Program Evaluation Final Report

CENTRAL GEORGIA
HEALTHCARE WORKFORCE ALLIANCE

Central Georgia Technical College, TAACCCT

September 2017

Submitted by:
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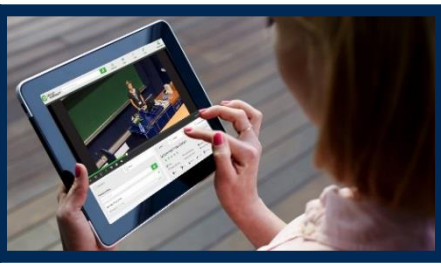

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Executive Summary

In September 2013, Central Georgia Technical College (CGTC) was awarded a $2.6 million round three TAACCCT grant titled *Central Georgia Healthcare Workforce Alliance*. Under the grant, CGTC created a collaborative, blended learning, technology-driven educational approach termed "BlendFlex" to expand the college's online learning capacity. BlendFlex is a methodology that allows a class to be captured live and via video and broadcast simultaneously to six or eight other campus or small centers or to any student device. Students can download software on their PC, iPad, tablet, laptop, etc. and attend class live in person, live via their handheld devices or access the class at another time from anywhere and on any device. The lectures are posted and students can view them any time and as many times as they want. BlendFlex allowed TAA-eligible workers, veterans, rural students, and other adult learners in health classes to attend class anytime, anywhere and on any device. This technology is especially useful for rural residents who are 50 miles from the nearest campus and military personnel who are deployed across the world.

The BlendFlex program was intended to address three main needs: 1) to prepare workers for jobs in the stable, critical and high demand field of healthcare in 11 counties in Georgia; 2) to provide high quality college courses in a more convenient format to address the needs of rural residents in their 3,500 square mile service area; and 3) to build an innovative, technology-driven course delivery system that would build capacity across the college as it expands into other programs. The program provided students with general education and pre-health courses via the BlendFlex approach plus comprehensive wrap-around services, career coaching, academic advising and referral to services.

Using TAACCCT grant funding, the college was able to expand its technology and move from being able to accommodate 20 classes to 160 classes at the same time. It should be noted that when a class is offered via BlendFlex, not only does the lead classroom where the lecture is being captured need special technology, so do the 6-8 sites receiving the broadcast. CGTC focused on students who wanted to work in healthcare and intended to apply to highly competitive programs. They recruited students who were taking general education and pre-health courses who could be helped by a flexible pathway to the programs. Students were required to participate in orientation to BlendFlex and have appropriate technology for the courses.

Over the four years of the program, CGTC served 1,333 participants in BlendFlex courses across their 11 county service area. The CGTC students were predominantly minority, females in their mid-twenties who qualified for the Federal Pell Grant program.

Evaluation Design Summary

Conceptual Framework

The program used multiple strategies to support the grant objectives. They: 1) purchased equipment and up-fitted classrooms; 2) built state-of-the-art telepresence classrooms; 3) provided comprehensive and continuous wrap-around student services; 4) created an aggressive marketing and outreach plan; 5) provided training and professional development for faculty; and 7) collaborated with local employers before, during and after the grant period.

It was hypothesized that students who participate in a blended learning, technology-driven classroom and receive comprehensive wrap-around services would have better academic outcomes (course completion, retention, grades, health program admission, time to completion and completion rates) than students taking courses through the traditional route. The 1,333 students responded to the program, were successful, accumulated 53,284 credits and earned 235 credentials.

Formative Evaluation Questions and Design

The evaluation of the CGTC program contained a formative component that determined the extent to which the program was implemented as designed. The evaluation also contained a summative component that assessed the outcomes and impacts of the CGTC program. A logic model was developed for the major components of the grant (Appendix A). The logic model was utilized to determine the steps in the evaluation process and the logical flow of activities. It was also used to develop assessments, focus group and surveys questions, to evaluate individual activities and the outcomes of those activities, to facilitate classroom observations and attendance at advisory committee meetings.

Formative Evaluation Questions

1. *How was the program selected?*
2. *How was the program improved or expanded using grant funds?*
3. *Were wrap-around services provided to students; and if so, how were they developed and utilized?*
4. *How were students admitted to the program?*
5. *What professional development did faculty receive?*
6. *What contribution did local business and industry make to the program?*

The goals of the formative evaluation were to understand the program model, the opportunities and challenges experienced by students and faculty/staff during the first two years of implementation. There were six formative evaluation questions. To address these questions, data were collected from multiple sources: student intake information, two sets of focus groups, a classroom observation, faculty and staff interviews, interactions with the advisory committee, student surveys and semester data from the college's student information systems.

The focus of the formative evaluation was to document the implementation of the DOL BlendFlex program components to ensure that all of the key elements were implemented as planned and to determine if the components of the program were effective and sustainable beyond the grant period.

The college built capacity throughout the four years of the grant. They added equipment and telepresence classrooms, and created an alternative method for completing general education and pre-requisite courses for entry into healthcare programs.

Summative Evaluation Questions and Design

To evaluate the BlendFlex program's outcomes and impacts, five research questions were developed. These summative questions were addressed to determine the impact the BlendFlex program had on grant participants and identify the factors that impacted participant outcomes.

The evaluators conducted a quasi-experimental design using propensity score matching (PSM) to identify a matched comparison group from a list of students also attempting to major in healthcare programs. The matched group of 1,256 was selected each term from the same group of students intending to go into healthcare programs but who were not taking BlendFlex courses.

Summative Evaluation Questions

1. *Will a larger percentage of students participating in a collaborative, blended learning environment, successfully complete courses (A-C grades) and programs at a higher rate than those taking courses through the traditional route?*
2. *Will students participating in a collaborative, blended learning environment, have higher progression rates as measured by terms enrolled at the college, terms to completion, credit accumulation and cumulative grade point average than those taking courses through the traditional route?*
3. *Do students participating in the blended learning, technology-driven courses have higher healthcare program acceptance rates than those taking courses through the traditional route.*
4. *Is there an added benefit to receiving wrap-around support services in addition to the blended learning, technology-driven courses?*
5. *Is the program cost-effective and sustainable?*

To address the research questions, the following data sources were selected: unit record level student data from the colleges' student information system (Banner) (credit accumulation, grades, retention and GPA); the student intake (entrance) data base; student follow-up; the National Student Clearinghouse; and additional focus groups and interviews.

To address ***research questions 1 and 2***, CGTC students were compared to the matched comparison group. The factors that were examined were registrations, course completions, credentials earned, terms retained, time to completion, credit accumulation and GPA. To address ***research question 3***, health program admission and the completion of certificates, degrees and diplomas were analyzed. To address ***research question 4***, data on the number of coach visits per student was collected and merged with the BlendFlex student data. To address ***research question 5***, the college's sustainability plan was considered plus data on enrollment and continued program costs.

CGTC Implementation Findings

Findings of steps taken by the BlendFlex staff to create and implement the program are summarized, followed by a discussion of the operational strengths and weaknesses of the program and evidence of its sustainability.

After analyzing all the data collected throughout the performance period, findings suggest that all seven strategies were largely implemented. By the end of the grant, the colleges had increased their course delivery capacity and served 1,333 students. The college intends to continue, expand the program and retain the coach. Findings are as follows:

- CGTC developed a collaborative, blended learning, technology-driven educational approach. They adapted the number of courses projected in their proposal. Courses were taught live on the Warner Robins campus and broadcasted to six or eight other sites via the telepresence technology. 1,333 students enrolled in an average of 1.7 BlendFlex classes and passed at higher rates than students in the same courses taught in the traditional manner.
- The college implemented wrap-around student support services. A part-time coach was hired at the end of the second year, was given a visible office and began seeing students, visiting the rural campuses and centers and providing information sessions and orientations. The coach provided some case management but mostly academic advising, academic assistance and referral, career planning, career guidance, and assistance with healthcare program applications.
- The BlendFlex staff and college recruiters developed an aggressive marketing campaign. Academic advisors were trained on the BlendFlex program used every method available to them to market the program and recruit students. They followed up on referrals, created flyers, developed a BlendFlex website, made presentations to classes and clubs, obtained assistance from local labor boards and agencies, and military bases. While enrollment was slow in the first year, they exceeded their goal of 900 by 48%.
- The CGTC consortium staff provided training and professional development for faculty. Training was offered through the professional development office and taught by the Director of Educational Technology. The college started with four faculty members going through the training in the first year and ended the grant with 46 faculty members trained. The training was several weeks long with homework and hands-on practice using the BlendFlex technology.
- College continued the tradition of engaging with local employers before, during and after the grant period. Local healthcare agencies and hospital staff helped develop the content for the CGTC program. The program's advisory board consisted of staff members from local hospitals, healthcare facilities, workforce boards and the Georgia DOL.

Fidelity to the Program Design

Due to unforeseen circumstances, the college did not implement the program as it was intended. The original intent was to: 1) adapt general education courses to BlendFlex format; 2) to adapt pre-health program courses (prerequisites) to BlendFlex format; and 3) adapt four entire certificate programs (nurse assistant, acute care nurse aide, patient care assistant and phlebotomy technician) using BlendFlex technology for delivery. Program participants would consist of students declaring one of the four health programs as their major and taking all of their courses through the BlendFlex format. The College began using BlendFlex to adapt one course in summer 2014 and added additional courses over the next year. However, adapting full health program certificates was problematic due to staff changes

and loss of key faculty in targeted programs. The College decided to change their approach to allow a broader number of students into the BlendFlex courses because:

- The College lacked adequate staff in targeted health programs to be trained on BlendFlex technology and deliver those courses in a timely manner;
- Other health careers students heard about BlendFlex courses from their friends and wanted to take the classes; and
- Taking courses in this format would allow distance bound individuals, rural students, shift workers, and hospital workers (12 hour shifts three days a week) to further their education.

In July 2015, the Project Manager for the Alliance made a request to their Federal Program Officer to allow the College to count all health science students who completed at least one BlendFlex course as a program participant. Permission was granted in September 2015. This allowed the College to attract more students and increase student exposure to the BlendFlex technology.

Strengths and Weaknesses

- The program delivered a collaborative, blended learning, technology-driven experience to students. Students responded well to the delivery methodology and successfully completed courses. The aspect of the program that students appreciated and utilized most was flexibility of the system to allow them to attend class at any time, from anywhere and on any device.
- These students accumulated credit hours and credentials at a higher rate than the matched comparison group. A unique aspect of this program was offering an alternative course delivery method that allowed isolated, rural residents and deployed military personnel the opportunity to take a wide array of courses via BlendFlex technology.
- Lack of fidelity to the program required a new evaluation plan. Due to unforeseen circumstances, the college did not implement the program as it was intended as outlined above. Approval was given in September 2015 by the Federal Program Officer to allow the College to count all health science students who completed at least one BlendFlex course as a program participant.

Participant Impacts and Outcomes

The following are key participant impact and outcome findings. The outcomes shown below measure how successful the BlendFlex program was in serving participants and in participant completion, credential attainment and employability, showing the nine outcomes articulated in the SGA.

DOL TAACCCT Grant Outcome Measures for the CGTC Program				
Outcomes		Goal	Current through June 2017	% of Target Met
		#	#	%
1.	Total unique participants receiving services through the CGTC program.	900	1,333	148%
2.	Students who completed a grant-funded program of study.	351	260	74%
3.	Students retained in grant-funded program of study.	540	1,206	223%
4.	Total number of students completing credit hours. Unduplicated number is 1,276.	855	1,432	167%
5.	Total number of students earning credentials.	360	368	102%
6.	Total number of students enrolled in further education after completion.	69	84	121%
7.	Students who become employed one quarter after program completion.	187	55	29%
8.	Students who remain employed three quarters after program completion.	218	24	11%
9.	Students employed at program enrollment who received a wage increase.	153	33	22%

To summarize the results of the nine outcomes are as follows:

1. 1,333 CGTC students were recruited, entered the program, accumulated credits completed courses and credentials. The program exceeded their goal by 48%
2. A total of 368 CGTC students completed a credentials which exceeded their goal by 2%. Students completed more credentials than the comparison group. Not all of these degrees were in healthcare programs.
3. A higher percentage of CGTC students accumulated credit hours than was projected, which is a reflection of the high retention rates.

Other Outcomes and Impacts

CGTC students had many successes in the program.

- The average number of semesters to completion for CGTC students was 5.5 compared to 5.4 semesters for the comparison group but 40% of BlendFlex students were admitted to competitive health programs and 49% graduated compared to 28% admission and 38% completion for the comparison group.

- Mean GPA for CGTC students was 2.44 compared to 2.24 for the comparison group.
- CGTC students earned an average of 40 credits at their respective colleges compared to 32 credits for the comparison group.
- The college has developed a sustainability plan that continues to support many of the aspects of BlendFlex program.

Limitations

The findings give rise to several issues with respect to the limitations of the evaluation.

- The analyses were limited to available data which impacted the analysis of employment outcomes. The State labor agencies in Georgia had an agreement with the Technical College System of Georgia but the data provided was one year in arrears and contained no salary information. The college relied on student follow-up for employment data.
- Coaching was significantly correlated to cumulative GPA but nothing else. Evaluators feel that the data were limited because the coach was in place only three terms of the program rather than the full eight term. Had more data been available (eight terms of participants and activities) coaching might have had a greater impact on student outcomes.
- Three and a half years is not long enough to follow students to their ultimate outcomes. Most of these students are attempting to enter competitive healthcare programs, complete a credential and then become employed but with high unemployment rates in some of their service region and the fact most of these students are rural, finding jobs will take some time. Students should be tracked for several more years to see what happens to them.

Conclusions

The following are conclusions and implications for future workforce and educational research:

- CGTC may have helped level the playing field for many students, especially rural students in their 3,500 mile service area. TAACCCT participants in the CGTC program received positive education and transfer outcomes. Of the 1,333 students who enrolled in BlendFlex classes, 529 (40%) were admitted to selective healthcare programs and of those, 259 (49%) completed a certificate, diploma or degree. Students completed after an average of 5.5 semesters with a mean GPA of 2.44 and an average of 39 earned credit hours. The analysis of the program shows positive results for the expansion of BlendFlex.
- The comparison between CGTC students and a matched comparison revealed significant differences. CGTC students had higher GPAs, were admitted to selective programs at higher rates, earned more credentials and had accumulated more credit hours than the comparison group.

I. Introduction

Between 2011 and 2014, the US Department of Labor (DOL) awarded nearly $500 million per year in grants to individuals or groups of community colleges through the Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant initiative. In September 2013, Central Georgia Technical College (CGTC) received $2.6 million dollars to develop the Central Georgia Healthcare Workforce Alliance (the Alliance), an employer-driven effort to increase the number of individuals in their service area who are trained in the high demand fields of healthcare. The Alliance created a collaborative, blended learning, technology-driven educational approach termed "BlendFlex" to expand online learning capacity to ensure that TAA-eligible workers, veterans and other adult learners, including those in rural communities, can participate anytime, from anywhere and on any device. After downloading software on their device, students can attend class through various methods including face-to-face classes, telepresence (synchronously through video conferencing), online or through lecture capture. The College has maximized its use of Cisco Telepresence Jabber which allows students to connect to any of the blended learning environments using any device (e.g., tablet, laptop, PC). The development and pilot test of BlendFlex began in the summer 2014 with a small number of students (N=24) enrolled in ALHS 1011 (Structure and Function of the Human Body) and has expanded to larger numbers and additional courses over the four years of the project.

The focus of the round three TAACCCT grants was to develop new undergraduate education and career training program strategies that have built upon previously established evidence of successful implementation. The DOL sought to ensure that institutions of higher education were able to help TAA-eligible workers, economically dislocated and other low-skilled adults acquire the skills, degrees, and credentials needed for high-wage, high-skilled employment while also meeting the needs of employers for skilled workers. The core elements of the round three grants were focused on evidence-based design, stacked and latticed credentials, transferability and articulation credit, advanced online and/or technology-enabled learning, strategic alignment and alignment with previously-funded TAACCCT projects (Mikelson, 2017).

As part of the grant's requirements to engage a third-party evaluator, CGTC contracted with the Center for Applied Research (CFAR) to be the evaluator for the BlendFlex program. CFAR was tasked with evaluating the implementation, outcomes, and impacts of the BlendFlex program. CFAR is submitting this final report to CGTC and to the DOL as the final requirement of the contract.

This report analyzes the course and program outcomes of BlendFlex participants during the four years of the grant. It is the second of two reports, drawing on the interim report written at the end of year two which examined program development, implementation and participation, identifying challenges, successes and strategies to improve programs and services.

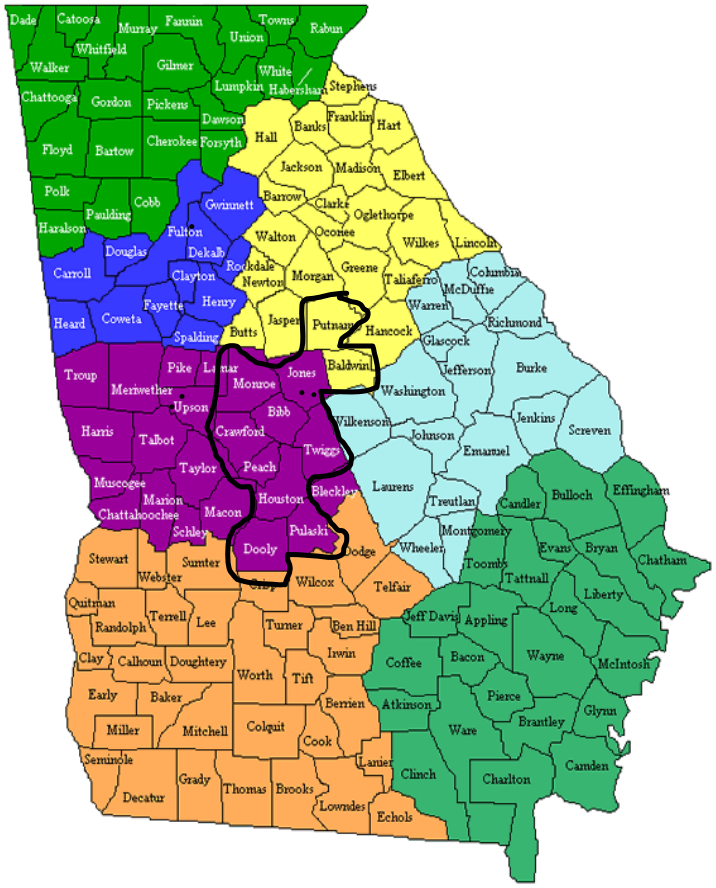
This report is organized into five chapters: 1) an introductory chapter that provides background on the BlendFlex program, summarizes the findings of the interim report, includes an overview of the

participants and the research questions addressed in the implementation evaluation; 2) the summative evaluation design, including the research questions and outcomes of the BlendFlex program; 3) factors influencing outcomes for participants; 4) results of the quasi-experimental outcomes analyses and how participants performed compared to a matched comparison group on program outcomes; and 5) a discussion of conclusions and findings, lessons learned, limitations and implications for future programs.

A. The CGTC Program Description and Activities

The BlendFlex program was conceived of many years before they applied for the TAACCCT grant.

Figure 1. CGTC's Service Area



Prior to the grant, the College owned equipment that allowed them to utilize telepresence/lecture capture in a maximum of 20 course sections at a time. Through the equipment purchased with grant funds, they are now able to support 160 course sections simultaneously across their service area. These programs also allow distance bound individuals, rural students, shift workers, and hospital workers to further their education. The grant funding allowed the College to purchase equipment and up-fit classrooms in multiple locations.

CGTC's service area comprises 11 counties in Central Georgia with approximately 500,000 residents covering approximately 3,500 miles. The counties served are Baldwin, Bibb, Houston, Crawford, Dooly, Jones, Monroe, Peach, Pulaski, Putnam and Twiggs. Table 1 below shows the makeup of the counties in the service region. Approximately 21% of residents in the eleven county region live below the poverty line (Table 1).

Table 1. CGTC County Demographics				
County	Classification	Population	Square miles	Persons Below the Poverty Line
Baldwin County	Urban	45,720	267.5	30%
Bibb County	Urban	155,547	255.2	25%
Houston County	Urban	139,900	379.9	15%
Crawford County	Rural	12,630	326.5	21%
Dooly County	Rural	14,918	397.2	29%
Jones County	Rural	28,669	395.4	17%
Monroe County	Rural	26,424	397.8	13%
Peach County	Rural	27,695	151.5	25%
Pulaski County	Rural	12,010	249.9	16%
Putnam County	Rural	21,218	360.7	14%
Twiggs County	Rural	9,023	362.9	28.7

The CGTC Healthcare Workforce Alliance was intended to address three main needs: 1) to prepare workers for jobs in the stable, critical and high demand field of healthcare; 2) to provide high quality college courses and programs in a more convenient format to address the needs of rural residents in their 3,544 square mile service area; and 3) to build an innovative, technology-driven course delivery system that would build capacity across the college as it expands into other programs.

Change in the Focus of the Program

The original plan over the four years of the grant was to: 1) adapt general education courses to the BlendFlex format, 2) to adapt pre-health program courses (prerequisites) to the BlendFlex format and, 3) adapt four entire certificate programs (nurse assistant, acute care nurse aide, patient care assistant and phlebotomy technician) using BlendFlex technology for delivery. This would allow students to take general education courses, prerequisite courses for health careers and courses in the major at anytime from anywhere and on any device. Furthermore, students would have the flexibility to switch methods based on schedule demands. Students would also have access to tools outside of regular class time, such as video recorded lectures, which would allow them to repeat lectures to help them better understand course content, clinical procedures and critical skills. Program participants would consist of students declaring one of the four health programs as their major and taking all of their courses through the BlendFlex format. Adapting full health program certificates was not possible due to staff changes and loss of key faculty in targeted programs. The College decided to change their approach to adapt all general education and pre-requisite health courses into BlendFlex to allow a broader number of pre-health students into the BlendFlex courses. This format would allow distance bound individuals, rural students, shift workers, and hospital workers (12 hour shifts three days a week) to further their education.

In July 2015, the Project Manager for the Alliance made a request to their Federal Program Officer to allow the College to count all health science students who completed at least one BlendFlex course as a

program participant. Permission was granted in September 2015. This allowed the College to attract more students and increase student exposure to the BlendFlex technology. Between 2014 and 2017, the College adapted the 20 course to BlendFlex format (Table 2). This change to the focus of the program caused elements of the evaluation and research questions to change.

