalaureate degree and/or graduation with an associate degree.

A profile of community college students includes first generation students (Goldrick-Rab, 2010) who are academically underprepared (Fike & Fike, 2008) and more likely to have responsibility to both families and jobs (Crosta, 2014; Goldrick-Rab, 2010). Juggling multiple responsibilities means students attend college erratically varying between full-time and part-time status as job, family, and finances allow and thus take longer to achieve credentials (Crosta, 2014; Goldrick-Rab, 2010). The challenge of persisting and completing a degree in higher education is daunting. First generation college students, those whose parents did not go beyond a high school education, are more frequently found in community colleges versus four-year institutions, 38% and 25%, respectively (Goldrick-Rab, 2010). These first generation students do not have parental support to help them navigate the system, are less likely to have academic insight or the ability to advocate for themselves (Kolenovic, Linderman, & Karp, 2013; Lareau, 2011).

Community colleges offer pathways to baccalaureate degrees; however, students must navigate complex transfer processes and formal articulation agreements with four-year universities (Wang, 2012). Transfer credit may be disallowed for technical, remedial, vocational, and internship coursework (Hagedorn, Cypers, & Lester, 2008; University of Maryland, 2014) and any, or all, of these types of courses may be on community college students' transcripts as they explore career options and develop college-level skills. Specific course requirements of receiving institutions vary. The competing restrictions of receiving institutions and flexibility of community college options create a confusing matrix of course and program decisions (Hagedorn et al., 2008). While it should seem intuitive that community college and transfer university requirements align, community colleges bear the burden of advising students who are often unsure of their ultimate goals and unaware of transfer requirements that vary by institution and program of study. Students may not know where they wish to pursue their baccalaureate degree and may inadvertently make course and program decisions that limit their options.

Community colleges have come under increasing scrutiny as the federal government and philanthropic organizations have turned to community college admission and completion to address the achievement gap (Bailey, 2012). As Melinda Gates said in her 2010 address to the American Association of Community Colleges, "Community colleges led the way on college access. Now it is time to lead the way on college completion" (Gates, 2010, para. 21). Among the states leading the way toward achieving higher rates of graduation, Maryland has crafted legislation designed to spur increases in transfer and graduation. The goal of Maryland's College and Career Readiness and

College Completion Act of 2013 (2012) is "that all degree-seeking students enrolled in a public community college earn an associate's [*sic*] degree before leaving the community college or transferring to a public senior higher education institution" (p. 6). The gap between the legislative goal and the current situation is significant. Nationally, the average graduation rate for community colleges is approximately 20% (Bailey, 2012; Martin, Galentino, & Townsend, 2014). Data from the 2011 cohort of first time, full-time degree seeking students indicate the Howard Community College graduation/completion rate was 15.0% and the transfer rate was 13.5% (OPROD, 2015), both below the national average.

Problem of Practice

The challenges facing community college students as they persist to achieve a baccalaureate degree by upward transfer and/or graduation with an associate degree are often too simply identified as being underprepared and financially under-resourced. Community college students face many obstacles to persistence that impede their ability to earn a degree and transfer including being academically underprepared (Bailey, 2012; Fike & Fike, 2008), financially under-resourced (Dowd & Coury, 2006; Mendoza, Mendez, & Malcolm, 2009), and more often first generation college students without knowledgeable support at home of college processes including registration, financial aid, and transfer (Dowd, Pak, & Bensimon, 2013; Goldrick-Rab, 2010, Lareau, 2011). Further, there are few barriers to registering for courses or opting for a program of study in the open-access community college environment, which may lead to students taking unnecessary courses or those not covered by financial aid (Goldrick-Rab, 2010). Among the many ways community college students differ from their four-year university

counterparts is that they tend not to seek student support services or integrate themselves in campus life (Martin et al., 2014). Thus, despite the many institutional supports available, community college students often make decisions about curriculum and transfer without professional advice. Taken together, these factors lead to the problem of low graduation and transfer rates for community college students.

Profiles of Community College Students

Community college students are a heterogeneous group. Demographic descriptions include traditional college students moving directly from high school into college to displaced workers returning to the classroom. Consistently the literature identifies a profile of students who are busy. In contrast to typical university students who live on campus and are generally absolved of home responsibilities, community college students juggle school, jobs, and family caretaker responsibilities simultaneously (Crosta, 2014; Goldrick-Rab, 2010).

Most community college students attend school part-time (Fike & Fike, 2008), indeed only 31% of community college are "exclusively full-time" (Goldrick-Rab, 2010, p. 453). Unlike their four-year university counterparts, community college students often do not assume a traditional pattern of taking a full load of daytime classes during major semesters so that they can complete the two-year associate degree in four semesters (Crosta, 2014). Crosta (2014) examined the persistence, transfer, and graduation rates among nearly 15,000 students enrolled in five community colleges from a single state and followed them for a period of five or six years, depending on the cohort. Data revealed six enrollment patterns with varying degrees of completion, although three patterns stand out as achieving transfer and/or graduation. Described as *Early Attachers*, students in this

group exhibited high intensity enrollment, earning credit consistently although they switched from full-time to part-time status. Among the enrollment patterns, this group showed the highest rate of graduation, 43%. The second most successful group of graduates was the *Late Attachers.* These students differed from the *Early Attachers* because they were more likely to have switched from part-time to full-time status, and 37% graduated within five to six years. *Full-Time Persisters* enrolled consistently but for shorter time frames, were more likely have had a previously unsuccessful college attempt, and although they had relatively low rates of graduation (18%), they transferred to four-year colleges 29% of the time. In summary, *Full-Time Persisters* and *Early Attachers* transferred or graduated at higher rates, 40% and 59%, respectively, and demonstrated "high levels of intensity and consecutive full-time enrollment" (Crosta, 2014, p. 135). Crosta (2014) observed that students who attended continuously and full-time were most likely to succeed. Note, however, that even among the most persistent and highest achievers, the graduation rate of 59% (Crosta, 2014) is still far short of Maryland's goal of all students earning an associate degree (College and Career Readiness and College Completion Act of 2013, 2012).

A constellation of student characteristics that support persistence have been identified. Martin, Galentino, and Townsend (2014) examined motivation and self-empowerment in community college students who graduated. They found that graduates had "(a) clear goals, (b) strong motivation, (c) the ability to manage external demands, and (d) self-empowerment" (p. 229). Overlaying these motivations with Crosta's (2014) evidence illuminates patterns of enrollment and eventual outcomes. For example, a student who graduated, cited in the work by Martin et al. (2014) bears a striking

similarity to a *Full-Time Persister:* the student tried college for three semesters after high school and dropped out to work full-time and returned to college 15 years later to focus on a clear academic goal. Further, graduates manage external demands of work and family, often working one of more jobs while attending full-time (Martin et al., 2014). This speaks to Crosta's (2014) observation that full-time enrollment is critical to completion.

Most interesting from the perspective of potential interventions to assist students in persisting to transfer and/or graduation is the finding that students wanted to solve problems themselves and did not readily access student services (Martin et al., 2014). Students prefer using internet searches and college websites to answer their questions, create schedules, and follow program curricular pathways instead of asking someone for assistance (Martin et al., 2014). Community college students use technology fluently both in their coursework and personal lives and do not engage actively in campus activities (Miller, Pope, & Steinmann, 2005). The many student services programs requiring on-campus appointments are not accessed by community college students who limit their time on campus to classes (Miller et al., 2005) and then travel to address work or home responsibilities. The disinterest in immersion experiences, where life revolves around campus, or in accessing student services are salient points of differentiation between community college and traditional four-year university students. Any intervention to increase rates of transfer and graduation must consider reaching students virtually or in the few places they are on campus to share important program information.

Similar to those who graduate, students who transfer are more likely to be continuously enrolled taking courses that are "designated to open the transfer door"

(Hagedorn et al., 2008, p. 660). Community colleges offer a pathway to baccalaureate degrees; however, students must stay on the path prescribed by complex transfer and articulation agreements in order to earn credit for coursework at the receiving institution (Handel, 2013; Wang, 2012). Miller (2013) demonstrated that institutions attuned to curriculum pathways leading to transfer have higher transfer rates. Indeed, the program itself, with the specific curriculum pathway clearly identified, and, support from dedicated faculty has been shown to increase persistence leading to both transfer and graduation (Jenkins & Cho, 2013; Nitecki, 2011).

Community colleges are open-access institutions where student who are underprepared for college-level coursework can enroll in developmental courses, further differentiating community colleges from their university counterparts with selective acceptance (Fike & Fike, 2008). Bailey (2012) reported that "nearly 60% of recent high school graduates who enter higher education through community colleges" (p.86) required at least one developmental course in reading, writing, or mathematics. Completing an associate degree in two years or four traditional semesters requires students to successfully complete 15 college-level credits per semester. The program pathways reveal the four semester sequence of college-level courses. Students who need significant developmental education are challenged to create a 15-credit course schedule because few course options are available to those not ready for college-level work.

Institutions focused on improving persistence should turn their attention to enrolling students in developmental courses early in their academic experience so students have more course choices and they are prepared to succeed in college-level work (Fike & Fike, 2008). The Maryland legislature has adopted this stance with The

Maryland College and Career Readiness and College Completion Act of 2013 (2012) by stipulating that developmental mathematics and English courses must be attempted early in the college experience, within the "first 24 credit hours" (p. 10). Fike and Fike (2008) reported that the strongest predictors of fall-to-fall retention were successfully completing a developmental reading course, followed by passing a developmental mathematics course. Students who attempted but did not successfully complete developmental mathematics course had higher odds of retention compared to those who did not even attempt developmental mathematics (Fike & Fike, 2008). Examining students who successfully completed the developmental mathematics curriculum, Bahr (2008) found these students transferred at the same rate as those who did not need remediation upon entry to community colleges. Improving the developmental curriculum and using a modular approach addresses some of the challenges (Miller, 2013). More simply, clearly delineating the prerequisite developmental courses necessary to enroll in college-level courses for students' intended programs addresses part of the issue. This will likely allow for the greatest flexibility in course selection and continuous enrollment in light of the many enrollment patterns and heterogeneity of students (Crosta, 2014) and potentially impact financial aid access.

The number of courses students must take and the timeframe over which they take them impacts the availability of financial aid (Mendoza et al., 2009). The number of credits required to maintain financial aid is 12 while the number of credits required to complete a two-year degree in four semesters is 15. Students who take only the minimum number of credits required to receive financial aid will either need to add another semester to their coursework or attend classes year-round to complete their associate

degree in two years. Students receiving financial aid may have access to grants, loans, and work study. The data on persistence and community college students who receive financial aid is mixed. White students with higher grade point averages and higher average incomes (usually because they are dependent upon parents) show the most persistence when they receive financial aid (Dowd & Coury, 2006; Mendoza et al., 2009). However, in the aggregate, financial aid in the form of loans specifically did not increase persistence or graduation (Dowd & Coury, 2006). Students took loans in excess of tuition costs to cover indirect expenses, and Dowd and Coury (2006) postulated "as students assess their aptitude for college work and the prospects for financial return to their educational investment, those who have loans will more quickly become dissatisfied…and withdraw" (p. 53). Further, students who are risk-adverse and view themselves as less likely to gain a degree will be less willing to take loans and persist. The authors suggested that considering student motivation and family support in addition to financial need may shed light on methods to improve retention and degree completion (Dowd & Coury, 2006). Students from families with at least on parent who attended college have greater variety of financial aid information available to them, while first generation college students generally depend upon high school counselors as the single source of financial aid information (Goldrick-Rab, 2010).

The open-access community college system provides an opportunity for students who may not have considered themselves bound for a four-year institution because of performance issues in high school. General education courses including English, mathematics, science, social science, arts and humanities core courses, not specific to an area of specialization, are transferrable to a four-year university. To attend Maryland

15

colleges and universities, students need not submit SAT/ACT scores for consideration once they have accumulated 30 college-level credits (University of Maryland, 2016). That is, they are evaluated for transfer based on their cumulative college grade point average and course experience. Students who complete their two-year associate degree may transfer to a four-year state university, enter as a junior, and are not subject to the course-by-course evaluation of credit earned. These students have a clearer pathway to a baccalaureate degree, earning credit for the completion of their general education and lower-level specialization courses at the community college.

In summary, community college students enter higher education with fewer characteristics that lead to persistence: academic preparation in English and mathematics, financial resources, singular focus on completing an academic program, and knowledgeable family support. As a result, the national three-year average graduation rate for an associate degree is approximately 20% (Bailey, 2012; Martin, Galentino, & Townsend, 2014). Although students who are more academically prepared achieve higher grade point averages, pass courses consistently, and are more likely to transfer (Hagedorn et al., 2008), the community college system itself builds in factors that complicate students' academic experiences. The open-access system designed to allow flexibility and choice lacks cohesive program structure and clear pathways to academic success, transfer, and graduation. Students who do not avail themselves of advising support nor integrate themselves into campus activities often make curricular choices by deciphering information obtained from the internet (Martin et al., 2014).

Conclusion

Despite the many quantifiable challenges facing community college students, among them a lack of academic preparedness, financial resources, and time to devote exclusively to academic work, there are students who are successful. These students persist and transfer to a university to pursue a baccalaureate degree and/or graduate with an associate degree. Students who persist continue to move forward on curriculum paths propelled by their own strong sense of self-concept and self-direction and are supported by faculty and staff (Wang, 2012). Gaining an understanding of the factors that support persistence leading to degree attainment and university transfer will be approached from the perspective of students, faculty, and professional advisors in the next chapter. The needs assessment study examines the current practices of each stakeholder at Howard Community College.

Chapter 2

Needs Assessment Study

The needs assessment study examined the current practices of primary stakeholders in a community college: students, faculty, and professional advisors, in a community college. This needs assessment study was conducted based on the knowledge that some students do persist to transfer and graduate. Instead of focusing on what impedes persistence, this needs assessment study focused on successful students. The purpose was to understand faculty's usual actions and personal motivations to support students. It was conducted also to understand factors successful students' considered critical to their success. Finally, the study captured the experience of a professional advisor who has provided support while working with students directly, and, assisted the institution in managing the formal transfer articulation agreements.

Context of the Study

Turning specifically to the setting for this research, Howard Community College (HCC) is a suburban two-year, Associate of Arts (A.A.) and Associate of Applied Sciences (A.A.S.) degree-granting institution located between Baltimore and Washington. Associate of Arts degrees are intended for students who will transfer to four-year colleges and universities. They meet the general education requirements of a liberal arts degree of the state and the public university system including mathematics, English, social and behavioral science, physical sciences, and the humanities (University of Maryland, n.d.a.; Smith, 2016). Fifty-nine percent of the students within the Business and Computer Systems (BUCO) division were enrolled in A.A. transfer degrees (HCC, 2015a). A.A.S. degrees are intended for students who wish to gain workplace skills and go directly into the job market (HCC, 2016). These programs meet the minimum requirements for general education and liberal arts and more than one half of the credits

are dedicated to developing a specialization in students' chosen field. Forty-one percent of students within the BUCO division were pursuing A.A.S. degrees (HCC, 2015a).

As a typical community college, HCC offers both non-credit and credit-bearing courses. Non-credit courses may lead to certification or count toward professional continuing education units; however, they are not eligible for college-level credit leading to a degree or available for transfer (HCC, 2016a). Credit-bearing courses, by comparison, are associated with a degree program and may be transferred to other community colleges and four-year universities. Each semester, HCC enrolls approximately 10,000 students pursuing credit-bearing courses, primarily Howard County residents (HCC, 2016b). The BUCO division is one of seven divisions at the college and is considered a programmatic division. That is, few courses are part of the general education requirement or taken by non-business majors. There are 16 transfer or career programs housed within the division (Table 2.1).

Table 2.1

Programs and Degrees Conferred by the BUCO Division

Program	Degree Conferred
Accounting	Associate of Arts
Business Administration	Associate of Arts
International Business	Associate of Arts
Business Management	Associate of Applied Science
Computer Science	Associate of Arts
Culinary Management	Associate of Applied Science
Entrepreneurship	Associate of Arts
Entrepreneurship	Associate of Applied Science
General Studies, Business-Technology Emphasis	Associate of Arts
Hospitality Management	Associate of Applied Science

Information Systems Management-Office Systems	Associate of Arts
Information Systems Management-Programming	Associate of Arts
Information Technology	Associate of Arts
Network Security	Associate of Arts
Network Security Administration	Associate of Applied Science
Office Technology	Associate of Applied Science

Note. Adapted from "Business and Computer Systems Division AES Self-Study," by Howard Community College, 2015b. Retrieved from https://myhcc.howardcc.edu/committees/aes/default.aspx

The Transfer and Advising office encourages students to meet with an advisor once per semester to plan for the next semester and prior to withdrawing from courses (HCC, 2016c) yet has no barriers in place to prevent students from acting alone without advising. Students who use the online registration system do not need to see an advisor to select and pay for classes, and the burden of meeting with an advisor is clearly the students' responsibility (HCC, 2016c). Students are not assigned a dedicated professional advisor upon admission unless they are in an honors cohort or other unique group (HCC, 2016c). Thus, most students walk-in for advising, potentially facing extensive wait times and seeing a new advisor each session. Anecdotal conversations and the literature suggest that factors that inconvenience students such as long lines and limited hours inhibit the use of advising services (Hagedorn et al., 2008). Given the technology in place, advising notes are not included in the student file (director of transfer, personal communication, August 8, 2014), which places the onus on students to remember and relate past advising sessions to their current advisor. Students taking credit-bearing courses leading to a degree are surveyed annually to gauge satisfaction with the Transfer and Advising office. Student responses to this survey show that HCC students are generally satisfied with

Admissions and Advising services with 75.7% indicating they are "very satisfied" or "satisfied" with the service (HCC, 2015c, p. 7).

Approximately 60% of students entering HCC require developmental courses in mathematics, reading, and/or writing (OPROD, 2014). Many general education courses require college-level competencies in these subject areas, which limits course choices for students. Virtually no courses within the Business and Computers (BUCO) division, however, have English and mathematic college-level prerequisites in an effort to bolster enrollment. Thus, the division often has academically underprepared students mixed with college-level students in the same classroom. Faculty frequently teach the necessary English and mathematics skills for the class along with program-specific content, which is typical in community college settings (Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013).

The BUCO division exemplifies the problem of practice of low transfer and graduation rates and thus was selected as the target for this needs assessment study. The BUCO division transfer and graduation rates were, 29.6% and 10.3%, respectively for the 2011 cohort (HCC, 2015a), which is the most current data available. Graduation and transfer rates are customarily calculated as 150% of the time necessary to complete a degree, which is three years for an associate degree. Considering the HCC transfer and graduation rates for the 2011 cohort, 13.5% and 15.0%, respectively (OPROD, 2015), both the BUCO and college rates are far short of the stated goal of the Maryland College and Career Readiness and College Completion Act of 2013 (2012) "that all degree-seeking students enrolled in a public community college earn an associate degree before

leaving the community college or transferring to a public senior higher education institution" (p. 6).

This needs assessment study explored the perspectives of division faculty, business students, and advising professionals invested in the support of students at HCC as they persisted to associate degree completion and/or transfer to a four-year university to pursue a baccalaureate degree. These stakeholders revealed a snapshot of the current advising and guidance practices provided to students in the BUCO division at HCC. Faculty within the BUCO division at HCC are trusted by students, seen as available and helpful (HCC, 2015c), and are potentially valuable advisors to students seeking to complete a degree or transfer. Related to assessing BUCO faculty's current activities and students' needs, the following research questions were explored.

RQ1: What activities related to supporting students in persistence, transfer, and graduation are faculty engaging in?

RQ2: What motivates faculty to engage in these activities?

RQ3: What support do students perceive they need and receive related to issues of persistence leading to transfer and/or graduation?

The current role of faculty as advisors, providing recommendations and guidance for course choices and program pathways, was explored from the students' perspective. Students within one semester of transferring and/or graduating provided insight from their point of view about the role of individuals including faculty and professional advisors who supported and guided them at HCC. Students who have sought information from the principal investigator have also informed this needs analysis by providing anecdotal evidence of these experiences with faculty and professional advisors. Finally,

insights from an advising professional were sought to elucidate the perceptions of faculty as support for students from the student services area.

Method

The methodology including participants, measures, and procedures for the needs analysis study are explained in the following sections.

Participants

All full-time faculty from the BUCO division in the spring 2014 semester were invited to participate in this study, and 64.7% ($n = 11$) volunteered to participate. The respondents were predominantly female (63.6%, $n = 7$) and were full-time faculty for four to six years (36.4%, $n = 4$) (Table 2.2). The full-time faculty have both the requisite degrees or professional certifications, and engage in academic and professional activities to support students as they persist academically and professionally.

Table 2.2

Characteristics of Faculty Survey Respondents (n = 11)

Characteristic	n (%)
Gender	
Female	7 (63.3)
Male	4 (36.4)
Years as full-time faculty	
1 year or less	2 (18.2)
2 to 3 years	1 (9.1)
4 to 6 years	4 (36.6)
7 to 10 years	2 (18.2)
11 years or more	2 (18.2)

Students 18 years of age or older intending to graduate and/or transfer from one of the 16 BUCO programs or the General Studies Business/Technology program in the fall 2014 or spring 2015 were invited to be focus group participants. The student participants represented seven programs, and 60% ($n = 12$) completed an A.A. transfer program. The majority of student participants were between the ages of 18 and 25 (85%, $n = 17$), had changed their program of study while at HCC (57.9%, $n = 11$), completed their degree in 3.5 years or less (88.0%, $n = 15$), and had not attended a previous college or university (70%, $n = 14$) (Table 2.3).