Table 2. History of BlendFlex Courses

Prefix	Course	Title	Sum 2014	Fall 2014	Spr 2015	Sum 2015	Fall 2015	Spr 2016	Sum 2016	Fall 2016
ALHS	1011	Structure & Function of the Human Body	X	X	X	X	X	X	X	X
ALHS	1040	Introduction to Health Care			X		X	X		X
ALHS	1060	Diet and Nutrition for AHS			X	X	X	X	X	X
ALHS	1090	Medical Terminology for AHS		X	X	X	X	X	X	X
BIOL	2113	Anatomy & Physiology I		X	X	X	X	X	X	X
BIOL	2114	Anatomy & Physiology II			X	X	X	X	X	X
BUSN	2200	Office Accounting								X
ECGT	1030	Intro to Electrocardiography								X
ENGL	1010	Fundamentals of English I					X	X	X	X
ENGL	1101	Composition and Rhetoric						X	X	X
MAST	1100	Med. Insurance Management						X	X	X
MAST	1110	Admin. Practice Management						X	X	X
MAST	1510	Medical Billing and Coding II								X
MATH	1012	General Mathematics					X	X	X	X
MATH	1111	College Algebra						X	X	X
PSYC	1010	Basic Psychology		X	X	X	X	X	X	X
PSYC	1101	Intro to Psychology		X	X	X	X	X	X	X
PSYC	2103	Human Development						X		X

B. Program Model

The primary goals of the BlendFlex program were to: 1) adapt 20 general education and pre-requisite healthcare courses to the BlendFlex delivery method; 2) increase pre-requisite healthcare course pass rates among BlendFlex students; 3) increase the acceptance rates in healthcare programs among BlendFlex students; 3) increase retention through the use of the BlendFlex delivery method; and 4) encourage students to continue their education either at the college or as transfer students. In order to guide the development work, a logic model was developed (see Appendix A). The fundamental elements of the program were:

1. Purchase equipment to create additional BlendFlex classrooms to include specially equipped cameras and lecture capture equipment.
2. Train faculty on use of the technology and classroom strategies for blended learning.

3. Establish a course schedule where students can enroll in a BlendFlex course being captured through telepresence at one campus and attend at another campus (special classrooms) or electronically through one of their devices.
4. Enable students to enroll and download software onto their preferred technology (iPhone, SmartPhone. iPad, Tablet, PC, Macbook, etc.).
5. Have faculty place resource materials and learning aids on the student portal for BlendFlex (e.g. syllabus, videos, assignments and handouts from class).
6. Enable students to attend class either in person, or from a distance via one of their devices. The faculty member can see who has logged into the class remotely and the students, class members and faculty can interact. Most telepresence classes are broadcast to 6-8 of their campuses and larger centers.
7. Make videos available to students after the class is over. Students can watch the videos for the first time if they missed class. Students can re-watch the video multiple times for better understanding of the course material, a real benefit in difficult courses such as Anatomy and Physiology.
8. Give students the option to attend class from anywhere, at any time and on any device.
9. To focus only on healthcare majors during the four years of the grant.
10. To strategically add courses so students could take all of their general education courses and the common pre-requisite health courses that applied to most all healthcare programs. They slowly added occupational courses for the Medical Assisting and Electrocardiography programs.

To supplement their technical education, CGTC provided students with wrap-around services through their project director, program faculty, success coach, and career counselors which included: personal counseling and referrals; academic counseling and referrals; and job-seeking skills. During the first two years of the program, the College hired a part-time coach who had other duties. This didn't work well as very few students engaged with the coach. In fall 2015, they hired a retired faculty member to assume the role of coach/advisor for the health science programs. Because she had a visible office and spent 20 hours a week on campus, students began to utilize the service. Students could drop in to get help with classwork, completing paperwork for admission to a health program or for a personal issue. The success coach also made monthly visits to the outlying campuses to offer services to rural students.

During program planning and design, the college continued their relationships with program advisory committees and established the CGHWA Advisory Board that included staff from local hospital systems, workforce development agencies, the Georgia Department of Labor, and medical facilities. These advisory board members supported the academic goals and priorities of the program and helped with marketing and recruitment.

C. Program Implementation Outcomes and Refinements

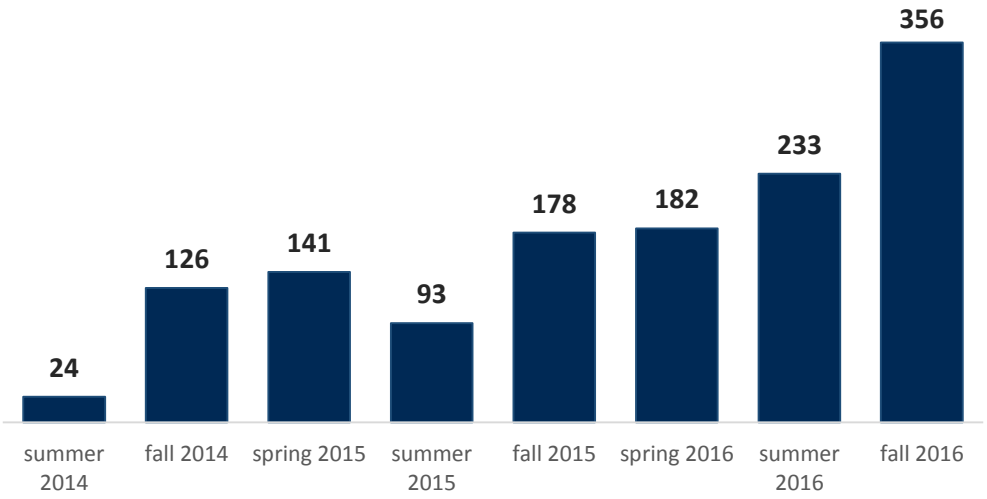
Implementation Study

For the implementation study, CFAR sought to understand the program model, the opportunities and challenges experienced by students and faculty/staff during the first two years of implementation. Surveys, focus groups and interviews were conducted with students, faculty and staff. The College used the data to inform program improvements.

Student Characteristics

Over the four years of the grant, the college served 1,333 unique participants. The College also identified a large pool of students who were considered pre-health science students who were waiting for a limited number of healthcare program slots. Using propensity score matching, the evaluators selected a group of 1,296 of these students to serve as the comparison group. The entry term for BlendFlex students can be seen in Figure 3.

Figure 3. First Term of Enrollment



Students in the CGTC program were mostly female (90%), Pell Grant recipients (75%), 56% minority and young (81% ≤ 35). The comparison group was 89% female, 75% Pell recipients, 62% minority and 80% ≤35 (Table 3).

Table 3. BlendFlex vs. Comparison Demographics				
Age	**BlendFlex**		**Comparison**	
	#	**%**	**#**	**%**
Under 21	278	20.9%	304	24.2%
21-25	422	31.7%	322	25.6%
26-35	372	27.9%	378	30.1%
35-45	170	12.8%	161	12.8%
46-55	74	5.5%	67	5.3%
56+	17	1.3%	24	1.9%
Total	**1,333**	**100%**	**1,256**	**100%**
Gender	**BlendFlex**		**Comparison**	
	#	**%**	**#**	**%**
Female	1,199	89.9%	1,116	88.9%
Male	133	10.1%	140	11.1%
Total	**1,333**	**100%**	**1,256**	**100%**
Race	**BlendFlex**		**Comparison**	
	#	**%**	**#**	**%**
Native American/Alaskan Native	7	0.5%	6	0.5%
Asian	17	1.3%	17	1.4%
African American	657	49.3%	695	55.3%
Latino	35	2.6%	31	2.5%
White	583	43.8%	477	38.0%
2+ races	19	1.4%	18	1.4%
Unknown	15	1.1%	12	1.0%
Total	**1,333**	**100%**	**1,256**	**100%**
Pell	**BlendFlex**		**Comparison**	
	#	**%**	**#**	**%**
Yes	1,002	75.2%	887	70.6%
No	331	24.8%	369	29.4%
Total	**1,333**	**100%**	**1,256**	**100%**

Major Field of Study

When asked about their educational goals, students listed 35 different healthcare certificates and degrees but 79% of them were planning to major in the seven healthcare majors (Table 4).

Table 4. Major Field of Study	
Major Field of Study	**Number**
Dental Hygiene	99
Healthcare Science	150
Medical Assisting	148
Pharmacy Technology	44
Practical Nursing	354
Radiologic Technology	197
Surgical Technology	55
Total	**1,047**

Economic Conditions of CGTC Students

For the most part, CGTC grant participants were low-income students with 75% eligible for the Federal Pell Grant, a program designed to assist low-income individuals attending higher education. Approximately 48% of the population qualified as TAA, WIA, a veteran, or a rural resident. At entry, approximately 4% were disabled, only 9% indicated that they were employed at entry (76% unknown job status). Approximately 30% considered themselves disadvantaged with the highest percentage being educationally disadvantaged (Table 5).

Table 5. Student Characteristics		
Program Eligibility		
Veteran	70	5%
WIA	19	1%
Rural	497	37%
TAA	1	0%
Disabled	64	5%
Disabilities		
Mental/Emotional Disability	19	1%
Hearing Impaired	3	0%
Visually Impaired	4	0%
Orthopedic Impairment	4	0%
Attention Deficit Disorder	13	1%
Other	21	2%
Disadvantaged		
Not Disadvantaged or Disabled	381	29%
Economically Disadvantaged	841	63%
Academically Disadvantaged	186	14%
Displaced Homemaker	20	2%
Single Parent	152	11%
Earned GED	42	3%
ESL Issues	18	1%
Employment		
Employed at Entry	115	9%
Underemployed at Entry	62	5%
Unemployed	141	11%
Unknown	1,012	76%

Note: Approximately 950 had some sort of disability or disadvantage.

D. Implementation Research Questions

For the implementation study, CFAR examined six research questions. To address these questions, evaluators collected data from the student intake database, conducted three sets of focus groups (one via BlendFlex), made observations in the classroom, interviewed individual faculty members, recruiters, program directors, the success coach, other involved staff, and attended several advisory board meetings. Student surveys were developed and administered to obtain information from students and semester data were collected from the college's student information system (Banner). The following are brief overviews of the research questions addressed in the interim report.

1. How was the program selected?

Because one goal of the Round III TAACCCT grant was for colleges to implement career training program strategies that have built upon previously established evidence of successful implementation, the expansion of BlendFlex served both students and the college well. Prior to the grant, telepresence technology was in place but at a smaller scale. CGTG developed the BlendFlex course delivery methodology to improve access for their distance bound individuals, rural students, shift workers, military personnel and hospital workers to further their education. It also allowed the college to expand their course and program offerings at their smaller centers. The college was able to expand a critical methodology to reach more students across their service area.

2. How was the program improved or expanded using grant funds?

The College owned equipment that allowed them to utilize telepresence/lecture capture in a maximum of 20 course sections at a time. Through the equipment purchased with grant funds, they are now able to support 160 course sections simultaneously across their service area. The grant funding provided necessary resources to purchase equipment and up-fit classrooms in multiple locations. The project was scaled up to include more health classes in the general education and occupational areas. The college plans to scale the project even further into other occupational programs. The alliance activities will be sustained using the college's internal general operational funding sources as well as other external proprietary resources.

The college conducted a survey each term with BlendFlex students to solicit information on use of program features, frequency of use and satisfaction with elements of the program. Over the course of the program, students utilized the features provide to them by the BlendFlex program and many used them often. Having access to the recorded lectures is a signature feature of BlendFlex and 24% of students used that feature daily and another 25% once a week. Other items used daily or weekly in large numbers were the online textbook, simulation activities, the learning management system, and web resources (Table 6).

Table 6. How Often Different BlendFlex Technologies were Used – Summer 2014 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (Learning Mgmt. System)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	55 (12.1%)	105 (23.0%)	67 (14.7%)	19 (4.2%)	80 (17.6%)	68 (14.9%)	68 (15.0%)
Once	32 (7.0%)	10 (2.2%)	23 (5.0%)	8 (1.8%)	20 (4.4%)	17 (3.7%)	8 (1.8%)
2-4 times/sem.	53 (11.6%)	40 (8.8%)	42 (9.2%)	12 (2.6%)	45 (9.9%)	54 (11.9%)	17 (3.8%)
5-10 times/sem.	67 (14.7%)	38 (8.3%)	71 (15.6%)	27 (5.9%)	57 (12.6%)	77 (16.9%)	19 (4.2%)
Once/wk.	113 (24.8%)	71 (15.6%)	69 (15.1%)	119 (26.1%)	64 (14.1%)	89 (19.6%)	36 (7.9%)
Daily	109 (23.9%)	102 (22.4%)	102 (22.4%)	248 (54.4%)	89 (19.6%)	99 (21.8%)	75 (16.6%)
N/A	27 (5.9%)	90 (19.7%)	82 (18.0%)	23 (5.0%)	99 (21.8%)	51 (11.2%)	230 (50.8%)
Total	456 (100.0%)	456 (100.0%)	456 (100.0%)	456 (100.0%)	454 (100.0%)	455 (100.0%)	453 (100.0%)

3. Were wrap-around services provided to students; and if so, how were they developed and utilized?

Students at CGTC had access to the College's services but also to a Success Coach funded by the grant. The original success coach was a faculty member who took on the role part-time in the first few years of the grant. When asked, only 4% of students had seen the success coach. Students attended orientation, utilized counseling, advising and career services provided to all students at the college but did not engage with the success coach. At the end of year two, the college hired a new success coach for the health science students. She was much more available to students and regularly visited the outlying campuses to meet with students, offer orientations and participate in other college events.

4. How were students admitted to the program?

As mentioned in the introduction, the program changed course during the first year. Only health science students were allowed to take BlendFlex courses. They did not have to meet any other criteria. Students learned about BlendFlex through word of mouth or through one of many recruitment efforts utilized by the program and enrolled in courses. They completed a survey of intake information and were tracked throughout their tenure at the college. Enrollment grew steadily and reached 356 in fall 2016. Due to the convenience of BlendFlex, students heard by word of mouth from other students about the methodology and enrolled in classes. By the end of the program, 1,333 students accounted for 2,241 registrations in courses for an average of 1.7 BlendFlex courses.

5. What professional development did faculty receive and was it effective?

Faculty who wanted to teach BlendFlex courses enrolled in a professional development training course to learn how to use the technology in the classroom. It was decided that the training would also emphasize a blended learning concept and how to teach the course via BlendFlex. All faculty members who planned to facilitate a course utilizing the BlendFlex model were required to attend the professional development course which occurred over a five-week period for three hours a week and included in-class training and out-of-class assignments. The number of faculty trained rose from four in fall 2014 to 13 in fall 2015. By the end of the program, 46 faculty members had attended training. Through focus groups with faculty teaching BlendFlex classes, faculty felt the training was very effective. The training required faculty to learn how to use the telepresence technology, create a course blueprint for blended learning and use the actual technology to deliver assignments.

6. What contribution did local business and industry make to the program?

The program had an advisory board that met regularly during the four years of the grant and gave the College feedback, helped them develop marketing materials and actively recruited students into the program. Because of the change in focus away from full programs being offered via BlendFlex, the advisory board did not get involved in providing clinical/internship space to the program but advised the program staff on adapting courses and faculty professional development.

E. Challenges During Program Implementation

Several challenges arose during the first few years of the grant. The major challenges and program refinements were as follows.

Complexities of 11 Campuses/Centers and a 3,500 Square Mile Service Area

The College had some challenges when offering the BlendFlex courses at multiple campuses. The greatest challenge had to do with structure and process. When a course is offered as a seated class on one campus but has classrooms assigned at other campuses for the telepresence broadcast, getting that into the student information system allowing students to enroll in the proper section was complicated. Faculty who taught one section of a course had to juggle five or six rosters and course sections, each with 3-5 students in them. The college had to have all equipment installed and working properly at each center which required tech support at each campus. When a course required a "skills check", there had to be appropriate staff at each center to observe student skill levels.

Program Recruitment

Enrollment in community colleges across the country decreased as recovery from the recession occurred. CGTC total enrollment declined from 12,165 students in the 2013-14 year to 11,514 in the 2015-16 year (5%) decline at the same time they were trying to recruit students to participate in the BlendFlex program. The College had some difficulty meeting their enrollment goals in the first two years. They created marketing materials, posters that were displayed around the campuses, centers and workforce development agencies, developed a website and trained advisors to recruit students for the BlendFlex classes. Once students realized how convenient and effective BlendFlex was, word spread and the enrollment began to climb. Through fall 2015, 560 students had enrolled in at least one BlendFlex course (62% of goal of 900) but by fall 2016, 1,333 students had taken at least one BlendFlex course (148% of goal).

Lack of Initial Involvement of the Success Coach

The original success coach was given release time and assigned as a part-time success coach in addition to her teaching load. This did not work well; few students used the services of the success coach and the program redefined the role at the end of year two. The new coach was assigned a visible office and worked 20 hours a week to perform only coaching duties. Over the last two years of the grant, the coach delivered 507 sessions with individual students plus worked with groups of students at the outlying campuses and centers. Through a survey distributed each term, 29% of students saw an academic advisor in 2015 compared to 72% by 2016 (a service provided by the success coach).

Fidelity to the Program Design

Due to unforeseen circumstances, the college did not implement the program as it was intended. The original intent was to: 1) adapt general education courses to BlendFlex format; 2) to adapt pre-health program courses (prerequisites) to BlendFlex format; and 3) adapt four entire certificate programs

(nurse assistant, acute care nurse aide, patient care assistant and phlebotomy technician) using BlendFlex technology for delivery. Program participants would consist of students declaring one of the four health programs as their major and taking all of their courses through the BlendFlex format. The College began using BlendFlex to adapt one course in summer 2014 and added additional courses over the next year. However, adapting full health program certificates was problematic due to staff changes and loss of key faculty in targeted programs. The College decided to change their approach to allow a broader number of students into the BlendFlex courses because:

- The College lacked adequate staff in targeted health programs to be trained on BlendFlex technology and deliver those courses in a timely manner;
- Other health careers students heard about BlendFlex courses from their friends and wanted to take the classes; and
- Taking courses in this format would allow distance bound individuals, rural students, shift workers, and hospital workers (12 hour shifts three days a week) to further their education.

In July 2015, the Project Manager for the Alliance made a request to their Federal Program Officer to allow the College to count all health science students who completed at least one BlendFlex course as a program participant. Permission was granted in September 2015. This allowed the College to attract more students and increase student exposure to the BlendFlex technology.

II. Summative Evaluation Design, Methods, Research Questions and Outcomes of the CGTC Program

The comprehensive evaluation of the BlendFlex program included regular formative feedback on the implementation progress and a rigorous analysis of outcomes and impacts using propensity score matching (PSM) to identify a matched comparison group. In this chapter, the methodology and approach to the evaluation is described. The research questions will be addressed including the factors believed to have had the most impact on participant outcomes.

A. Evaluation Design

The goal of the evaluation was to provide the college with information, data, and analysis to determine the effectiveness of the BlendFlex program. A secondary goal was to determine if BlendFlex courses were an effective alternative to traditional coursework in allied health training and if they helped students gain entry into new career pathways in healthcare.

The impact study utilized a rigorous quasi-experimental matched comparison group analysis to examine the impact of BlendFlex participation on progression and completion outcomes (course completion, retention, credit accumulation, transfer and program completion).

Both quantitative and qualitative data were utilized in this study. Sources of quantitative data were student unit record level data extracted from the colleges' student information system (Banner), and transfer data from the National Student Clearinghouse. Sources of qualitative data were student focus groups, classroom observations, surveys and interviews with various faculty and staff members.

Table 7 below illustrates the work of the evaluators over the course of the grant. The evaluators worked with the college to develop data collection protocols and assessment tools to obtain insights from faculty members, project directors, success coaches, career counselors, and students. Observations were made in the BlendFlex classroom. Focus groups were conducted once a year in years two, three and four with both students and faculty teaching via BlendFlex. Surveys were distributed to current students each term and term data was uploaded to the data mart. Interviews were conducted on each site visit with individual faculty members, the project steering committees, the advisory board (twice), success coaches, recruiters, and other key staff. Survey results can be found in Appendix B.

Table 7. Evaluation and Data Collection Timeline

Date	Action	Data Collected
Fall 2013	Grant Awarded, Program Planning and Design Phase, interaction with project director.	Semester Data Uploaded Survey data collected
Spring/ Summer 2014	Detailed Evaluation Plan Completed 1st Site Visit to college (August 2014) Survey data collected. First BlendFlex course offered (summer pilot)	Interviews/Discussion with project director, Steering Committee and evaluation team Semester Data Uploaded Survey data collected
Fall 2014	Survey data collected 2nd site visit (October 2014) IR staff visited college for Jumpstart	Semester Data Uploaded Student focus group conducted Faculty focus group conducted
Spring/ Summer 2015	3nd Site Visits to College, classroom observations (June 2015)	Faculty, Staff, Director & Steering Committee Interviews, met with advisory board, Semester Data Uploaded
Fall 2015	First Year Report Submitted by CFAR	Survey data collected Semester Data Uploaded
Spring 2016	Interim Report Delivered to CGTC 4th site visit	Survey data collected Semester Data Uploaded Student focus group conducted Faculty focus group conducted
Summer 2016		Survey data collected Semester Data Uploaded
Fall 2016		Survey data collected Semester Data Uploaded
Spring 2017	5th Site visit	Final focus groups with students and faculty. Semester Data Uploaded, met with advisory board,
Summer/ Fall 2017	Write Final Evaluation Report Collect transfer data	National Student Clearinghouse Submitted and Received, Semester Data Uploaded

CFAR has worked with many colleges to develop and implement a SAS-based internal data-mart system titled ***Jumpstart for Institutional Research***. CGTC received Jumpstart for IR as part of Achieving the Dream, a national initiative with the goal of improving student success. CFAR already had a signed data-sharing agreements with CGTC and they uploaded semester files from their student information systems (Banner) to a secure cloud-based server. Each college has their own secure login and password. Once the files were edited for errors, SAS datasets were created. A CFAR staff member visited the college in the second year, assisted with their data-mart extraction for this grant and worked with them offline through fall 2017. The data uploaded to CFAR allowed the evaluators to analyze eight semesters of enrollment data from summer 2014 through fall 2016. Information about Jumpstart can be found in Appendix C.