Table 2.3

Characteristics of Student Participants in Focus Group (n = 20)

Characteristic	n (%)
Gender	
Female	12 (60.0)
Male	8 (40.0)
Age	
18 - 21	11 (55.0)
22 - 25	6 (30.0)
26 - 30	1 (5.0)
31+	10.0
Associate of Arts (Transfer) Program[a,d]	12 (60.0)
Associate of Applied Science (Career) Program[c,d]	8 (40.0)[b]
Time from enrollment to graduation from Howard Community College[e]	
1-1.5 years	3 (18.0)
2-2.5 years	7

	(41.0)
3-3.5 years	5
	(29.0)
4-4.5 years	1
	(5.8)
5+ years	1
	(5.8)
Attended College/University Prior to Attending Howard Community College	
Yes	6
	(30.0)
No	14
	(70.0)
Changed Program of Study at Howard Community College[d]	
Yes	11
	(57.9)
No	8
	(42.1)
Parents Have College Experience	
Yes	14
	(70.0)
No	4
	(20.0)
Unknown	2
	(10.0)

Note.
[a.] Programs represented: Business Administration, Entrepreneurship, and General Studies Business and Technology.
[b.] One student double majored in Hospitality and Culinary.
[c.] Programs represented: Business Management, Computer Science, Culinary, Hospitality, and Office Technology.
[d.] Missing data from one student.
[e.] Missing data from three students.

Students not intending to transfer or graduate within this timeframe were included in

anecdotal case reports to augment the student perspective. Two students' individual cases

were collected.

The director of the Admissions and Advising Office provided insight in this needs

assessment study. This individual is responsible for articulation agreements with receiving transfer institutions, which involves formalizing transfer agreements between HCC and four-year institutions, and is a member of HCC's Curriculum and Instruction committee, which approves college-wide curricula.

Measures

Three instruments were used to gather data: a survey of faculty, a focus group protocol with students, and a semi-structured interview with an advising professional. A survey was constructed to measure faculty's activities and motivations for supporting and advising students relative to transfer, graduation, and careers. The faculty survey (Appendix A) was based on Packard, Tuladhar, and Lee's (2013) measure of the frequency and length of time activities supporting transfer were discussed in class and in individual meetings with students in a community college to promote transfer into science, technology, engineering, and math (STEM) fields. The survey consisted of demographic items including gender and number of years as full-time faculty as well as items that asked respondents to indicate activities in which they engage with individual students, activities and discussions in the classroom environment, and motivation for assisting students. For example, faculty were asked to identify how many times in an academic year they helped students find information on four-year schools or directed a student to the transfer office. Reasons for this type of activity (i.e., "I want to do my part in increasing the transfer rate") were also provided. Items distinguished between activities supporting transfer or directly entering the workplace after graduation.

Student perspectives of faculty and staff support were obtained during student focus group interviews. Participants completed the Demographic Information Form

(Appendix B) including program of enrollment, anticipated graduation or transfer date, semester of initial enrollment, previous college enrollment, information regarding change of major, gender, age, and parental college attendance. The student focus group protocol (Appendix C) included questions that explored student needs and the support they received as they earned their degree and/or prepared for transfer.

A semi-structured interview protocol (Appendix D) for the professional advisor included questions about the characteristics of successful students, prevailing features of unsuccessful students, impediments to course and degree completion, and the perceived role of faculty in the advising process.

Procedure

The procedure for this emergent mixed methods study (Creswell & Plano Clark, 2011) includes three components (1) a survey of full-time faculty, (2) focus groups with students nearing transfer and/or graduation, and (3) a semi-structured interview with an advising professional.

Data collection. The full-time faculty in the division were asked via email to participate in the faculty survey. Survey data were collected via a web-based survey tool over a period of two, four-day periods during April and July 2014.

Graduating students' contact information was obtained from the registrar. A personalized invitation to participate in a focus group interview was delivered to the student via his/her current instructor. Transfer students were self-identified from messages posted in sophomore-level courses managed by the BUCO division. Two student focus groups were conducted in December 2014 and March 2015. The advising professional participated in a one-hour, semi-structured interview in August, 2014.

Data analysis. Data were analyzed using various methods depending upon the participant group and the instrument used. The faculty responses on the faculty survey instrument were analyzed using SPSS. Descriptive statistics for the demographic data were calculated. The frequency of activities to support students in their pursuit of transfer and career goals and faculty motivation identified were calculated. A paired sample *t*-test of transfer-related topics compared to career-related topics was estimated.

The two focus group interviews were audio recorded and transcribed. These data were coded, grouped, and labeled to uncover broad themes (Creswell & Plano Clark, 2011). The semi-structured interview with the advising professional was audio recorded and transcribed. These qualitative data gathered were coded, grouped, and labeled to uncover broad themes (Creswell & Plano Clark, 2011).

Results

The findings are organized by the three research questions posed. The faculty's activities and motivations are followed by students' perceptions of the support needed and provided.

Faculty Activities

To investigate the activities in which faculty were engaged to support students in persistence, transfer and graduation, the responses to the faculty survey were examined. All faculty reported they had written a letter of recommendation or support at least one or two times per academic year (Table 2.4). More than half of the faculty reported that they did not engage in any activities to support students as they sought to achieve transfer and career goals more than one to two times per academic year (Table 2.4).

Table 2.4

Frequency of Faculty Activities to Support Students' Achievement of Transfer and Career

Goals (n = 11)

Activity	*n* (%)			
	0 times	1 – 2 times	3 – 5 times	6 or more times
Helped a student find information on 4-year schools	2 (18.2)	5 (45.5)	0 (0.0)	4 (36.4)
Help students find a job or internship	1 (9.1)	6 (54.5)	2 (18.2)	2 (18.2)
Wrote a letter of support or recommendation	0 (0.0)	6 (54.5)	3 (27.3)	2 (18.2)
Made a phone call for a student that helped the student transfer	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Introduced a student to someone who could help in the transfer process	5 (45.5)	4 (36.4)	1 (9.1)	1 (9.1)
Directed students to the transfer office	3 (27.3)	5 (45.5)	1 (9.1)	2 (18.2)
Made a phone call for a student that could help them get a job or internship	5 (45.5)	3 (27.3)	2 (18.2)	1 (9.1)
Introduced the student to someone that could help them get a job or internship	4 (36.4)	4 (36.4)	1 (9.1)	2 (18.2)
Reviewed a student's resume	7 (63.6)	1 (9.1)	2 (18.2)	1 (9.1)
Hired a student	9 (81.8)	1 (9.1)	1 (9.1)	0 (0.0)

Of the topics discussed in class in the past academic year, it is interesting to note that

faculty discussed how to apply for an internship (*n* = 6) more frequently than how to

apply to a four-year university (*n* = 2, *p* = .04) (Table 2.5). Although a resume is required

for a job or internship, 63.6% of the faculty indicated they did not review a student's

resume at all during the academic year (Table 2.4).

Table 2.5

Information Discussed to Assist Students in Achieving Career Versus Transfer Goals (n =

11)

Topic Discussed	Related to Career n (%)	Related to Transfer n (%)
Information needed to progress	11 (100.0)	8 (73.0)
Faculty's personal experiences	10 (91.0)	8 (73.0)
Application process	6 (55.0)	2 (18.0)
Pathways	8 (73.0%	5 (45.5)

During the focus groups, students explained that faculty were often a source of

inspiration and pushed students to continue their education despite challenges. As one

student said, "teachers…gave me that pep talk that I needed… [and said] just look at the

end, you're almost there" (S, December 3, 2014 focus group). Students reported that

faculty were helpful recommending programs of study and transfer schools. In the case of

"K," two faculty were instrumental in connecting him with a transfer school and

appropriate grants and fellowships (K, December 3, 2014 focus group). Interestingly, the

faculty identified by this student were not part of the BUCO division.

Students reported that the faculty they sought for guidance and support were "not

just there for the paycheck" (G, March 25, 2015 focus group). Two students from the

hospitality and culinary program noted the frequency of contact with particular faculty

who teach in the program noting they could stop in at any time. One student with

experience from a large four-year university explained that the HCC faculty do not view

meeting you as an intrusion on office time, "you are not an inconvenience [when you stop

by]" (E, March 25, 2015 focus group). Other students in the information systems

programs noted that faculty were available during open laboratory hours and provided

assistance with specific class work, guidance on future course selection, and real-world

experiences.

The student focus group revealed only one episode of resume development, which

was a class assignment. The student indicated that the assignment required a meeting

with the career counseling center, which she found helpful. Three students indicated

during the focus group they requested a letter of recommendation for either a job or

college transfer application (E, R, and K, December 3, 2014 focus group). Interestingly,

one of these students was asked to supply a draft of the letter for the faculty to edit.

Faculty Motivation

To understand the faculty members' motivation for engaging in these activities,

the second research question, the responses on the faculty survey were examined. When

asked "why do you help students transfer?" respondents indicated they wanted to help

students any way they could ($n = 9$, 81.8%), believe it is their professional responsibility

($n = 7$, 63.6%), and get personal satisfaction knowing that one of their students has

advanced their education ($n = 7$, 63.6%). Similarly, when asked "why do you want to

help students in their career?" participants responded they want to help them anyway they

can (100%), it is their professional responsibility (90.9%), and they get personal

satisfaction knowing one of their students has found a job (90.9%) (Table 2.6). Less than

half of the faculty respondents indicated they wanted to do their part to increase the

transfer rate ($n = 5$, 45.5%).

Table 2.6

Faculty Motivations to Support Students' Achievement of Transfer and Career Goals (n =
11)

Motivation	Related to Career n (%)	Related to Transfer n (%)
It is my professional responsibility.	10 (90.9)	7 (63.6)
I want to help them in any way I can.	11 (100.0)	9 (81.8)
I get personal satisfaction.	10 (90.9)	7 (63.6)
I believe it adds to the prestige of my department.	5 (45.5)	4 (36.4)

The data appear to suggest that more faculty are motivated to help students in their career
than transfer (Table 2.6).

The faculty who were most active in supporting students with activities related to
transfer and graduation (i.e., those who engaged in the activities three or more times per
academic year) indicated they were motivated by their professional responsibility ($M =$
28.31), interest in helping students any way they could ($M = 28.31$), and personal
satisfaction ($M = 26.29$). Faculty were least motivated by adding to the prestige of the
department ($M = 16.12$) (Table 2.7).

Table 2.7

Cross-Tabulation of Faculty Activities and Motives

Activity faculty engaged in three or more times per academic year	Faculty Motive			
	I believe it is my professional responsibility n (%)	I want to help students in any way I can n (%)	I get personal satisfaction n (%)	It adds to the prestige of the department n (%)

Helped a student find information on four-year schools	4 (36.4)	4 (36.4)	4 (36.4)	2 (18.2)
Helped a student find a job or internship	4 (36.4)	4 (36.4)	4 (36.4)	3 (27.3)
Wrote a letter of support or recommendation	5 (45.5)	5 (45.5)	4 (36.4)	2 (18.2)
Introduced a student to someone who could help in the transfer process	2 (18.2)	2 (18.2)	2 (18.2)	1 (9.1)
Directed a student to the transfer office	3 (27.3)	3 (27.3)	3 (27.3)	1 (9.1)
Made a phone call to help a student get a job or internship	3 (27.3)	3 (27.3)	3 (27.3)	2 (18.2)
Introduced the student who could help the student get a job or internship	3 (27.3)	3 (27.3)	3 (27.3)	2 (18.2)
Reviewed a student's resume	3 (27.3)	3 (27.3)	2 (18.2)	2 (18.2)
Hired a student[a]	1 (9.1)	1 (9.1)	1 (9.1)	1 (9.1)

Note: No faculty made a phone call to help the student transfer.
[a.] No faculty engaged in this activity more than 3-5 times per year.

Students' Perceptions of Support

To understand students' perceptions of the support they needed and received related to issues of persistence leading to transfer and/or graduation, the third research question, the students' responses during the focus group interviews were examined. The students in the focus group revealed a range of friends, family, spouses/partners, faculty, and staff who provided support. Curricular and emotional support were provided by faculty. Financial and emotional support were provided by family, friends, and

spouses/partners. Professional advisors were helpful with the paperwork associated with course registration. Students who were part of college-sponsored cohorts, for example honors or STEM, received recommendations from dedicated advisors and revealed that those staff members were extremely helpful in developing semester-by-semester recommendations for course work. Interestingly, all of the students in the focus group identified at least one faculty member who provided the opportunity for students to explore curricular and career options and "point students in the right direction" (P, December 3, 2014 focus group). Emotional support provided by faculty was demonstrated by taking the time to provide and explore options with students. One student, "A," recounted an episode when faculty brought in the director of a transfer school program to class to speak. It helped the student envision her future, make a connection with an academic professional, and provide the context for working with the HCC faculty member on course selection to achieve her transfer goal. The student felt a stronger connection to the HCC faculty after this in-class experience (A, December 3, 2014 focus group).

Focus group students described themselves most frequently as determined. They also identified persistent, realistic, driven, and motivated as adjectives to describe their internal strengths. "A" mentioned her ability to juggle two jobs, have a social life, go to school, and "balance everything" (A, December 3, 2014 focus group). By contrast, "R" compromised on entertainment and a social life commenting that he has not seen a movie in the last two years and, with a sense of pride, pointed out that he was graduating with a 4.0 grade point average (R, December 3, 2014 focus group). In both cases, while their focus may be either multifaceted or singular, they were determined to achieve their goal.

The focus group students were motivated by an internal drive to finish what they started (B, D, and S, December 3, 2014 focus group; B, R, and V, March 25, 2015 focus group) and mentioned that they wanted to complete their degree so as not to "let down" a teacher or family member who had supported them (G., K., D., and S., December 3, 2014 focus group). Students explained that visualizing their goals helped maintain their determination. "C" is passionate about cooking and saw himself succeeding in a culinary career (C, March 25, 2015 focus group). "G" humorously described his motivation to work in a "71-degree environment" that provided a consistent, secure career (G, March 25, 2015 focus group). "A" had previously been enrolled in a nursing program and explained that she could not "see myself in that profession" and once she changed programs, was determined to complete her degree (A, March 25, 2015 focus group). It is important to note that these students were identified as graduating soon after the focus group and were likely different from those who are struggling to graduate or transfer to a four-year college.

Focus group students applied various strategies for course registration including registering early to take advantage of the variety of choices, juggling work schedules and changing courses after an initial registration, using data from "ratemyprofessor.com," or assessing the popularity of faculty to make their schedules. Most interesting was the language used to describe the process as "purchasing classes" (G and D, personal communication, December 3, 2014 focus group), consideration for which classes appeared to be "selling out" (D, personal communication, December 3, 2014 focus group), and making the analogy to the research done to buy a car or house, "Is it worth your money?" (G, December 3, 2014).

When queried, focus group students explained that knowing the prerequisites, sequence, and the future availability of courses over the major semesters and the summer and winter semesters would be most helpful. Students in the honors and STEM programs, and international students noted the assistance of cohort-specific advisors. Students in the honors and STEM cohorts receive priority registration in advance of the general college population. Nearly all focus group participants identified confusion at some point in their HCC experience over these issues, which delayed progress, required additional paperwork to "override" into a course, and frustrated them.

Students commented that they frequently communicated with faculty through the online learning system, Canvas. Less frequently, they communicated with faculty before/after class and during office hours. Several students noted that they saw faculty during office hours only two to three times over the course of their entire academic experience at HCC. The faculty provided assistance with course content and curriculum advising.

During the focus group, "B" revealed that he felt his opportunity to transfer had been eliminated by his choice of an A.A.S. degree. During a private conversation following the focus group, "B" indicated he had spoken to an advisor in the professional advising office who explained that he would need eight more courses to earn the A.A. transfer degree, among them, developmental mathematics courses, which were perceived as an insurmountable barrier (B., personal communication, December 3, 2014). Exploring other program options with "B" showed him that only four more courses, which he believed could be completed in a single semester, would allow him to earn both his A.A.S. and A.A. degrees and open transfer opportunities.

The director of transfer, an advising professional, was asked about characteristics she sees in students who persist. She described several students that revealed a consistent theme: self-aware students were more likely to persist to graduation and transfer and take advantage of the services offered to support persistence. Students who are more likely to be successful have insight into their strengths and limitations; study skills and needs; and academic or career interests and goals. She provided several specific examples of students who are self-aware and access available supports. Students who have a general idea of an area of study are advised to take the prerequisite first and second year courses and narrow their focus through these courses. Students who need developmental education are encouraged to proactively engage with tutoring services and avoid the same struggles they had with these courses in high school. Small class sizes of 20 - 24 students encourages students who recognize that college demands more time, focus, and energy than high school to attend and be prepared for classes. The advising professional also noted that breaks in students' daily academic schedule provide opportunities to connect with clubs, activities, and services on campus.

Discussions with the director of transfer exploring the role of faculty supporting students led to her observation that students see the professor "as a connection to success" (director of transfer, personal communication, August 8, 2014). Expanding on the idea, she emphasized the motivational impact faculty can have on students because of intensity of contact as opposed to academic advisors who students see once a semester. She pointed out that all faculty are not the same, however, in their interactions with students. "Some teachers see the positive even if the student is struggling…and give them that nugget of encouragement to get them to the next level" (director of transfer, personal

communication, August 8, 2014) and some faculty do not provide that same support. She acknowledged that she has the same observation about the academic advisors who work in her department.

Discussion

The faculty's responses to survey items clarified the activities and motivations of faculty, which are an important consideration related to faculty's perception of themselves as support for students. Faculty cited professional responsibility, interest in helping students any way they could, and personal satisfaction as factors that motivated them to assist students in achieving their career and transfer goals. All faculty wrote letters of support or recommendation at least once or twice a year. This may be perceived as a traditional responsibility of faculty, particularly full-time faculty, and therefore it fits well with their motivations.

However, faculty reported low levels of activities related to providing support to students to achieve transfer and career goals. Indeed, more than half the faculty either did not engage in activities related to supporting transfer, graduation, and career goals or did so only once or twice per academic year (Table 2.4). This may indicate that faculty do not believe it is their job to advise students on transfer since there is a transfer advising office on campus. They may be assuming students regularly seek advisement from the professional advisors in this office. Community college faculty, known for their dedication to teaching and fulfilling the mission of providing open access to higher education for all (Twombly & Townsend, 2008), may not see their role as advisors at HCC. Greater faculty involvement in the communication of transfer information may be necessary to bolster the "transfer culture" (Tatum et al., 2006, p. 205) of the college.

The HCC students' responses appeared to support the literature's portrayal of students who juggle multiple responsibilities in addition to pursuing an education (Fike & Fike, 2008). Students' comments emphasized the practical aspects of pursing an education: the value one gets for the cost, the ease of communicating via technology, and the interest in just-in-time, purposeful conversations with faculty who provide useful information. Consistent with interviews conducted with graduates of other community colleges (Martin et al., 2014), the students at HCC did not avail themselves of faculty office hours. Instead, they used the learning management system (LMS) email system to communicate with faculty. The will to succeed because others are invested and interested in one's success appeared to be a powerful motivator for these students (Wang, 2012) and may be a revelation to faculty, which could be shared during professional development. Follow-up from faculty after advising conversations to track students' progress including whether students used the advice sought may strengthen the student-faculty connection. This information may also potentially be incorporated into the professional development.

Students' comfort and the ease with which they accessed social media such as "ratemyprofessor.com" and community-building sites such as the LMS provided insight related to where students seek information and supports previous findings (Miller et al., 2005). Knowing how and where students accessed information will be helpful to identifying methods for disseminating the details of clear, easily understood program pathways providing the course sequence that leads to transfer and/or graduation.

The confusion over the advising recommendations provided by professional advisors as illustrated in the anecdotal evidence from informal meetings with students was a troubling finding when considered in light of the relatively low rates of student

transfer and graduation. Further, the fact that advising was most often accessed on a drop-in basis led to a lack of continuity in the advisor-student relationship. Processes in place did not allow professional advisors to make notes in students' academic records for future reference. Thus, the responsibility was on students to manage the advising relationship fully. Transferring from a community college requires navigating a wide selection of program choices and pre-requisite course requirements. Community college students, often faced with developmental English and mathematics needs, financial aid restrictions, and schedule limitations due to family and job commitments, saw value in the curricular and emotional support provided by faculty who can potentially help them navigate the higher education system.

The dedicated advising provided to the small honors and STEM cohorts, and international students was well received and accessed frequently by focus group participants. Most frequently, students noted the availability of these advisors, the multiple contact methods including texting personal phone numbers and email, and the sense of gaining an overall plan leading to earning a degree. These practices may represent a model that can be adapted to students pursuing degrees in the BUCO division if the model can be scaled-up considerably.

The advising professional who was interviewed emphasized the importance of faculty awareness to provide encouragement and direction. It is possible that the difference between teachers who provide that "nugget of encouragement" (director of transfer, personal communication, August 8, 2014) and those who do not is the manifestation of how faculty see themselves in the role of supporting students as they persist. Faculty may be unaware of how infrequently students actually access transfer

information through the transfer advising office and how frequently they make scheduling decisions based on non-academic factors such as work schedules. Faculty may not appreciate the value students place on the practical relationship that helps students explore curricula and careers. Advising professionals, particularly transfer coordinators who serve as the bridge between HCC and the four-year colleges and universities, are a wealth of knowledge about processes and opportunities that students must consider as they persist in their community college studies. Addressing the gaps between faculty perceptions, student needs, and the information from advising professionals is critical knowledge to be shared in professional development.