The evaluators used propensity score matching (PSM) to generate a comparison group that was similar to the intervention group based on a set of characteristics that could create bias. To conduct PSM for the impact study, student characteristics available in the student information system were collected for both the BlendFlex students and the pool of potential comparison group students. The comparison group consisted of students who wanted to enter healthcare programs at the colleges based on a pre-health holding code or a unique set of courses taken only by pre-health majors. The colleges provided the list of cohort students participating in the BlendFlex program, with different entry points or semesters, and CFAR staff determined multiple BlendFlex cohorts and comparison groups using a matching procedure. A student research identification number was established and retained in the dataset. Student characteristics were coded to structure the data for multiple analyses and logistic regression was used to determine significant differences on pre-intervention characteristics in the two groups. The findings indicated that besides intent to enter a health program, receiving a Pell Grant award, age range and gender were the only significant characteristics of participation for the BlendFlex cohorts. After the matching procedure, outcomes and program impact were analyzed and compared for the matched groups and measured the statistical difference in outcomes between the two groups. See Appendix D.

The impact study focused on five outcomes: increased number of course completions; credentials obtained; persistence rates (time to completion, credit accumulation); admission to selective admission programs; impact of wrap-around services; and program sustainability. The specific research questions for each outcome are listed below.

B. Increased Number of Course Completions

Research Question 1: Will a larger percentage of students participating in a collaborative, blended learning environment, successfully complete courses (A-C grades) and programs at a higher rate than those taking courses through the traditional route?

Grades were evaluated across 17 courses and eight terms. BlendFlex students had higher successful course completion rates (A-C) for some courses and students in traditional classes had higher successful

completion rates in others. Overall, 69% of BlendFlex students successfully completed courses while 62% of students in traditional classes successfully completed courses (Table 8).
BlendFlex students out performed traditional students in general education classes such as English, math and psychology. Grades broken out by course and by term can be seen in Appendix E.

Table 8. BlendFlex vs Comparison Grades by Course (All Terms)

Course	BlendFlex			Comparison		
	A-C	Other	Total #	A-C	Other	Total #
ALHS 1011	149 (53%)	134 (47%)	283	1,273 (47%)	1,419 (52.7%)	2,692
ALHS 1040	94 (73%)	34 (27%)	128	646 (83%)	137 (18%)	783
ALHS 1060	95 (64%)	54 (36%)	149	538 (79%)	142 (21%)	680
ALHS 1090	182 (72%)	70 (28%)	252	1,541 (76%)	499 (55%)	2,040
BIOL 2113	179 (64%)	100 (36%)	279	656 (62%)	409 (38%)	1,065
BIOL 2114	106 (73%)	39 (27%)	145	356 (83%)	72 (17%)	428
ECGT 1030	138 (72%)	55 (29%)	193	n/a	n/a	n/a
ENGL 1010	65 (69.9%)	28 (30%)	93	1,112 (57%)	833 (43%)	1,945
ENGL 1101	35 (50%)	35 (50%)	70	996 (60%)	667 (40%)	1,663
MAST 1100	32 (91%)	3 (9%)	35	n/a	n/a	n/a
MAST 1110	42 (100%)	0 (0%)	42	n/a	n/a	n/a
MAST 1510	66 (93%)	5 (7%)	71	n/a	n/a	n/a
MATH 1012	78 (59%)	55 (41%)	133	1,336 (57%)	1,012 (43%)	2,348
MATH 1111	58 (65%)	31 (35%)	89	932 (62%)	581 (38%)	1,513
PSYC 1010	92 (75%)	30 (25%)	122	1,506 (65%)	819 (35.2%)	2325
PSYC 1101	123 (78%)	34 (22%)	157	1,900 (73%)	703 (27.0%)	2603
PSYC 2103	n/a	n/a	n/a	n/a	n/a	n/a
Total	**1,534 (69%)**	**707 (32%)**	**2,241**	**12,792 (64%)**	**7,293 (36%)**	**20,085**

Over the course of the program, BlendFlex students earned 11,927 credit hours compared to 6,517 for the comparison group. BlendFlex students, successfully completed (A-C grades) 73% of all of their courses and 69% of their BlendFlex courses. The comparison group successfully completed 67% of their courses. BlendFlex students earned 235 (19%) credentials (degrees, certificates and diplomas) while the comparison groups earned 174 credentials (15; Table 9). BlendFlex students did complete more courses and accumulate more credentials than the comparison group.

Table 9. Course and Program Completions

Variable	BlendFlex Students		Comparison Group	
	Number	Mean	Number	Mean
Courses Registrations	11,927	9.0	6,517	5.2
BlendFlex Registrations	2,241	1.7	na	na
Variable	**Number**	**Percent**	**Number**	**Percent**
Successful Course Completions	8,697	73%	6,517	67%
Successful BlendFlex Course Completions	1,534	69%	na	na
Credentials Earned	235	19%	174	15%

C. Increased Persistence Rates – Retention, Credit Accumulation

Research Question 2: Will students participating in a collaborative, blended learning environment, have higher progression rates as measured by terms enrolled at the college, terms to completion, credit accumulation and cumulative grade point average than those taking courses through the traditional route?

The BlendFlex students including withdrawals and drop-outs, attended the college for an average of three semesters compared to 2.7 for the comparison group. It took both groups approximately the same number of terms to complete a credential (5.5. vs. 5.4). The BlendFlex students accumulated 53,283 credit hours (mean = 40) among the 1,333 students while the comparison group accumulated 40,060 credit hours (mean = 32) among the 1,256 students. BlendFlex students did have higher progression rates being enrolled for more terms, accumulating more credits and having higher GPAs (Table 10).

Table 10. Increased Persistence

Variable	BlendFlex Students		Comparison Group	
	Mean	Range	Mean	Range
Terms at the College	3	1 to 16	2.7	1 to 17
Terms to Completion	5.5	2 to 16	5.4	2 to 13
Cumulative GPA	2.44	0 to 4.0	2.24	0 to 4
Variable	**Number**	**Mean**	**Number**	**Mean**
Credit Accumulation	53,284	40	40,060	32

D. Higher Selective Program Admission Rate

Research Question 3: Do students participating in the blended learning, technology-driven courses have higher healthcare program acceptance rates than those taking courses through the traditional route.

BlendFlex students were admitted into highly selective programs in greater numbers than the comparison group (40% vs. 28%). Those who were admitted earned credentials at higher rates than the comparison group (49% vs. 38%). Because many students earned certificates in programs such as phlebotomy or nurse aide and diplomas in programs such as medical assisting or surgical technology, some earned as many as six credentials. The majority of students earned one degree, diploma or certificate (Table 11).

Table 11. Course and Program Completions		
Variable	BlendFlex Students	Comparison Group
Program Acceptance	529 (40%)	355 (28%)
Completed Program	259 (49%)	134 (38%)
One Credential	192	104
Two Credentials	37	16
Three Credentials	27	10
Four Credentials	2	3
Five Credentials	1	0
Six Credentials	0	1

E. The Impact of Wrap-around Services

Research Questions 4: Is there an added benefit to receiving wrap-around support services in addition to the blended learning, technology-driven courses?

The availability of and services provided by the success coach has been dramatically improved during the last two years of the grant. The success coach advises students, assists with registration, visits rural campuses and centers, helps students select an appropriate career pathway, assists with the application process for competitive programs, and makes referrals to college services. Based on student activity, they need the most assistance with advising and academic support services (e.g., referrals to the tutoring center or Academic Success Center). The students who enroll in BlendFlex classes are eventually applying to highly competitive healthcare programs with high expectations for course grades and cumulative grade point average. Because of this, the coach receives many requests for assistance in improving student grades. Had she been hired in year one rather than in year three, students would have received more intense and consistent coaching and advising. The success coach felt the college needed additional program coaches/advisors because the majority of students are advised by faculty in their program but faculty have heavy teaching loads and are unavailable during breaks. Unlike the success coach, faculty may know their own program but little about other programs in which students are interested. Since the success coach began in the fall of 2015, she has facilitated 502 individual coaching/advising sessions with 262 students (range 1-12 visits). From the records reviewed, she has made approximately 35 visits to outlying campuses. Table 12 is a list of all the activities the coach has delivered at the campuses for the program. To determine whether academic coaching was correlated with outcomes variable such as grade point average, accumulated credit or number of terms enrolled, Pearson Correlation coefficients were calculated. There was a small positive correlation between number of coach visits and cumulative grade point average (r=.06, p=.019). Terms of enrollment and accumulated credit were not significant.

> ***BlendFlex helps students "not make up but keep up."***
> ***~Success Coach***

Table 12. Other Coach Activities		
Talked with individual and groups of students	Conducted tours of facilities	Processed students flagged through the early alert system
Toured the centers and met director	Made demonstrations of simulation equipment	Met with program instructors
Inventoried BlendFlex equipment	Advised high school students	Worked on publicity and marketing materials for the program
Met the veteran success coaches	Emailed all students in each health class offering assistance (e.g. 1,427 in the ALHS class)	Addressed instructor support issues
Spoke with directors and instructional aids	Responded to BlendFlex support questions	Worked with hospitals about participation in events
Facilitated RN information session	Attended classes and socials as a representative of the program	Interacted with the faculty
Conducted advising sessions	Made referrals to tutoring and other services	Made referrals to academic success center
Responded to questions about programs	Emailed directors and other staff	Prepared for campus/center events
Conducted orientation sessions	Organized for advising	Verified and cleaned up data in student records
Worked with faculty and directors on schedule of course offerings	Made presentations to K-12 students	Assisted with visitors looking at BlendFlex

Students need help with alternative pathways when they are not admitted to high demand programs like nursing. This year, 314 students applied for 34 nursing program slots. The lowest GPA accepted was 3.76 (see Appendix F). When the coach reviews a student's academic record, she advises them from the beginning about the options they have if they are not admitted. Students are grateful for the help she gives them. CGTC students need flexibility with their complicated lives. In every focus groups when asked "what is the best thing about BlendFlex?" students answered "the flexibility." The recorded lectures are very helpful to students and serve as electronic supplemental instruction. Being in a military town with people deployed, they can keep up in a BlendFlex class rather than withdrawing from the course and starting over. BlendFlex has been great for all students, ones who work, who have families, or who live in rural areas. It has made new career possibilities available for rural students and allowed working students to have access to general education and pre-requisite courses that they would not have had access to without it.

F. Program Sustainability

Research Question 5: Is the program cost-effective and sustainable?

Cost Effectiveness

CGTC used the majority of their grant funds to purchase the equipment needed to expand an existing delivery method. The faculty teaching in BlendFlex were paid one-time stipends for course adaptations and not fully funded by grant. A total of 45 faculty completed the required training to deliver their classes through the BlendFlex technology. Except for maintenance, it will cost the college nothing to continue and expand the program. The great benefit economically is that their completion rates have gone up dramatically which indicates increased retention. The cohort reported on in 2014 had a persistence rate (graduation or still progressing) of 61.5% and was 74% for 2017. Students completing the courses at higher rates will increase student success. The college is seeking additional funding to replace equipment and update their technology.

Sustainability

At CGTC, analysis of outcomes have been used to inform decisions regarding what is to be sustained after the TAACCCT grant performance period ends. This includes, but is not limited to, curriculum, content, staff positions, student services, equipment installation and maintenance, and procedures. Items being reviewed are:

- Expanding BlendFlex course availability to disciplines outside of health sciences, while still maintaining robust content and rigorous assessment.
- Expanding options to convert non-BlendFlex courses to BlendFlex courses were prioritized based on the content of the course and space and equipment availability.
- Expanding the availability of Telepresence and BlendFlex courses especially at rural institutional sites.
- Securing funds to accommodate an increase in technology-enhanced instruction.
- Expansion of articulation agreements to allow students additional opportunities to pursue expanded academic and career options.

At the beginning of the grant implementation period, health courses and general education core courses required for healthcare majors were chosen based on their lower success rates, as an effort to improve student access, success, and selective admission selection into healthcare programs. The data showed that students in BlendFlex classes were just as successful in earning academic credit as with traditional instruction. However, students in the highly enrolled, low success general education courses did better than students in the traditional course (Table13).

Table 13. BlendFlex vs Comparison Grades by Course and Term						
BIOL 2113	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2014	14 (40.0%)	21 (60.0%)	35	90 (47.6%)	99 (52.4%)	189
Spring 2015	16 (55.2%)	13 (44.8%)	29	65 (47.4%)	72 (52.6%)	137
Summer 2015	20 (69.0%)	9 (31.0%)	29	29 (80.6%)	7 (19.4%)	36
Fall 2015	30 (75.0%)	10 (25.0%)	40	112 (63.3%)	65 (36.7%)	177
Spring 2016	17 (53.1%)	15 (46.9%)	32	103 (66.0%)	53 (34.0%)	156
Summer 2016	42 (76.4%)	13 (23.6%)	55	56 (70.9%)	23 (29.1%)	79
Fall 2016	40 (67.8%)	19 (32.2%)	59	201 (69.1%)	90 (30.9%)	291
Total	**179 (64%)**	**100 (36%)**	**279**	**656 (62%)**	**409 (38%)**	**1,065**
ENGL 1010	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2015	11 (61.1%)	7 (38.9%)	18	383 (60.2%)	253 (39.8%)	636
Spring 2016	11 (68.8%)	5 (31.3%)	16	236 (52.4%)	214 (47.6%)	450
Summer 2016	23 (69.7%)	10 (30.3%)	33	150 (52.6%)	135 (47.4%)	285
Fall 2016	20 (76.9%)	6 (23.1%)	26	343 (59.8%)	231 (40.2%)	574
Total	**65 (70%)**	**28 (30%)**	**93**	**1112 (57%)**	**833 (43%)**	**1,945**
MATH 1012	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2015	19 (65.5%)	10 (34.5%)	29	399 (52.6%)	360 (47.4%)	759
Spring 2016	6 (40.0%)	9 (60.0%)	15	333 (57.0%)	251 (43.0%)	584
Summer 2016	20 (51.3%)	19 (48.7%)	39	204 (60.4%)	134 (39.6%)	338
Fall 2016	33 (66.0%)	17 (34.0%)	50	400 (60.0%)	267 (40.0%)	667
Total	**78 (59%)**	**55 (41%)**	**133**	**1336 (57%)**	**1012 (43%)**	**2,348**
MATH 1111	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Spring 2016	9 (52.9%)	8 (47.1%)	17	233 (61.5%)	146 (38.5%)	379
Summer 2016	23 (71.9%)	9 (28.1%)	32	159 (59.1%)	110 (40.9%)	269
Fall 2016	26 (65.0%)	14 (35.0%)	40	540 (62.4%)	325 (37.6%)	865
Total	**58 (65%)**	**31 (35%)**	**89**	**932 (62%)**	**581 (38%)**	**1,513**
PSYC 1010	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2014	13 (92.9%)	1 (7.1%)	14	320 (66.3%)	163 (33.7%)	483
Spring 2015	8 (72.7%)	3 (27.3%)	11	223 (66.2%)	114 (33.8%)	337
Summer 2015	11 (84.6%)	2 (15.4%)	13	194 (69.0%)	87 (31.0%)	281
Fall 2015	11 (91.7%)	1 (8.3%)	12	271 (63.8%)	154 (36.2%)	425
Spring 2016	15 (71.4%)	6 (28.6%)	21	203 (63.4%)	117 (36.6%)	320
Summer 2016	18 (66.7%)	9 (33.3%)	27	102 (65.8%)	53 (34.2%)	155
Fall 2016	16 (66.7%)	8 (33.3%)	24	193 (59.6%)	131 (40.4%)	324
Total	**92 (75%)**	**30 (25%)**	**122**	**1506 (65%)**	**819 (35%)**	**2,325**

Table 13. BlendFlex vs Comparison Grades by Course and Term (cont.)						
PSYC 1101	BlendFlex			Comparison		
	A-C	Other	Total#	A-C	Other	Total#
Fall 2014	18 (78.3%)	5 (21.7%)	23	262 (66.8%)	130 (33.2%)	392
Spring 2015	7 (70.0%)	3 (30.0%)	10	268 (73.8%)	95 (26.2%)	363
Summer 2015	4 (50.0%)	4 (50.0%)	8	158 (72.8%)	59 (27.2%)	217
Fall 2015	17 (77.3%)	5 (22.7%)	22	291 (73.1%)	107 (26.9%)	398
Spring 2016	21 (91.3%)	2 (8.7%)	23	276 (71.9%)	108 (28.1%)	384
Summer 2016	29 (78.4%)	8 (21.6%)	37	247 (75.5%)	80 (24.5%)	327
Fall 2016	27 (79.4%)	7 (20.6%)	34	398 (76.2%)	124 (23.8%)	522
Total	**123 (78%)**	**34 (22%)**	**157**	**1900 (73%)**	**703 (27%)**	**2,603**

Of students who enrolled in Biology 2113, Anatomy and Physiology I, 64% of BlendFlex students passed the course with A-C grades compared to 62% in traditional courses. In English 1010, Fundamentals of English (developmental), 77% or BlendFlex students made A-C grades compared to 57% in traditional courses. In two math courses (1012 Foundations of Math and 1111, College Algebra) 59% and 65% of BlendFlex students made A-C grades compared to 57% and 62% in traditional courses. In Psychology 1010 (Basic Psychology) and 1101 (Intro to Psychology), 67% and 78% made A-C grades compared to 65% and 73% in traditional courses. These six courses accounted for 12,672 class registrations over the past two and one half years at CGTC. These courses will continue and expand.

As the grant performance period ended, funding for additional equipment is being secured through stackable grants and college revenue via tuition dollars. CGTC is maintaining the BlendFlex equipment and technical support with the existing full-time Media & Telepresence Specialist, who is paid from the Information Technology (IT) department budget. Additionally, the hardware and additional technical support will be provided by the existing IT department. These staff have already been trained and have been working on the grant funded equipment over the grant performance period.

Since the TAACCCT Grant covered the cost of the equipment purchase and the initial years of licensing and maintenance, future maintenance costs will be supported by the CGTC Technology department. See full Sustainability Plan in Appendix G.

G. Cumulative Education Outcomes for Participants

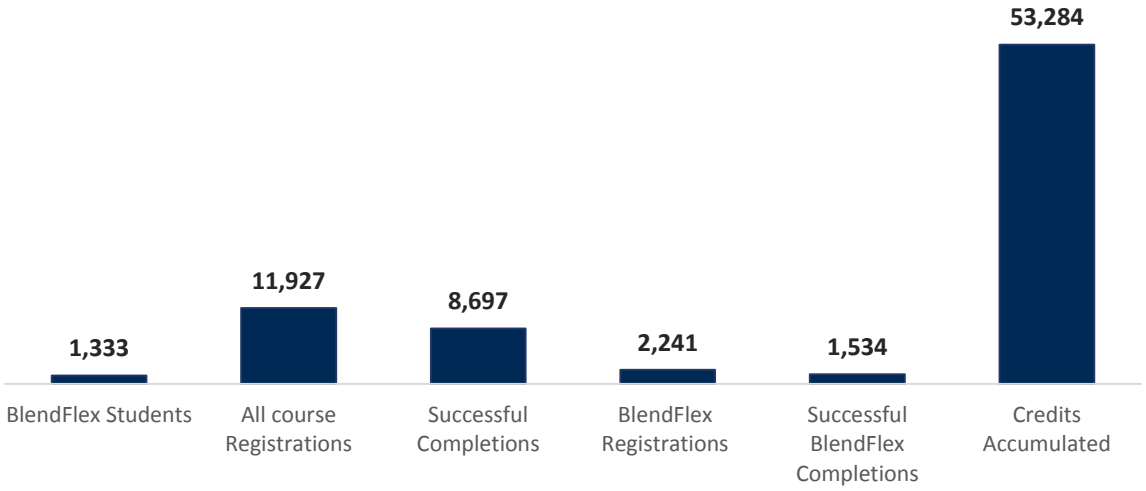
The TAACCCT grant program identified several participant outcomes indicators for analysis through grantee evaluation. This section focuses on the key outcomes of course, program and credential completion for students aspiring to a career in healthcare services.

Students Enrolled in, Completed, and Earned Credit Hours

Over the three years of the program, BlendFlex students accounted for 11,927 seats in classes including 2,241 in BlendFlex courses. They successfully completed those courses at higher rates than the

comparison group (73% vs. 67%). They also earned 256 degrees, certificates or diplomas in a healthcare program at CGTC.

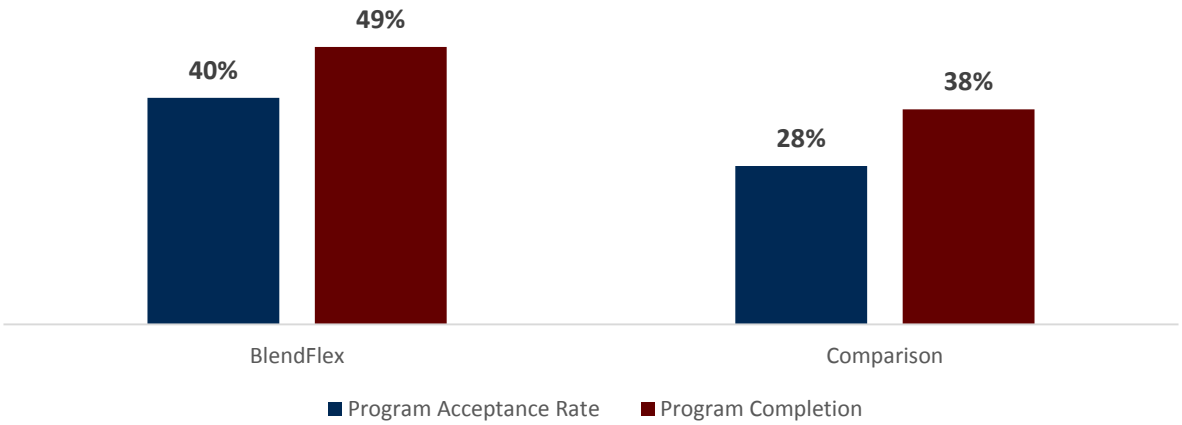
Figure 4. Student Outcomes



Students Were Admitted to Competitive Health Programs at Higher Rates

All BlendFlex students carried healthcare program codes with the intent of completing general education and pre-health prerequisites and then applying to their program of interest. BlendFlex students were admitted at higher rates (40%) compared to 28% among the comparison group. Of those admitted, 49% of BlendFlex students completed at least one degree, certificate or diploma compared to 38% of the comparison group.

Figure 5. HealthCare Program Acceptance and Completion



Note: The number of term to completion for the BlendFlex Students was 5.5.

III. Factors Influencing Outcomes for Participants

Chapter II presented the results of the descriptive analysis of education and transfer outcomes for the CGTC participants. In this chapter, we address the factors that influenced participant outcomes.