While HCC faculty stated they were motivated to help students succeed, they did not engage in the activities directly related to achieving transfer and career achievement such as examining transfer schools with students or evaluating students' resumes (Packard et al., 2013). Among the possible explanations for this lack of activity may be that faculty are unaware of how important these activities are to student completion (Dowd et al., 2013; Martin et al., 2014; Miller, 2013), the impact of their support for students (Carrasco-Nungaray, & Peña, 2012; Dowd et al., 2013), and/or the belief that students are obtaining this support elsewhere on campus. The interview with the advising professional also revealed a lack of consistency of faculty support to help students persist. These potential reasons for this disconnection provide some evidence of the content to be explored in a future intervention.

An opportunity to intervene and change the current practice of faculty engagement with students includes providing the necessary tools for faculty to work directly with students as they make course, program, and transfer/graduation decisions.

These materials should be available where students and faculty are most likely to intersect, the LMS. Professional development will likely focus on the importance and practical aspects of engaging in activities that support students including connecting students with institutional support services (Carrasco-Nungaray & Pena, 2012), writing strong letters of recommendation, and resume development.

Limitations

There are limitations to the survey model choice; that is, the original survey did not consider activities related to supporting careers, and the administered survey did not measure how long faculty dedicated class time to discussing these subjects.

There were also limitations to the sample that was available for the focus group interviews. Only students who were within one semester of graduating and/or transferring participated in the interviews, which limited the student voice to successful students. The perceptions of less successful students were not captured in this methodology. Indeed, examining the time from entry at HCC to degree completion in the focus group, 88% of students completed their degree in 3.5 years or less. Comparing this to the national average for community college students, less than 20% of students finish in three years (Bailey, 2012; Martin et al., 2014) and the overall graduation/completion rate for HCC students is 15% (OPROD, 2015). The sample of HCC students in the focus group is not necessarily representative of the entire community college population; however, they serve as a model of the subset that does succeed in earning a degree within the BUCO division and is instructive in discovering the needed supports to assist in persistence leading to degree completion.

Conclusion

Since faculty are a consistent presence in community college students' lives, this needs assessment study was conducted to evaluate the typical supports provided to students and how often BUCO faculty engaged in these activities. It revealed the faculty's motivations for supporting students and both the scope and frequency of the activities that support students as they work toward degree completion and transfer to a four-year university. The focus groups sought to provide an examination of the typical breadth of students who attend HCC and yet the unique perspective of the relatively few that actually earned a degree. Thus, these students who persisted to graduation and/or transfer were helpful in understanding the support provided by family, friends, faculty, and staff and how and when these resources were accessed to guide and scaffold internal motivation. The professional advisor's perspective provided a broad foundation for understanding the characteristics of successful students from her vantage point of college-wide initiatives. Combining the activities that supported success with processes to address gaps provides direction for the development of an intervention to increase persistence leading to graduation and/or transfer.

Chapter 3

Faculty as Institutional Agents

The POP identifies and recognizes the challenges facing community college students as they persist to complete their education achieving a baccalaureate degree by transferring to a four-year university and/or graduating with an associate degree. While the obstacles to persistence include being academically underprepared (Bailey, 2012; Fike & Fike, 2008), financially under-resourced (Dowd & Coury, 2006; Mendoza et al., 2009), and more often first generation college students without knowledgeable support at home (Dowd et al., 2013; Lareau, 2011), the open-access of the community college system complicates the problem. There are few barriers to registering for courses or opting for a program of study matched to their college-level capabilities. There is a general avoidance of requirements that discourage enrollment (i.e., prerequisite college-level courses). Further, there are few forces that compel students to seek support services or integrate themselves in campus life (Martin et al., 2014). Thus, despite the many institutional supports available, community college students often make decisions about curriculum and transfer without professional advice.

There are several potential interventions that could be pursued to address this POP. For example, a robust student registration system that recommends courses, limits options to choices within a chosen program of study, forces early completion of developmental course work, and encourages early registration could be developed (Prystowsky, Koch, & Baldwin, 2015). Common Core curricula intended to better prepare students in high school for college-level work (Jones & King, 2012) could be the focus of attention. Re-examining and re-designing developmental education in college to

a modular approach (Miller, 2013) or one that integrates skills into program-specific courses could be undertaken. The relationship between faculty and students could offer a vehicle for reaching students as they persist. Theoretically, faculty within the BUCO division at HCC could have a role as institutional agents supporting and guiding students as they persist to transfer and/or graduation following curricular pathways, which is the approach that will be considered. It is anticipated that faculty with the knowledge of challenges facing community college students can use their power as institutional agents to remove or minimize obstacles to persistence, thus increasing student transfer and graduation rates.

The Role of Faculty in Persistence

The BUCO division faculty responses to the needs assessment survey demonstrated their willingness to help students as they persist, yet they do not engage frequently in activities that directly support students as they progress to transfer and/or graduation. For example, less than 50% of faculty surveyed helped students find information on four-year transfer schools, wrote a letter of recommendation, helped students find a job or internship, reviewed a student's resume, or directed students to the transfer office more than three times per academic year (Table 2.4). Faculty are motivated by a sense of personal responsibility, gained personal satisfaction, and wanted to be helpful to students in any way they could to support academic and career goals (Table 2.6). It appears there may be an opportunity to connect the willingness of faculty to support students with the knowledge of the practical aspects of providing assistance and more frequent engagement in activities that support transfer and graduation. The

literature demonstrates the importance of faculty engagement with students to achieve the goals of transfer and/or graduation (Dowd et al., 2013; Nitecki, 2011; Tatum et al., 2006).

Tinto (1975) contributed to the understanding of factors leading to voluntary withdrawals and dismissal for poor performance through the development of a theoretical model to predict student dropout from higher education. The model considered individual attributes; student's commitment to the educational goal and the institution's commitment to students; and factors that led to academic and social integration. Tinto (1975) recognized the interaction with faculty explicitly to support students' social integration. Academic integration, which is based upon grade achievement and intellectual development, is arguably within the influence of evolving faculty-student relationships as well. Halpin (1990) built upon work by Tinto (1975) studying first time, full-time freshman at a community college to determine the impact of social and academic integration on persistence and retention. Students completed a survey with items related to academic integration, student-faculty interaction, and institutional commitment to student success. Most of the variance between those students who persisted, were dismissed, or withdrew from the community college was explained by factors that prominently included faculty: concern for teaching, academic and intellectual development, and faculty-student interaction. Indeed, Halpin (1990) acknowledged "while little can be done to influence 'background characteristics' or 'environmental' circumstances of community college students…institutional mechanisms to maximize student/faculty contact…like numerous office hours…and a generally accessible, involved faculty may be a significant portion of the prescription for retention" (p.31).

More recent work by Braxton, Hirschy, and McClendon (2004) builds a new model of persistence at commuter schools and community colleges. Building on the work of Tinto (1975) and adjusting it to factors considered particularly relevant to these types of institutions, they noted that institutional commitment to students and institutional integrity, both substantially involving faculty-student relationships, was predictive of student retention. Classroom active learning, which included discussions and team-based activities, and access to faculty in learning communities provided the social integration that aided in persistence. The consistent presence of faculty in the classroom and their belief that all students can succeed supported academic integration that leads to persistence. Further, as the institutional commitment to student success becomes more evident to students, they are more likely to persist in community college (Braxton, Hirschy, & McClendon, 2004). Well-established work in the field of persistence and retention by Tinto (1975), tested further (Halpin, 1990), and refined (Braxton et al., 2004) led to consideration of the role of faculty institutional agents to build the foundation for student commitment to persisting in higher education.

Institutional Agents

Institutional agents are individuals who have the authority and status to provide resources to students or connect students to resources (Stanton-Salazar, 2011). Faculty, particularly full-time faculty, have this status on campus and the connections to other professionals at the institution that may facilitate degree completion, graduation, and/or transfer for students. As discussed in the needs assessment study, students who participated in the focus groups consistently revealed that a faculty member was an important source of information and inspiration. The exposure to faculty afforded to

47

students by regular class attendance (Martin et al., 2014) means students have more routine exposure to faculty than any other group at the institution (Capps, 2011). This unique access is an opportunity to provide program and career insight, help define academic goals, and advise on academic pathways to graduation and/or transfer (Martin et al., 2014) essentially filling the role of institutional agent.

In a narrative analysis of community college students who successfully transferred, Dowd, Pak, and Bensimon (2013) examined the role of institutional agents to support students. The cases captured students' perceptions of faculty who believed in them, challenged them in class, took their aspirations seriously, and helped them develop necessary college-level skills. The faculty were credited with being inspirational and supportive of students ultimately providing the positive reinforcement they needed to graduate and/or transfer. In other words, the faculty created the in-class connection shown to increase the likelihood of transfer (Dowd et al., 2013). Examining students who were successful navigating the complex transfer process in the needs assessment study was instructive in elucidating the role of faculty in assisting students in the BUCO division.

Two well-defined, career-oriented programs, the paralegal and early childhood programs, were examined in a case study at a single community college facing typical issues of persistence, retention, and low graduation rates (Nitecki, 2011). These programs had much higher graduation rates, 32.3% and 51.3%, respectively, compared to the college as a whole, 12.5%. Students and faculty in these more successful programs were interviewed and observed in classrooms. Faculty's high expectations and clear program goals of staying on the path to degree completion were cited as a source of encouragement and support to students in these programs. In class, faculty explored

professional opportunities, necessary job skills, curricular requirements, and, outside

class, faculty were available to guide students individually and assist with gaining

practical career experience. Dedicated faculty assumed some activities traditionally

delivered at the institutional level including advising, which helped students "navigate

[institutional] bureaucracy" (p. 117). These faculty were engaged as institutional agents

dedicating their time and knowledge to student success. The program structure and

dedicated faculty served to support the students and is a model for the intervention.

Navigating the complexities of institutional bureaucracy is significantly

complicated by the demands of institutions receiving transfer students. Faculty in a single

urban community college were studied in mixed methods work by Tatum, Hayward, and

Monzon (2006) to assess the background, activities, and type of involvement of faculty to

support students' achievement of transfer goals. Despite community college faculty's

willingness to assist students, this work reveals that faculty involvement was generally

low and knowledge of the transfer process weak. Faculty who assisted in the transfer

process cited responsibility and personal satisfaction as motivators. Both the contract

status and years of experience at the institution were predictors of faculty involvement

with transfer activities: the most experienced full-time faculty were more likely to be

involved. While it surfaced that not all faculty were interested in assisting students in the

transfer process, the recommendations emphasized the importance of identifying those

faculty with a proclivity to assist students and providing support at the department level

creating a "transfer culture" (p. 205) at the institution. The general recommendations for

faculty involvement included focusing efforts on specific groups of faculty, increasing

knowledge of the transfer process, and targeting specific activities in and out of the

classroom (Tatum et al., 2006). Of particular note is the development of faculty "transfer guru[s]" (p. 204) who are specialists in a department to assist other faculty with questions or in developing transfer knowledge. The work by Tatum et al. (2006) was not designed to determine the outcomes of students who received transfer guidance from faculty, and more work is needed in this area.

Streamlining the transfer process requires an understanding of both the community college's and four-year institution's program (i.e., course) requirements. Miller (2013) examined practices that facilitated transfer with a case study approach focusing on both community colleges and receiving four-year institutions. Clearly defined academic pathways that included not only the two-year community college course sequence but also the transfer school requirements were presented as a "four-year degree plan" (p. 42). This novel approach took into account unique articulation agreements and built a culture where transfer was expected. Culturally sensitive faculty were integral to the process both in active learning classrooms and as knowledgeable supporters who worked cooperatively with professional advisors, transfer, and financial aid personnel. The focus on customer service led community college personnel to assume multiple roles, assisting students where needed. Once students transferred to the four-year university, they still faced issues of integration and engagement, which led Miller (2013) to recommend that faculty consider "rethinking and redesigning both developmental and transfer-bound curricula" (p.48). Faculty were identified as important to facilitating the transfer process both from the sending and receiving institutions particularly in fostering a culture that expected transfer.

Building the connection between the academic content of coursework and the subsequent transfer and career paths is an important perspective that faculty can uniquely provide. Active learning with "real-life" experiences enrich the connection and allow students to explore and reflect upon their career and academic goals. As Freeman (2012) noted, students without "broad exposure to potential careers…often know little about what they can do following their undergraduate studies" (p. 154). Freeman's (2012) work highlighted several assignments presented to junior-level students studying biology that allowed students to explore career options that suited their personalities. The assignments required students to identify the entrance requirements for further education including costs, grades, and standardized test scores. Interestingly, the seminar also required students to create a back-up plan in case the first choice did not materialize. The HCC focus group students identified their vision of the future as motivation for pursing an associate degree and transferring to a four-year institution college. The assignments described by Freeman (2012) provided students the opportunity to develop a plan and create a vision of the future. Investigating a potential career and the course of study needed is a good example of "practical hands-on research activities" identified as a cornerstone of active learning (Miller, 2013). Further, the seminar assignments provided the foundation for individually tailored advising conversations with faculty (Freeman, 2012).

First generation, under-prepared, financially under-resourced students whose lives are complicated by responsibilities to family, jobs, and education need support to persist through transfer and/or graduation. Faculty members acting as institutional agents provide many supports to students: program pathways that elucidate the courses required

and the proper sequence, offering opportunities for career and transfer school exploration, emotional and moral support in goal development and persistence to goal achievement, connections to institutional personnel that can assist with the bureaucracy of transfer paperwork, and fostering a culture of academic achievement. Carrasco-Nungaray and Pena (2012) recommended collaboration with student services personnel and professional development programs that emphasize consistently high academic standards and recognition of the importance of faculty to students as trusted advisors. To act as effective institutional agents, faculty need the knowledge to provide that support.

Knowledge of curricular pathways, transfer limits and opportunities is currently centralized in the advising and transfer offices at HCC. A description of the advising situation at HCC as well as a discussion of advising literature follows and provides additional context for a proposed intervention.

Advising

The advising model at HCC is centralized, where all students are encouraged although not required to see trained professional advisors in a central office. While some groups of students with special advising requirements (i.e., honors, international, and nursing students) have dedicated advisors, most advisors provide general services to the entire college population. Despite the demands of the Maryland College and Career Readiness and College Completion Act (2012), which will require program-level advising, a move to one of the shared models which splits the advising responsibility between a central office and academic divisions (Pardee, 2000) at the institutional level is not anticipated. In the various formulations of shared advising models at other

institutions, students see both faculty and professional advisors with the determination made by the number of accumulated credits or program choice (Pardee, 2000).

The faculty in the BUCO division at HCC do not engage in frequent, intentional, systematic advising activities as evidenced in the needs assessment study discussed in chapter two of this work. It is not anticipated that a move to a shared model of advising would be supported by college administration during a time of budget constraints and the initiation of a movement to increase the number of students full-time faculty teach to improve the ratio of full-time to part-time faculty exposure to students. A promising approach to supporting students as they persist to graduation and/or transfer, however, is to further develop the relationship between faculty and students with the purpose of providing advice and support through currently available communication channels and connecting them where necessary to student services for professional advising services. Cooperation between student services and faculty will be necessary in this model (Miller, 2013). Literature from the largest community college system in the country, Los Angeles Community Colleges, suggested that advising that is "enmeshed in the classroom experience" (Hagedorn et al., 2008, p. 661) reached the most students. This means turning advising from a destination on campus into an activity that meets students where they spend most of their time on campus, the classroom. The advising message repeatedly emphasized the courses required by the receiving institutions, which followed the prescribed path to the transfer school and rapid progress through developmental courses (Hagedorn et al., 2008). Faculty involvement in the advising process potentially overcomes the shortage of advisors available during evening and weekends and for students who primarily took online classes. Hagedorn et al. (2008) also found that a

critical differentiator between those who transfer and those who do not is "academic course progression and completion" (p. 661). The value of widespread knowledge of program pathways does not appear to be overstated.

With the growing use of online tools to facilitate learning, the role of the LMS in an advising model was explored by Ullmann (2009) in a distance education nursing program. Students were included in appropriate advising courses that focused on curricular pathways, necessary forms, scholarship information, and due dates all integrated into the LMS. Results included increases in attendance for events as detailed in the LMS's announcement function, wide dissemination of program changes, tripling the number of appointments for registration, and more efficient communication between advising and students.

Christian and Sprinkle (2013) investigated the merits of prescriptive and collaborative advising. In prescriptive advising sessions, the advisor directs the advising conversation, dictates course selection and timing, and does not engage the student in mutual decision making. Unlike the prescriptive model, collaborative advising depends upon the student and faculty member together discussing career interests and curriculum paths, which "underscores the salience of faculty-student [support]" (Christian & Sprinkle, 2013, p. 272). In Christian and Sprinkle's (2013) work, students preferred the collaborative advising model, which draws attention to the need for faculty to be integrated into the advising process through training and collaboration with professional advising services. Faculty who teach in professional programs (e.g., business and accounting) often have work experience salient to the advising conversation and a collaborative approach.

Kolenovic, Linderman, and Karp (2013) assessed an advising intervention in an analysis of college records in a two-year associate program. The intervention used an intrusive advising model; that is, mandatory twice monthly structured sessions and special sessions on transfer. They found that participation in advising, "not motivation or ability" was a significant predictor of graduation (p. 286). An in-depth examination of their data revealed that students who were more academically successful actually used advising services less than their less academically successful counterparts (Kolenovic, Linderman, & Karp, 2013). This finding is particularly intriguing when considered in light of findings by Hagedorn et al. (2008) that transfer was more likely for students who earned higher grade point averages and passed more transfer courses, indicators of academic success. The HCC student focus groups conducted with graduating students and reported in chapter two of this work revealed that those who were part of an honors or STEM cohort benefitted by the close connection to faculty and professional advisors who guided them routinely from semester to semester.

With a centralized model of advising and the resources dedicated to supporting students in place at HCC, the significant additional expense of a shared model of faculty and professional advisors as described by Pardee (2000) is not warranted. However, the in-class connection between individual faculty and students strengthens the likelihood of transfer (Dowd et al., 2013; Eagan & Jaeger, 2009), and advising at the program level, required by the new legislation (College and Career Readiness and College Completion Act of 2013, 2012), increases student retention and graduation (Nitecki, 2011; Tatum et al., 2006). Students who speak with faculty members and receive advice on career and courses report feeling more connected and engaged with the college (Komarraju,

Musulkin, & Bhattacharya, 2010; Wang, 2012), which may also address persistence. Indeed, a student from the needs assessment study focus group expressed this sentiment directly. The needs assessment study also revealed that advisors at HCC recognize that students see the professor "as a connection to success" (director of transfer, personal communication, August 8, 2014). Expanding on this idea, the transfer director emphasized the motivational impact faculty can have on students because of the intensity of contact as opposed to academic advisors who students may see once a semester. Further, faculty have career experience that enhances the credibility of program pathways and transfer recommendations.

Developing the faculty-student relationship from the initial contact with the institution has merit. Seidman (1991) examined the impact of counseling new community college students prior to the first semester and in two sessions during the first semester. Fall-to-fall persistence increased significantly with this intervention. The counselors utilized a collaborative approach to advising, matching course and program selection to interests, abilities and long-term goals. Seidman (1991) noted the importance of faculty relationships with students "since faculty are viewed as role models…and help acculturate students into the world of ideas" (p. 225). Faculty potentially have a role in advising from the earliest contact between the student and the community college since students may discover career and program options not apparent in conversations with general advisors.

Consistent enrollment (Crosta, 2014) and early commitment to a program of study (Jenkins & Cho, 2013) have been shown to increase graduation and transfer rates for community college students, respectively. Calcagno, Crosta, Bailey, and Jenkins (2007)

sought to elucidate milestones that increased the odds that community college students would graduate. The methodology included consideration for both a discrete number of college-level credits (i.e., 20 credits) and earning a percentage of the college-level credits for degree completion (Calcagno, Crosta, Bailey, & Jenkins et al., 2007). Younger, traditional-aged students increased the odds of graduating by "a factor of 15.5" (Calcagno et al., 2007, p. 794) once they had reached 50% of the program credits needed for completion.

Faculty have a role in encouraging persistence in community college students (Nitecki, 2011; Tatum et al., 2006). Although faculty will not fill the formal role of "advisors" as in a shared model (Pardee, 2000) at HCC, they can use the access afforded them in academic settings to guide students. Faculty will fill the role of institutional agent. The role of an institutional agent is not necessarily to have all of the answers but rather to facilitate a connection to those who do (Carrasco-Nungaray & Pena, 2012). Faculty can bridge gaps in understanding transfer and graduation requirements, support students' motivation and vision of their future, and provide practical curricular direction based on established program pathways.

Conclusion

Community college students present with challenges that impede persistence, and, in an effort to provide open access, few institutional barriers limit students' choices, complicating the path to completion of a degree and/or transfer. Faculty are a consistent presence in the lives of students and are a resource for both the dissemination of curriculum pathways and moral support to encourage students to persist. An intervention

designed to reach students through the LMS with support from faculty institutional agents

was proposed to address these challenges.

Chapter 4

Intervention Design: Method and Procedure

In this chapter, the intervention to increase persistence leading to transfer and/or graduation is described. The intervention was designed to address student needs for curricular guidance. This information was provided through traditional mail, the LMS, and in one-on-one advisement meetings with students as faculty worked with them. The intervention included several components. Program pathway materials detailed course progression by program of study and essentially provided a map of courses in the proper sequence that "open the transfer door" (Hagedorn et al., 2008, p. 660). Discussion activities to explore career and transfer options were included in the first semester on the LMS to assist students in developing the vision that supports determination to earn a degree and/or transfer. Faculty reminders through the LMS encouraged timely registration. Transfer school information was readily available, and students were invited to discuss their plans with full-time faculty in addition to the transfer advising staff.

The intervention was also designed to meet students where they are—in class and online. Community college students have an expectation that technology will be used to facilitate learning and advising (Miller et al., 2005) and the LMS is used by faculty in the BUCO division to support face-to-face, hybrid, and online courses virtually. The LMS is the primary tool students use to complete course assignments, and each course site includes the syllabus, assignments, discussions, exams, private group sub-sites, grades, faculty feedback integrated into online submissions, and a course-based email system. Early and consistent use of an LMS was demonstrated to reinforce positive perceptions of online support, which has been linked to better course grades (Ring, Kellermanns,

Barnett, Pearson, & Pearson, 2013). Technology was found to allow institutional personnel to reach more students more efficiently, connect students with advising information as needed (Ullmann, 2009), and, when done well, demonstrate a student-centered institutional focus (Shea, 2005). Thus, the LMS was hypothesized to serve as an effective portal for advising material and active exploration of transfer and career choices.

The theory of change tested was that faculty who were encouraged to be institutional agents would fill a gap in students' support system and provide a connection to the college, emotional and moral support, and practical curricula direction (Dowd et al., 2013). Full-time faculty in the BUCO division have significant direct exposure to students because they teach three to five courses per semester. Faculty professional development provided information so faculty could assist students as they persisted including practical information about degree requirements both at HCC and transfer institutions. In addition, faculty were connected to other college personnel who could support their advising efforts. It was hypothesized that faculty acting as institutional agents would use resources provided through the LMS, conduct individualized conversations with students on appropriate course and program selection, and connect students as necessary with transfer advising.

The intervention tested the hypothesis that students who received and interacted with information about program pathways, transfer schools, and discipline-specific faculty from the outset of their first semester through the first year will persist from fall to spring semesters and make significant progress toward earning an associate degree. Comparisons between active treatment and treatment-naïve cohorts were made to assess

the efficacy of the intervention. The following intervention research questions were developed.

RQ1: What were faculty and students' experiences and engagement with the intervention?

RQ2: Did the intervention affect semester-to-semester persistence, completion of developmental education requirements, course selection, and cumulative grade point average (GPA)?

RQ3: Did the intervention affect the number of students who earned 30 credits including and excluding developmental education credits by the end of the first academic year?

Research Design

Consistent with an embedded mixed methods approach (Creswell & Plano Clark, 2011), the procedure included capturing both qualitative and quantitative data. This approach was used to add narrative depth to the quantitative results and objectivity to the qualitative results.

The research design logic model (Appendix E) illustrates the flow of participant inputs, activity and participation outputs, and the proximal, medial, and distal outcomes anticipated. Inherent in the first research question is an evaluation of the process of implementation and implementation fidelity. A brief overview of implementation fidelity is provided to more fully describe the research design.

Fidelity of implementation. To provide a consistent framework for evaluating the experiences of faculty and students, fidelity of implementation must be defined. Fidelity of implementation was investigated in this intervention by evaluating faculty

adherence to the tenants of institutional agency, the quality of their interactions with students in their role as institutional agents, and faculty responsiveness to their role as institutional agency (Dusenbury, Brannigan, Falco, & Hansen, 2003). Examining each of these perspectives within the context of the theory of institutional agents illuminates the inflection points where fidelity was measured. There was strong alignment between the logic model (Appendix E) and the points where fidelity of implementation were measured. The outputs shown in the logic model are the points at which adherence, quality, and responsiveness were evaluated using tools described in the data collection matrix (Table 4.1).

Table 4.1

Data Collection Matrix Assessing Fidelity

Fidelity Indicator	Data Collection Tools	Frequency
Adherence and Responsiveness	Faculty-Student Interaction Worksheet	Collected at end of fall and spring semesters
	Semi-structured interviews with faculty	End of spring semester
	Ad hoc conversations with faculty about experiences	Monthly division meetings
Quality	Semi-structured interviews with faculty Student interview	End of spring semester

Adherence. Institutional agents are individuals who have the authority and status to provide resources to students or connect students to resources (Stanton-Salazar, 2011). There are several activities that define the role of faculty as institutional agents. First, faculty-student discussions about the intersection of academic goals and career aspirations within the context of student interests is viewed by students as inspirational

and supportive and has been shown to increase the likelihood of transfer (Dowd et al., 2013; Eagan & Jaeger, 2009), student retention, and graduation (Nitecki, 2011; Tatum et al., 2006). The intervention included professional development to emphasize the importance of faculty in this role. This professional development workshop included materials, discussions, and role-play scenarios that set the standard for complete adherence which included (a) engaging in conversation with students about their aspirations, (b) assessing the student's current academic status and matching it with achievable goals for graduation and/or transfer, (c) investigating career and transfer school options with the student, (d) connecting students directly with a transfer and graduation specialist in the Advising Office with a phone call or email, and (e) providing (or offering, as appropriate) letters of recommendation or review of resumes for transfer or career opportunities. The evaluation of adherence examined whether faculty engaged in these activities as expected (Nelson, Cordray, Hulleman, Darrow, & Sommer, 2012). Strong adherence to the intervention required faculty to engage with the student in conversations about aspirations, academic status, and career/transfer goals proactively. Thus, when the student responded to an invitation and met with faculty, it was the faculty's responsibility to lead the conversation in light of their recognition of the important role they can play as institutional agents. Connections with the Advising Office and letters of recommendation were provided as necessary and varied depending on student circumstances. Poor adherence to the intervention was evident when the faculty did not make themselves available for student meetings, exhibited disinterest in assisting students, or did not provide contacts that supported student aspirations.

Quality. The quality of the faculty's interaction with students is the extent to which the faculty met the "theoretical ideal" (Dusenbury et al., 2003, p. 224) of institutional agents. Ideally, faculty were willing, engaged participants in the conversations with students reflecting their active interest in supporting students' goals. It is possible to imagine a range of quality from simply "checking the box" to deep, practical conversations that outlined action steps and considered student aspirations. The latter has been identified by students as positively reinforcing (Dowd et al., 2013) and reflects a higher quality interaction and fidelity of implementation. High quality faculty institutional agent interactions with students were exhibited when faculty took action to support students (i.e., together they examined transfer requirements, faculty sent an email or made a phone call to a transfer advisor alerting the advisor of a student visit, or faculty followed-up with a student on progress). Low quality interactions were superficial and not subject to follow-up conversations.

Responsiveness. Acting as an institutional agent requires knowledge of college processes, transfer and graduation requirements, and key institutional personnel. It also required time to behave as an institutional agent and meet with students. The extent to which faculty spent time with students during the semester and how frequently they repeatedly met with individual students reflected the degree to which they were engaged in the intervention and demonstrated responsiveness (Dusenbury et al., 2003). The administrative standards in HCC's Advising Office are 30 minute appointments with students and provided a reasonable benchmark against which to measure responsiveness (Rossi, Lipsey, & Freeman, 2004).

Indicators of fidelity of implementation. The indicators of fidelity of implementation in this intervention combined both continuous and single measures (Table 4.2). Continuous measures served to monitor the process in an ongoing manner providing stakeholders of new interventions, like this one, the opportunity to evaluate how the actual program compared to the intended program (Rossi et al., 2004). Single point measures in this case "augment[ed] an impact evaluation" (p. 175) since they assessed the quality of the actual interactions compared to the ideal institutional agent-student interactions.

Continuous data collection tools. The continuous data collection tools were the Faculty-Student Interaction Worksheet (Appendix K; see description below) and ad hoc conversations with faculty during division meetings recorded in the investigator's field notes. Both of these tools were used to evaluate adherence and responsiveness of faculty to their role as institutional agents.

The Faculty-Student Interaction Worksheet was used to measure whether faculty were actually doing the activities of an institutional agent (i.e., discuss current course work, discuss transfer schools, and help with scheduling for subsequent semester). The number of unique names faculty identified on the Faculty-Student Interaction Worksheet provided evidence of frequency with which they acted as institutional agents and multiple meetings with the same student demonstrated deeper commitment to the individual.

The ad hoc conversations served as check points to explore the need for follow-up with participants to clarify responsibilities as institutional agents as well as responsiveness and adherence to the intervention. These frequent conversations were

"management-oriented" and offered the opportunity to initiate "corrective measures" (Rossi et al., 2004, p. 181) with the faculty participants.

Single measure data collection tools. The quality of the faculty as institutional agents was measured with tools designed for students and faculty feedback. Feedback provided by students and faculty during semi-structured interviews allowed for comparison to the theoretical ideal.

High fidelity of implementation was evident in faculty who embodied the spirit of effective institutional agents. Faculty who adhered to the principles of institutional agency, responded to students, and performed the activities with high quality reflected high fidelity of implementation. Unsatisfactory performance on any of these factors led to lower levels of fidelity and complicated the explanation of why the intervention may have succeeded or failed as revealed in the outcome evaluation (Rossi et al., 2004). Variations in fidelity also raised questions about the practical aspects of attempting the intervention with a larger group of faculty in the division.

Outcome evaluation. The logic model (Appendix E) also identifies the proximal outcomes intended for the intervention. The proximal outcomes measured for faculty were the frequency of their discussions with students about program pathways, persistence, transfer, and graduation. The proximal outcomes measured for students were the frequency with which students sought faculty advising, semester-to-semester persistence, completion of developmental education, appropriate course selection, GPA, and the achievement of a significant credit milestones.

Method

66

This section describes the faculty and student participants and the procedures used to conduct the intervention study. The faculty are described first followed by the students within each subsection.

Participants

Six full-time faculty, including the principle investigator, in the BUCO division at HCC directly involved in the management of seven programs delivered the intervention. The five transfer programs studied were Accounting, Business Administration, Entrepreneurship, General Studies Business and Technology (GS-BT), and International Business. The two career programs studied were Business Management and Entrepreneurship. The faculty were distributed according to the following disciplines: three faculty were accounting faculty, two were general business faculty (including the principle investigator), and one was an entrepreneurship faculty. Faculty instruct students in all programs were included in the present study.

Students admitted to HCC for the fall 2015 semester identified as FTIC students were invited to participate in the research study. These students graduated from high school in May 2015 and began taking courses as early as the summer 2015 although most began during the traditional fall semester. Students initially declaring one of seven programs within the division were invited to participate. A treatment-naïve group of FTIC students entering in fall 2014 and registering for the same seven programs under study served as a comparison group.

The FTIC cohorts enrolling in the seven BUCO programs were primarily male and 18 years of age or older. Approximately 80% of each cohort required developmental education. Of the students requiring developmental education, approximately one quarter

required remediation in mathematics, reading, *and* writing. Three ethnicities/races

dominated both cohorts: white, black/African American, and Asian. The four most

frequently enrolled programs of study at entry were Business Administration A.A.,

Business Management A.A.S, Accounting A.A., and GS-BT A.A. A comparison of the

demographic characteristics of the fall 2014 treatment-naïve group and the fall 2015

active treatment group of FTIC students (Table 4.2) revealed no association between

cohort and gender, age, ethnicity/race, developmental education needs, or program of

study. Therefore, the proportion of individuals within each of these categories did not

differ across cohorts.

Table *4.2*

Demographic Characteristics of FTIC Fall 2014 and Fall 2015 Cohorts

	Fall 2014 Treatment- Naïve ($n = 82$) n (%)	Fall 2015 Active Treatment ($n = 76$) n (%)	X^2 p
Gender			.86
Male	55 (67.1)	52 (68.4)	
Female	27 (32.9)	24 (31.6)	
Age			.93
18 or older	61 (74.4)	57 (75.0)	
Less than 18	21 (25.6)	19 (25.0)	
Ethnicity/Race			.43
Asian	11 (13.4)	12 (15.8)	
Black or African American	19 (23.2)	24 (31.6)	
Hispanic	11 (13.4)	5 (6.6)	
White	32 (39.0)	30 (39.5)	

Other	9	5	
	(11.0)	(6.6)	
Developmental Education Needs			.70
None	17	14	
	(20.73)	(18.42)	
One (reading or writing or mathematics)	25	28	
	(30.49)	(36.84)	
Two (reading + writing, or reading + mathematics, or writing + mathematics)	20	10	
	(24.39)	(13.16)	
Three (reading + writing + mathematics)	20	24	
	(24.39)	(31.59)	
Program of Study			.63
Accounting A.A.	13	9	
	(15.85)	(11.84)	
Business Administration A.A.	29	28	
	(35.37)	(36.84)	
Entrepreneurship A.A.	3	6	
	(3.66)	(7.89)	
GS-BT A.A.	7	10	
	(8.54)	(13.16)	
International Business A.A.	1	2	
	(1.22)	(2.63)	
Business Management A.A.S.	28	21	
	(34.15)	(27.63)	
Entrepreneurship A.A.S.	1	0	
	(1.22)	(0.00)	

One female student between the ages of 18 and 21 and registered in the GS-BT program, a change from her originally intended program of study, participated in an interview. She took classes in the summer 2015, fall 2015, and spring 2016 semesters. She completed her required developmental mathematics course in the summer 2015 semester and did not need either developmental writing or reading. Neither of her parents attended college.

Instrumentation

There were two faculty instruments. The post-intervention semi-structured faculty interview protocol (Appendix L) asked about their perceptions of the effectiveness of the

intervention, confidence in their role as institutional agents, and recommendations for changes to the intervention. Faculty recorded their interactions with students on the Faculty-Student Interaction Worksheet (Appendix K) either electronically or on a hardcopy of the worksheet.

In addition to student data collected from existing student files and the LMS, the student interview protocol (Appendix J) was used to inquire about the level of participation in the intervention treatment, perception of support received from faculty acting as institutional agents, goal achievement, future academic and career plans, and recommendations for improving the intervention. Demographic characteristics of the student participant were collected (Appendix I) including program identification, semester persistence, developmental status, gender, age, and college attendance by parents.

Procedure

This section includes a description of the intervention including the materials used followed by a description of the data collection and analysis procedure. An intervention timeline is shown in Table 4.3.

Intervention. Faculty participated in a three-hour and 15-minute professional development workshop in August, 2015. Topics included characteristics of HCC students, faculty's role as institutional agents, role-play scenarios to practice conversations with students, intervention procedure, and a presentation by an advising transfer specialist. Institutional professional development credit and a modest meal were provided. Faculty informed consent was obtained at the professional development workshop.

Semi-structured interviews (Appendix L) were conducted with all faculty in March, 2016 with the exception of one accounting faculty member whose interview was conducted in December, 2015 prior to her departure for maternity leave. (Note: This faculty member returned to online teaching in the spring semester.) Faculty submitted their Faculty-Student Interaction Worksheets (Appendix K) at the conclusion of the fall and the spring semesters. Faculty were queried on an ad hoc basis about their experiences as institutional agents and work with students. These conversations were noted in the investigator's field notes.

The student intervention began in August with a mailing to the students' homes. In the first week of the fall semester the students were populated into the LMS course site containing the intervention materials. Students were encouraged to visit the site and provide comments related to discussion prompts that were posted on three occasions during the fall semester. These discussion activities were designed to create a connection between their attendance at HCC and broader academic and career goals. Discipline-specific faculty reviewed the student responses and provided feedback with a further invitation to discuss career and academic choices early in the students' academic career (e.g., a student who expressed interest in starting a business received a response from the entrepreneurship faculty with an invitation to stop by and discuss the idea further). The LMS email system and announcement utility were used to communicate with students directly and as a cohort about transfer events, internship opportunities, registration reminders, and invitations to meet with faculty for individualized advising.

Students were invited to participate in an interview in December and in April. A drawing for a $50 retail gift certificate and a modest meal was provided as an incentive for participation.

Table 4.3

Intervention Timeline

Intervention Activity	Participants	Timeline
Professional development workshop	Faculty	Ten days before fall semester
Introductory packet mailed	Students	First week of fall semester
LMS enrollment	Students and faculty	First week of fall semester
Discussion activities on LMS	Students and faculty	Fall semester
LMS invitation to meet about academic and career goals	Faculty and students	Fall, winter and spring semesters
LMS reminders to register for the upcoming semester	Students	End of fall and spring semesters
Semi-structured interviews	Faculty	End of spring semester
Semi-structured interviews	Students	End of fall and spring semesters

Note. One faculty interview was conducted at the end of the fall semester because the participant was scheduled to be on maternity leave and teach online during the spring semester.

Informed consent was obtained for students over the age of 18. Consent was obtained by students' instructors who provided two copies of the documentation before or after class and collected the signed forms the following class allowing students time to review the information. The investigator visited classrooms to reach students directly and obtain informed consent. The informed consent document was also linked to the home

page of the learning management system site (Figure 4.1) so that students could read the form, print it, sign it, and return it to the investigator's office.

Faculty Materials. The intervention had three faculty-directed components. At the professional development workshop faculty received a packet of information, which assembled critical information from several campus resources: the advising, financial aid, and, internship/co-op offices; a compilation of important criteria for the most commonly targeted transfer schools; and a directory of HCC contacts identified specifically for the BUCO division. These materials are provided as supplementary materials for this study. Faculty received an electronic and hardcopy of the Faculty-Student Interaction Worksheet (Appendix K) and were provided access to the LMS allowing them to communicate directly with student participants through email, announcements, and discussion posting responses.

Student Materials. The intervention materials in the packet mailed to the student's home included a welcome letter (Appendix F), short faculty biographical introductions (Appendix G), program pathways outlining required courses and the recommended sequence over four semesters for the seven programs (Appendix H), and requirements for targeted transfer institutions (Appendix H).

The intervention materials available on the LMS were the program pathways outlining required courses and the recommended sequence over four semesters for the seven programs (Appendix H); transfer school requirements and application procedures (Appendix H); faculty biographical introductions (Appendix G); and three discussion activities that students were invited to complete and post to an online discussion forum during the fall semester. Here is a sample discussion question,

Do some research on a job in business that you would consider as a career. Find someone who does this job and ask them about their day-to-day activities, the education they earned to pursue the job, the parts of the job they like most, and the parts they enjoy least. Comment on your findings in 100 words by replying to this discussion.

(You may find your business teachers and the Career Center in RCF 302 helpful sources of information.)

Hyperlinks to the informed consent, program pathways, transfer schools, and faculty biographies were included on the home page of the LMS (Figure 4.1).

Figure 4.1

Learning Management System Home Page

Data Collection. The data collection procedure included both the process of implementation and proximal outcomes of the intervention. Information related to the process of implementation was reflected primarily in the data collected from the faculty instruments, the semi-structured interviews, and the Faculty-Student Interaction worksheet. These data revealed the faculty's adherence, responsiveness, and quality of engagement vis-à-vis the theory of institutional agency. The student focus group

interview provided data to assess the quality of the interactions with faculty as institutional agents. The student metrics described in the research questions were assessed primarily through the two databases of student information.

Faculty interviews were conducted by faculty interviewers from outside of the BUCO division who knew little of the subjects' discipline and were not otherwise connected to the intervention. Two different faculty from the English division conducted the interviews. In December, 2015 the first interview was conducted with the instructor who would be on maternity leave and teaching online in the spring semester. That interviewer became ill and was unable to conduct the remaining five interviews. The remaining five interviews, including the investigator's, were conducted by a second English division faculty member.

The investigator's field notes were recorded using an online journal. The journal automatically recorded the date and allowed for unlimited entries. Journal entries included data from ad hoc conversations with faculty and students as well as a repository for the investigator's reflections during the intervention. Faculty-Student Interaction Worksheets (Appendix K) yielded faculty records of student contact, which were maintained by the six faculty, including the investigator, involved in the intervention. Faculty recorded salient details of student advising meetings occurring either face-to-face or virtually for all students they met with during the fall and spring semesters.

Student data were gathered from two database sources: the HCC student database and the LMS site database. The HCC student database showed persistence from fall to spring semesters, provided the number of credits attempted and earned each semester, developmental education status for reading, writing, and mathematics at point of entry,

developmental courses attempted and completed, attempts and grades for three key

gateway courses including ACCT-111 Principles of Accounting, BMGT-100 Introduction

to Business, and ECON-101 Macroeconomics, and cumulative GPA. The database also

provided demographic data and allowed for comparison to the previous year's fall 2014

treatment-naïve cohort. The data were gathered for the following semesters: summer

2015, fall 2015, winter 2016, and spring 2016. The same data were gathered for the

treatment-naïve fall 2014 FTIC cohort and reported for summer 2014, fall 2014, winter

2015, and spring 2015 semesters. A research assistant in the learning outcomes

assessment office compiled the data.

LMS interactions were captured from the standard output of the course sites and

provided the frequency of student engagement with the discussion prompts, the pages

accessed on the site, the frequency of page access, the last dates the pages were accessed,

and responses to the investigator's email communications and discussion prompts.

Students were invited to participate in interviews in December and April. The

December interview was conducted during final exam week and did not yield usable data

(the student participant was under 18 years of age). The April interview was scheduled

for two different weeks to encourage participation. There were no participants for the first

April date, and the second April interview was attended by a single participant.