A. College Support Structure

CGTC provided a strong support network for the BlendFlex students. The information technology and professional development areas supported both students and faculty with state-of-the-art classroom technology, a student portal for support materials and online academic support through products like SmartThinking. The college's senior leadership supported the grant, the project director and other support staff involved in project management. The professional development area of the college developed a strong training program for BlendFlex faculty which contributed to the success of the program. The BlendFlex faculty were very committed to the BlendFlex concept, understanding that it would not only build capacity at CGTC but also contribute to their students' success.

B. Participant Characteristics

Participant characteristics were identified in Chapter I, Tables 3 and 5. The majority of students were female (90%), minority students (56%) with a mean age of 29. The variable identified by faculty, staff and the success coach as being the most influential in the success of BlendFlex students was having many responsibilities and barriers. Being low income, they had transportation issues, childcare issues and spent time away from work when they had classes. Because of these barriers, the support of their coach was critical to their success. Coaches identified critical issues that students experienced that would typically impacted their attendance and classroom success (Figure 4). However, BlendFlex provided a solution by providing flexibility in class attendance. Despite these characteristics that often impact educational outcomes, success rates were high for the CGTC students.

Figure 5. Issues That Impacted Student Progress

- Family life (11% single parent)
- Disabilities (5%)
- Low income (63% economically disadvantaged and 75% qualified for the federal Pell grant program)
- Rural (37%) with transportation issues and long commutes

Strong Data Capacity

The institutional effectiveness office was forward-thinking, developing assessment tools to be utilized in the first term and consistently throughout the four years of the grant. The office complied with all data and information requests and consistently uploaded term files to the secure server. They created a tracking process and kept up with the BlendFlex students. The evaluators appreciated their commitment to evaluating the grant. The data available from the IE office added to the focus group and interview

data provide solid implementation evaluation that was utilized to improve aspects of the program for students.

IV. Results of the Quasi-Experimental Outcomes Analyses and Comparison of Program Outcomes to the Matched Comparison Group

As part of the grant requirements, DOL directed grantees to use the most rigorous quantitative evaluation design appropriate for each grantee's institutional capacity and characteristics. CGTC focused on building capacity in their health programs by adapting pre-requisite healthcare course to BlendFlex. Once the grant period is over, the college can expand the technology and BlendFlex model to programs beyond health sciences. Their emphasis was on providing a flexible alternative pathway to high demand, high income jobs in healthcare for students in their 3,500 mile service area. They also focused on improved student outcomes such as successful course completion rates (A-C grades), retention, credit accumulation, and higher completion and transfer rates. Because of the nature of community college students and their enrollment patterns, an experimental design with random selection and distribution would not have been appropriate. To add rigor to the evaluation, a quasi-experimental design using PSM to create a matched comparison group was utilized.

In this chapter, the results of the comparison between the treatment group and the matched comparison group will be explored. The research questions were centered on CGTC student outcomes. The focus of the comparison will be on credit accumulation, grade point average, semesters to completion, graduation rates, transfer rate and completions at the transfer institution. Employment data for the comparison group was not collected due to the lack of participation on the part of the state employment agencies in Georgia. Some employment information was collected from BlendFlex but only on a small number of students. When the focus of this program changed from students completing one of four certificates to students completing BlendFlex courses, the employment data became less important than data on students' educational outcomes. Since the Georgia State DOL would not provide data to colleges, no strong attempt was made to obtain it.

A. The Matched Comparison Group

The matched comparison group pool was selected from like students who were attempting to be admitted to health programs at their college. These students were identified by carrying a pre-nursing program code or from a unique pattern of courses indicating pre-health programs. Health programs are different than other programs at community colleges in that they are typically cohort-based programs with students entering as a group and progressing as a group. Health programs often have their own advisors, orientation and they are externally accredited. Selecting students from other programs would not be as accurate a comparison as other pre-health students. Because of this, the groups were very similar. The BlendFlex group was 94% female, mean age 28 and 70% minority (matched group 90%, 29

and 59%). The only variable that was significant in the regression analysis was applying for the federal Pell grant (low income students).

B. Comparing Outcomes for CGTC Students & the Comparison Group

Cumulative GPA

To examine differences in GPA between BlendFlex students and the comparison group, independent samples t-tests and multiple regression were used. BlendFlex students had statistically significant higher cumulative GPA (M=2.44, SD=1.00) than students in the comparison group (M=2.24, SD=1.20), t(2582)=-4.63, p <.001 (Table 14). Multiple regression indicated that only 1% (R^2 = .01, p< .001) of the variance observed in cumulative GPA was due to BlendFlex participation (Table 15). Being in BlendFlex was associated with a .20 increase in GPA.

Table 14. Comparison of Cumulative GPA, BlendFlex vs. Comparison Students

Variable	BlendFlex	Comparison	Test Statistic
	M (SD)	M (SD)	t (p)
GPA	2.44 (1.00)	2.24 (1.20)	-4.63 (.000)*

*Note. *statistically significant at p<.05*

Table 15. Multiple Regression Analysis of BlendFlex Participation Predicting Cumulative GPA

Variable	*B*	S. E.	β	R^2	F
Model				.01*	21.44*
Intercept	2.24*	.03			
BlendFlex	.20*	.04	.09		

*Note. *indicates p < .05. b = unstandardized beta weight; S. E. = standard error, β = standardized beta weight.*

Total Credits Completed

To examine differences in accumulated credits between BlendFlex students and the comparison group, independent samples t-tests and multiple regression were used. BlendFlex students accumulated more credits (M=40.12, SD=34.17) than students in the comparison group (M=31.90, SD=33.40), t(2582)=-6.19, p <.001 (Table 16). Multiple regression indicated that only 2% (R^2 = .02, p< .001) of the variance observed in accumulated credits was due to BlendFlex participation (Table 17). Being in BlendFlex was associated with completing 8.2 more credits.

Table 16. Comparison of Number of Credits Accumulated, BlendFlex vs. Comparison Students			
Variable	**BlendFlex**	**Comparison**	**Test Statistic**
	M (SD)	**M (SD)**	**t (p)**
Accumulated Credits	40.12 (34.17)	31.90 (33.40)	-6.19 (.000)*
*Note. *statistically significant at p<.05*			

Table 17. Multiple Regression Analysis of BlendFlex Participation Predicting Number of Credits Accumulated					
Variable	***b***	**S. E.**	**β**	**R^2**	**F**
Model				.02*	38.27*
Intercept	31.90*	.95			
BlendFlex	8.23*	1.33	.12		
*Note. *indicates p < .05. b = unstandardized beta weight; S. E. = standard error, β = standardized beta weiaht.*					

Transfer Rates

Chi-square tests and logistic regression were used to examine differences in transfer rates (any transfer, 2-year institution transfer, and 4-year institution transfer) between the two study groups (Table 18). For overall transfer rates, a lower percentage of BlendFlex students transferred (10%) versus comparison group students (13%) ($X^2(1, N = 2429) = 5.24$, p <.05). BlendFlex students were 25% less likely to transfer than comparison group students (OR = 0.75, 95% CI: 0.58, 0.96; Table 19). There were no statistically significant differences in 2-year institution rates between the two groups ($X^2(1, N = 2429) = .02$, p =.922; OR = 0.97, 95% CI: 0.66, 1.43). Comparison group students had a higher transfer rate to 4-year institutions (9%) versus BlendFlex students (7%), ($X^2(1, N = 2429) = 5.73$, p <.05). BlendFlex students were 30% less likely to transfer to 4-year institutions than comparison group students (OR = 0.70, 95% CI: 0.52, 0.94).

Table 18. Comparison of Transfer Rates, BlendFlex vs. Comparison Students			
Variable	**BlendFlex**	**Comparison**	**Test Statistic**
	# (%)	**# (%)**	**X^2 (p)**
Any Transfer	124 (10.1)	156 (13.0)	5.24 (.022)*
2-Year Institution	54 (4.4)	54 (4.5)	0.02 (.922)
4-Yr Institution	81 (6.6)	110 (9.2)	5.73 (.019)*
*Note. *statistically significant at p<.05*			

Table 19. Logistic Regression Analysis of BlendFlex Participation Predicting Transfer Rates									
Variable	**β**	**OR**	**95% CI**	**β**	**OR**	**95% CI**	**β**	**OR**	**95% CI**
Model (R^2)		(.00)			(.00)			(.00)	
BlendFlex	-.29	0.75	0.58, 0.96	-.03	0.97	0.66, 1.43	-.36	0.70	0.52, 0.94
Note β = standardized beta weight. S.E. = standard error, OR = odds ratio, 95% CI = 95% confidence interval. R2 values are Nagelkerke pseudo-R2 values.									

Credentials Earned, Graduation Rates, and Time to Completion

Chi-square tests and logistic regression were used to examine differences in certificates and degrees earned from CGTC or transfer institutions between the two study groups (Table 20). A higher percentage of BlendFlex students obtained certificates or diplomas (16%) compared to comparison group students (12%) ($X^2(1, N = 2429) = 10.67$, p <.05). Logistic regression indicated that BlendFlex students were almost 50% more likely to earn a certificate or diploma compared to students in the comparison group (OR = 1.47, 95% CI: 1.17, 1.85; Table 24).

There were no statistically significant differences between BlendFlex and comparison group students in percentage of students earning an associate's degree or higher ($X^2(1, N = 2420) = 1.55$, p =.245; Table 20). Logistic regression indicated that BlendFlex participation did not predict likelihood of obtaining an associate's degree or higher (OR = 1.30, 95% CI: 0.86, 1.98; Table 21). It should be noted that the 150% time frame required to earn a degree would not have been meet by students entering after the fall 2014 semester. Therefore, final and accurate conclusions cannot be made for several more years.

Table 20. Comparison of Diplomas/Certificates and Degrees Earned, BlendFlex vs. Comparison Students			
Variable	**BlendFlex**	**Comparison**	**Test Statistic**
	# (%)	**# (%)**	**X^2 (p)**
Diploma or Certificate	202 (16.4)	141 (11.8)	10.67 (.001)*
Associate's Degree or	53 (4.3)	40 (3.4)	1.55 (.245)
*Note. *statistically significant at p<.05*			

Table 21. Logistic Regression Analysis of BlendFlex Participation Predicting Diploma/Certificate Completion and Associate's Degree or Higher Completion						
Variable	**B**	**OR**	**95% CI**	**β**	**OR**	**95% CI**
Model (R^2)		(.01)			(.00)	
BlendFlex	.38	1.47	1.17, 1.85	.27	1.30	0.86, 1.98
Note β = standardized beta weight. S.E. = standard error, OR = odds ratio, 95% CI = 95% confidence interval. R2 values are Nagelkerke pseudo-R2 values.						

Chi-square tests and logistic regression were used to examine differences in graduation rates of BlendFlex students and comparison group students. There was no statistically significant difference in graduation rates between BlendFlex (10%) and comparison students (8%) ($X^2(1, N = 2589) = 3.24$, $p = .080$; Table 22). Logistic regression also indicated that there was no statistically significant difference in graduation rates between the two groups (OR = 1.28, 95% CI: 0.98, 1.67; Table 23).

Table 22. Comparison of Graduation Rates, BlendFlex vs. Comparison Students			
Variable	**BlendFlex**	**Comparison**	**Test Statistic**
	# (%)	**# (%)**	**X^2 (p)**
Graduated	139 (10.4)	105 (8.4)	3.24 (.080)
*Note. *statistically significant at p<.05*			

Table 23. Logistic Regression Analysis of BlendFlex Participation Predicting Graduation			
Variable	**β**	**OR**	**95% CI**
Model (R^2)		(.00)	
BlendFlex	.24	1.28	0.98, 1.67
Note β = standardized beta weight. S.E. = standard error, OR = odds ratio, 95% CI = 95% confidence interval. R2 values are Nagelkerke pseudo-R2 values.			

To examine differences in number of terms to completion between BlendFlex students and the comparison group, independent samples t-tests and multiple regression were used. Any student earning a diploma, certificate, or degree at either CGTC or a transfer institution were counted as completers. There were no statistically significant differences between BlendFlex students (M=5.49, SD=2.31) and comparison group students (M=5.40, SD=2.32) in the number of terms to completion, t(409)=-.40, p=.692 (Table 24). Multiple regression indicated that none ($R^2 = .00$, p=.69) of the variance observed in number of terms enrolled was due to BlendFlex participation (Table 25). Being in BlendFlex was not associated with number of terms to completion.

Table 24. Comparison of Cumulative GPA and Number of Terms Enrolled, BlendFlex vs. Comparison Students			
Variable	**BlendFlex**	**Comparison**	**Test Statistic**
	M (SD)	**M (SD)**	**t (p)**
Number of Terms Enrolled	5.49 (2.31)	5.40 (2.32)	-.40 (.692)
*Note. *statistically significant at p<.05*			

Table 25. Multiple Regression Analysis of BlendFlex Participation Predicting Number of Terms Enrolled					
Variable	***b***	**S. E.**	**β**	**R^2**	**F**
Model				.01*	11.08*
Intercept	2.73*	.06			
BlendFlex	.27*	.08	.07		
*Note. N = 2584. *indicates p < .05. b = unstandardized beta weight; S. E. = standard error. β = standardized beta weight.*					

C. Employment Status for BlendFlex Students

When the focus of the program changed, finding employment after completion of a program was no longer a goal. The program staff were more concerned with students successfully completing courses and being admitted to competitive health programs. Employment was not readily available with the Georgia State DOL. The Technical College System of Georgia has an agreement with the state DOL to provide limited employment information but it is one year in arrears and does not contain wage information. The college tried to collect the information through surveys and contact with students with limited success. Below are the only data collected on employment for BlendFlex students.

Across all semesters, more than half of all BlendFlex students (55.6%) were employed. Among these 215 students who were employed, 53% are employed part-time, and 47% are employed full-time. Students work in a variety of settings including retail, service industries, healthcare, hospitality, and manufacturing. Common job titles include: cashier, certified nursing assistant, patient care technician, office assistant/clerk, and sales associate. Of the 215 students who were employed, 188 provided hourly wage data. Students earn an average of $10.08/hr (SD = 3.29) with a range of $2.13 to $23.00/hr.

Students also answered several questions on the BlendFlex survey administered each term related to underemployment (Table 26). Approximately 12% of students are working a temporary job, 12% are available for full-time work but settling for part-time work, and 1% have been impacted by downsizing.

Table 26. Underemployment of BlendFlex Students	
Statement	**Selected**
Currently in a temporary job.	48 (11.6%)
Available for full-time work, but settling for part-time work.	48 (11.6%)
Has been impacted by downsizing.	3 (0.72%)
Note. Students could select all reasons that applied.	

Finally, students were asked about their desire and availability to work if they were not working nor looking for work (Table 27). Less than 10% of students who are neither working nor looking for work want a job (9.7%), are available to work (8.7%), or have looked for work sometime in the past 12 months (8.0%).

Table 27. BlendFlex Students' Desire and Availability to Work	
Statement	**Selected**
Want a job.	40 (9.7%)
Available to work.	36 (8.7%)
Have looked for work sometime in the past 12 months.	33 (8.0%)
Note. Students could select all reasons that applied.	

V. Discussion of Findings and Conclusions, Program Impact, Limitations and Implications for Future Programs.

This chapter includes findings and conclusions for the CGTC BlendFlex program. Additional program impacts from the perspective of the program faculty and staff are included, as well as lessons learned. The limitations of the study will be identified and discussed. Suggestions will be made for future programs and others wanting to develop a program such as the BlendFlex program.

A. Findings and Conclusions

CGTC may have helped level the playing field for many students, especially rural students in their 3,500 mile service area. TAACCCT participants in the BlendFlex program received positive education and transfer outcomes. Of the 1,333 students who enrolled in BlendFlex classes, 529 (40%) were admitted to selective healthcare programs and of those, 259 (49%) completed a certificate, diploma or degree. Students completed after an average of 5.5 semesters with a mean GPA of 2.44 and an average of 39 earned credit hours. The analysis of the program demonstrates positive results and justification for the expansion of BlendFlex.

The comparison between CGTC students and a matched comparison revealed significant differences. CGTC students had higher GPAs, were admitted to selective programs at higher rates, earned more credentials and had accumulated more credit hours than the comparison group.

B. Program Strengths

The CGTC program was well planned and implemented. The college faculty, technical staff and leadership collaborated throughout the four years of the grant to develop and implement an effective instructional delivery method. The program directors sought input from their advisory board and the program was developed based on workforce-validated skills. The colleges solidified their relationships with local employers and utilized them for more than an advisory breakfast once or twice a year. As the grant is ending, the college is sustaining the majority of the program. See Appendix G. The college has flexible pathways to health careers that will serve all their students regardless of location. As the grant is ending, the BlendFlex technology has been established as a core foundation for organizing and delivering courses and has built the capacity of the college.

When the BlendFlex steering committee was asked to identify the few greatest strengths of the program, they said:

- Increasing their ability to reach rural students. Pre-BlendFlex, rural students had to drive to small campuses or centers with limited course options. BlendFlex opened up many courses for these students. The college plans to expand so students can accomplish a large percentage of their program requirements taking classes at home or driving to one of the small area centers.
- BlendFlex increased enrollment, improved retention and completion rates.
- CGTC, as with most community college students, face many academic barriers. BlendFlex gave them the flexibility so they could stay in school, accumulate credits and complete.
- The grant allowed them to invest in wrap-around support services for students. When the new coach began her work with students, they realized how important these services are and plan to invest more in coaching and keep the current success coach paid through the grant.
- They could truly help the military in their community allowing soldiers to remain in classes even if they were deployed.
- It encouraged the faculty to embrace innovation. They learned to reinforce classroom activities with technology. Seeing their lectures captured made them more mindful of content delivery.
- Improved the technology skills of their faculty.

C. Program Challenges

There were many program challenges with the first being a change in focus in the first year. The detailed evaluation contained research questions that could not be answered under the new format. The evaluator worked with the college to create new research questions with equal rigor that were answerable under the new structure.

Obtaining data on employment remains a challenge for all colleges and universities across the nation. Institutions of higher education have a need to know how students from specific programs are doing in the workforce, especially programs that are externally accredited. Obtaining employment records would also help faculty in programs identify strengths and weaknesses in their programs and make improvement. This process could be automated with some security and restrictions so the onus does not fall on a small number of employees with the DOL.

There were a few challenges with equipment compatibility. Students used multiple forms of technology, some with outdates software. Add to that the complexities of BlendFlex and there was some confusion among students. There was support for them through a technology help desk so problems did get solved. Staff had to make sure the equipment was working effectively at each site receiving content from the live classroom.

When the steering committee was asked about challenges with the program, they responded:

- Their greatest challenge just arose with Section 508 of the Rehabilitation Act of 1973 passing legislation that all video released to students has to have closed captioning. The beauty of BlendFlex was that the videos became available immediately. Closed captioning will take 4-7 days per video and $3.50 a minute to produce.
- Scheduling a course with students seated in one classroom on one campus and being broadcast to eight different rooms on eight campuses and all listed in the schedule as one course. Banner, their student information system, could not handle that and they had to create a “messy” work-around.
- Not being able to obtain up-to-date wage and labor data was problematic and creates issues with all their grants. Since this grant was funded by DOL, the state DOLs should have provided data for the TAACCCT grant recipients.
- Four years was not long enough for the work. They would like to have had a planning year where they developed the curriculum, purchased equipment and hired staff, then a second year to train, create marketing plans and implement them, fine tune courses and methods and then three years of implementation.

D. Other Program Impacts

Institutions of Distinction

CGTC was able to expand a state-of-the-art course delivery methodology with the funds from the TAACCCT grant. Multiple colleges across the country visited the college to look at BlendFlex in action and several implemented the telepresence technology at their institutions. The Project representatives delivered 15 presentations and written articles on BlendFlex to 1,846 individuals. Some of those presentations were made to state and regional meetings, technological or educational organizations. The college participated in a round table with the Secretary of Labor and was nominated or won several awards including awards from the University Business Magazine, Models of Excellence Award, “Top School” award from the Military Advanced Education & Transition organization and the 2015 Excalibur

Award state of Georgia). Military Times Best for Vets awarded CGTC as a top 24 Best Career & Technical College nationwide for commitment to educating and providing opportunities to veterans, service members and families. CGTC was selected as a 2017 Military Friendly School due to meeting or exceeded benchmarks for recruitment, retention, and support and job placement of veterans. Articles appeared about the program in many publications such as eCampus News, CISCO's Case Study publication, CISCO's blog, and University Business Magazine.

Others Served by the TAACCCT Grant

The program director kept track of non-BlendFlex students participating in events or activities using the classrooms or equipment. The colleges had multiple types of events on-site and off-site over the four years of grant funding. They held meetings and trainings using BlendFlex. Over the four years, 6,964 people were exposed to or used the equipment or the staff funded through the grant.

E. Limitations

The findings give rise to several issues with respect to the limitations of the evaluation. The analyses were limited to available data which impacted the analysis of employment outcomes. The State labor agencies in Georgia would not provide any employment data. The college relied on student follow-up for employment data.

Coaching was significantly correlated to cumulative GPA but nothing else. Evaluators feel that the data were limited because the coach was in place only three terms of the program rather than the full eight term. Had more data been available (eight terms of participants and activities) coaching may have had a larger impact on student outcomes.

Three and a half years is not long enough to follow students to their ultimate outcomes. Most of these students are attempting to enter competitive healthcare programs, complete a credential and then become employed but with high unemployment rates in some of their service region and the fact most of these students are rural, finding jobs will take some time. Students should be tracked for several more years to see what happens to them.

F. Implications for Future Programs

BlendFlex technology has the potential to impact higher education in a significant way. Faculty have many options with the capture and availability of lectures for student viewing. Those videos could be used as supplemental instruction or for flipped classrooms. They could be used strategically in certain high demand, low success classes that serve as the gate-keeper to highly technical or competitive programs such as anatomy and physiology, calculus, chemistry and other math and science subjects.

Coaching, though started late, was a critical piece of the program. The coach provided academic assistance and personal contact with students and became their point of engagement with the program.

All of the staff involved in BlendFlex recognized the significance of the coach and want to increase coaching across the college. Coaching needs to be studied in more detail and since the TAACCCT grants have required success coaches in all the programs over the four years of the grant, DOL has the data to conduct preliminary research on this topic. Coaching needs to be strongly supported in future program efforts from the DOL.

Access to public workforce records needs improvement. Colleges have an educational need to know about the employment outcomes of their students. It is understood that the staff needed to provide these data to the 1,100 community colleges in the country would be immense; however, the work could be automated to reduce the effort on the part of either party.

An analysis should be done on the types of classes that are the most successful utilizing BlendFlex. It is possible that students do better face-to-face in some subjects and via telepresence for others. Ideally, the college would identify a “most effective” list and a “least effective” list to guide the expansion of the program.

VI. References

Mikelson, K. e. (2017, February). *TAACCCT Goals, Desing, and Evaluation.* Retrieved from US Department of Labor: https://www.dol.gov/asp/evaluation/completed-studies/20170308-TAACCCT-Brief-1.pdf

VII. Appendices

Appendix A. Program Logic Models

Logic Model for the BlendFlex Program

Situation: Providing assistance to rural students in a 3,500 square miles service area with two main campuses.

Priorities: **I**mprove learning, retention, admission to competitive programs, completion, provide accessibility, ability to complete more quickly, showing sustainability

Inputs	Activities	Outputs	Initial Outcomes	Intermediate Outcomes	Long-term Outcomes
• Grant funds • Talented staff • Equipment purchased • Technology infrastructure • Relationship with local labor and external stakeholders • Outlying campuses and centers	• Select courses • Rewrite the syllabus • Rework assignments, interactions and student involvement • Train faculty and staff • Pilot test the courses • Develop marketing materials • Distribute marketing materials	• Number of courses adapted • Number of Faculty Trained • Adaptable process developed to help with scale up • # students recruited • # students enroll • # students utilize services	• Equivalent or better success rate as face-to-face • Term-to-term retention improves • Time to completion decreases • Student recruit by word of mouth • Improved faculty technology skills • Improved course completion	• Students become employed • Students continue their education • Students utilize technology strategies in other classes • Increase number of blended courses at the college • Increased program completion	• Increased enrollment • Better serving the rural population • Be a model site for blended learning • Put people to work in health field • Health jobs don't go unfilled

Assumptions: All units at the college will work together. Students will have access to technology. Faculty will want to do this.

Appendix B. Term Surveys (Results for All Courses and Results by Course)

Results for All Courses

Table 1a. How Often Different BlendFlex Technologies were Used (Summer 2014 through Fall 2016)							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel (Learning Management System)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	55 (12.1%)	105 (23.0%)	67 (14.7%)	19 (4.2%)	80 (17.6%)	68 (14.9%)	68 (15.0%)
Once	32 (7.0%)	10 (2.2%)	23 (5.0%)	8 (1.8%)	20 (4.4%)	17 (3.7%)	8 (1.8%)
2-4 times/sem.	53 (11.6%)	40 (8.8%)	42 (9.2%)	12 (2.6%)	45 (9.9%)	54 (11.9%)	17 (3.8%)
5-10 times/sem.	67 (14.7%)	38 (8.3%)	71 (15.6%)	27 (5.9%)	57 (12.6%)	77 (16.9%)	19 (4.2%)
Once/wk.	113 (24.8%)	71 (15.6%)	69 (15.1%)	119 (26.1%)	64 (14.1%)	89 (19.6%)	36 (7.9%)
Daily	109 (23.9%)	102 (22.4%)	102 (22.4%)	248 (54.4%)	89 (19.6%)	99 (21.8%)	75 (16.6%)
N/A	27 (5.9%)	90 (19.7%)	82 (18.0%)	23 (5.0%)	99 (21.8%)	51 (11.2%)	230 (50.8%)
Total	456 (100%)	456 (100%)	456 (100%)	456 (100%)	454 (100%)	455 (100%)	453 (100%)

Figure 1. Percent of students that used the following BlendFlex Technologies more than once:

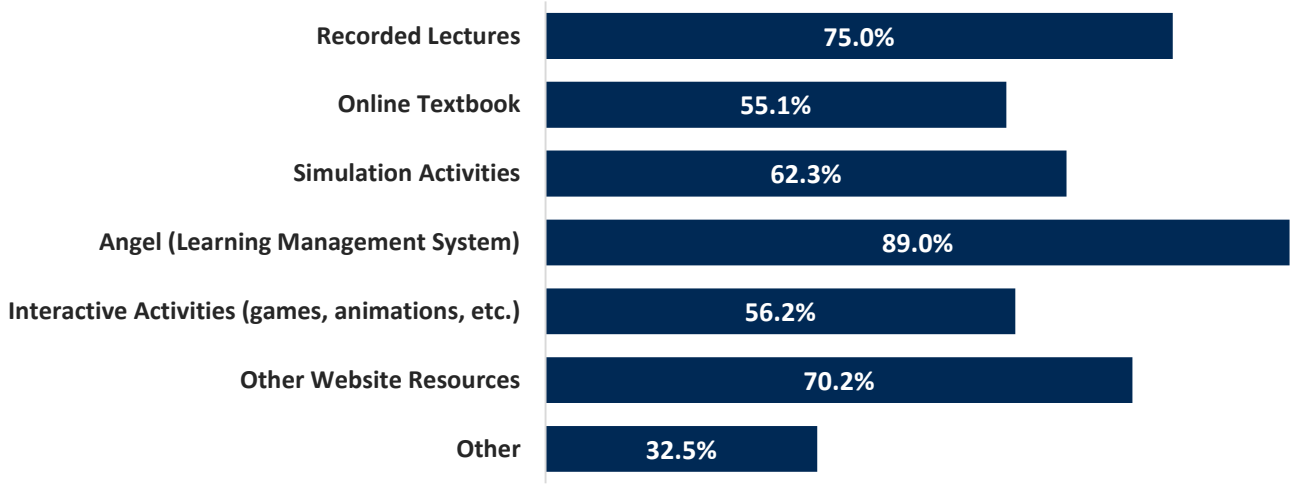
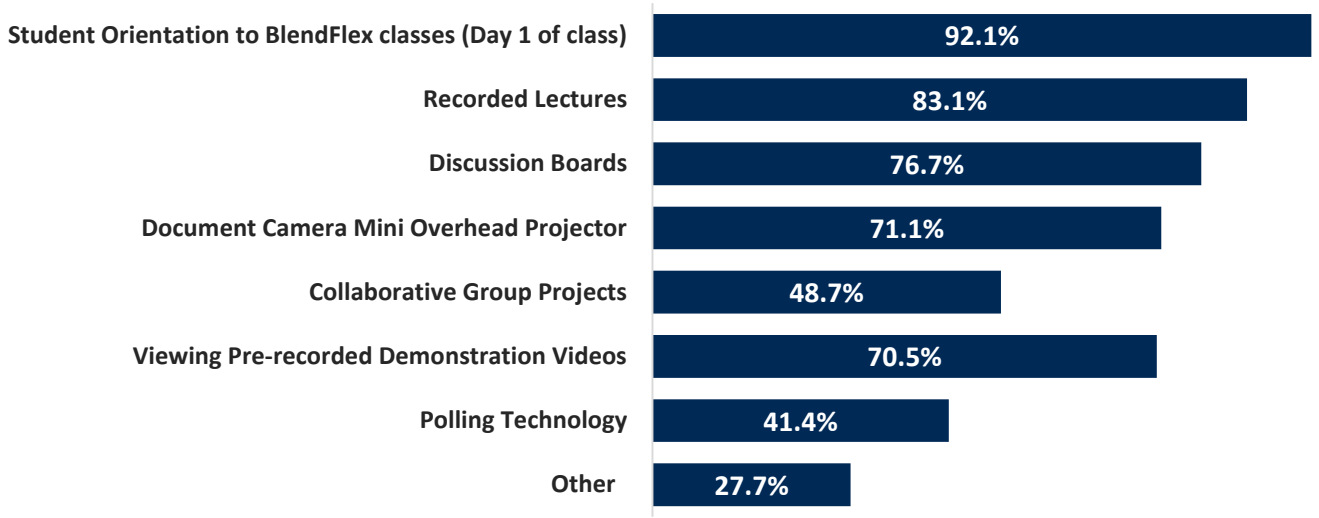


Table 1b. Student Helpfulness Ratings of Various Features (Summer 2014 through Fall 2016)								
Variable	Student Orientation to BlendFlex classes (Day 1 of class)	Recorded Lectures	Discussion Boards	Document Camera (Mini Overhead Projector)	Collaborative Group Projects	Viewing Pre-recorded Demonstration Videos	Polling Technology	Other
Not helpful	16 (3.5%)	22 (4.8%)	45 (9.9%)	26 (5.7%)	26 (5.7%)	23 (5.0%)	25 (5.5%)	13 (2.9%)
Somewhat helpful	79 (17.3%)	76 (16.7%)	100 (21.9%)	83 (18.2%)	79 (17.3%)	80 (17.5%)	43 (9.4%)	15 (3.3%)
Very helpful	342 (74.8%)	303 (66.4%)	250 (54.8%)	241 (52.9%)	143 (31.4%)	242 (53.0%)	146 (32.0%)	111 (24.4%)
N/A	20 (4.4%)	55 (12.1%)	61 (13.4%)	106 (23.2%)	208 (45.6%)	112 (24.5%)	242 (53.1%)	315 (69.4%)
Total	457 (100%)	456 (100%)	456 (100%)	456 (100%)	456 (100%)	457 (100%)	456 (100%)	454 (100%)

Figure 2. Percent of students that said the various features were somewhat/very helpful:



Results by Course

Table 1a. How Often Different BlendFlex Technologies were Used in ALHS 1011 (Structure and Function of the Human Body) – Summer 2014 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	9 (11.5%)	21 (26.9%)	10 (12.8%)	2 (2.6%)	10 (12.8%)	13 (16.7%)	16 (20.5%)
Once	5 (6.4%)	2 (2.6%)	5 (6.4%)	1 (1.3%)	2 (2.6%)	3 (3.8%)	1 (1.3%)
2-4 times/sem.	11 (14.1%)	8 (10.3%)	6 (7.7%)	2 (2.6%)	7 (9.0%)	10 (12.8%)	3 (3.8%)
5-10 times/sem.	12 (15.4%)	8 (10.3%)	12 (15.4%)	4 (5.1%)	13 (16.7%)	12 (15.4%)	4 (5.1%)
Once/wk.	18 (23.1%)	12 (15.4%)	17 (21.8%)	29 (37.2%)	27 (34.6%)	19 (24.4%)	7 (9.0%)
Daily	18 (23.1%)	13 (16.7%)	16 (20.5%)	36 (46.2%)	14 (17.9%)	17 (21.8%)	12 (15.4%)
N/A	5 (6.4%)	14 (17.9%)	12 (15.4%)	4 (5.1%)	5 (6.4%)	4 (5.1%)	35 (44.9%)
Total	78 (100%)	78 (100%)	78 (100%)	78 (100%)	78 (100%)	78 (100%)	78 (100%)

Table 1b. Student Helpfulness Ratings of Various Features in ALHS 1011 (Structure and Function of the Human Body) – Summer 2014 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	2 (2.5%)	3 (3.8%)	10 (12.7%)	3 (3.8%)	12 (15.2%)	6 (7.6%)	8 (10.1%)	1 (1.3%)
Somewhat helpful	16 (20.3%)	16 (20.3%)	22 (27.8%)	14 (17.7%)	23 (29.1%)	17 (21.5%)	13 (16.5%)	4 (5.1%)
Very helpful	56 (70.9%)	49 (62.0%)	40 (50.6%)	49 (62.0%)	28 (35.4%)	40 (50.6%)	27 (34.2%)	19 (24.1%)
N/A	5 (6.3%)	11 (13.9%)	7 (8.9%)	13 (16.5%)	16 (20.3%)	17 (21.5%)	31 (39.2%)	55 (69.6%)
Total	79 (100%)	79 (100%)	79 (100%)	79 (100%)	79 (100%)	80 (101.3%)	79 (100%)	79 (100%)

Table 2a. How Often Different BlendFlex Technologies were Used in ALHS 1040 (Introduction to Healthcare) – Spring 2015 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	2 (6.9%)	2 (6.9%)	1 (3.4%)	1 (3.4%)	2 (6.9%)	0 (0.0%)	2 (6.9%)
Once	1 (3.4%)	1 (3.4%)	0 (0.0%)	0 (0.0%)	2 (6.9%)	0 (0.0%)	0 (0.0%)
2-4 times/sem.	5 (17.2%)	2 (6.9%)	3 (10.3%)	1 (3.4%)	2 (6.9%)	5 (17.2%)	4 (13.8%)
5-10 times/sem.	2 (6.9%)	3 (10.3%)	7 (24.1%)	1 (3.4%)	8 (27.6%)	7 (24.1%)	2 (6.9%)
Once/wk.	7 (24.1%)	3 (10.3%)	6 (20.7%)	6 (20.7%)	4 (13.8%)	7 (24.1%)	1 (3.4%)
Daily	11 (37.9%)	17 (58.6%)	10 (34.5%)	19 (65.5%)	10 (34.5%)	7 (24.1%)	7 (24.1%)
N/A	1 (3.4%)	1 (3.4%)	2 (6.9%)	1 (3.4%)	1 (3.4%)	3 (10.3%)	13 (44.8%)
Total	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)

Table 2b. Student Helpfulness Ratings of Various Features in ALHS 1040 (Introduction to Healthcare) – Spring 2015 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	1 (3.4%)	1 (3.4%)	2 (6.9%)	1 (3.4%)	1 (3.4%)	0 (0.0%)	2 (6.9%)	1 (3.4%)
Somewhat helpful	3 (10.3%)	3 (10.3%)	6 (20.7%)	7 (24.1%)	6 (20.7%)	5 (17.2%)	5 (17.2%)	0 (0.0%)
Very helpful	25 (86.2%)	21 (72.4%)	21 (72.4%)	19 (65.5%)	16 (55.2%)	22 (75.9%)	16 (55.2%)	10 (34.5%)
N/A	0 (0.0%)	4 (13.8%)	0 (0.0%)	2 (6.9%)	6 (20.7%)	2 (6.9%)	6 (20.7%)	18 (62.1%)
Total	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)

Table 3a. How Often Different BlendFlex Technologies were Used in ALHS 1060 (Diet and Nutrition) – Spring 2015 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	5 (15.6%)	8 (25.0%)	3 (9.4%)	1 (3.1%)	5 (16.1%)	1 (3.1%)	3 (9.4%)
Once	2 (6.3%)	1 (3.1%)	0 (0.0%)	0 (0.0%)	1 (3.2%)	0 (0.0%)	1 (3.1%)
2-4 times/sem.	2 (6.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (9.4%)	0 (0.0%)
5-10 times/sem.	9 (28.1%)	4 (12.5%)	8 (25.0%)	4 (12.5%)	3 (9.7%)	5 (15.6%)	1 (3.1%)
Once/wk.	6 (18.8%)	3 (9.4%)	3 (9.4%)	9 (28.1%)	2 (6.5%)	5 (15.6%)	3 (9.4%)
Daily	7 (21.9%)	11 (34.4%)	9 (28.1%)	17 (53.1%)	10 (32.3%)	12 (37.5%)	10 (31.3%)
N/A	1 (3.1%)	5 (15.6%)	9 (28.1%)	1 (3.1%)	10 (32.3%)	6 (18.8%)	14 (43.8%)
Total	32 (100%)	32 (100%)	32 (100%)	32 (100%)	31 (100%)	32 (100%)	32 (100%)

Table 3b. Student Helpfulness Ratings of Various Features in ALHS 1060 (Diet and Nutrition) – Spring 2015 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	2 (6.3%)	0 (0.0%)	3 (9.4%)	2 (6.3%)	1 (3.1%)	1 (3.1%)	1 (3.1%)	2 (6.3%)
Somewhat helpful	3 (9.4%)	3 (9.4%)	4 (12.5%)	5 (15.6%)	4 (12.5%)	4 (12.5%)	3 (9.4%)	1 (3.1%)
Very helpful	26 (81.3%)	26 (81.3%)	23 (71.9%)	18 (56.3%)	14 (43.8%)	20 (62.5%)	13 (40.6%)	9 (28.1%)
N/A	1 (3.1%)	3 (9.4%)	2 (6.3%)	7 (21.9%)	13 (40.6%)	7 (21.9%)	15 (46.9%)	20 (62.5%)
Total	32 (100%)	32 (100%)	32 (100%)	32 (100%)	32 (100%)	32 (100%)	32 (100%)	32 (100%)

Table 4a. How Often Different BlendFlex Technologies were Used in ALHS 1090 (Introduction to Anatomy and Physiology) – Spring 2015 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	10 (24.4%)	6 (14.6%)	6 (14.6%)	2 (4.9%)	4 (9.8%)	4 (9.8%)	6 (14.6%)
Once	3 (7.3%)	1 (2.4%)	0 (0.0%)	0 (0.0%)	1 (2.4%)	2 (4.9%)	0 (0.0%)
2-4 times/sem.	5 (12.2%)	4 (9.8%)	7 (17.1%)	2 (4.9%)	3 (7.3%)	8 (19.5%)	1 (2.4%)
5-10 times/sem.	4 (9.8%)	6 (14.6%)	7 (17.1%)	4 (9.8%)	6 (14.6%)	7 (17.1%)	1 (2.4%)
Once/wk.	7 (17.1%)	10 (24.4%)	8 (19.5%)	11 (26.8%)	11 (26.8%)	8 (19.5%)	3 (7.3%)
Daily	9 (22.0%)	11 (26.8%)	12 (29.3%)	21 (51.2%)	12 (29.3%)	9 (22.0%)	10 (24.4%)
N/A	3 (7.3%)	3 (7.3%)	1 (2.4%)	1 (2.4%)	4 (9.8%)	3 (7.3%)	20 (48.8%)
Total	41 (100%)	41 (100%)	41 (100%)	41 (100%)	41 (100%)	41 (100%)	41 (100%)

Table 4b. Student Helpfulness Ratings of Various Features in ALHS 1090 (Introduction to Anatomy and Physiology) – Spring 2015 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	1 (2.4%)	1 (2.4%)	4 (9.8%)	3 (7.3%)	5 (12.2%)	3 (7.3%)	2 (4.9%)	2 (4.9%)
Somewhat helpful	4 (9.8%)	8 (19.5%)	12 (29.3%)	7 (17.1%)	13 (31.7%)	9 (22.0%)	3 (7.3%)	1 (2.4%)
Very helpful	36 (87.8%)	23 (56.1%)	21 (51.2%)	24 (58.5%)	15 (36.6%)	22 (53.7%)	16 (39.0%)	9 (22.0%)
N/A	0 (0.0%)	9 (22.0%)	4 (9.8%)	7 (17.1%)	8 (19.5%)	7 (17.1%)	20 (48.8%)	29 (70.7%)
Total	41 (100%)	41 (100%)	41 (100%)	41 (100%)	41 (100%)	41 (100%)	41 (100%)	41 (100%)

Table 5a. How Often Different BlendFlex Technologies were Used in BIOL 2113 (Anatomy and Physiology) – Fall 2014 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	9 (14.1%)	22 (34.4%)	10 (15.6%)	4 (6.3%)	14 (21.9%)	10 (15.6%)	4 (6.3%)
Once	3 (4.7%)	2 (3.1%)	8 (12.5%)	3 (4.7%)	4 (6.3%)	2 (3.1%)	2 (3.1%)
2-4 times/sem.	10 (15.6%)	5 (7.8%)	8 (12.5%)	0 (0.0%)	11 (17.2%)	6 (9.4%)	2 (3.1%)
5-10 times/sem.	10 (15.6%)	2 (3.1%)	11 (17.2%)	4 (6.3%)	9 (14.1%)	12 (18.8%)	5 (7.8%)
Once/wk.	20 (31.3%)	9 (14.1%)	10 (15.6%)	20 (31.3%)	9 (14.1%)	14 (21.9%)	8 (12.5%)
Daily	12 (18.8%)	7 (10.9%)	9 (14.1%)	32 (50.0%)	10 (15.6%)	13 (20.3%)	6 (9.4%)
N/A	0 (0.0%)	17 (26.6%)	8 (12.5%)	1 (1.6%)	7 (10.9%)	7 (10.9%)	37 (57.8%)
Total	64 (100%)	64 (100%)	64 (100%)	64 (100%)	64 (100%)	64 (100%)	64 (100%)

Table 5b. Student Helpfulness Ratings of Various Features in BIOL 2113 (Anatomy and Physiology) – Fall 2014 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	3 (4.7%)	6 (9.4%)	11 (17.2%)	5 (7.8%)	5 (7.8%)	5 (7.8%)	4 (6.3%)	2 (3.1%)
Somewhat helpful	16 (25.0%)	11 (17.2%)	14 (21.9%)	14 (21.9%)	5 (7.8%)	11 (17.2%)	2 (3.1%)	2 (3.1%)
Very helpful	44 (68.8%)	40 (62.5%)	29 (45.3%)	23 (35.9%)	14 (21.9%)	25 (39.1%)	10 (15.6%)	14 (21.9%)
N/A	1 (1.6%)	7 (10.9%)	10 (15.6%)	22 (34.4%)	40 (62.5%)	23 (35.9%)	48 (75.0%)	46 (71.9%)
Total	64 (100%)	64 (100%)	64 (100%)	64 (100%)	64 (100%)	64 (100%)	64 (100%)	64 (100%)

Table 6a. How Often Different BlendFlex Technologies were Used in BIOL 2114 (Anatomy and Physiology II) – Spring 2015 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	2 (5.4%)	5 (13.5%)	3 (8.1%)	1 (2.7%)	3 (8.1%)	2 (5.6%)	3 (8.1%)
Once	3 (8.1%)	0 (0.0%)	1 (2.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
2-4 times/sem.	6 (16.2%)	4 (10.8%)	4 (10.8%)	0 (0.0%)	4 (10.8%)	6 (16.7%)	2 (5.4%)
5-10 times/sem.	9 (24.3%)	3 (8.1%)	5 (13.5%)	2 (5.4%)	6 (16.2%)	8 (22.2%)	2 (5.4%)
Once/wk.	10 (27.0%)	4 (10.8%)	7 (18.9%)	14 (37.8%)	4 (10.8%)	9 (25.0%)	4 (10.8%)
Daily	7 (18.9%)	4 (10.8%)	3 (8.1%)	17 (45.9%)	4 (10.8%)	6 (16.7%)	6 (16.2%)
N/A	0 (0.0%)	17 (45.9%)	14 (37.8%)	3 (8.1%)	16 (43.2%)	5 (13.9%)	20 (54.1%)
Total	37 (100%)	37 (100%)	37 (100%)	37 (100%)	37 (100%)	36 (100%)	37 (100%)