Invitations to participate in the interview were posted as announcements on the LMS site

for the December focus group and sent directly to potential participants as emails through

the LMS for the April dates. Students were invited personally to participate by the

investigator for the December and April focus group interviews. Finally, semi-structured

interviews were attempted via email with students who did not re-enroll in the spring

semester to gain perspective on why these students do not persist. No usable data were collected (i.e., there were no responses).

Data Management. Data were stored on the investigator's HCC password protected computer. Data captured on the Faculty-Student Interaction Worksheet were coded to anonymize both the faculty and students. Data captured for each student through the HCC and LMS databases were organized by student identification number. Prior to analysis, the student identification numbers were assigned a unique code to anonymize the data. Data were compiled in an Excel spreadsheet and uploaded to SPSS for analysis. Data captured through interviews were audio recorded, transcribed, and kept on the investigator's password protected HCC computer. Prior to analysis, pseudonyms were substituted for the interview participants' names.

Data Analysis. Consistent with the embedded mixed methods design, both qualitative and quantitative data were captured through the various instruments. The qualitative data were analyzed to assess the experiences of participants and implementation fidelity, and the quantitative data were used to assess the outcomes of the intervention (Creswell & Plano Clark, 2011). This section describes how the data were analyzed by research question.

Both qualitative and quantitative data were collected to address the first research question, which examined the experience and engagement with the intervention. The data from the faculty semi-structured interviews were coded, grouped, and labeled to uncover broad themes (Creswell & Plano Clark, 2011). Faculty responses were first grouped by subject of activities with students (i.e., course-related or advising) and then demonstrations of institutional agency were identified. Analysis compared faculty's

impressions of their engagement with students and experiences as institutional agents to the description detailed in the literature (Dowd et al., 2013; Stanton-Salazar, 2011). Faculty responses to questions about how processes to support students could be improved were analyzed to identify broad thematic impressions of the usefulness and generalizability of the intervention to others in the division and to the college as a whole.

The data from the Faculty-Student Interactions Worksheet were analyzed for faculty contact with all students over the academic year, which included frequency and method of contact, and topics discussed. Descriptive statistics, frequency, mean, and range, were calculated based on the total number of students with whom faculty met, the time spent in meetings, and the number of follow-up meetings with individual students. The worksheets were further analyzed to specifically identify students in the active treatment cohort who met with faculty. The total number of students from the cohort, the faculty with whom they met, and the topics discussed were recorded.

There was an anticipated range of treatment exposure for student participants, which was an additional measure of fidelity of implementation. If the packet of materials mailed to the students' home was not returned as undeliverable by the U.S. Postal Service, the minimum level of exposure to the intervention was assumed to be receipt of the packet. The assumption that the packet was opened by the student or family member is appropriate since the information was mailed in an official HCC envelope and was received during the first week of classes in the fall semester. It is possible, however, that the information was only superficially scanned, set aside for future reference, or quickly discarded. Thus, the minimum level of exposure could be indeed quite minimal. A similar concern is raised by the acceptance of the invitation to the LMS. However, the LMS

provided information related to the pages viewed and the overall time spent on the site. The data gathered from the LMS database were descriptively analyzed to calculate the mean number of pages viewed, the most frequent pages viewed, engagement with the LMS discussion activities, and to describe when the site was last accessed by persisters.

The student interview was coded to search for themes that reflected the literature relative the profile of community college students and the opportunities to support these students. Comments from the student that described her challenges and the college personnel she sought for assistance were grouped. This grouping illuminated the role that faculty acting as institutional agents could and do play to support students and to fill gaps left by the advising center. These findings were compared with faculty experiences reported during the interview to illuminate the differences between student and faculty perceptions of faculty helpfulness.

My field notes were coded to highlight themes related to the implementation of the intervention, my roles as both participant and observer, and my interactions with students and faculty. The themes were then grouped to consider the perspectives of generalizing the findings of this study (Tracy, 2010) and the implications for practice.

The qualitative data collected from the faculty interviews, the student interview, and my field notes were compared to determine overlapping themes and areas of discordancy. Whenever possible the faculty's experiences were compared to the student's impressions. My field notes added depth and perspective, particularly where topics, experiences, and students intersected with the interview data. This method of grouping and comparison allowed for triangulation of experiences and impressions of efficacy.

Data from the HCC student database were analyzed to provide the metrics for addressing research questions two and three. First, the demographic characteristics of the treatment-naïve and active treatment cohorts were compared using a chi-square test to determine if the two cohorts were comparable in subsequent analyses. Then to address research question two, semester-to-semester persistence, completion of developmental education, and course selection were compared for the two cohorts using the Mann-Whitney U test for independent samples. A t-test for two independent samples was calculated to compare mean developmental credits attempted and successfully completed to compare remedial course completion rates. A t-test for two independent samples was calculated to compare mean cumulative GPA, and, GPA ranges were compared descriptively for the two cohorts. To address research question three about reaching credit milestones, descriptive statistics and a chi-square test were calculated with and without the inclusion of developmental education credits. A one-tailed t-test was performed to increase the power to detect difference between the two cohorts in the hypothesized direction of total credits and college-level credits earned.

Summary Matrix. The summary matrix demonstrates the relationship between the research questions, proximal outcomes, variables, and the data gathering instruments (Table 4.4). The summary matrix was informed by the literature, reflected the mixed method approach, and incorporated elements of the intervention. It suggests the hypothesis that faculty who acted as institutional agents would fill a gap in students' support system and provided the connection to the college, emotional and moral support, and practical curricula direction (Dowd et al., 2013) needed to reach significant credit milestones by the end of the first year (Calcagno et al., 2007).

Table 4.4

Summary Matrix

Research Question	Proximal Outcome	Variables	Source of Data
RQ1: What were faculty and students' experiences and engagement with the intervention?	Faculty discussion of persistence, transfer, and graduation is increased	The number of student/faculty meetings	Faculty-Student Interaction Worksheet Field notes
		Faculty perception of development as institutional agents	Semi-structured faculty interviews
	Students seek advising more frequently from faculty	Student perception of faculty helpfulness	Faculty-Student Interaction Worksheet Student interview
		Rate of student engagement with the LMS	LMS Database
RQ2: Did the intervention affect semester-to-semester persistence, completion of developmental education requirements, course selection, and cumulative GPA?	Increased semester-to-semester persistence of HCC BUCO students	Fall-to-spring persistence rates	HCC student database
	Students take courses in recommended order according to program pathways	Developmental mathematics and English completion rates	HCC student database

		Course selection	HCC student database
RQ3: Did the intervention affect the number of students who earned 30 credits including and excluding developmental education credits by the end of the first academic year?	Students reach credit milestones at the end of the first year	Students complete 30 credits in the first year	HCC student database

Participant Observer Subjectivity Statement

As a faculty member participating in the intervention as an institutional agent, I walk a line dividing the responsibilities as an active participant in the study and the observer who must reflect accurately the outcomes of the intervention. Thus, it is critical that I reflect on both the value and challenges of the position as participant observer.

As an insider to the both the methodology and the students participating in the intervention, I have "privileged access" (Labaree, 2002, p. 100) about the processes and the people involved. This knowledge was an advantage since an overarching research goal was to study the impact of faculty acting as institutional agents on important metrics of student persistence: semester-to-semester persistence, completion of developmental education courses, appropriate course choice, GPA, and the achievement of credit milestones. The frequency with which I encountered students, whether in the classroom, hallway, or coffee shop, helped to develop the trust and relationship necessary for faculty to be sought after by students for guidance and support. As a faculty member who teaches several of the required courses in various programs, I have a privileged position within

the classroom. Throughout the course of the intervention, there were opportunities to hear anecdotal comments in the classroom about students' reticence to take certain courses, whether because they fear they will be difficult or a preconceived notion about their interest in the subject. Undoubtedly this has prompted me to be more attuned to these beliefs and address them directly in individual student meetings.

Among the advantages Labaree (2002) proposes to being an insider participant observer are the "value of shared experience [and] the value of greater access" (p. 102), which I have both as a faculty participant and an undergraduate transfer student. My faculty colleagues and I work closely together; we are all in the same building, and see each other at bi-monthly meetings, in the division office, and before and after class. We often share the experiences we have had with students and seek one another's advice. Because I am a member of the division, faculty participants had greater access to me than they would have had with a different type of study design. I also have shared experiences with students. I transferred from a state university to a private university during my undergraduate studies. That experience provides first-hand knowledge of the social challenges of fitting into an already established social environment. Because of my experience, I recommended students consider how they "fit" socially into the transfer institution in the one-on-one discussions. The insight gained by accessing tools available to students (i.e., the college website, receiving institutions online promotion materials, and the internal course registration system) all provided a deeper understanding of the challenges negotiating the complex pathways leading to completing an associate degree and ultimately earning a bachelor's degree.

A theme in the participant observer qualitative research literature is the risk of empathy and emotion clouding the objectivity of the researcher (Allan, 2006; Labaree, 2002; Schrift & Amar, 2015). As the researcher interested in building trust with students and faculty, I frequently demonstrated empathy. This is typical where faculty acting as institutional agents may be filling a void for support not otherwise provided at home. I feel the same joys and frustrations as my colleagues when we work with students and learn more about them beyond their GPA. The amount of time and consideration a student gives to a recommended course of action influences my perception of the student (Kupor, Tormala, Norton, & Rucker, 2014) and potentially my willingness to act further. The belief that a colleague is an excellent teacher may cause me to be more empathetic to the instructor and hear fewer student criticisms. My experience as a transfer student on one hand provided an insider's view of the process; however, that same experience may have caused me to imagine how I would have handled a situation (Schrift & Amar, 2015). It was important then to be self-reflexive, tracking and acknowledging my own biases and preconceptions (Tracy, 2010). Allan (2006) suggested that a reflective diary where the investigator's feelings are recorded helps to distinguish empathetic reactions from objective findings.

A second theme present in the literature is the nature of the power relationship between investigators and potential participants (Wallace & Sheldon, 2015), both students and faculty in this study. Given that the institutional agency theory asks faculty to fill the role of supporter and advisor, and be a conduit to needed resources, it is apparent that there is an imbalance of power in favor of the faculty. I am certainly in this position and must carefully navigate relationships with students to maintain "authentic,

informed consent" (Wallace & Sheldon, 2015, p. 269). As mentioned, we are a close group of colleagues. We want to help one another, and certainly this extends to my colleagues' interest in supporting my research. I looked critically at interview transcripts for occasions where faculty participants implied that they "wanted to say the right thing" and contrasted them with their frank criticisms of the study design or interactions with students. I endeavored to present a reliable view of the study's findings through thick description and triangulating faculty and student perspectives to demonstrate credible findings to the reader (Tracy, 2010).

To overcome both of these sets of challenges, I maintained a field journal, which included expressions of emotion (i.e., frustrated, excited, and happy) as well as dispassionate objective meeting notes with students. My field notes provided more detailed descriptions of student encounters that did not fit into quantitative study instruments such as the Faculty-Student Interaction Worksheet (Appendix K). These descriptions were reflected both in the findings and discussion in this work. The expectation of writing about student meetings and tracking encounters on the Faculty-Student Interaction Worksheet (Appendix K) balanced both elements and assisted in maintaining appropriate objectivity.

Chapter 5

Findings, Discussion, and Implications for Practice

This chapter describes the study findings organized by research question. This study examined the effect of combining the theory of institutional agency with practical tools to assist students in making decisions about programs and transfer schools. Over the course of the academic year, one goal was to increase faculty's ability to act as institutional agents by providing information and contacts to assist their efforts to support students. A second goal was to improve key metrics of student progress by making advising information about programs and transfer schools readily available through the LMS and faculty. The research questions reflected these goals.

RQ1: What were faculty and students' experiences and engagement with the intervention?

RQ2: Did the intervention affect semester-to-semester persistence, completion of developmental education requirements, course selection, and cumulative grade point average (GPA)?

RQ3: Did the intervention affect the number of students who earned 30 credits including and excluding developmental education credits by the end of the first academic year?

The analysis for the intervention study compared the treatment-naïve fall 2014 FTIC students to the active treatment fall 2015 FTIC students. Both student groups met the same entry criteria: high school graduation in May of the year entering HCC as a FTIC student and initially registered for one of the seven programs in BUCO (i.e., Accounting A.A., Business Administration A.A., Business Management, A.A.S, Entrepreneurship

A.A., Entrepreneurship A.A.S, General Studies Business and Technology (GS-BT) A.A., and International Business A.A.). As stated previously, analyses of the demographic characteristics of the comparison and active treatment groups showed no association between cohort and gender, age, ethnicity/race, developmental education needs, or program of study. Therefore, the proportion of students in each category within each cohort did not differ (Table 4.2).

Faculty and Student Engagement with the Intervention

Results from several instruments inform the response to the first research question that explored faculty and student experiences and engagement with elements of the intervention. Faculty's fidelity to the theory of institutional agency was assessed through the Faculty-Student Interaction Worksheet, faculty responses to interview questions, and ad hoc conversations noted by the investigator. Institutional agency theory focuses upon activities that support students and beliefs that students can succeed with this support (Dowd et al., 2013; Nitecki, 2011; Tatum et al., 2006); thus, both examples and attitudes of faculty toward students were considered in the evaluation of fidelity. Adherence, quality, and responsiveness of faculty acting as institutional agents were markers of fidelity of implementation (Dusenbury et al., 2003). Examples of faculty engaging in conversation with students about aspirations and investigating transfer opportunities and careers based on academic performance were demonstrations of adherence to the tenants of institutional agency. The faculty's willingness to work with students, following-up on conversations in multiple meetings was reflected in the Faculty-Student Interaction Worksheet and demonstrated the quality of implementation. Responsiveness was assessed by examining the frequency and the time dedicated to student meetings.

Assessing engagement and experiences was also considered from the students' perspectives by examining the level of engagement with the LMS. These levels of engagement will be augmented with one student's description of her interactions with faculty. The LMS is a tool used primarily by faculty to communicate individually with students and manage course-related assignments and grades. Messages sent through email and course-level announcements are understood by students to originate with faculty, not student services or professional advisors. Thus, they are another link to faculty. Students' engagement with the LMS, participation in discussion questions, examination of transfer school information pages, and faculty contact information were assessed to examine the utility of the LMS as an accessible repository for such information. The student interviewed provided insight from the perspective of an archetypal community college student: first-generation, academically underprepared, and financially under-resourced.

Faculty Experiences

Faculty recorded their interactions with students on the Faculty-Student Interaction Worksheet, which they reported they kept at hand either on their computer or desk. Faculty were asked to record all interactions, not just those with members of the treatment cohort, and, not just those for whom they provided advising. Although few students from the fall 2015 cohort were recorded on the worksheet, faculty reported meeting with nearly 60 students on average over the academic year ($M = 58.67$; $SD = 31.75$) and the number of meetings ranged from $28 - 127$ during the academic year. The fact that faculty met frequently with students speaks to their responsiveness and commitment to the theory of institutional agency. It is apparent from these data that

faculty had on-going conversations with students (i.e., several meetings on the same topics with the same student) an indication of the quality of the interactions since follow-up was measured as implementation quality.

Six faculty members, including the investigator, participated in individual interviews to understand their experiences while in the study and how they felt about the engagement with students vis-à-vis their role as institutional agents. The interview comments reflect both the faculty activities and their attitudes. Fidelity of implementation to the theory of institutional agency was evident in the faculty comments related to how they worked directly with students.

One-on-one conversations with students typically began with a focus on coursework and brought students to faculty's offices. Nora[1], a faculty participant, explained that the "vast majority of students…are struggling with material and they want to go through [it] in greater detail" (Nora, interview, April 25, 2016). This coursework connection to students allowed faculty to use their discipline-specific knowledge and experience to act as institutional agents (Dowd et al., 2013). Steven often had students who stopped by to develop a business idea, part of a class assignment, which led to conversations about "where to go from here" (Steven, interview, April 15, 2016). He felt this led naturally into a conversation about other courses and transfer schools. Steven's comments that he proactively engaged with students and used his network to connect students with resources (Dowd et al., 2013) demonstrated his adherence and responsiveness to the theory of institutional agency:

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[1] All faculty names are pseudonyms.

I can give them contacts, people to go to, there's usually an open invitation to observe some classes…put them in touch with other entrepreneurs, or people in the fellows' program at [another university] so that we quite often just facilitate [students] meeting with the right people to get more information to make decisions about where they want to go. (Steven, interview, April 15, 2016)

Because I am very familiar with the program pathways, transfer requirements, and the impact of developmental education on persistence, I tended to devote my activities with students to "picking out where they want to transfer to, what classes they need, [and] making sure their major aligns [with these choices]" (interview, April 8, 2016). Margot learned about the program pathways and transfer requirements in the professional development session and used her knowledge and networks to act as an institutional agent:

Even just all the transfer documents I was talking about. That has helped me with my ignorance with the process. And she [the investigator] matched us up with the advising group, and that's their specialty, that's their everyday job. Now I feel like I know I'm not expected to know all the answers, but I am expected to be able to direct the students to the proper people. (Margot, interview, December 3, 2015)

The activities that faculty engaged in with students made purposeful connections to resources that supported students to achieve their educational goals.

Faculty had positive attitudes about these experiences with students. Uniformly, faculty enjoyed these conversations and felt that the individual communication began a relationship with students that extended beyond the course content. Margot stated, "I like the one-on-one, and you get to know them a little more. You get to hear their personal

stories as well as their academics. Builds that bond a little bit" (Margot, interview, December 3, 2015). Nora explained that the individual engagement with the students was her purpose as faculty. "I feel like that's what I'm here for, if I'm not working with students then I don't know…I have to question myself …and what it is that I'm doing here" (Nora, interview, April 25, 2016). Charlie, Katrina, and Steven expressed their commitment to their students' success. I found working with students both enjoyable and rewarding, and sought to create a safe space for students to think aloud, exploring academic and professional aspirations.

Among the most valuable resources faculty have access to is their own time (Dowd et al., 2013). The pressure to meet the requirements of being an instructor and see students individually weighed on faculty. The time and energy involved with both high-quality teaching and individualized conversations, while perceived as worthwhile, was significant. Because Charlie, Katrina, and Steven made it clear they were personally invested in their students' success, they were thus guarded about spending time with students who were just "covering the bases" (Charlie, interview, April 15, 2016). The comments by Charlie, Katrina, and Steven implied that there must be a tangible result from their conversations with students. Developing a mutual relationship was a starting point, offering assistance that was used by students as they progressed seemed to be more meaningful. While faculty demonstrated their responsiveness and had strong fidelity of implementation as evidenced in their willingness to meet and plan with students, it is conceivable that if faculty perceived students were not going to use the information provided or be equally committed to the relationship, then faculty would become less responsive to student requests for their time.

Ad hoc conversations between faculty during the normal course of work often focused on connections made outside of the division, students who have exposure to multiple division faculty, and transfer school requirements. These conversations reflected the activities faculty engaged in as institutional agents. The contacts faculty continued to make beyond the professional development workshop and their desire to increase their knowledge demonstrated their adherence to the theory of change. During some of these conversations, faculty expressed frustration with a transfer school requirement that seemed to disproportionately disadvantage our students (i.e., withdrawing from gateway courses had the same outcome as failing the course and counted against the student's transfer opportunity). These types of conversations showed a commitment to the role of institutional agency. No longer were faculty unaware or apathetic; they felt they needed to proactively work with students to best help them achieve their academic and career goals.

Student Experiences

Students in the fall 2105 treatment cohort received faculty introductions, program pathways, and transfer school information through traditional mail and the LMS. The premise was that students would not seek advising, and that to be effective, advising information must be brought to the student (Hagedorn et al., 2008). The LMS site was designed as a repository for the sequence of prescribed transfer courses based on specific programs and transfer schools and a conduit to faculty that students could access at any time. The site title, "Business and Entrepreneurship Students FA15" indicated it was exclusively for this new cohort of college freshman (see Figure 4.1 for an image of the home page). The site appeared on the list of current courses for which students were

registered, and, because it was created as a global site, it is visible every semester. The use of this LMS site and contacts with faculty recorded on the Faculty-Student Interaction Worksheet indicated the level of engagement students had with the study materials. The student interview afforded the opportunity to question a student in-depth about her first-year experience.

The LMS site was accessed by the majority of students, 98.7% ($n = 75$). The mean number of pages viewed was 15.30 ($SD = 10.31$) from September, 2015 through June, 2016. It is interesting to note the difference in engagement with the LMS among students who persisted from the fall to the spring semesters ($n = 63$) compared to those who did not return ($n = 9$). The mean number of pages viewed by persisters was 16.54 ($SD = 10.66$) and 9.31 for non-persisters ($SD = 5.50$). Further, the majority of persisting students (95.24%, $n = 60$) last accessed the site in the spring semester. Notably, 65.10% ($n = 41$) of the persisters last accessed the site at the end of the spring semester, April through June (Table 5.1).

Table 5.1

Last Month LMS Site Accessed by Persisters

Last Month Accessed	Persisters (*n* = 63) (%)
September	0 (0.00)
October	0 (0.00)
November	1 (1.59)
December	2 (3.17)
January	0 (0.00)
February	12

	(19.05)
March	7
	(11.11)
April	10
	(15.87)
May	24
	(39.10)
June	7
	(11.11)

The home page, discussion pages, and announcements were the most frequently accessed pages. Interestingly, while only two students responded to each of the three discussion prompts, 77.63% ($n = 59$) students accessed the discussions pages at least once ($M = 2.39$, $SD = 2.73$, accessed range: $1 - 15$). This may indicate that students were passively interested in other students' responses but were not willing to actively participate in the discussion. In the fall 2015 cohort, 17% ($n = 13$) did not persist from the fall to spring semester and included the single student who did not access the site at all. More than half of those who did not return for the spring semester stopped accessing the site by October (69.23%, $n = 9$).