Table 6b. Student Helpfulness Ratings of Various Features in BIOL 2114 (Anatomy and Physiology II) – Spring 2015 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	2 (5.4%)	2 (5.4%)	6 (16.2%)	4 (10.8%)	0 (0.0%)	3 (8.1%)	1 (2.7%)	1 (2.7%)
Somewhat helpful	12 (32.4%)	9 (24.3%)	4 (10.8%)	9 (24.3%)	4 (10.8%)	6 (16.2%)	1 (2.7%)	1 (2.7%)
Very helpful	22 (59.5%)	23 (62.2%)	17 (45.9%)	11 (29.7%)	8 (21.6%)	14 (37.8%)	12 (32.4%)	14 (37.8%)
N/A	1 (2.7%)	3 (8.1%)	10 (27.0%)	13 (35.1%)	25 (67.6%)	14 (37.8%)	23 (62.2%)	21 (56.8%)
Total	37 (100%)	37 (100%)	37 (100%)	37 (100%)	37 (100%)	37 (100%)	37 (100%)	37 (100%)

Table 7a. How Often Different BlendFlex Technologies were Used in ECGT 1030 (Introduction to Electrocardiography) – Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Once	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
2-4 times/sem.	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
5-10 times/sem.	1 (33%)	0 (0%)	0 (0%)	0 (0%)	1 (33%)	2 (67%)	0 (0%)
Once/wk.	2 (67%)	1 (33%)	3 (100%)	1 (33%)	2 (67%)	0 (0%)	1 (33%)
Daily	0 (0%)	0 (0%)	0 (0%)	2 (67%)	0 (0%)	0 (0%)	0 (0%)
N/A	0 (0%)	2 (67%)	0 (0%)	0 (0%)	0 (0%)	1 (33%)	2 (67%)
Total	3 (100%)	3 (100%)	3 (100%)	3 (100%)	3 (100%)	3 (100%)	3 (100%)

Table 7b. Student Helpfulness Ratings of Various Features in ECGT 1030 (Introduction to Electrocardiography) – Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Somewhat helpful	1 (33%)	0 (0%)	2 (67%)	1 (33%)	0 (0%)	1 (33%)	0 (0%)	1 (33%)
Very helpful	2 (67%)	3 (100%)	0 (0%)	1 (33%)	1 (33%)	0 (0%)	0 (0%)	0 (0%)
N/A	0 (0%)	0 (0%)	1 (33%)	1 (33%)	2 (67%)	2 (67%)	3 (100%)	2 (67%)
Total	3 (100%)	3 (100%)	3 (100%)	3 (100%)	3 (100%)	3 (100%)	3 (100%)	3 (100%)

Table 8a. How Often Different BlendFlex Technologies were Used in ENGL 1010 (Fundamentals of English I) – Fall 2015 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	4 (14.8%)	11 (40.7%)	7 (25.9%)	2 (7.4%)	7 (25.9%)	3 (11.1%)	6 (22.2%)
Once	4 (14.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (3.7%)	2 (7.4%)	1 (3.7%)
2-4 times/sem.	1 (3.7%)	2 (7.4%)	1 (3.7%)	2 (7.4%)	4 (14.8%)	4 (14.8%)	3 (11.1%)
5-10 times/sem.	0 (0.0%)	1 (3.7%)	3 (11.1%)	0 (0.0%)	0 (0.0%)	3 (11.1%)	0 (0.0%)
Once/wk.	7 (25.9%)	2 (7.4%)	4 (14.8%)	4 (14.8%)	1 (3.7%)	5 (18.5%)	1 (3.7%)
Daily	8 (29.6%)	6 (22.2%)	9 (33.3%)	14 (51.9%)	8 (29.6%)	8 (29.6%)	3 (11.1%)
N/A	3 (11.1%)	5 (18.5%)	3 (11.1%)	5 (18.5%)	6 (22.2%)	2 (7.4%)	13 (48.1%)
Total	27 (100%)	27 (100%)	27 (100%)	27 (100%)	27 (100%)	27 (100%)	27 (100%)

Table 8b. Student Helpfulness Ratings of Various Features in ENGL 1010 (Fundamentals of English I) – Fall 2015 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	0 (0.0%)	2 (7.4%)	1 (3.7%)	1 (3.7%)	1 (3.7%)	1 (3.7%)	2 (7.4%)	0 (0.0%)
Somewhat helpful	3 (11.1%)	3 (11.1%)	6 (22.2%)	4 (14.8%)	6 (22.2%)	2 (7.4%)	2 (7.4%)	1 (3.7%)
Very helpful	21 (77.8%)	18 (66.7%)	19 (70.4%)	15 (55.6%)	10 (37.0%)	17 (63.0%)	12 (44.4%)	7 (25.9%)
N/A	3 (11.1%)	4 (14.8%)	1 (3.7%)	7 (25.9%)	10 (37.0%)	7 (25.9%)	11 (40.7%)	19 (70.4%)
Total	27 (100%)	27 (100%)	27 (100%)	27 (100%)	27 (100%)	27 (100%)	27 (100%)	27 (100%)

Table 9a. How Often Different BlendFlex Technologies were Used in ENGL 1101 (Composition and Rhetoric) – Spring 2016 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	2 (16.7%)	2 (16.7%)	4 (33.3%)	0 (0.0%)	3 (25.0%)	2 (16.7%)	3 (25.0%)
Once	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
2-4 times/sem.	1 (8.3%)	1 (8.3%)	0 (0.0%)	0 (0.0%)	1 (8.3%)	1 (8.3%)	0 (0.0%)
5-10 times/sem.	1 (8.3%)	0 (0.0%)	2 (16.7%)	1 (8.3%)	0 (0.0%)	1 (8.3%)	0 (0.0%)
Once/wk.	3 (25.0%)	4 (33.3%)	1 (8.3%)	3 (25.0%)	0 (0.0%)	3 (25.0%)	1 (8.3%)
Daily	5 (41.7%)	1 (8.3%)	3 (25.0%)	7 (58.3%)	2 (16.7%)	5 (41.7%)	4 (33.3%)
N/A	0 (0.0%)	4 (33.3%)	2 (16.7%)	1 (8.3%)	6 (50.0%)	0 (0.0%)	4 (33.3%)
Total	12 (100%)	12 (100%)	12 (100%)	12 (100%)	12 (100%)	12 (100%)	12 (100%)

Table 9b. Student Helpfulness Ratings of Various Features in ENGL 1101 (Composition and Rhetoric) – Spring 2016 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	0 (0.0%)	1 (9.1%)	2 (18.2%)	1 (9.1%)	1 (9.1%)	1 (9.1%)	1 (9.1%)	1 (9.1%)
Somewhat helpful	5 (45.5%)	1 (9.1%)	0 (0.0%)	2 (18.2%)	1 (9.1%)	2 (18.2%)	1 (9.1%)	0 (0.0%)
Very helpful	7 (63.6%)	8 (72.7%)	9 (81.8%)	5 (45.5%)	2 (18.2%)	5 (45.5%)	3 (27.3%)	4 (36.4%)
N/A	0 (0.0%)	1 (9.1%)	0 (0.0%)	3 (27.3%)	7 (63.6%)	3 (27.3%)	6 (54.5%)	6 (54.5%)
Total	12 (109.1%)	11 (100%)	11 (100%)	11 (100%)	11 (100%)	11 (100%)	11 (100%)	11 (100%)

Table 10a. How Often Different BlendFlex Technologies were Used in MAST 1100 (Medical Insurance Management) – Spring 2016 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	0 (0.0%)	2 (28.6%)	1 (14.3%)	2 (28.6%)	3 (42.9%)	2 (28.6%)	0 (0.0%)
Once	2 (28.6%)	1 (14.3%)	1 (14.3%)	1 (14.3%)	1 (14.3%)	1 (14.3%)	0 (0.0%)
2-4 times/sem.	0 (0.0%)	1 (14.3%)	2 (28.6%)	0 (0.0%)	0 (0.0%)	1 (14.3%)	0 (0.0%)
5-10 times/sem.	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (14.3%)	0 (0.0%)	0 (0.0%)	1 (14.3%)
Once/wk.	3 (42.9%)	1 (14.3%)	1 (14.3%)	1 (14.3%)	1 (14.3%)	2 (28.6%)	1 (14.3%)
Daily	2 (28.6%)	2 (28.6%)	2 (28.6%)	2 (28.6%)	2 (28.6%)	1 (14.3%)	1 (14.3%)
N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (57.1%)
Total	7 (100%)	7 (100%)	7 (100%)	7 (100%)	7 (100%)	7 (100%)	7 (100%)

Table 10b. Student Helpfulness Ratings of Various Features in MAST 1100 (Medical Insurance Management) – Spring 2016 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	1 (14.3%)	2 (28.6%)	1 (14.3%)	1 (14.3%)	0 (0.0%)	1 (14.3%)	0 (0.0%)	0 (0.0%)
Somewhat helpful	1 (14.3%)	1 (14.3%)	4 (57.1%)	3 (42.9%)	3 (42.9%)	1 (14.3%)	1 (14.3%)	0 (0.0%)
Very helpful	5 (71.4%)	4 (57.1%)	2 (28.6%)	2 (28.6%)	0 (0.0%)	5 (71.4%)	0 (0.0%)	1 (14.3%)
N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (14.3%)	4 (57.1%)	0 (0.0%)	6 (85.7%)	6 (85.7%)
Total	7 (100%)	7 (100%)	7 (100%)	7 (100%)	7 (100%)	7 (100%)	7 (100%)	7 (100%)

Table 11a. How Often Different BlendFlex Technologies were Used in MAST 1110 (Administrative Practice Management) – Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	0 (0.0%)	3 (30.0%)	3 (30.0%)	0 (0.0%)	4 (40.0%)	4 (40.0%)	4 (40.0%)
Once	1 (10.0%)	1 (10.0%)	1 (10.0%)	1 (10.0%)	1 (10.0%)	1 (10.0%)	1 (10.0%)
2-4 times/sem.	0 (0.0%)	0 (0.0%)	2 (20.0%)	0 (0.0%)	1 (10.0%)	1 (10.0%)	0 (0.0%)
5-10 times/sem.	3 (30.0%)	1 (10.0%)	2 (20.0%)	1 (10.0%)	1 (10.0%)	1 (10.0%)	1 (10.0%)
Once/wk.	5 (50.0%)	2 (20.0%)	2 (20.0%)	4 (40.0%)	1 (10.0%)	1 (10.0%)	0 (0.0%)
Daily	1 (10.0%)	2 (20.0%)	0 (0.0%)	4 (40.0%)	1 (10.0%)	1 (10.0%)	0 (0.0%)
N/A	0 (0.0%)	1 (10.0%)	0 (0.0%)	0 (0.0%)	1 (10.0%)	1 (10.0%)	4 (40.0%)
Total	10 (100%)	10 (100%)	10 (100%)	10 (100%)	10 (100%)	10 (100%)	10 (100%)

Table 11b. Student Helpfulness Ratings of Various Features in MAST 1110 (Administrative Practice Management) – Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (10.0%)
Somewhat helpful	2 (20.0%)	2 (20.0%)	3 (30.0%)	3 (30.0%)	1 (10.0%)	1 (10.0%)	0 (0.0%)	0 (0.0%)
Very helpful	8 (80.0%)	8 (80.0%)	5 (50.0%)	5 (50.0%)	3 (30.0%)	6 (60.0%)	1 (10.0%)	0 (0.0%)
N/A	0 (0.0%)	0 (0.0%)	2 (20.0%)	2 (20.0%)	6 (60.0%)	3 (30.0%)	9 (90.0%)	9 (90.0%)
Total	10 (100%)	10 (100%)	10 (100%)	10 (100%)	10 (100%)	10 (100%)	10 (100%)	10 (100%)

Table 12a. How Often Different BlendFlex Technologies were Used in MAST 1510 (Medical Billing and Coding) – Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	0 (0%)	2 (50%)	2 (50%)	0 (0%)	1 (25%)	1 (25%)	1 (25%)
Once	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
2-4 times/sem.	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
5-10 times/sem.	1 (25%)	0 (0%)	0 (0%)	0 (0%)	1 (25%)	1 (25%)	0 (0%)
Once/wk.	3 (75%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (25%)	1 (25%)
Daily	0 (0%)	0 (0%)	0 (0%)	3 (75%)	0 (0%)	0 (0%)	0 (0%)
N/A	0 (0%)	2 (50%)	2 (50%)	1 (25%)	2 (50%)	1 (25%)	2 (50%)
Total	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)

Table 12b. Student Helpfulness Ratings of Various Features in MAST 1510 (Medical Billing and Coding) – Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Somewhat helpful	0 (0%)	0 (0%)	1 (25%)	1 (25%)	0 (0%)	1 (25%)	0 (0%)	0 (0%)
Very helpful	4 (100%)	4 (100%)	3 (75%)	2 (50%)	0 (0%)	3 (75%)	1 (25%)	1 (25%)
N/A	0 (0%)	0 (0%)	0 (0%)	1 (25%)	4 (100%)	0 (0%)	3 (75%)	3 (75%)
Total	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)

Table 13a. How Often Different BlendFlex Technologies were Used in MATH 1012 (Foundations of Mathematics) – Fall 2015 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	2 (9.1%)	3 (13.6%)	5 (22.7%)	1 (4.5%)	7 (33.3%)	9 (40.9%)	5 (22.7%)
Once	2 (9.1%)	0 (0.0%)	3 (13.6%)	1 (4.5%)	2 (9.5%)	0 (0.0%)	0 (0.0%)
2-4 times/sem.	3 (13.6%)	1 (4.5%)	1 (4.5%)	0 (0.0%)	2 (9.5%)	4 (18.2%)	1 (4.5%)
5-10 times/sem.	5 (22.7%)	2 (9.1%)	3 (13.6%)	1 (4.5%)	3 (14.3%)	2 (9.1%)	0 (0.0%)
Once/wk.	2 (9.1%)	7 (31.8%)	2 (9.1%)	5 (22.7%)	0 (0.0%)	1 (4.5%)	0 (0.0%)
Daily	5 (22.7%)	6 (27.3%)	5 (22.7%)	14 (63.6%)	4 (19.0%)	4 (18.2%)	2 (9.1%)
N/A	3 (13.6%)	3 (13.6%)	3 (13.6%)	0 (0.0%)	3 (14.3%)	2 (9.1%)	14 (63.6%)
Total	22 (100%)	22 (100%)	22 (100%)	22 (100%)	21 (100%)	22 (100%)	22 (100%)

Table 13b. Student Helpfulness Ratings of Various Features in MATH 1012 (Foundations of Mathematics) – Fall 2015 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	0 (0.0%)	1 (4.5%)	0 (0.0%)	2 (9.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Somewhat helpful	1 (4.5%)	2 (9.1%)	3 (13.6%)	4 (18.2%)	4 (18.2%)	1 (4.5%)	4 (18.2%)	1 (4.5%)
Very helpful	21 (95.5%)	17 (77.3%)	10 (45.5%)	13 (59.1%)	4 (18.2%)	16 (72.7%)	5 (22.7%)	4 (18.2%)
N/A	0 (0.0%)	2 (9.1%)	9 (40.9%)	3 (13.6%)	14 (63.6%)	5 (22.7%)	13 (59.1%)	17 (77.3%)
Total	22 (100%)	22 (100%)	22 (100%)	22 (100%)	22 (100%)	22 (100%)	22 (100%)	22 (100%)

Table 14a. How Often Different BlendFlex Technologies were Used in MATH 1111 (College Algebra) – Spring 2016 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	5 (23.8%)	2 (9.5%)	3 (14.3%)	1 (4.8%)	6 (28.6%)	4 (19.0%)	5 (23.8%)
Once	2 (9.5%)	0 (0.0%)	1 (4.8%)	0 (0.0%)	1 (4.8%)	1 (4.8%)	0 (0.0%)
2-4 times/sem.	0 (0.0%)	1 (4.8%)	1 (4.8%)	0 (0.0%)	1 (4.8%)	1 (4.8%)	0 (0.0%)
5-10 times/sem.	1 (4.8%)	4 (19.0%)	5 (23.8%)	2 (9.5%)	2 (9.5%)	6 (28.6%)	0 (0.0%)
Once/wk.	5 (23.8%)	5 (23.8%)	2 (9.5%)	4 (19.0%)	1 (4.8%)	3 (14.3%)	1 (4.8%)
Daily	5 (23.8%)	7 (33.3%)	5 (23.8%)	13 (61.9%)	1 (4.8%)	2 (9.5%)	3 (14.3%)
N/A	3 (14.3%)	2 (9.5%)	4 (19.0%)	1 (4.8%)	9 (42.9%)	4 (19.0%)	12 (57.1%)
Total	21 (100%)	21 (100%)	21 (100%)	21 (100%)	21 (100%)	21 (100%)	21 (100%)

Table 14b. Student Helpfulness Ratings of Various Features in MATH 1111 (College Algebra) – Spring 2016 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	2 (9.5%)	1 (4.8%)	2 (9.5%)	2 (9.5%)	0 (0.0%)	1 (4.8%)	2 (9.5%)	0 (0.0%)
Somewhat helpful	4 (19.0%)	3 (14.3%)	2 (9.5%)	3 (14.3%)	0 (0.0%)	3 (14.3%)	1 (4.8%)	0 (0.0%)
Very helpful	13 (61.9%)	13 (61.9%)	7 (33.3%)	13 (61.9%)	5 (23.8%)	11 (52.4%)	10 (47.6%)	3 (14.3%)
N/A	2 (9.5%)	4 (19.0%)	10 (47.6%)	3 (14.3%)	16 (76.2%)	6 (28.6%)	8 (38.1%)	18 (85.7%)
Total	21 (100%)	21 (100%)	21 (100%)	21 (100%)	21 (100%)	21 (100%)	21 (100%)	21 (100%)

Table 15a. How Often Different BlendFlex Technologies were Used in PSYC 1010 (Basic Psychology) – Fall 2014 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	3 (10.3%)	7 (24.1%)	5 (17.2%)	2 (6.9%)	6 (20.7%)	6 (20.7%)	4 (14.8%)
Once	1 (3.4%)	1 (3.4%)	1 (3.4%)	1 (3.4%)	1 (3.4%)	1 (3.4%)	0 (0.0%)
2-4 times/sem.	2 (6.9%)	4 (13.8%)	1 (3.4%)	3 (10.3%)	2 (6.9%)	0 (0.0%)	0 (0.0%)
5-10 times/sem.	2 (6.9%)	1 (3.4%)	1 (3.4%)	1 (3.4%)	2 (6.9%)	4 (13.8%)	1 (3.7%)
Once/wk.	5 (17.2%)	0 (0.0%)	2 (6.9%)	1 (3.4%)	0 (0.0%)	4 (13.8%)	2 (7.4%)
Daily	12 (41.4%)	7 (24.1%)	12 (41.4%)	19 (65.5%)	8 (27.6%)	7 (24.1%)	5 (18.5%)
N/A	4 (13.8%)	9 (31.0%)	7 (24.1%)	2 (6.9%)	10 (34.5%)	7 (24.1%)	15 (55.6%)
Total	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)	27 (100%)

Table 15b. Student Helpfulness Ratings of Various Features in PSYC 1010 (Basic Psychology) – Fall 2014 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	2 (6.9%)	1 (3.4%)	1 (3.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (3.4%)	1 (3.6%)
Somewhat helpful	3 (10.3%)	6 (20.7%)	6 (20.7%)	3 (10.3%)	5 (17.2%)	6 (20.7%)	3 (10.3%)	2 (7.1%)
Very helpful	21 (72.4%)	20 (69.0%)	20 (69.0%)	17 (58.6%)	13 (44.8%)	16 (55.2%)	9 (31.0%)	8 (28.6%)
N/A	3 (10.3%)	2 (6.9%)	2 (6.9%)	9 (31.0%)	11 (37.9%)	7 (24.1%)	16 (55.2%)	17 (60.7%)
Total	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)	29 (100%)	28 (100%)

Table 16a. How Often Different BlendFlex Technologies were Used in PSYC 1101 (Introduction to Psychology) – Fall 2014 through Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	2 (5.6%)	8 (22.2%)	4 (11.1%)	0 (0.0%)	5 (13.9%)	7 (19.4%)	5 (14.3%)
Once	2 (5.6%)	0 (0.0%)	1 (2.8%)	0 (0.0%)	2 (5.6%)	4 (11.1%)	1 (2.9%)
2-4 times/sem.	6 (16.7%)	6 (16.7%)	6 (16.7%)	2 (5.6%)	7 (19.4%)	3 (8.3%)	1 (2.9%)
5-10 times/sem.	7 (19.4%)	3 (8.3%)	4 (11.1%)	1 (2.8%)	1 (2.8%)	6 (16.7%)	1 (2.9%)
Once/wk.	10 (27.8%)	6 (16.7%)	1 (2.8%)	5 (13.9%)	1 (2.8%)	6 (16.7%)	2 (5.7%)
Daily	5 (13.9%)	8 (22.2%)	6 (16.7%)	26 (72.2%)	3 (8.3%)	6 (16.7%)	6 (17.1%)
N/A	4 (11.1%)	5 (13.9%)	14 (38.9%)	2 (5.6%)	17 (47.2%)	4 (11.1%)	19 (54.3%)
Total	36 (100%)	36 (100%)	36 (100%)	36 (100%)	36 (100%)	36 (100%)	35 (100%)

Table 16b. Student Helpfulness Ratings of Various Features in PSYC 1101 (Introduction to Psychology) – Fall 2014 through Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	0 (0.0%)	1 (2.8%)	2 (5.6%)	1 (2.8%)	0 (0.0%)	0 (0.0%)	1 (2.8%)	1 (2.9%)
Somewhat helpful	5 (13.9%)	7 (19.4%)	10 (27.8%)	3 (8.3%)	4 (11.1%)	9 (25.0%)	3 (8.3%)	1 (2.9%)
Very helpful	27 (75.0%)	23 (63.9%)	21 (58.3%)	21 (58.3%)	9 (25.0%)	18 (50.0%)	10 (27.8%)	7 (20.0%)
N/A	4 (11.1%)	5 (13.9%)	3 (8.3%)	11 (30.6%)	23 (63.9%)	9 (25.0%)	22 (61.1%)	26 (74.3%)
Total	36 (100%)	36 (100%)	36 (100%)	36 (100%)	36 (100%)	36 (100%)	36 (100%)	35 (100%)

Table 17a. How Often Different BlendFlex Technologies were Used in MAST 1510 (Human Development) – Fall 2016							
Variable	**Recorded Lectures**	**Online Textbook**	**Simulation Activities**	**Angel/ Blackboard (LMS)**	**Interactive Activities (games, animations, etc.)**	**Other Website Resources**	**Other**
Never	0 (0%)	1 (25%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (25%)
Once	1 (25%)	0 (0%)	1 (25%)	0 (0%)	1 (25%)	0 (0%)	1 (25%)
2-4 times/sem.	1 (25%)	1 (25%)	0 (0%)	0 (0%)	0 (0%)	1 (25%)	0 (0%)
5-10 times/sem.	0 (0%)	0 (0%)	1 (25%)	0 (0%)	1 (25%)	0 (0%)	0 (0%)
Once/wk.	0 (0%)	2 (50%)	0 (0%)	2 (50%)	0 (0%)	1 (25%)	0 (0%)
Daily	2 (50%)	0 (0%)	1 (25%)	2 (50%)	0 (0%)	1 (25%)	0 (0%)
N/A	0 (0%)	0 (0%)	1 (25%)	0 (0%)	2 (50%)	1 (25%)	2 (50%)
Total	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)

Table 17b. Student Helpfulness Ratings of Various Features in MAST 1510 (Human Development) – Fall 2016								
Variable	**Student Orientation to BlendFlex classes (Day 1 of class)**	**Recorded Lectures**	**Discussion Boards**	**Document Camera (Mini Overhead Projector)**	**Collaborative Group Projects**	**Viewing Pre-recorded Demonstration Videos**	**Polling Technology**	**Other**
Not helpful	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (25%)	0 (0%)	0 (0%)
Somewhat helpful	0 (0%)	1 (25%)	1 (25%)	0 (0%)	0 (0%)	1 (25%)	1 (25%)	0 (0%)
Very helpful	4 (100%)	3 (75%)	3 (75%)	3 (75%)	1 (25%)	2 (50%)	1 (25%)	1 (25%)
N/A	0 (0%)	0 (0%)	0 (0%)	1 (25%)	3 (75%)	0 (0%)	2 (50%)	3 (75%)
Total	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)

Appendix C. IR Data Solution (Jumpstart)

The Center for Applied Research – Central Piedmont Community College

THE CENTER FOR APPLIED RESEARCH

EXPLANATION OF INSTITUTIONAL RESEARCH SOLUTION – JUMPSTART FOR INSTITUTIONAL RESEARCH

The Center for Applied Research at Central Piedmont Community College has been helping community colleges by increasing institutional research capacity through a solution using SAS and data extractions from the home institution. The solution involves the following:

1. Identification of the data elements needed to populate the model in anticipation of point-in-time data reporting and cohort reporting over extended periods of time.
2. A data dictionary to define the data elements.
3. A practical process and structure to maintain the integrity of the data model and its components.
4. Definition of the process by which and the frequency with which the data will be captured from the college.
5. Identification of any security issues we should consider with the data being captured and how to address those issues.
6. The functionality/capability should allow for scheduled, ongoing reporting and ad hoc reporting as the need arises.