As mentioned previously, few students (9.21%, $n = 7$) from the fall 2015 treatment cohort were recorded on the Faculty-Student Interaction Worksheet. One student met with two different faculty members, and discussed coursework exclusively with one faculty member and coursework, scheduling, programs, transfer, and academic performance with me. This student was noted in my field journal for the frequency of his visits. He stopped by at least once-a-month, dropping in during office hours, to look at transfer requirements for the large state university he hopes to attend in the future.

As evidenced by the findings presented, student engagement with the intervention materials was primarily through the LMS site. The few students who did meet with

faculty uniformly discussed coursework. The experience of students during their first year in community college may be reflected by "Bridget", the archetypal community college student who revealed her experiences in the student interview protocol.

"Bridget" participated in the student interview and noted several times that she was the first in her family to go to college and that the academic scholarship she earned helped her avoid student loans. She confided that unlike many of her friends at the large state university, tuition expenses were difficult for her single mother to manage. Her family was also worryied about paying for her younger brother's tuition in two years. Compounding Bridget's anxiety about college was her lack of confidence in her ability to negotiate the complexities of transfer. "I'm really new to the whole college system, what needs to be done, and how to transfer" (Bridget, interview, April 27, 2016). She appeared to limit the support she sought regarding program pathways and programs of study to the professional advising staff. She related that she saw several different advisors and received conflicting advice, adding to her uncertainty and explained that she really wanted someone to just "tell me what I should do" (Bridget, interview, April 27, 2016). Although she found faculty generally helpful about coursework, she did not know that faculty could provide information on transfer; "I thought advisors are the only ones that really knew about the whole credit transfer … what classes to take and what they don't offer in the summer or winter" (Bridget, interview, April 27, 2016). As noted in my field journal, I saw Bridget on two occasions after the interview and assisted her on course selection for the next academic year and reviewed the requirements of the large state university to which she is interested in transferring.

Considering engagement with the study materials from the perspectives of both faculty and students, there appeared to be a disconnection between the FTIC students and the faculty participants. Faculty were willing and able to act as institutional agents; they were simply afforded few opportunities to do so with the fall 2015 cohort. Students in the treatment cohort seemed to prefer the flexibility of accessing information on the LMS and passively observing discussions.

Metrics Supporting Persistence

Several measures provided evidence of the steps toward academic integration and an individual's commitment to the goal of earning a degree (Tinto, 1975): semester-to-semester persistence, completion of developmental education, course selection, and cumulative GPA. These metrics were reflected in research question two, which examined whether students returned from the fall to the spring semesters while completing required courses on the program pathway with a sufficient GPA to continue enrollment which also afforded opportunities for transfer.

Semester-to-Semester Persistence

A Mann-Whitney U test of two independent samples showed that students returned from the fall to spring semesters at similar rates for the two cohorts. The percentage of students who persisted from the fall to the spring semesters was 79.27% for the fall 2014 treatment-naïve cohort and 82.89% for the fall 2015 active treatment cohort. There was no association between the cohort and persistence in school ($U = 3,003.00$, $p = .56$).

Completion of Developmental Education Requirements

Students entering any program of study are encouraged to begin their

developmental coursework within the first 24 credits to meet the goals of the Maryland's

College and Career Readiness and College Completion Act of 2013 (2012). In each

cohort the proportion of students who required developmental coursework in one or more

areas was similar (Table 4.2), 79.27% ($n = 65$) and 81.58% ($n = 62$), fall 2014 and fall

2015, respectively. The Mann-Whitney U test showed, however, that cohort was

associated with developmental education completion rates during the first year of

enrollment. In the active treatment cohort, 30.26% ($n = 23$) completed their

developmental education courses versus 15.85% ($n = 13$) in the treatment naïve cohort,

($U = 1,670.50$, $p = .03$) (Table 5.2).

Table 5.2

Developmental Education Completion by Cohort

	Fall 2014 Treatment- Naïve	Fall 2015 Active Treatment	Row Total	Mann- Whitney U Test
	n	n		p
Needed Developmental Education				
Completed	13	23	36	.03
Did Not Complete	52	39	91	
Total	65	62	53	

The participants were grouped according to the number of disciplines to be

remediated (Table 5.3) to investigate these groups of students separately. Among students

who needed only one subject (i.e., reading, or writing, or mathematics), the Mann-

Whitney U test indicated an association between cohort and developmental education

completion ($U = 245.00$, $p = .02$). Of those students who required more than one

discipline of remediation, there was no association between cohort and developmental

education completion ($U = 90.00$, $p = .68$ and $U = 228.00$, $p = .70$, two and three levels of

remediation, respectively).

Table 5.3

Developmental Education Completion by Cohort and Grouped by Number of Disciplines

	Fall 2014 Treatment-Naïve	Fall 2015 Active Treatment	Row Total	Mann-Whitney U Test
	n	n		p
Needed One Discipline (reading, writing, or mathematics)				
Completed	5	14	19	.02
Did Not Complete	20	14	34	
Total	25	28	53	
Needed Two Disciplines (reading + writing, reading + mathematics, or writing + mathematics)				
Completed	4	3	7	.55
Did Not Complete	16	7	23	
Total	20	10	30	
Needed Three Disciplines (reading + writing + mathematics)				
Completed	4	6	10	.70
Did Not Complete	16	18	34	
Total	20	24	44	

Most students in both groups enrolled in developmental courses during their first

academic year, 93.5% and 91.7%, fall 2014 and fall 2015, respectively. Attempting the

remedial courses is an important first step for students; successfully passing the courses

and progressing to college level courses is a significant achievement. The *t*-test revealed

no significant difference between the completion rates for developmental credits

attempted and successfully completed and cohort ($t = .09$, $df = 156$, $p = .93$) although

there was a trend in favor of the active treatment group. In the fall 2014 treatment-naïve

group, the mean number of developmental credits attempted was 7.78 ($SD = 4.82$) and the mean number of developmental credits earned was 4.32 ($SD = 4.16$), yielding a 55.53% completion rate. For the fall 2015 active treatment group, the mean number of developmental credits attempted was 6.47 ($SD = 4.72$) and the mean number of developmental credits earned was 4.34 ($SD = 4.18$), yielding a 67.08% completion rate.
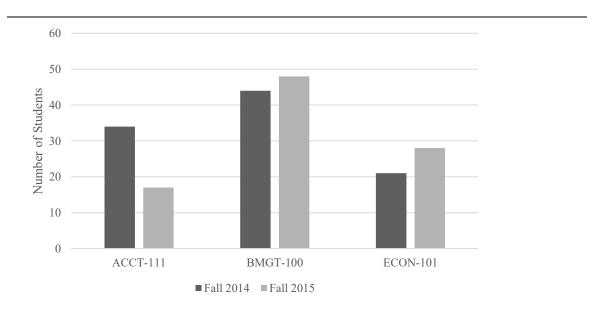
Course Selection

Choosing the appropriate courses within a program of study is recommended for FTIC students (Nitecki, 2011). In the programs under investigation, three gateway courses are critical to both degree completion and transfer: ACCT-111 Principles of Accounting (ACCT-111), BMGT-100 Introduction to Business (BMGT-100), and ECON-101 Macroeconomics (ECON-101). In an effort to encourage course selection that builds upon foundational courses, program pathways (Appendix H) were distributed in the introductory packet mailed to students' homes and posted on the LMS site. The pathways recommended BMGT-100 and ECON-101 as first year courses for all students. ACCT-111 was recommended in the second year for all students except those in the Accounting A.A. program.

There are no barriers in place to prevent students from taking any of the three gateway courses, ACCT-111, BMGT-100, or ECON-101; and, the entire populations of both cohorts were considered in this analysis ($n = 82$ and $n = 76$, 2014 treatment-naïve and 2015 active treatment cohorts, respectively). Students attempting BMGT-100 and ECON-101 increased and students attempting ACCT-111 decreased in the active treatment cohort compared to the treatment-naïve cohort (Figure 5.1). In the fall 2014 treatment-naïve group, 53.66% ($n = 44$) of students took BMGT-100 versus 63.16% ($n =$

48) of the fall 2015 active treatment group, a 10.50% increase ($U = 969.00$, $p = .39$). In the fall 2014 treatment-naïve group, 25.61% ($n = 21$) of students in the 2014 cohort took ECON-101 versus 36.84% ($n = 28$) in the fall 2015 active treatment group, an 11.23% increase ($U = 236.00$, $p = .80$). Despite trends in the expected direction, there was not an association between cohort and enrollment in BMGT-100 or ECON-101. In the fall 2014 treatment-naïve group, 41.46% ($n = 34$) students took ACCT-111 in the first year versus 22.36% ($n = 17$) of students in the fall 2015 active treatment group, a decline of 19.10% ($U = 199.00$, $p = .04$). Thus, there was an association between cohort and the percentage of students attempting ACCT-111.

Figure 5.1

Number of FTIC Students Taking Gateway Business Courses by Cohort

Cumulative GPA

GPA is a metric transfer schools use to discriminate among applicants, determine scholarship and financial aid availability, and define students' academic status. The mean

cumulative GPA for the fall 2014 treatment-naïve group was 2.07 ($n = 82$, $SD = 1.01$). The mean cumulative GPA for the 2015 active treatment group was 2.28 ($n = 76$, $SD = 1.54$). The mean cumulative GPA for the two cohorts, which were not statistically different ($t = 1.27$, $df = 156$, $p = .21$), is a blunt metric however.

Grouping students by GPA range highlights students on the upper end of the distribution who may be afforded more transfer opportunities and students on the lower end of the distribution who are subject to semester credit limits (HCC, 2015d, p. 63). Looking more precisely at students in a given GPA range (Table 5.4), slightly fewer students earned less than a 2.00 cumulative GPA in the fall 2015 active treatment group 35.53% ($n = 27$), compared to the fall 2014 treatment-naïve group, 39.02% ($n = 32$), respectively. Further, there is a trend toward more students in the fall 2015 cohort earning a 3.0 or higher GPA than the fall 2014 cohort, 27.63% ($n = 21$) and 19.51% ($n = 16$), respectively.

Table 5.4

GPA Distribution by Cohorts

	GPA Range				
Cohort	0.00 – 1.99	2.00 –2.49	2.50 – 2.99	3.00 – 3.49	3.50 – 4.00
	n	*n*	*n*	*n*	*n*
	(%)	(%)	(%)	(%)	(%)
Fall 2014	32	15	19	12	4
	(39.02)	(18.29)	(23.17)	(14.63)	(4.88)
Fall 2015	27	13	15	12	9
	(35.53)	(17.12)	(19.74)	(15.79)	(11.84)

Reaching Significant Credit Milestones

Calcagno et al. (2007) found that younger, traditional-aged students increased the odds of graduating by "a factor of 15.5" (p. 794) once they had reached 50% of the program credits needed for completion. Thirty credits represent this milestone; however,

given that nearly 80% of students in both cohorts required developmental coursework, a comparison of all credits accrued versus only college-level credits accrued (Table 5.5) was considered in research question three. To answer this question, the total number of credits completed was compared followed by an examination of the association between cohort and those who did and did not complete this milestone.

The mean number of all credits completed was 17.17 ($SD = 9.98$) and 20.00 ($SD = 10.84$) for the fall 2014 and fall 2105 cohorts, respectively ($t = 1.70$, $df = 156$, one-tailed, $p = .04$). There was no association between cohort and earning 30 total credits, including developmental credits, X^2 (1, $N = 158$) = 2.10, $p = .16$ (Table 5.5). In the treatment-naïve fall 2014 cohort, 14.63% of students ($n = 12$) earned 30 or more total credits compared to 23.68% ($n = 18$) in the active treatment fall 2015 cohort.

Table 5.5

Cumulative Completed Credits

	Fall 2014 Treatment Naïve	Fall 2015 Active Treatment	Row Total	X^2
	n (%)	n (%)		p
Cumulative All Credits				
0 – 29	70	58	128	.16
30 – 44	12	18	30	
Total	82	76	158	
Cumulative College-Level Credits				
0 – 29	76	65	141	.20
30 – 44	6	11	17	
Total	82	76	158	

The mean number of college-level credits was 13.74 ($SD = 9.91$) and 16.43 ($SD = 10.87$) for the fall 2014 and fall 2105 cohorts, respectively ($t = 1.63$, df = 156, one-tailed,

$p = .05$). The chi-square analysis did not indicate an association between cohort and earning 30 college-level credits, X^2 (1, $N = 158$) = 2.10, $p = .20$ (Table 5.5). Excluding developmental credits, 7.32% of students ($n = 6$) in the fall 2014 treatment-naïve cohort earned more than 30 credits compared to 14.47% ($n = 11$) of students in the fall 2015 active treatment.

Discussion

The intervention designed to increase the persistence of FTIC students was intended to ultimately lead to increased rates of graduation from community college and transfer to a four-year university. Efficacy of the intervention, assessed by comparing a treatment naïve, business-as-usual cohort from the fall 2014 to the active treatment fall 2015 cohort on several measures that reflect progress toward degree attainment, implies a shift in the usual practice and ultimately culture of the division toward supporting students as they attempt to reach their transfer and graduation goals. The research questions focused attention on experiences and engagement of faculty and students with the intervention to inform a change in practice. The typical metrics of students' success—persistence, completion of developmental education, GPA, and the achievement of credit milestones—were measured.

Improving Knowledge and Increasing Involvement of Faculty

Sharing knowledge of student characteristics, college procedures, and transfer school requirements provided faculty with new information. The professional development workshop held prior to the fall 2015 semester provided a fuller picture of the students served by the division. Many times during the session, faculty admitted they did not know the extent of remediation necessary and the prevalence of first-generation

college students in their classrooms. The faculty were under the impression that because HCC is situated in an affluent county with reportedly excellent public schools, all students have the same resources at home and should be college-ready when they graduate from high school.

The faculty universally valued their experiences working with students and often described positive feelings associated with bonding with students (Margot, interview, December 3, 2015), empowering students to tackle the demands of college (Katrina, interview, April 11, 2016), and supporting students' self-esteem (Steven, interview, April 15, 2016). The purpose of the professional development was to tap into the sense of professional responsibility revealed in the needs assessment study, which is chapter 2 of the present study, and add useful information to change faculty's practice as they supported students toward transfer and graduation. Faculty seemed to identify and appreciate the program pathways as tools to facilitate transfer although less so toward graduation. This is somewhat ironic since the pathways were designed to be a road map to degree completion.

While program pathways were designed with transfer schools in mind, faculty did not necessarily see the benefits of degree completion for students for seamless transfer. Charlie, noted "students don't necessarily have to complete to transfer. They need to complete the courses that that university is going to take, so why do they really need an A.A. degree?" (Charlie, interview, April 15, 2016). This sentiment continued at the end of the academic year, despite the fact that an advisor emphasized the benefits of associate degree completion prior to transfer during the professional development workshop. The benefits of completing general education requirements and developmental courses,

entering university as a junior ready to focus on discipline courses, acceptance of the degree as a whole without course-by-course transcript evaluation, and saving costs while pursuing a bachelor's degree were underappreciated even at the end of the intervention. Additional faculty training is needed in this area to more consistently point out the advantages of degree attainment for students. Given that many of the anecdotes related in interviews and ad hoc conversations focused on specific student cases, a promising method for helping the faculty to understand the advantages of graduation may be the development of composite student profiles specific to each transfer school and program of study.

Faculty participants recommended the division could better support students by developing strong articulation agreements with transfer institutions. These agreements would enhance the pathways to completion particularly if they included the transition to the four-year institution. Maryland College and Career Readiness and College Completion Act of 2013 (2012) requires statewide transfer agreements so that students who earn up to 60 credits at a Maryland community college can transfer those credits toward the completion of a bachelor's degree. Indeed, from a practical standpoint, conversations with students and program pathways must specifically show how courses will be accepted into the receiving institution. ARTSYS is the University System of Maryland statewide resource for understanding how credits will transfer between Maryland two- and four-year institutions (Smith, 2016). Faculty training on the use of ARTSYS will enhance familiarity with the tool and encourage its use. Faculty acted as institutional agents when they recommended courses to students based on transfer goals.

Training on how to use the ARTSYS system is anticipated to improve the effectiveness of their advising.

The culture of the division was reflected in the needs assessment findings related to motivation (see Chapter 2). Faculty were motivated to help students in any way they could, and yet, they did not or only infrequently engaged in specific activities that support graduation and transfer (i.e., reviewed resumes, helped students find information on four year schools, or directed students to the transfer office). Perhaps this was because they did not know the importance of these activities, or, they believed students were getting needed assistance from the professional advising office. Tatum et al. (2006) suggested that community colleges who want to improve the transfer rate should encourage more faculty involvement and "educate more faculty on the importance and mechanics of transfer" (p. 203). A division whose faculty is more involved in the process is anticipated to seek more knowledge. As faculty become more familiar connecting students with the people and processes necessary to support them as they persist toward transfer and graduation (i.e., act as institutional agents), the culture will likely change to one that is proactive. Margot explained, she is more "reactive…anyone who reaches out to me, I'm here for you" (Margot, interview, December 3, 2015). Students will feel a stronger connection to the college as they develop stronger relationships with faculty (Kolenovic et al., 2013), what Tinto (1975) referred to as "institutional commitment" (p. 109). As faculty become stronger institutional agents, "the positive interactions…increase students' capacity to receive and act on pertinent information" (Dowd et al., 2013, p. 3). Changing practice and an organization's culture is a process, which will likely take

several years. Increasing faculty involvement and knowledge of transfer and the advantages of graduation appears to be a first step in changing the culture and practice.

One of the challenges uncovered during the study was simply connecting with the students. Few students from the treatment cohort visited faculty's offices as noted on the Faculty-Student Interaction Worksheet. Attempts to conduct focus groups with multiple students from the treatment group was fruitless. During the student interview, Bridget shed light on these challenges—low attendance was because students did not know me or the other faculty. There is some support for this observation in the needs assessment data (Chapter 2). The needs assessment study procedure included two focus groups with students who were within one semester of transferring and/or graduating. The majority of students who participated in those focus groups indicated they had spent between two and three and one-half years at HCC. As the investigator and focus group facilitator, I either had personal experience with the students through previous classes or relied upon faculty colleagues who knew students well and reached out and invited them to participate. By the time the students had been on campus for two or more years, they had developed a connection to faculty. Accelerating this process is necessary for students to benefit from faculty acting as institutional agents.

The LMS is a tool that connects students with faculty since it is a primary tool for completing coursework. The LMS site appeared to be an effective method of distributing program pathways, transfer institution requirements, and faculty contact information to students. Almost all of the students accessed the LMS site and viewed the pages over the course of the academic year with more consistent use among persisters. It was encouraging that there was a spike in use of the LMS site in May (Table 5.1) as students

received messages from multiple sources about the opportunity to register for summer and fall courses.

While the LMS offered an opportunity for asynchronous discussions, there were few responses to the discussions about job/career searches, college success strategies, and transfer school requirements. Given the very low participation rates in the discussion activity compared to the total number of views, perhaps an alternative structure should be employed for discussions. Examining college students' use of social media sites (i.e., Facebook), Pempek, Yermolayeva, and Calvert (2009) found that the majority of students "lurk" (p. 235) frequently; that is, they read profiles, look at photos, and read news feeds but do not respond. Students did not feel compelled to participate in the discussion, preferring to simply check in and see what others had to say. This behavior should be taken into consideration and faculty should be encouraged to provide more robust information to generate discussion. The discussions may benefit from more involvement by faculty to prime the conversation with multimedia and examples of student experiences.

The LMS site was designed as a self-contained course that students could continue to access outside of traditional classes and semesters. The advantage of this design is the continuity of student accessibility, particularly as community college students often change from part-time to full-time status or experience a break in enrollment (Crosta, 2014). The disadvantage is that students may not access the site if it does not change regularly. The novelty and utility is forgotten. One method to overcome this disadvantage may be to create a site not linked to a specific cohort but rather to the division that includes program pathways, faculty contacts, and transfer institution

requirements and place it in all gateway courses. Hagedorn et al. (2008) triumphed the need to bring advising to the students rather than expecting them to go out of their way to seek assistance; "advising should be enmeshed in the classroom experience" (p. 661). The widespread use of the LMS may be an effective method to integrate advising into courses. The fact that the LMS is also perceived by students to be a faculty-controlled tool may also increase awareness that faculty can assist with advising.

Metrics of Student Progress

As described by Daly and Finnigan (2014), applying research evidence to practice is influenced and complicated by the organizational context. In community college practice, the pedagogical tension of an open access institution, which allows students who are not college-ready in mathematics and English to be admitted, is balanced against the maintenance of a college-level curriculum. The open access environment also pits the demand for ever-increasing student enrollment against the goals of graduation and transfer. Regulatory measures such as those enacted by the Maryland legislature, The Maryland College and Career Readiness and College Completion Act of 2013 (2012), stipulated quantifiable targets for degree completion and progress through developmental education. While funding for community colleges in Maryland has not been tied to meeting the targets, a performance-based system has been reported to be under consideration (Fain, 2014). Thus, measuring the impact of traditional measures of students' progress and completion success was required.