Implementation Strategy

The delivery of this solution will take place in three phases: preparation, installation and training, and ongoing assistance. The tasks and activities for each phase are as follows:

1. **Preparation:**

   CFAR staff will work with the Registrar/IR and/or IT programmers to create the "data extraction program" to be used by the college. During this process, the data dictionary will be delivered to the programmer plus the layout for the extraction program. This process can be accomplished from a distance using phone and email. CFAR staff will also prepare a CD and load it with the SAS install program, the data extraction program and a sample of SAS programs. NOTE: each institution must purchase their own SAS site license.

Tasks in this stage: delivery of a data dictionary, work with the college on the data extraction, download the data file, trouble-shoot and clean the file. Make sure programs run cleanly. Correct any issues that arise.

2. Installation and Training:

CFAR staff will travel to the college to work on the ground to install and train staff on the use of the system. One CFAR staff member will be with the college on site for 1 day. When they leave, programs will have been installed, the data extraction program run, a data-mart set up and created and multiple SAS programs run to make sure the product works effectively.

Tasks in this phase: travel to college, work onsite with the college to install and train staff, program installation, data extraction, set up of data-mart, SAS programs run, programmers work with IT professionals on unique variables at each institution, training on use of data.

3. Ongoing Assistance:

Once staff members are trained and the system is installed and working correctly, CFAR staff will be available by phone and email to trouble shoot and address system needs. Specific days have not been selected yet (see example below).

Activity	Location	Dates
Preparation	Offsite	Late Spring/early Summer (1 day) – year 1
Installation and Training	Onsite	Late Summer/Early Fall (1-2 days per college) – year 1
Ongoing Assistance	Offsite	Fall-Spring (1-2 days) – year 2

Tasks: Available by phone and email for trouble-shooting and work on programs for the college during date of installation and for one year, use of listserve and website (in development).

Appendix D. Fall 2015 Pre/Post Results of Propensity Score Matching

Table 1. CGTC Fall 2015 Pre/Post Results of Propensity Score Matching									
Group Statistics	**Group**	**Pre-Matching**				**Post-Matching**			
Variable		**N**	**Mean**	**SD**	**P Value**	**N**	**Mean**	**SD**	**P Value**
Developmental English	Comparison	825	0.110	0.310		178	0.140	0.348	
	Cohort	178	0.070	0.261	0.163	178	0.070	0.261	0.040*
Developmental Math	Comparison	825	0.210	0.409		178	0.240	0.426	
	Cohort	178	0.260	0.442	0.130	178	0.260	0.442	0.542
Developmental Reading	Comparison	825	0.120	0.329		178	0.140	0.348	
	Cohort	178	0.070	0.251	0.032*	178	0.070	0.251	0.024*
Pell	Comparison	825	0.600	0.489		178	0.740	0.442	
	Cohort	178	0.740	0.442	0.001**	178	0.740	0.442	1.000
Gender	Comparison	825	0.830	0.377		178	0.830	0.375	
	Cohort	178	0.890	0.317	0.054	178	0.890	0.317	0.128
Less than or equal to 22 years old	Comparison	825	0.507	0.500		178	0.478	0.501	
	Cohort	178	0.438	0.498	0.098	178	0.438	0.498	0.458
23-28 years old	Comparison	825	0.222	0.416		178	0.214	0.411	
	Cohort	178	0.258	0.439	0.292	178	0.258	0.439	0.319
29-35 years old	Comparison	825	0.121	0.327		178	0.140	0.348	
	Cohort	178	0.112	0.317	0.742	178	0.112	0.317	0.427
36 + years old	Comparison	825	0.150	0.358		178	0.169	0.375	
	Cohort	178	0.191	0.394	0.177	178	0.191	0.394	0.582
Black	Comparison	825	0.164	0.370		178	0.174	0.380	
	Cohort	178	0.163	0.370	0.981	178	0.163	0.370	0.778
Hispanic	Comparison	825	0.007	0.085		178	178	0.000	
	Cohort	178	0.006	0.075	0.810	178	178	0.000	1.000
White	Comparison	825	0.097	0.296		178	178	0.107	
	Cohort	178	0.163	0.370	0.010*	178	178	0.169	0.091
Other/Unknown	Comparison	825	0.732	0.443		178	178	0.719	
	Cohort	178	0.669	0.472	0.087	178	178	0.669	0.302
Estimated Probability	Comparison	825	0.176	0.040		178	0.186	0.036	
	Cohort	178	0.186	0.036	0.001**	178	0.186	0.036	1.000
***Note*: ***p<.001. ** p <.01. *p <.05.**									

Table 2. Logistic Regression Results Predicting Membership in BOOST Group Before Propensity Score Matching- Fall 2015						
Variables	**B**	**S.E.**	**Wald**	**df**	**P Value**	**Exp(B)**
Developmental English	-0.335	0.374	0.800	1.000	0.371	0.716
Developmental Math	0.442	0.212	4.327*	1.000	0.038	1.556
Developmental Reading	-0.777	0.371	4.378*	1.000	0.036	0.460
Pell	0.620	0.195	10.084**	1.000	0.001	1.860
Gender	0.415	0.262	2.513	1.000	0.113	1.514
Less than or equal to 22 years old	-0.255	0.238	1.150	1.000	0.284	0.775
23-28 years old	-0.144	0.260	0.306	1.000	0.580	0.866
29-35 years old	-0.400	0.317	1.590	1.000	0.207	0.670
Black	0.162	0.233	0.479	1.000	0.489	1.175
Hispanic	0.055	1.099	0.003	1.000	0.960	1.057
White	0.618	0.246	6.300*	1.000	0.012	1.855
Constant	-2.212	0.335	43.668	1.000	0.000	0.109
Note: ***p<.001. ** p <.01. *p <.05.						
Chi-Squared= 34.391 p<.001, -2 LL 903.477, Nagelkerke R Square, 0.055						
82.3% Predicted Correctly						

Appendix E. Grades by Course and by Term

Table 1. BlendFlex vs Comparison Grades by Course and Term						
ALHS 1011	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2014	19 (44.2%)	24 (55.8%)	43	210 (45.8%)	249 (54.2%)	459
Spring 2015	16 (53.3%)	14 (46.7%)	30	213 (46.3%)	247 (53.7%)	460
Summer 2015	11 (35.5%)	20 (64.5%)	31	141 (44.9%)	173 (55.1%)	314
Fall 2015	30 (76.9%)	9 (23.1%)	39	195 (42.4%)	265 (57.6%)	460
Spring 2016	31 (64.6%)	17 (35.4%)	48	219 (50.2%)	217 (49.8%)	436
Summer 2016	15 (33.3%)	30 (66.7%)	45	92 (48.2%)	99 (51.8%)	191
Fall 2016	27 (57.4%)	20 (42.6%)	47	203 (54.6%)	169 (45.4%)	372
Total	149 (52.7%)	134 (47.3%)	283	1273 (47.3%)	1419 (52.7%)	2692
ALHS 1040	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Spring 2015	26 (74.3%)	9 (25.7%)	35	151 (75.1%)	50 (24.9%)	201
Fall 2015	16 (61.5%)	10 (38.5%)	26	245 (87.2%)	36 (12.8%)	281
Spring 2016	24 (96.0%)	1 (4.0%)	25	115 (83.9%)	22 (16.1%)	137
Fall 2016	28 (66.7%)	14 (33.3%)	42	135 (82.3%)	29 (17.7%)	164
Total	94 (73.4%)	34 (26.6%)	128	646 (82.5%)	137 (17.5%)	783
ALHS 1060	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Spring 2015	9 (36.0%)	16 (64.0%)	25	122 (81.3%)	28 (18.7%)	150
Summer 2015	8 (72.7%)	3 (27.3%)	11	48 (75.0%)	16 (25.0%)	64
Fall 2015	12 (60.0%)	8 (40.0%)	20	109 (77.9%)	31 (22.1%)	140
Spring 2016	15 (60.0%)	10 (40.0%)	25	176 (84.6%)	32 (15.4%)	208
Summer 2016	15 (65.2%)	8 (34.8%)	23	29 (70.7%)	12 (29.3%)	41
Fall 2016	36 (80.0%)	9 (20.0%)	45	54 (70.1%)	23 (29.9%)	77
Total	95 (63.8%)	54 (36.2%)	149	538 (79.1%)	142 (20.9%)	680
ALHS 1090	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2014	17 (58.6%)	12 (41.4%)	29	227 (71.8%)	89 (28.2%)	316
Spring 2015	18 (78.3%)	5 (21.7%)	23	241 (71.1%)	98 (28.9%)	339
Summer 2015	14 (63.6%)	8 (36.4%)	22	156 (73.9%)	55 (26.1%)	211
Fall 2015	21 (80.8%)	5 (19.2%)	26	371 (81.9%)	82 (18.1%)	453
Spring 2016	22 (78.6%)	6 (21.4%)	28	204 (70.8%)	84 (29.2%)	288
Summer 2016	14 (60.9%)	9 (39.1%)	23	146 (78.1%)	41 (21.9%)	187
Fall 2016	76 (75.2%)	25 (24.8%)	101	196 (79.7%)	50 (20.3%)	246
Total	182 (72.2%)	70 (27.8%)	252	1541 (75.5%)	499 (24.5%)	2040

BIOL 2113	BlendFlex			Comparison		
	A-C	Other	Total #	A-C	Other	Total #
Fall 2014	14 (40.0%)	21 (60.0%)	35	90 (47.6%)	99 (52.4%)	189
Spring 2015	16 (55.2%)	13 (44.8%)	29	65 (47.4%)	72 (52.6%)	137
Summer 2015	20 (69.0%)	9 (31.0%)	29	29 (80.6%)	7 (19.4%)	36
Fall 2015	30 (75.0%)	10 (25.0%)	40	112 (63.3%)	65 (36.7%)	177
Spring 2016	17 (53.1%)	15 (46.9%)	32	103 (66.0%)	53 (34.0%)	156
Summer 2016	42 (76.4%)	13 (23.6%)	55	56 (70.9%)	23 (29.1%)	79
Fall 2016	40 (67.8%)	19 (32.2%)	59	201 (69.1%)	90 (30.9%)	291
Total	179 (64.2%)	100 (35.8%)	279	656 (61.6%)	409 (38.4%)	1065
BIOL 2114	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Spring 2015	15 (62.5%)	9 (37.5%)	24	63 (80.8%)	15 (19.2%)	78
Summer 2015	15 (83.3%)	3 (16.7%)	18	31 (100%)	0 (0.0%)	31
Fall 2015	16 (80.0%)	4 (20.0%)	20	47 (83.9%)	9 (16.1%)	56
Spring 2016	19 (76.0%)	6 (24.0%)	25	80 (76.9%)	24 (23.1%)	104
Summer 2016	19 (76.0%)	6 (24.0%)	25	56 (90.3%)	6 (9.7%)	62
Fall 2016	22 (66.7%)	11 (33.3%)	33	79 (81.4%)	18 (18.6%)	97
Total	106 (73.1%)	39 (26.9%)	145	356 (83.2%)	72 (16.8%)	428
ECGT 1030	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2016	10 (66.7%)	5 (33.3%)	15	n/a	n/a	n/a
Total	138 (71.5%)	55 (28.5%)	193	n/a	n/a	n/a
ENGL 1010	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2015	11 (61.1%)	7 (38.9%)	18	383 (60.2%)	253 (39.8%)	636
Spring 2016	11 (68.8%)	5 (31.3%)	16	236 (52.4%)	214 (47.6%)	450
Summer 2016	23 (69.7%)	10 (30.3%)	33	150 (52.6%)	135 (47.4%)	285
Fall 2016	20 (76.9%)	6 (23.1%)	26	343 (59.8%)	231 (40.2%)	574
Total	65 (69.9%)	28 (30.1%)	93	1112 (57.2%)	833 (42.8%)	1945
ENGL 1101	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Spring 2016	3	9 (75.0%)	12	284 (61.7%)	176 (38.3%)	460
Summer 2016	18	12 (40.0%)	30	193 (57.4%)	143 (42.6%)	336
Fall 2016	14	14 (50.0%)	28	519 (59.9%)	348 (40.1%)	867
Total	35	35 (50.0%)	70	996 (59.9%)	667 (40.1%)	1663
MAST 1100	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Spring 2016	14 (87.5%)	2 (12.5%)	16	n/a	n/a	n/a
Summer 2016	10 (90.9%)	1 (9.1%)	11	n/a	n/a	n/a
Fall 2016	8 (100%)	0 (0.0%)	8	n/a	n/a	n/a
Total	32 (91.4%)	3 (8.6%)	35	n/a	n/a	n/a
MAST 1110	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Spring 2016	17 (100%)	0 (0.0%)	17	n/a	n/a	n/a
Summer 2016	15 (100%)	0 (0.0%)	15	n/a	n/a	n/a
Fall 2016	10 (100%)	0 (0.0%)	10	n/a	n/a	n/a
Total	42 (100%)	0 (0.0%)	42	n/a	n/a	n/a

MAST 1510	BlendFlex			Comparison		
	A-C	Other	Total #	A-C	Other	Total #
Fall 2016	14 (73.7%)	5 (26.3%)	19	n/a	n/a	n/a
Total	66 (93.0%)	5 (7.0%)	71	n/a	n/a	n/a
MATH 1012	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2015	19 (65.5%)	10 (34.5%)	29	399 (52.6%)	360 (47.4%)	759
Spring 2016	6 (40.0%)	9 (60.0%)	15	333 (57.0%)	251 (43.0%)	584
Summer 2016	20 (51.3%)	19 (48.7%)	39	204 (60.4%)	134 (39.6%)	338
Fall 2016	33 (66.0%)	17 (34.0%)	50	400 (60.0%)	267 (40.0%)	667
Total	78 (58.6%)	55 (41.4%)	133	1336 (56.9%)	1012 (43.1%)	2348
MATH 1111	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Spring 2016	9 (52.9%)	8 (47.1%)	17	233 (61.5%)	146 (38.5%)	379
Summer 2016	23 (71.9%)	9 (28.1%)	32	159 (59.1%)	110 (40.9%)	269
Fall 2016	26 (65.0%)	14 (35.0%)	40	540 (62.4%)	325 (37.6%)	865
Total	58 (65.2%)	31 (34.8%)	89	932 (61.6%)	581 (38.4%)	1513
PSYC 1010	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2014	13 (92.9%)	1 (7.1%)	14	320 (66.3%)	163 (33.7%)	483
Spring 2015	8 (72.7%)	3 (27.3%)	11	223 (66.2%)	114 (33.8%)	337
Summer 2015	11 (84.6%)	2 (15.4%)	13	194 (69.0%)	87 (31.0%)	281
Fall 2015	11 (91.7%)	1 (8.3%)	12	271 (63.8%)	154 (36.2%)	425
Spring 2016	15 (71.4%)	6 (28.6%)	21	203 (63.4%)	117 (36.6%)	320
Summer 2016	18 (66.7%)	9 (33.3%)	27	102 (65.8%)	53 (34.2%)	155
Fall 2016	16 (66.7%)	8 (33.3%)	24	193 (59.6%)	131 (40.4%)	324
Total	92 (75.4%)	30 (24.6%)	122	1506 (64.8%)	819 (35.2%)	2325
PSYC 1101	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2014	18 (78.3%)	5 (21.7%)	23	262 (66.8%)	130 (33.2%)	392
Spring 2015	7 (70.0%)	3 (30.0%)	10	268 (73.8%)	95 (26.2%)	363
Summer 2015	4 (50.0%)	4 (50.0%)	8	158 (72.8%)	59 (27.2%)	217
Fall 2015	17 (77.3%)	5 (22.7%)	22	291 (73.1%)	107 (26.9%)	398
Spring 2016	21 (91.3%)	2 (8.7%)	23	276 (71.9%)	108 (28.1%)	384
Summer 2016	29 (78.4%)	8 (21.6%)	37	247 (75.5%)	80 (24.5%)	327
Fall 2016	27 (79.4%)	7 (20.6%)	34	398 (76.2%)	124 (23.8%)	522
Total	123 (78.3%)	34 (21.7%)	157	1900 (73.0%)	703 (27.0%)	2603
PSYC 2103	**BlendFlex**			**Comparison**		
	A-C	**Other**	**Total #**	**A-C**	**Other**	**Total #**
Fall 2016	n/a	n/a	n/a	n/a	n/a	n/a
Total	n/a	n/a	n/a	n/a	n/a	n/a

Appendix F. Allied Health Competitive Selection Score Trends

CENTRAL GEORGIA TECHNICAL COLLEGE

Allied Health Competitive Selection Score Trends

As of January 2017

Term	Applied	Qualified	Slots	Selected	Highest Score	Lowest Score	Highest GPA	Lowest GPA	Highest TEAS	Lowest TEAS
Associate of Science in Nursing (ASN)										
Spring 2017	351	212	30	30	490.00	419.48	4.00	3.43	90.00	45.30
Term	**Applied**	**Qualified**	**Slots**	**Selected**	**Highest Score**	**Lowest Score**	**Highest GPA**	**Lowest GPA**	**Highest PSB**	**Lowest PSB**
Cardiovascular Technology										
Spring 2017	51	16	12	12	610.43	392.86	3.71	2.18	247	139
Spring 2016	46	11	10	9	632.43	474.29	4.00	3.14	261	148
Spring 2015	67	10	10	10	669.00	539.57	4.00	2.90	287	211
Clinical Laboratory Technology										
Spring 2017	41	7	12	7	650.35	367.950	3.82	1.86	268	181
Spring 2016	44	14	10	10	645.36	504.00	4.00	1.81	263	197
Spring 2015	44	6	12	6	618.00	342.00	3.53	1.48	268	161
Dental Assisting										
Fall 2016	24	16	14	14	623.00	427.00	4.00	2.50	230	136
Fall 2015	37	15	12	12	659.00	407.00	4.00	2.50	259	137
Dental Hygiene										
Fall 2016	38	29	14	14	573.43	452.17	3.86	2.82	252	188
Summer 2016	64	32	18	18	565.00	453.70	3.73	2.74	277	160
Fall 2015	68	29	14	14	554.00	522.97	4.00	2.92	265	182
Echocardiography										
Spring 2017	32	14	12	12	577.43	413.26	4.00	2.05	238	139
Spring 2016	19	10	10	10	632.43	474.29	3.71	3.05	249.0	139.0
Hemodialysis Technology										
Spring 2017	15	7	10	7	586.17	392.84	3.85	2.53	234	139
Fall 2016	34	21	28	21	640.94	410.00	4.00	2.32	255	120
Summer 2016	35	22	28	22	625.00	403.23	4.00	2.19	255	117

Term	Applied	Qualified	Slots	Selected	Highest Score	Lowest Score	Highest GPA	Lowest GPA	Highest TEAS	Lowest TEAS
Medical Assisting										
Fall 2016	49	27	45	27	621.35	370.67	4.00	1.92	253	138
Summer 2016	45	27	32	27	614.00	383.39	3.88	2.48	221	100
Spring 2016	54	36	32	32	577.25	366.00	4.00	2.17	249	141
Fall 2015	69	13	35	13	609.00	378.00	3.65	2.08	254	140
Orthopedic Technology										
Fall 2016	21	9	15	9	598.86	310.68	3.68	1.74	232	131
Fall 2015	26	8	15	8	647.00	406.50	4.00	2.23	256	170
Fall 2014	44	9	15	9	606.38	548.43	3.69	3.22	264	185
Pharmacy Technology										
Fall 2016	74	50	15	15	N/A	N/A	4.00	3.27	N/A	N/A
Fall 2015	24	6	15	6	N/A	N/A	2.90	1.54	N/A	N/A
Fall 2014	22	17	15	15	N/A	N/A	4.00	3.00	N/A	N/A
Practical Nursing										
Spring 2017	308	199	52	52	674.00	506.00	4.00	3.00	274	169
Fall 2016	211	154	56	56	643.00	528.64	4.00	2.80	265	159
Summer 2016	188	133	31	31	640.00	534.43	4.00	3.27	253	177
Spring 2016	291	209	62	62	634.29	547.00	4.00	3.32	289	172
Fall 2015	316	184	62	62	645.71	543.18	4.00	3.12	267	150
Radiologic Technology										
Spring 2017	67	46	16	16	652.21	565.42	4.00	3.00	268	177
Fall 2016	85	56	20	20	665.21	561.16	4.00	3.27	281	163
Spring 2016	121	43	16	16	656.00	554.48	4.00	2.86	274	192
Fall 2015	105	40	20	20	653.00	551.63	4.00	3.20	260	205
Surgical Technology										
Spring 2017	61	35	14	14	605.00	486.00	4.00	2.84	227	164
Fall 2016	36	19	14	14	643.00	480.62	4.00	3.38	236	142
Spring 2016	99	38	14	14	632.00	455.67	4.00	2.35	260	184
Fall 2015	100	51	14	14	662.00	506.38	4.00	2.76	275	182

Appendix G. Draft Sustainability Plan for the College

CENTRAL GEORGIA
HEALTHCARE WORKFORCE ALLIANCE

September 2017 Draft

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Program Summary

The Central Georgia Healthcare Workforce Alliance (CGHWA) was a four year, $2.6 million Round 3 Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant that was established at Central Georgia Technical College (CGTC) in 2013 through funding from the United States Department of Labor (USDOL). The program was designed to develop a collaborative, blended learning, technology-driven approach to creating healthcare career pathways with multiple opportunities for entry and exit. This grant allowed Trade Adjustment Assistance (TAA) eligible, veteran (VA), Workforce Innovation and Opportunity Act (WIOA) participants, rural county residents, others such as the under-employed, and the unemployed, to gain the education and credentials required for employment in high-demand healthcare careers. Services included tutoring; success and career coaching; targeted employment workshops and; healthcare job fairs. In addition to services, curriculum was created and/or enhanced with leadership and input from business leaders and employers. Grant funding will end September 30, 2017.