Persistence was defined as continuation from the fall to the spring semesters. There was no association between cohort (i.e., treatment naïve fall 2014 vs. active treatment fall 2015) and persistence with approximately 80% of students in both groups

returned from the fall to spring. Persistence without progress toward degree completion, however, may ultimately lead to withdrawal from community college as the investment of time and money does not appear to be a wise one to students (Dowd & Coury, 2006; McKinney & Burridge, 2015). Students who return semester-after-semester, repeating courses for which they earned failing grades or attempting courses for which they are not prepared, while building future debt without progress toward a degree are likely to withdraw from higher education (Dowd & Coury, 2006). Importantly then in this work, was the impact of the intervention on successful completion of developmental course work.

There was an association between cohort and the completion of developmental course work overall and in the subset of students who needed remediation in only one subject: reading, writing, or mathematics (Table 5.2). Bahr (2008) found that students who completed mathematics remediation were "indistinguishable from [students who did not need remediation] in terms of credential attainment and transfer" (p. 442). The impact of completing developmental course work in the first academic year is two-fold: students have more scheduling options for required courses with college-level prerequisites (i.e., college composition and college algebra) in subsequent semesters, and, college-level courses lead directly to degree completion as they are part of the 60-credit program requirements. Although more than 90% of students in both the treatment naïve and active treatment cohorts attempted developmental courses, and there was no association between cohort and developmental credits attempted and completed, on average the fall 2015 active treatment group had a 67.1% completion rate compared to 57.4% completion rate from the treatment naïve group. This positive trend may be the result of greater

emphasis by professional and faculty advisors admonishing students to satisfy their developmental needs. The student interview participant, Bridget, articulated her understanding of the importance in completing needed remedial education when she explained that she completed her developmental mathematics course in the summer 2015 semesters so she could "get ahead a bit" (Bridget, personal interview, April 27, 2016). This also allowed her to take MATH-138 Statistics in the spring semester "to keep up with everyone else" (Bridget, personal interview, April 27, 2016). Katrina, one of the faculty participants, revealed experiences of one-on-one discussions with students increased their confidence in their academic ability and encouraged them to attempt developmental mathematics (Katrina, interview, April 11, 2016). It should be noted here that students registering for the seven BUCO programs needed more developmental education than the college as a whole, 80% (Table 4.2) versus 60% (OPROD, 2014), respectively. Thus, progress made in the present study is particularly salient.

Program pathways were developed in response to the Maryland College and Career Readiness and College Completion Act of 2013 (2012) to clarify degree requirements (Fain, 2014). Faculty in the BUCO division supported this initiative and were instrumental in crafting the four-semester plans. The program pathways visually lay out a plan for completing an associate degree in two years while assuring that courses are taken in a sequence that supports the learner. Foundational understanding of business is developed in the first semester in BMGT-100 and ECON-101, requirements for all seven programs studied in this intervention. By contrast, ACCT-111, which builds upon specific skills based on the broad understanding of organizations, is recommended in the second year for all students except Accounting A.A. majors. There was a trend in the data that

pointed toward an increase in the proportion of students who enrolled in both BMGT-100 and ECON-101 from fall 2015 active treatment group to the 2014 treatment-naïve group. Moreover, fewer students in the fall 2015 active treatment group attempted ACCT-111 in their first academic year. The pathways included in this intervention were the same pathways advising professionals used in the spring 2015, typically when students in the incoming freshman class are developing their fall schedules. They were also included in both the packet of materials mailed to students' home addresses and on the LMS site. While it is not possible to attribute increases in foundational course attempts and decreases in more challenging course attempts solely to the intervention materials, certainly publicizing the recommended program pathways has potential for supporting appropriate course selection.

These gateway courses provide foundational knowledge and grades in these courses are markers of academic integration (Tinto, 1975; Halpin, 1990) into business majors. Additional analysis was conducted to explore the findings in the present study further. Success rates for these three courses were compared across the two cohorts. Success rates, defined as earning a D or better, for the gateway courses differed between the two cohorts only for ACCT-111. All students in the fall 2015 cohort completed ACCT-111 successfully (n = 17) compared to 58.82% in the fall 2014 cohort (n = 20) (U = 58.00, p = .00). There was an association between the fall 2015 active treatment cohort and the success rates for ACCT-111. There are several factors that could account for this relationship. Students in the fall 2015 active treatment cohort who attempted and successfully completed ACCT-111 needed less intensive remediation (Appendix M) (i.e., only one mathematics course to bring them to college level). The accounting department

has tried a number of efforts to increase the success rates in the course, including tutoring and open laboratory sessions. It is possible that these students participated in those extra services. The staff and faculty advisors could also have emphasized the need to complete developmental education prior to attempting ACCT-111. Finally, the pathways, which provide guidance based beginning with foundation courses and building skills, provide better guidance to students then course requirements for a program listed in the college catalog in alphabetical order.

The value of program pathways to provide guided choices was highlighted by Jenkins and Cho (2013) and Steven who discussed the paralyzing effect of too many choices on students' decision-making abilities "if you give anybody too many choices, they choose nothing" (Steven interview, April 15, 2016). Jenkins and Cho (2013) suggested that the complexity that abounds in community colleges because of the many transfer institution requirements make it difficult for even professional advisors to navigate the system. Clear pathways to degree completion support students as they attempt to meet their transfer goals (Hagedorn et al., 2008; Jenkins & Cho, 2013). Bridget articulated her frustration with professional advisors who she perceived as giving conflicting advice on course selection and timing. More wide-spread distribution of the program pathways through both formal advising channels and informal faculty offices seems warranted.

A primary data point transfer institutions consider is cumulative GPA. University of Maryland offers one of the most desired and competitive limited enrollment programs in business. The minimum GPA for transfer consideration is a 3.0 on a four-point scale (University of Maryland, 2015). In the fall 2015 active treatment cohort, 27.6% ($n = 17$)

114

earned a 3.0 or better cumulative GPA compared to 19.5% (*n* = 16) in the fall 2014

treatment-naïve cohort. Students who do not meet the minimum GPA threshold will not

be considered for transfer. Students with higher GPAs simply have more options for

transfer.

At the other end of the spectrum are students who earned less than a 2.0

cumulative GPA, the minimum required to maintain "good academic standing" (HCC,

2015d, p. 63) at HCC. Students must make satisfactory academic progress each semester

by earning a minimum GPA based on the number of credits attempted. Students who fail

to make satisfactory academic progress are placed on academic warning. Once on

academic warning, the student must earn a 2.00 semester GPA. Failure to meet this

threshold will result in academic probation limiting the number of credits allowed in the

next semester. Failure to earn a 2.00 semester GPA while on academic probation results

in academic suspension for the next major semester (HCC, 2015b). There was no

association between cohort and the proportion of students who earned a GPA below 2.0,

35.53% and 39.02%, active treatment and treatment-naïve cohort, respectively.

Clearly, the fact that fully one-third of FTIC students enrolled in business,

entrepreneurship, and accounting programs are earning a GPA that is less than the

minimum required to maintain satisfactory academic progress points to a challenge that

must be overcome if these students are to complete a degree. Faculty participants

indicated a level of frustration with students' participation in assistance offered during

office hours and open laboratory time (Nora, interview, April 25, 2016). Charlie used the

time-honored adage, "you can bring a horse to water but you can't make him drink"

(Charlie, interview, April 15, 2016). This points to an area of potentially greater study to identify and reach students early who are academically unsuccessful.

As stated above, Calcagno et al. (2007) examined the records of "42,641 first-time degree seeking students" (p. 780) in Florida community colleges and determined that reaching 50% of credits necessary for an associate degree increased the odds of completing the degree by a "factor of 15.5" (p. 794) for traditional-aged students. This milestone was used to gauge the efficacy of this intervention. The one-tailed t-test indicated a positive association in favor of the active treatment group with 14.5% ($n = 11$) compared to 7.3% ($n = 6$) students reaching this milestone. These students, if they maintain their current pace, are on schedule to complete an associate degree in two years. Completion data, however, is typically reported as the percentage of students who earn the degree in 150% of the time necessary; thus, three years for a two-year degree. It can be anticipated that students who have earned 24 to 29 college-level credits in the first year will complete their degree in three years. In a separate analysis, 10.98% ($n = 9$) of the fall 2014 treatment-naïve group reached this milestone, and 15.79% ($n = 12$) of the 2015 cohort students met this milestone, which also reflects a trend to support the efficacy of the intervention. The work from Calcagno et al. (2007) further suggested that "a younger student who received 20 non-remedial credits was 7.6 times as likely to graduate as a younger student who did not" (p. 793). More time following these particular cohorts will determine if these trends hold true in the current 2014 and 2015 cohorts.

The need for remediation has been suggested as a barrier to degree completion (Bahr, 2008; Calcagno et al., 2007; Wang, 2009). For this study, the total number of credits, including developmental credits, accumulated by the end of the first academic

year was also examined. The one-tailed *t*-test showed an association in favor of the fall 2015 cohort. Calcagno et al. (2007) found that traditional college age students who "enrolled in remedial courses were 0.58 times as likely to graduate as younger students who did not enroll in college preparation courses" (p. 794). Students may underappreciate the benefits of enrolling and completing developmental courses and need to be encouraged by faculty and professional advisors that their progress toward degree completion begins with completing developmental requirements.

Students are often reticent to attempt developmental courses. As a faculty member who regularly assists students with course selection, I often get significant resistance from students when I suggest that they begin their developmental courses. In response, I tell the composite story of a student who has requested a letter of recommendation for a transfer school because they anticipated graduating at the end of the next semester. When queried about the student's completion of mathematics requirements, I heard, "I just need one course, MATH-141 College Algebra, to be done." The student's mathematics placement was actually MATH-067. This means the student needed three more courses to complete (Appendix M). This cautionary tale has led many students to reconsider their delay of developmental courses.

Implications for Practice

A number of recommendations to change faculty practices in the division have been suggested in this discussion: improved knowledge of transfer requirements and training on the ARTSYS system, increased understanding of the transfer advantages for students who persist to graduation, wider promotion of the program pathways, and more

robust use of the LMS as an advising tool. There are also recommendations for changing the practices of a college as a whole that may warrant consideration.

One of the faculty interview participants offered insight to the challenges she sees facing FTIC students as they enter community college and must immediately prepare for the next transition to a four-year institution. She quipped, "we ought to have a 'What you need to know before you get started at HCC'" (Nora, interview, April 25, 2016) student information session. While the college currently offers individualized "Freshman Focus" advising sessions in April for the fall incoming freshman class of FTIC students, students such as Bridget either do not avail themselves of the opportunity or do not recall the guidance provided. The sessions may be too early for students who are concentrating on finishing high school to appreciate the information. Further, the program is scheduled before four-year institutions typically send acceptance letters to candidates on May 1. It is conceivable that students who are deciding between HCC and a four-year school are waiting for acceptance letters and financial aid packages before making a decision. They may be deciding to attend HCC after the Freshman Focus advising window has closed.

The faculty participants in this intervention were cautious about recommending the expansion of professional development and use of the LMS site without seeing results of this intervention. Given the demands on valuable faculty time, it is understandable that faculty would be hesitant to invest time and energy into developing greater knowledge of transfer and graduation requirements. This holds particularly true if they do not feel students will take advantage of opportunities to speak with them. A commitment from the college to support faculty as institutional agents is required. This commitment could be in the form of discipline-specific "transfer gurus" as suggested by Tatum et al. (2006); that

is, faculty who are allocated time to build their knowledge of transfer and graduation, located in the division. Steven pointed out the merit of such an individual to also build articulation agreements and connections to university faculty, both time-consuming activities that could be concentrated with a single faculty member in the division. Of course, one of the challenges uncovered by this study was simply getting students into faculty's offices. The connection to coursework seemed to be the most direct way to encourage students to meet individually with faculty. Given that adjunct faculty teach significant percentage of students, the college should devote efforts to developing them as institutional agents.

An institutional agent is one who is able to connect students to needed resources. They do not have to have all of the information and expertise. Developing adjunct faculty as institutional agents is a viable option for the college since at its essence, an institutional agent knows where to point the student. A transfer specialist located in the division gives adjunct faculty the opportunity to take students directly to the source of support instead of sending them off to another department in another building. The hesitancy to ask adjunct faculty to participate in this process undervalues their potential role in increasing graduation and transfer rates.

This study attempted to weave together the strengths and findings of previous studies. Incorporating faculty into the advising process and helping them develop as institutional agents has been studied (Dowd et al., 2013; Tatum, 2006). Promotion of program pathways and encouraging students to follow them has been found to be effective (Miller, 2013; Nitecki, 2011). Moving advising from an office on campus and intruding into students' college routine is recommended (Christian & Sprinkle, 2013;

Hagedorn et al., 2008; Kolenovic et al., 2013; Pardee, 2000). Finally, incorporating the LMS and technology into the method for disseminating information and reaching students has proven valuable (Miller et al., 2005; Ullmann, 2009). The process demonstrated in this work, builds on previous work and adds to the available information on how to assist community college students as they persist toward achieving graduation and transfer goals.

Limitations

Taken together, the findings of the intervention suggest that students in the active treatment group were positively affected. There are at least three limitations that must be considered, however. A primary limitation is that the study only followed students in their first academic year. As mentioned, the traditional measure for degree completion is 150% of the time allocated, and, thus, three years would be an appropriate timeline to consider. Further, transfer institutions that receive most of HCC's business students all require a minimum of 30 college-level credits before transfer is allowed without SAT/ACT tests or high school transcripts. These institutions emphasize the benefits of associate degree completion since core general education classes will be completed, students can enter as a junior following the 60-credit associate degree, and transcripts are not subject to the course-by-course evaluation of credit earned. These students have a clearer pathway to a baccalaureate degree, earning credit for the completion of their general education and lower-level specialization courses at the community college. The current findings must be revisited to determine whether the intervention impacts distal outcomes of increases in transfer and graduation rates.

Second, although this study was conducted in only one division, the students are not isolated from messages and outreach from other departments on campus. The college advising office has increased its emphasis to students on degree completion. These messages in combination with the transfer school messages raise awareness about value of an associate degree. Publicity on campus to faculty, staff, and students about a new online registration system has undoubtedly added to the conversation about course registration and degree completion.

Third, there was the difficulty in working directly with the students in the fall 2015 active treatment cohort. The study design was intended to promote early attachment to the college so that student enrollment is "front-loaded in the earliest terms and highly consecutive" (Crosta, 2014, p.131). It was intended to promote program pathways that encouraged student to take courses "that open the transfer door" (Hagedorn et al., 2008, p. 660). One of the challenges in this intervention was the limited contact faculty—as institutional agents—had with students to provide these pathways and advising. All of the faculty participants noted the difficulty in getting students to visit during office hours, as evidenced by the very low reported visits from the fall 2015 cohort on the Faculty-Student Interaction worksheet.

The fall 2014 treatment-naïve cohort was better known to the faculty participants and often appeared on the Faculty-Student Interaction worksheet. My experience with "GP" is particularly salient. GP was introduced to me in her first semester at the college, fall 2014, by an adjunct instructor teaching BMGT-100. I did not have contact with her until the following semester (i.e., fall 2015). At that time, she met me during office hours, inquired about transfer schools, and registered for a spring 2016 class I was teaching. I

121

also met with her several times during office hours and as a "drop-in" student during the spring semester to work on her resume and interview skills. The one-year timeframe for this intervention study limited to full-time faculty participants may not be long enough nor broad enough to reach students effectively.

Conclusion

The POP identified the many obstacles to persistence leading to transfer and graduation for community college students. This intervention study attempted to work with students as they presented to the community college in the fall following high school graduation: often academically underprepared, financially under-resourced, and at home, under-supported by knowledgeable family members. Structural processes including the dissemination of program pathways were attempted through physical and virtual methods.

The research questions focused first on faculty and student experiences and engagement with the intervention. Faculty demonstrated strong fidelity of implementation engaging in the role of institutional agent. Their experiences were generally positive although recurring theme was the difficulty meeting the fall 2015 students individually. This lack of connection between the active treatment cohort and faculty participants was also evident in the Faculty-Student Interaction Worksheet and the student interview. Student use of the LMS was frequent and the access data indicated that students entered the site through the end of the spring semester when registration messages were publicized across campus. The second and third research questions, which illuminated the metrics that reflected persistence, developmental education completion, program pathway adherence, cumulative GPA, credits earned, and achievement of credit

milestones were generally favorable. There was a positive association between cohort and developmental education completion and adherence to program pathways for the introductory accounting course. There was a significant difference in favor of the treatment group for mean number of total credits completed and college-level only credits completed. There were favorable trends toward a higher developmental education completion rate, adherence to program pathways for other foundational courses, and reaching credit milestones. While there was no association between cohort and persistence, the other metrics indicated positive progress toward degree completion.

The college has invested in student planning software, which facilitates students' registration and shows progress against the program pathways. It is anticipated that this software will enhance students' understanding of the pathway to graduation and a four-year degree. It may also increase the willingness of professional advisors in student services to shift from face-to-face meetings often with lengthy wait-times to brief online responses to advising questions.

However, the role of faculty who routinely see students cannot be underestimated. Faculty with the connections and knowledge can provide the moral and curricular support as students persist. The new software, as an example, will be yet another tool faculty can use to increase the connection to students and the institution. Faculty have the opportunity to work with other personnel at the college and broaden the knowledge they use as institutional agents. The challenges of low transfer and graduation rates plaguing community colleges is not likely to respond to a single, technological approach. A change in culture to focus on transfer and graduation as an expectation for all students who enter

will require collaboration between faculty institutional agents, student support staff, and

use of the myriad of technological tools available.

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Appendix A

Full-time Faculty Survey

This survey has been prepared as part of a doctoral research project and all responses will remain anonymous. Your participation is completely voluntary and you are under no obligation to complete the survey. Your responses will be aggregated and studied to inform future training and development. The time and information you provide are very much appreciated.

In this academic year, how often have you done the following?

	6 or more times	3 - 5 times	1 - 2 times	none

Helped a student find information on four-year schools

Helped a student find a job or internship

Wrote a letter of support or recommendation

Made a phone call for a student that helped the student transfer

Introduced a student to someone who could help in the transfer process

Directed the student to the transfer office

Made a phone call for a student that could help them get a job or internship

Introduced the student to someone that could help them get a job or internship

Reviewed a student's resume

Hired a student

None of the above

What kinds of information have you discussed in your classes this academic year relevant to transfer?   Check all that apply.

Material covered in class that students will need in a four-year university

Experiences you had when you were in a four-year school

How to apply to a four-year school

The differences between two- year and four-year schools

Strategies for adjusting to a four-year school

What schools are best for their program (major)

What programs (majors) are available

The benefits of more education

Speeches to encourage students to transfer

None of the above

I am not teaching this academic year.

Other:

Why do you help students transfer? Check all that apply.

I believe it is my professional responsibility.

I want to help students in any way I can.

I want to do my part in increasing the transfer rate.

I get personal satisfaction knowing that one of my students has advanced their

education.

I believe it adds to the prestige of my department.

I had someone who helped me when I was in college.

None of the above

Other:

What kinds of information have you discussed in your classes this academic year relevant

to getting a job? Check all that apply.

Material covered in class that students will need in the "real world"

Experiences you have had in your career

How to get an internship

How to write a resume

How to interview for a job

A career path

None of the above

I am not teaching this academic year.

Other:

Why do you help students in their career? Check all that apply.

It is my professional responsibility.

I want to help them in any way I can.

I get personal satisfaction in knowing that one of my students has gotten a job.

It adds to the prestige of my department.

I had someone who helped me when I was in college.

None of the above

Other:

Demographic Questions

Please indicate your gender.

male

female

Including this academic year, how long have you been a full-time faculty member at HCC?

1 year

2 - 3 years

4 - 6 years

7 - 10 years

11 or more years

Would you be interested in participating in a one-hour focus group discussing faculty training and development? You are only indicating interest, not committing to participation.

yes

no

If you answered "yes" to participating in a focus group, please provide your email address.

Or, if you prefer, you may send an email to Mary Beth Furst at mbfurst@howardcc.edu or call 443-518-4929.

Appendix B

Student Focus Group Demographic Information Form

What program are you in?

Accounting	Associate of Arts
Business Administration	Associate of Arts
International Business	Associate of Arts
Business Management	Associate of Applied Science
Computer Science	Associate of Arts
Culinary Management	Associate of Applied Science
Entrepreneurship	Associate of Arts
Entrepreneurship	Associate of Applied Science
General Studies, Business/Technology Emphasis	Associate of Arts
Hospitality Management	Associate of Applied Science
Information Systems Management- Office Systems	Associate of Arts
Information Systems Management-Programming	Associate of Arts
Information Technology	Associate of Arts
Network Security	Associate of Arts
Network Security Administration	Associate of Applied Science
Office Technology	Associate of Applied Science

When will you graduate? (FA14, SP15, n/a)

When will you transfer? (FA14, SP15, FA15, n/a)

What semester did you begin your college studies at HCC?

Did you attend another college/university previous to HCC? (Y/N)

Have you changed your program (major) since you have been at HCC? (Y/N)

What is your gender? (M/F)

Indicate your age this year. (18-21, 22-25, 26-30, 31+)

Have either of your parents attended college? (Y/N/unknown)

Appendix C

Student Focus Group Interview Protocol

- Who has supported you in your pursuit of a degree from HCC and/or to transfer from HCC?

- What type of support did you gain from these individuals? (i.e., emotional, financial, practical guidance on curricula and academic goals)

  o For example, how did you know what classes to take and in what order? How did you know which program of study (major) to choose? How did you know about the transfer options?

- What role did full-time faculty play in the support you received from HCC employees? (i.e., did you meet for office hours, ask for assistance in transfer recommendations, ask for a letter of recommendation, look at job opportunities, submit a resume for review)

- What internal strengths do you think contributed to your academic achievement? (i.e., strong goal orientation, clear motives, intelligence)

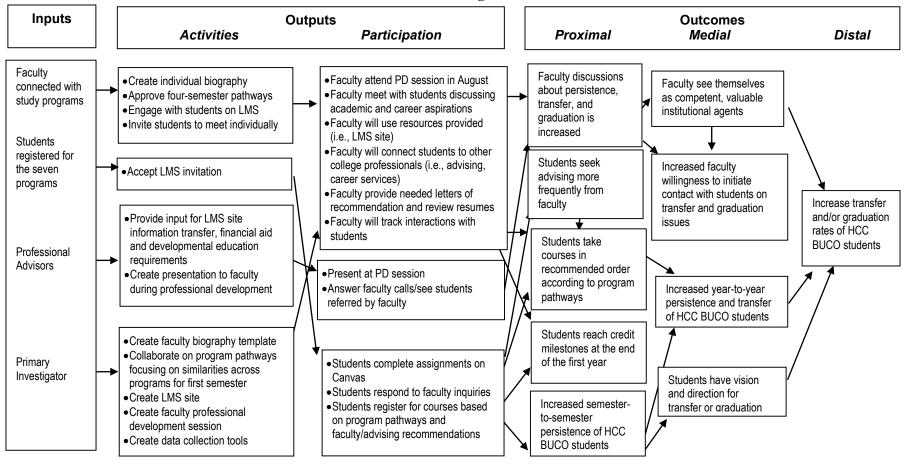- How confident are you in your ability to succeed academically? Why?

Appendix D

Semi-Structured Interview Protocol with Professional Advisor

1. Identify characteristics of successful students.

2. What are the prevailing features of unsuccessful students?

3. What are the impediments to course and degree completion from your perspective?

4. How do you perceived faculty's role in the advising process?

Appendix E

Intervention Logic Model

Inputs	Outputs		Outcomes		
	Activities	*Participation*	*Proximal*	*Medial*	*Distal*

Inputs

Faculty connected with study programs

Students registered for the seven programs

Professional Advisors

Primary Investigator

Activities

- Create individual biography
- Approve four-semester pathways
- Engage with students on LMS
- Invite students to meet individually

- Accept LMS invitation

- Provide input for LMS site information transfer, financial aid and developmental education requirements
- Create presentation to faculty during professional development

- Create faculty biography template
- Collaborate on program pathways focusing on similarities across programs for first semester
- Create LMS site
- Create faculty professional development session
- Create data collection tools

Participation

- Faculty attend PD session in August
- Faculty meet with students discussing academic and career aspirations
- Faculty will use resources provided (i.e., LMS site)
- Faculty will connect students to other college professionals (i.e., advising, career services)
- Faculty provide needed letters of recommendation and review resumes
- Faculty will track interactions with students

- Present at PD session
- Answer faculty calls/see students referred by faculty

- Students complete assignments on Canvas
- Students respond to faculty inquiries
- Students register for courses based on program pathways and faculty/advising recommendations

Proximal

Faculty discussions about persistence, transfer, and graduation is increased

Students seek advising more frequently from faculty

Students take courses in recommended order according to program pathways

Students reach credit milestones at the end of the first year

Increased semester-to-semester persistence of HCC BUCO students

Medial

Faculty see themselves as competent, valuable institutional agents

Increased faculty willingness to initiate contact with students on transfer and graduation issues

Increased year-to-year persistence and transfer of HCC BUCO students

Students have vision and direction for transfer or graduation

Distal

Increase transfer and/or graduation rates of HCC BUCO students

144

Appendix F

Letter Mailed to Students' Home Addresses

August 15, 2015

Dear <Student Name>,

Welcome to Howard Community College and the Business and Computer Systems division! We are looking forward to supporting you as you take courses toward completing your degree and transferring.

There are several **faculty members who are available to guide you through HCC**. Enclosed are biographies of faculty in the business, entrepreneurship, and accounting programs. We all have experience in the field and have been teaching for several years. You'll see our contact information and we encourage you to **stop by and see us in the first week of classes**.

Also included are details and **requirements of the schools HCC students transfer to** when they pursue their four-year degree. We are available to talk to you anytime about these schools and help you plan from your first semester in college how to get there from HCC.

You will be invited to participate in a pilot program run through Canvas. **Look for your invitation in your Canvas courses** at the beginning of the semester.

We hope you will take some time to look through these materials and stop by to see us before the third week of classes.

Welcome! We look forward to meeting you.

signature	*faculty*	*faculty*	*faculty*	*faculty*	*faculty*
MB	*signature*	*signature*	*signature*	*signature*	*signature*
Furst					
Business					
DH 328					

Business and Computers Division Office
Duncan Hall (DH)
239

Legend
⊛ - Dragon Wagon Shuttle Stop
♿ - Handicapped, by Permit Only
Ⓦ - Welcome Center
1 - Open Parking - White Striped
2 - Employees Only - Yellow Striped
3 - Bicycles
4 - Licensed Motorcycles
5 - Deliveries, Sales and Repair Reps
6 - Food Services and Bookstore Deliveries
7 - Drop off Location

Appendix G

Sample Faculty Introductions

Mary Beth Furst, MBA

My name is Mrs. Furst and I usually teach general business courses like BMGT 100, marketing, ethics, and sales.

Before I came to HCC, I worked for 18 years in sales for Pfizer, a pharmaceutical company.

My undergraduate and graduate degrees are both from Loyola University in Maryland. My undergraduate degree is in marketing and my MBA is in international business.

I am passionate about helping students succeed in college and very interested in meeting you. Please stop by!

Duncan Hall 328
mbfurst@howardcc.edu
443-518-4929

Program Pathways

Program: Accounting AA			
Fall Semester	**Credits**	**Spring Semester**	**Credits**
ACCT 111- Principles of Accounting I	3	ACCT-112 Principles of Accounting II	3
BMGT 100-Introduction to Business	3	Arts and Humanities Core Group A	3
CMSY-110 Software Applications for Micros	3	ECON-102 Principles of Economics (Micro)	3
ECON-101 Principles of Economics (Macro)	3	MATH-138 Statistics (or DevEd Math)	4
ENGL-121 College Composition (or DevEd Engl	3	Any Gen Ed Core Course	3
credit total	15	credit total	16
Fall Semester		**Spring Semester**	
ACCT-231 Intermediate Accounting I	3	ACCT-232 Intermediate Accounting II	3
Science Core Course	3	Science Core with Lab	4
SPCH-105 Fundamentals of Public Speaking	3	Social & Behavioral Science Core Group B	3
BMGT-151 Business Law	3	BMGT-203 Business Ethics	3
BMGT-175 Business Communications	3	BMGT-150 International Business Seminar	1
credit total	15	credit total	14
		Program Total	60
Program: Business Administration AA			
Fall Semester	**Credits**	**Spring Semester**	**Credits**
BMGT 100-Introduction to Business	3	Arts and Humanities Core Group A	3
CMSY-110 Software Applications for Micros	3	SPCH-105 Fundamentals of Public Speaking	3
ECON-101 Principles of Economics (Macro)	3	ECON-102 Principles of Economics (Micro)	3
MATH-141 College Algebra	3	MATH-145 Business Calculus	3
ENGL-121 College Composition	3	ENTR-101 Entrepreneurship and Creativity	3
credit total	15	credit total	15
Fall Semester		Spring Semester	
ACCT-111 Principles of Accounting I	3	ACCT-112 Principles of Accounting II	3
Arts and Humanities Core Group B	3	MATH-138 Statistics	4
BMGT-203 Business Ethics	3	Gen Ed Core Course (s)	4
Science Core with Lab	4	Science Core	3
Social and Behavioral Science Core Group B	3		
credit total	16	credit total	14
		Program Total	60

Program: Entrepreneurship AA

Fall Semester		Spring Semester	
BMGT 100-Introduction to Business	3	Arts and Humanities Core Group A	3
SPCH-110 Introduction to Human Communicati	3	Social and Behavioral Science Core Group A	3
ECON-101 Principles of Economics (Macro)	3	ECON-102 Principles of Economics (Micro)	3
MATH-141 College Algebra	3	MATH-145 Business Calculus	3
ENGL-121 College Composition	3	ENTR-101 Entrepreneurship and Creativity	3
credit total	15	credit total	15
Fall Semester		**Spring Semester**	
ACCT-111 Principles of Accounting I	3	ACCT-112 Principles of Accounting II	3
BMGT-151 Business Law	3	ENTR-226 Entrepreneurial Leadership	2
Science Core	3	Science Core with Lab	4
Gen Ed Core Course	3	Business Elective	3
Social and Behavioral Science Core Group B	3	Business Elective	3
credit total	15	credit total	15
		Program Total	60

Program: General Studies Business and Technology AA

Fall Semester		Spring Semester	
BMGT 100-Introduction to Business	3	Arts and Humanities Core Group A	3
CMSY-110 Software Applications for Micros	3	Social and Behavioral Science Core Group A	3
ECON-101 Principles of Economics (Macro)	3	Science Core	3
MATH-143 Precalculus I	3	SPCH-105 Fundamentals of Public Speaking	3
ENGL-121 College Composition	3	ENTR-101 Entrepreneurship and Creativity	3
credit total	15		15
Fall Semester		**Spring Semester**	
ACCT-111 Principles of Accounting I	3	Business/Technology Elective	3
Arts and Humanities Core Group B	3	Business/Technology Elective	3
Gen Ed Core	2	BMGT-205 Principles of International Business	3
Science Core with Lab	4	Gen Ed Core	3
BMGT-203 Business Ethics	3	Social and Behavioral Science Core Group B	3
	15		15
		Program Total	60

Program: International Business AA

Fall Semester		Spring Semester	
BMGT 100-Introduction to Business	3	Science Core with Lab	4
World Language	4	World Language	4
ECON-101 Principles of Economics (Macro)	3	ECON-102 Principles of Economics (Micro)	3
MATH-141 College Algebra	3	MATH-145 Business Calculus	3
ENGL-121 College Composition	3		
credit total	16	credit total	14
Fall Semester		**Spring Semester**	
ACCT-111 Principles of Accounting I	3	ACCT-112 Principles of Accounting II	3
CMSY-110 Software Applications for Micros	3	BMGT-203 Business Ethics	3
Science Core	3	Business Elective(s)	5
MATH-138 Statistics	4	Social and Behavioral Science Core Group B	3
SPCH-151 The Spoken Word	3		
credit total	16	credit total	14
		Program Total	60

Program: Business Management AAS			
Fall Semester	**Credits**	**Spring Semester**	**Credits**
BMGT 100-Introduction to Business	3	SPCH-101 **OR** SPCH-105 **OR** SPCH-110 Oral Communicati	3
FYEX-100 First Year Experience	2	CMSY-110 Software Applications for Micros	3
ECON-101 Principles of Economics (Macro)	3	ECON-102 Principles of Economics (Micro)	3
Science Core with Lab	4	FNPL-101 Personal Financial Planning	3
ENGL-121 College Composition	3	Math Core Course	3
credit total	15	credit total	15
Fall Semester		**Spring Semester**	
ACCT-111 Principles of Accounting I	3	ACCT-112 Principles of Accounting II	3
BMGT-130 Principles of Marketing	3	BMGT-203 Business Ethics	3
BMGT-145 Principles of Management	3	BMGT-205 Principles of International Business	3
Business Elective	3	BMGT-241 Project Management	3
Business Elective	3	Business Elective	3
credit total	15	credit total	15
		Program Total	60

Program: Entrepreneurship AAS			
Fall Semester		**Spring Semester**	
BMGT 100-Introduction to Business	3	ENTR-101 Entrepreneurship and Creativity	3
SPCH-110 Introduction to Human Communication	3	Math Core Course	3
ECON-101 Principles of Economics (Macro)	3	BMGT-151 Business Law	3
CMSY-110 Software Applications for Micros	3	Business Elective	3
ENGL-121 College Composition	3	Business Elective	3
credit total	15	credit total	15
Fall Semester		**Spring Semester**	
ACCT-111 Principles of Accounting I	3	BMGT-203 Business Ethics	3
Business Elective	3	Business Elective	3
Science Core with Lab	4	Business Elective	3
ENTR-226 Entrepreneurial Leadership	2	Business Elective	3
Social and Behavioral Science Core Group B	3	Business Elective	3
credit total	15	credit total	15
		Program Total	60

Transfer information summary example

University of Maryland, Smith School of Business				
Competitive entry program for several majors:				
Accounting	Management (formerly General Business)	International Business	Marketing	
Finance	Information Systems	Supply Chain Management	Operations Management	
GPA Requirements	3.2 or higher			
Developmental Coursework	Students will not be considered with more than two developmental levels of coursework in English and mathematics (combined)			
Application Deadline:	March 15th			
Application	https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantLogin.asp?id=umd			
Additional information	http://www.rhsmith.umd.edu/programs/undergraduate-programs/academics/undergraduate-policies			
Check transferrability of HCC course	http://www.artsys.usmd.edu/			

Appendix I

Post-Intervention Student Interview Demographic Information Form

What program are you in?

Did you take courses during the Summer (Y/N)

                                          Fall (Y/N)

                                          Winter (Y/N)

                                          Spring (Y/N)

Have you changed your program (major) since you have been at HCC? (Y/N)

Are you required to take developmental math classes? (MATH 061, 067, 070) (Y/N)

      Have you taken any of these classes so far?

Are your required to take developmental English classes? (ENGL 085/086 OR ENGL 095/096) (Y/N)

      Have you taken any of these classes?

What is your gender? (M/F)

Indicate your age this year. (18-21, 22-25, 26-30, 31+)

Have either of your parents attended college? (Y/N/unknown)

Appendix J

Post-Intervention Student Interview Protocol

1). What are your academic plans? (continue at HCC, transfer prior to graduation, transfer after graduation, graduate and not continue education at this time)

2). What type of support did you get from HCC to pursue these goals (i.e., emotional, practical guidance on curricula and academic goals)? Who provided this support within HCC?

- For example, how did you know what classes to take and in what order? How did you know which program of study (major) to choose? How did you know about the transfer options?

3). What was your experience with the Canvas (learning management system) tools provided (i.e., program pathways, transfer requirements, discussion questions)?

4). What role did full-time faculty play in the support you received from HCC employees? (i.e., did you meet for office hours, ask for assistance in transfer recommendations, ask for a letter of recommendation, look at job opportunities, submit a resume for review)

5). How confident are you in your ability to succeed academically? Why?

6). What could HCC do better to improve your experience here?

Appendix K

Faculty-Student Interaction Worksheet

Student Name	Student ID (last 4 digits)	Date of Meeting (mm/dd)	Scheduled Appointment OR Drop In (mark with an X)		Please indicate if you did any of the following (mark with an X)										Additional Notes
			scheduled	drop-in	discussed current course work	helped with schedule for next semester	discussed programs/ majors	discussed transfer schools	discussed internships	discussed careers	discussed grades/ academic performance	reviewed resume	referred to advising	referred to financial aid	

Appendix L

Post-Intervention Semi-Structured Interview with Faculty

What was your experience working with students?

Do you feel that the time you spent working with students was time well spent? (explain)

How could the division better help students continue with their education? ... transfer? ... graduate?

How could the college better help students continue with their education? ... transfer? ... graduate?

If this intervention was rolled-out to your colleagues in this division, what advice would you give them?

Would you recommend that the intervention be rolled-out to the entire division? (explain)

Appendix M

Developmental Course Table

	Reading		Writing		Math		Other Courses
Developmental Table	ENGL 093 (level 1)		ENGL 094 (level 1)		MATH 060		FYEX-100 (Co-requisite for ENGL 086 and ENGL 096)
	ENGL096 (level 2)		ENGL 097 (level 2)		MATH 061		ENGL 085 (ESL Oral Communication -required when students place into two developmental ESL Courses)
	ENGL 083 (ESL level 1)		ENGL 084 (ESL level 1)		MATH 067		
	ENGL 086 (ESL level 2)		ENGL 087 (ESL level 2)		MATH 070		

Note: Effective fall 2015, MATH 060 is no longer being offered as a credit course at HCC. Students must register through HCC's Continuing Education department to complete this course. Adapted from "Program Planning Sheets Business Administration: Developmental Table," by Howard Community College, 2014.

Curriculum Vitae

MARY E. FURST (Mary Beth Orazi Furst)
4152 Roxbury Mill Road
Glenwood, Maryland 21738
mbfurst@gmail.com 410-925-9250
(b) June 23, 1966 Marietta, Ohio

Education

Ed. D. in Entrepreneurial Leadership in Education   **2016**
Johns Hopkins University School of Education
Dissertation: "Addressing Persistence of Community College Students to
Increase Transfer and Graduation Rates."

M.B.A. in International Business   **1993**
Loyola University Maryland

B.B.A. in Marketing   **1988**
Loyola University Maryland

Professional Experience

Howard Community College, Business and Computers Division

                                                                    2007 to Present
I have progressed from Instructor through Assistant Professor to Associate Professor and
assumed increasing responsibilities for curriculum development, hiring and training of
adjunct faculty, training of new full time faculty, development of global programs for
students and faculty and served on numerous committees.
Associate Professor   *April 2013 to Present*
  Teaching Responsibilities
   o Teach 10 credits (4 classes) per semester in a variety of formats (face to face,
     hybrid and online)
   o IDEA surveys consistently recognize classroom success and rank in the top 20% of
     all courses surveyed on campus

  Coordinator
   BMGT-100 Introduction to Business
   BMGT-130 Principles of Marketing
   BMGT-142 Business Development and Sales
   BMGT-203 Business Ethics
   BMGT-205 Principles of International Business
   o Responsibilities include development and maintenance of all curriculum, creation
     of three delivery methods (face-to-face, hybrid and online), hiring and training of
     all adjunct faculty

Assistant Professor   *April 2010 to May 2013*
Instructor   *August 2007 to April 2010*

College Leadership

Global Program Development   *July 2011 to Present*
- o Coordinator *INSPIRES Global Perspectives,* a faculty and staff professional development program at HCC's that seeks to increase global competency through deeper exploration of a student-centered issues
- o Coordinator Global Distinction, an academic enrichment program for students begun in July 2011 to increase the global competency of students across our campus, preparing them for transfer and/or careers

Coordinator, New Full Time Faculty   *July 2011 to July 2015*
- o Responsibilities to each three-year cohort include being the primary point of contact for new faculty, integrating new faculty into the college through a series of professional development workshops addressing both administrative tasks and teaching excellence, and, the development of a teaching portfolio

Johns Hopkins University Whiting School of Engineering

January 2015 – present

Adjunct Faculty
- o Teach general business and marketing courses in the Center for Leadership Education including Introduction to Business, Principles of Marketing, and International Marketing
- o Rank of teaching effectiveness consistently at or above the department level

Howard Community College   **August 2002 – August 2007**
Adjunct Faculty

    Developed the "real world" learning approach still used in BMGT 130 Principles of Marketing that includes writing a marketing plan for a non-profit or small business client

Awards and Recognition
- o 2012 Recipient Heiskell Award for Global Distinction
- o 2012 AACU Grant Recipient for INSPIRES Global Distinction
- o 2009-2010 Outstanding Faculty, Howard Community College
- o Outstanding Adjunct Faculty 2005-2006

Presentations
- o AACU, October 2013: *INSPIRES Global Perspectives: A Problems to Projects Professional Development Approach*
- o West Los Angeles College, May 2013: *Hands on Approach to Globalizing Your Curriculum*
- o Institute for International Education, March 2012: *Global Distinction: Internationalizing the Community College Award Winner*
- o The League of Innovation, March 2012: *Global Distinction: A Student Pathway to Global Competence*
- o The Chair Academy, March 2010: *Global Distinction: A Student Academic Enrichment Program*
- o AFAACT, January 2009: *Multidimensional Approach to Teaching the Credit Crisis*

Pfizer

Successfully sold the Pfizer portfolio to physicians, group practices, hospitals and insurance companies. Recognized as a Consistent Achievers Winner by exceeding quota 12 of 12 years.

Senior Professional Healthcare Consultant, Parke Davis, Vista Rx and Powers Divisions
o Winner, Market Share Increase contests—2004, 2005 and 2006; and, Winner, Vice President's Club and Circle of Excellence 2003
o Ranked by superiors in highest stage of capability for Territory Optimization, Selling Skills and Customer Value Delivery and Team Contribution

Regional Account Manager, National Healthcare Operations
o Through contract and pull-through negotiations with healthcare insurance companies including Aetna, Blue Cross & Blue Shield Association and MAMSI, obtained preferred status for new and mature products
    o Facilitated and led the management group in Washington, DC to organize the sales efforts of 150+ individuals across a matrix organization to achieve business plan objectives in all market divisions—government, managed care, indemnity and self-pay

Institutional Healthcare Representative, Roerig Division
o Member of number 1 district in region
o Ranked in top 15% of IHRs in division

Lewis Advertising   September 1988 to November 1989
Account Executive and Coordinator
Managed the creation, development, production and follow-up of direct marketing campaigns for financial services companies