Vision: The program vision was to assist TAA and underrepresented participants in gaining quickly obtained certificates and degrees – including opportunities for stacking and latticing credentials - in high-demand, high wage jobs in the healthcare sector.

Planning for End of Grant: The CGHWA Steering Committee and CGHWA Advisory Board provided guidance based on the data generated during the grant implementation period and industry trend data, items designated as sustainable in the original grant request, and additional items deemed to be successful and potentially sustainable by the college. Budgets and sources of funding for sustainable items were also identified.

USAGE OF DATASETS

Over the course of the TAACCCT grant, the College generated data for reporting purposes from students, faculty, staff and business/industry partners via surveys, focus groups, classroom observations and meetings. Based on the data collected, the institution has already begun the task of implementing sustainability initiatives.

At CGTC, analysis of outcomes have been used to inform decisions regarding what is to be sustained after the TAACCCT grant performance period ends. This includes, but is not limited to, curriculum, content, staff positions, student services, equipment installation and maintenance, and procedures. Items being reviewed are:

- Expanding BlendFlex course availability to disciplines outside of health sciences, while still maintaining robust content and rigorous assessment.
- Expanding options to convert Non-BlendFlex courses to BlendFlex courses were prioritized based on the content of the course and space and equipment availability.

- Expanding the availability of Telepresence and BlendFlex courses especially at rural institutional sites
- Securing funds to accommodate an increase in technology-enhanced instruction.
- Expansion of articulation agreements to allow students additional opportunities to pursue expanded academic and career options.

It is noteworthy that datasets were utilized throughout the grant period to track outcomes and ongoing benchmarks. Datasets utilized for sustainability planning include: survey data (related to participant satisfaction with grant services) and on-site and online tutoring usage reports. Positive evaluations of grant services provided evidence of the value of special populations and career service workshops, success coaching, and tutoring labs to participants. As it relates to sustained grant funded and newly created positions**,** datasets showed which positions led to improved student success and satisfaction. This substantiated the need to sustain positions engaged in instructional delivery, student advisement and retention efforts, and equipment upkeep. In addition, the data was used to assess the effectiveness of high touch student services and areas that required improvement or enhancement.

Additionally, the College compared specific outcomes for grant participants versus non-participants. The external evaluator conducted focus groups with students in the grant funded programs of study and faculty who taught the BlendFlex courses. Focus groups were conducted with business and industry partners, who provided industry trend data and feedback on the qualities necessary for students to gain employment. Data from all of these activities was utilized to back up funding requests for support from the college budget and pursue additional stackable grants.

Data Collection

The College will continue to collect data on students taking BlendFlex courses to compare them to non-BlendFlex students longitudinally. With the expansion of the BlendFlex model into additional disciplines, the goal is to collect the rate of successful completion and attrition rates and compare them for BlendFlex and non-BlendFlex students. This will also serve as data to provide rationale for continued financial support locally as well as to include in future grant applications. The ability to provide guidance to other institutions in the development of a similar BlendFlex programs will also require empirical data.

SUSTAINABLE LINE ITEM: BLENDFLEX COURSE OFFERINGS

At the beginning of the grant implementation period, Health courses and General Education core courses required for healthcare majors were chosen based on their lower success rates in an effort to improve student access, success, and selective admission selection into healthcare programs.
Since the beginning of the grant, there have been twenty-one BlendFlex courses developed, which was comprised of ten Health courses, nine General Education core courses and two Business Administrative Technology courses. The ten Health courses are four Allied Health, three Medical Assisting, two Biology and one Electrocardiography. The seven General Education core courses are three diploma level &

four-degree level in Math, English and Psychology. The two Business Administrative Technology Courses are diploma level and are a part of the expansion of the BlendFlex strategy in disciplines outside of Health. A full list of the courses converted are in Addendum #1. Academic Affairs leadership is developing the plans to convert other courses in varied disciplines into the BlendFlex model. Currently, students can obtain the following certificate programs via 50% or more BlendFlex Courses, Acute Care Nurse Aide, Health Care Assistant, Electrocardiography Technology, Medical Coding Technical, Nurse Aide, Patient Care Assisting and Phlebotomy.

The data showed that students in BlendFlex classes were just as successful in earning academic credit as with traditional instruction. The flexibility for students was one of the best features of the BlendFlex courses and assisted with saving students from "stopping out" but instead they completed their courses. The students in rural areas were availed more options for attendance without the challenges of traveling long distances to one of the main campuses. Instead, rural students were able to attend BlendFlex courses at one of the local satellite locations via TelePresence, from home or work on their laptop or tablet and online by reviewing the recorded lectures.

The Telepresence equipment allowed the Dual Enrollment or high school students with an additional avenue to obtain college credit. The idea of obtaining more funding through stackable grants and increasing the leveraging of existing Telepresence equipment into more high schools and nearby centers is another goal of expansion and sustainability of BlendFlex course offerings. One such stackable grant secured by the College was the U.S. Department of Education's Predominantly Black Institution (PBI) competitive grant. The PBI grant funding allowed the College to implement the Removing Barriers, Setting Benchmarks and Improving Student Success (RSI) initiative. The RSI initiative proposed to increase opportunities for minority populations to have access to and success in Engineering Technology educational programs leading to high-wage, high-demand careers. Due to the racial/ethnic make-up of students at the College and partner institutions, RSI provided the groundwork for achieving the overarching goals of the initiative. RSI assisted with increasing telepresence equipment for dually enrolled high school students at the Hutchings College Career Academy with a STEM related focus. There was also Telepresence equipment secured to assist with tutoring Bibb County students as a pilot program in the STEM area.

To ensure that faculty, staff and students were aware of the BlendFlex courses, the BlendFlex courses were identified with a course attribute of "BLND" and special comments on the course schedule. During the grant implementation period, the courses could not be registered for without a faculty/staff override to ensure that only health science majors were taking the courses per grant requirements. In support of sustainability, the BlendFlex courses availability for Central Georgia Technical College students still remains under the "BLND" code designation. However, faculty, staff and students are aware that BlendFlex courses are no longer restricted to only health students. All Central Georgia Technical College students can register for BlendFlex courses. As stated earlier, there have been a total of twenty one courses converted into the BlendFlex model over the past three years. The sustainability goal is to continue converting courses in varying disciplines into the BlendFlex model if there structure can be validated as applicable to be taught utilizing the BlendFlex model efficiently.

To further ensure the availability of the BlendFlex courses is known by all students, the implementation of strategic expansion and promotional initiatives have been employed. The Office of Institutional Effectiveness produced their spring 2017 edition of "The Review" which was dedicated to the BlendFlex initiative, to include data, course offerings and success stories and personal testimonials from current and past BlendFlex participants. This newsletter was delivered to the entire administration, faculty and staff; which totals over 1,100 full and part time employees. Adult Education and Continuing Education are utilizing the TelePresence equipment and BlendFlex model to provide instruction and tutorials to their participants and clientele. The TelePresence equipment has also made the ability to have meetings with multiple campus faculty, staff and students without losing work time with travel between the many miles between the campuses and satellite centers. This allows the multiple locations to utilize the travel time to complete other tasks instead of spending it traveling to and from meetings. In the area of on-going promotion of the BlendFlex course offerings, a new flyer was produced by the CGTC Office of Marketing to highlight the courses offered, student services provided to participants and the accessibility of the courses for all students regardless of major. The Project Manager traveled to all campuses and satellite locations to remove the old promotional flyers and ensure that they were replaced with the new ones. The Central Georgia Technical College College Advisement, Retention and Early Intervention (CARE) Center staff were provided with the new promotional flyers and a refresher on the services to provide guidance to first time students registering for courses. The High School Coordinators were provided with the new promotional flyers and a refresher on the services provide via the BlendFlex model for all the dual enrollment participants in the area high schools.

SUSTAINABLE LINE ITEM: BLENDFLEX FACULTY PROFESSIONAL DEVELOPMENT CLASS

The BlendFlex Professional Development Class taught instructors the concepts and pedagogies of delivering instruction using the BlendFlex Model. BlendFlex occurs successfully when the best delivery methodologies available are used for each specific learning objective and incorporated into the curriculum. This training used a blended learning approach to model the concepts taught in a BlendFlex learning environment.

The prerequisite for the class was the successful completion of BlackBoard (Bb) Training. This prerequisite training was a hands-on session where faculty are taught how to login to BbLearn as a student would do and learn the basics that will be taught to the students in the Student Orientation sessions. Topics included logging into BbLearn, accessing a course, reading announcements, locating assignments, sending a message, posting to a discussion board, uploading to an assignment drop box, submitting a test, and reviewing grades.

The BlendFlex Faculty Professional Development class was comprised of five sessions over five weeks. There was a 1.5-hour class and 1.5-hour lab work assignment each week. At the culmination of the class, a deliverable was required utilizing the weekly assignments to design one BlackBoard learning module consisting of a minimum of one week of instruction for a BlendFlex course in the faculty member's discipline. The incentive for course completion was either class release time or a one-time stipend, depending on fund availability. With the culmination of the grant performance period, the

class was restructured to three sessions over three weeks. The 1.5-hour class and 1.5-hour lab work assignment each week will continue. The two-week reduction in the training class was due to the removal of additional grant related assignments. This reduction allows faculty to obtain all necessary content in 60% of the time, which better accommodates participation.

Over the course of the three-year grant implementation period, forty-six faculty completed the BlendFlex Faculty Professional Development Class. During fall 2017, fourteen faculty are teaching a BlendFlex course and fourteen have completed the series in preparation for teaching in future semesters. The class will continue to prepare additional faculty on an as needed basis. The class has been and will continue to be taught by the College's Director of Educational Technology.

SUSTAINABLE LINE ITEM: BLENDFLEX EQUIPMENT & TECHNOLOGICAL ENHANCEMENTS

At CGTC, both faculty and students found value in the BlendFlex strategy and the exposure to technology that was provided. The flexibility provided by the BlendFlex strategy and ability to attend class from several different locales has led to an increase in student satisfaction with options for instruction.

Based on student outcomes and demand, BlendFlex courses outside of the health sciences have been implemented in the BlendFlex model of instruction. Academic Affairs and Information Technology are developing a prioritization plan to solidify which courses will be converted into the BlendFlex strategy. This will require ensuring that current hardware is being maximized for student benefit, as well as solicitation of additional grants and funds to assist with acquiring additional equipment.

As the grant performance period ended, funding for additional equipment is being secured through stackable grants and college revenue via tuition dollars. CGTC is maintaining the BlendFlex equipment and technical support with the existing full-time Media & Telepresence Specialist, who is paid from the Information Technology (IT) department budget. Additionally, the hardware and additional technical support will be provided by the existing IT department. These staff have already been trained and have been working on the grant funded equipment over the grant performance period.

Since the TAACCCT Grant covered the cost of the equipment purchase and the initial years of licensing and maintenance, future maintenance costs will be supported by the CGTC Technology department.

SUSTAINABLE LINE ITEM: STACKABLE CREDENTIALS

Stackable credentials were identified in the grant as an items that the College would sustain post-grant. The college worked to enhance the curriculum and "stack" credentials as a way to help students' complete industry certifications, leading directly to employment. With the grant developed BlendFlex strategy, several certificate programs can be completed 50% or more via BlendFlex courses; Acute Care Nurse Aide, Health Care Assistant, Electrocardiography Technology, Medical Coding, Patient Care Assisting, Nurse Aide and Phlebotomy Technician.

The stackable credentials serve many purposes as it relates to advancing a student's educational growth and employability. For example, the Health Care Assistant TCC provides useful knowledge and skills that employers require for many positions in the healthcare arena. Therefore, a student who aspires to be a Nurse and is not selected via selective admission process, due to a limited number of slots in the program, still achieves a credential and increases opportunities for employment. With this obtained credential, a student can seek employment and continue to work toward the diploma and ultimately a degree to assist with their career advancement. Employers, like Navicent Health in our service delivery area, have collaborations with the College to provide On the Job Training for healthcare professionals who are working toward re-entry or re-certification of their credentials. The local WIOA office, while not an employer, collaborates with the College, identifying and providing funds for eligible students. The programs of study that the WIOA assist with are identified as careers in high demand in our service delivery area. Therefore, the stackable credentials that students obtain are well worth the investment and long-term career enhancement.

The planned funding source for maintaining and updating stackable credentials will be the Academic Affairs budget and additionally secured grant funds. These expenses will include faculty, staff, and any support personnel devoted to updating curriculum and/or degrees. The College supports the premise that stackable credentials enable students to find enhanced or re-employment rapidly, as well as adding to their skill sets. New and enhanced curricula are matched to employers' needs and have been reviewed by Business and Industry partners. Stackables offer flexible program options to support students' career pathways and provide employers with a consistent stream of knowledgeable and prepared employees. The College has also entered into an Articulation Agreement with Fort Valley State University's Biotechnology program. This articulation agreement provides an avenue for students who obtain their associates degree in Biotechnology to matriculate to FVSU's bachelor's degree program for Biotechnology.

SUSTAINABLE LINE ITEM: WRAP AROUND SERVICES

TUTORING

The tutors currently hired to provide services at CGTC for the DOL grant funded BlendFlex strategy will be sustained. Students have access to tutors through the CGTC Academic Success Centers (ASC). The ASC provides peer tutoring, success workshops, supplemental instruction and technology resources. This department employs as many as 30 part-time tutors during the semester. Requests for tutors will be assigned as needed. The access to online peer and professional tutoring, which is grant funded through September 30, 2017, is being researched to ensure continuation at the culmination of the grant funded performance period.

Based on the College's desire to increase availability of tutorial services, the use of collaboration stations at satellite locations for adult education and continuing education through the U.S. Department of Agriculture's Rural Utilities Services Distance Learning and Telemedicine Grant (RUS) 2015 Grant were installed. The adaptation of these collaboration stations is being deliberated for all

locations, with the Monroe County Center currently serving as the pilot location. The Telepresence equipment installation at high school locations for the Dual Enrollment program is in the developmental stage. The tutorial assistance for the high school locations will provide access to tutoring at the high school versus incurring travel requirements to the main campuses or satellite locations.

COACHING

Success Coaching is an integral part of the continued success of the students matriculating at CGTC. The Career Services Division and Student Success Coaches ensure that students were availed ample opportunities to receive support and assistance beginning early through ongoing workshops and career guidance.

At CGTC, dedicated Career Service staff were sustained. These positions were not grant funded but were an integral part of the success of the grant. The Career Services staff visited classrooms and set up displays on campus and in heavily frequented areas of campus to ensure that students are aware of the services provided by the Career Center, which include:

- Networking students with Employment Internships
- Providing workshops on Cover Letters, Resume and Interviewing Strategies
- Providing workshops on Networking and Job Search Skills
- Conducting Mock Interview Sessions
- Using Social Media to Find a Job
- Assisting with job search for Unemployed and/or Underemployed Students
- Hosting Career Fairs
- Serving as member of the Central Georgia Healthcare Workforce Alliance (CGHWA)
- Serving and supporting the activities of the CGHWA Steering Committee

Career Services continues to work collaboratively with internal and external partners to ensure the optimal successful outcomes for students. Consistent improvements and enhancements are implemented based on feedback received from students and internal and external partners.

The Health Science Success Coach was a grant-funded position that has been absorbed by the college. The Health Science Success Coach played a vital role in the recruitment and retention of students by providing services, which include:

- Providing information on targeted career and educational pathways for health science students.
- Assisting with competitive selection process.
- Serving as member of the Central Georgia Healthcare Workforce Alliance (CGHWA)
- Serving and supporting the activities of the CGHWA Steering Committee

- Working collaboratively with dean, health division heads and program chairs to ensure consistency in program selection guidelines. Helping to coordinate and plan information sessions on competitive selection process
- Serving as a core team member for the college's Guided Pathways project.
- Conducting and analyzing on-going formative and summative evaluation data of program effectiveness, making suggestions for modifications as necessary.
- Visiting all campuses and satellite locations to provide advisement and support to students and instructional aides
- Hosting TelePresence Seminars on Selective Admissions for Health Care Programs in collaboration with Health Science Program Chairs
- Providing One on One Advisement and Registration
- Emailing and Phoning Health Science Students on Early Alerts

Data related to student success when working with the Success Coach led to planning that not only included sustaining the position, but also the procedures and resource manual updates and informational workshops, which were developed by the Success Coach. Student level data on attendance, test scores, and courses has aided the Success Coach in being proactive; through use of intervention strategies that help students enhance the probability of successfully completing educational goals.

ASSISTIVE SERVICES (SPECIAL NEEDS)

CLOSED CAPTIONING

The Technical College System of Georgia (TCSG) obtained a trial membership for a closed captioning program for CGTC. Each license included unlimited use of the program to close caption videos/website on campus. The program allowed individuals from every department to caption their own videos. Each college location had 1-2 computers that had access to the site. The program allowed unlimited usage but had to be on a designated computer as we purchased usage by how many computers were used for the program. The trial period ran from January until July 2017, which allowed CGTC to use and determine if it was worth the capital investment to secure. TCSG provided on-going training via webinar on how to use the captioning site.

Effective January 1, 2018, closed captioning will be mandatory for all educational recordings in accordance with the federal Section 508 accessibility laws. TCSG and its Colleges are required to comply with the federal Section 508 accessibility laws. TCSG's approach for compliance is as follows:

- **Assemble Accessibility Teams. TCSG has formed an Accessibility Steering Committee to guide this project. Additionally, each college has designated a point of contact to coordinate their college compliance efforts.**
- **Train staff on standards.** TCSG will provide training on the federal requirements as well as practical training on how to modify and create accessible electronic documents in various formats.
- **Make TCSG and college home pages accessible.** Since the TCSG and college home pages are the starting point for most electronic interactions with prospective and current students, the home pages must be made compliant immediately.

- **ENSURE NEW CONTENT IS ACCESSIBLE.** Once training is complete, only accessible content should be posted to the college web sites. Colleges should develop a procedure for testing and remediating content before it is posted to the web.
- **DEVELOP COLLEGE COMPLIANCE PLANS.** Each college will be responsible for developing a compliance plan to identify and remediate inaccessible ICT. The compliance plan should include an approach for identifying and fixing web content, applications and course materials.
- **USE EVALUATION TOOLS.** TCSG and its colleges will use automated evaluation tools to perform accessibility assessments of TCSG and college web pages, applications and online content.
- **REMOVE NON-COMPLIANT CONTENT FROM WEB SITES.** TCSG and its colleges are responsible for bringing web content into compliance by established timeframes. Colleges may decide to remove inaccessible content from their web sites if it fails to substantially comply with federal standards.
- **MONITOR PROGRESS.** Periodically, TCSG will use its automated evaluation tool to run reports for each of the TCSG and college websites in order to monitor and document progress toward the compliance plans. Colleges will also be expected to monitor progress and submit periodic updates on the web and non-web content of their ICT compliance plans.
- **INTEGRATE ACCESSIBILITY INTO PROCESSES AND PROCEDURES.** TCSG and its colleges must think about how processes and procedures may be revised to ensure that new ICT content and technology continue to be accessible. TCSG and its colleges should review procedures for managing web content, procuring ICT technology, developing software applications, and on-boarding staff. Addressing accessibility on the front-end is more efficient and provides a clear path to ongoing compliance.

Camtasia was utilized to provide an additional assistive services. For example, nursing faculty can record the correct way to extract blood from a patient; or how to dress or undress utilizing the standard universal precautions. The closed captioning of these recorded trainings occurs automatically; as the computer is trained to learn the voice of the presenter and automatically dictate what was stated. The faculty member was availed the option to edit any erroneous dictation in the closed captioning.

Special Populations was also a vital partner in assisting students. Sign language was incorporated into several classes to provide students with hearing impairments assistive services. There are also language translation services available for those students with language barriers. Sign language classes using Telepresence technology begin in April 2017.

RELATIONSHIPS WITH INTERNAL/EXTERNAL PARTNERS

CGHWA Advisory Board

The CGHWA Advisory Board was created for business and industry partners to actively participate in supporting the grant. This support was by assisting with program development and providing insight to ensure that curriculum developed would meet hiring needs and assist in helping grant participant completers have advance notice of job opportunities. Collaborating with business and industry is vital to the success of the program, as well as the chance for completers to have an early opportunity to compete for available jobs. The CGHWA has several Advisory Board members who are local business

leaders. This board will continue to meet to advise and provide Subject Matter Expert (SME) expertise for existing Programs of Study, new certificates, diplomas and other new educational enhancement initiatives and most importantly, local industry trends. The responsibility of ensuring continued involvement and guidance from the Advisory Committee resides with the Institutional Effectiveness Department. The inclusion of academic affairs, student affairs and business financial services as a part of the CGHWA Advisory Board ensures a holistic approach to student success was garnered with the business and industry partners.

Workshops/Outreach

In the Coaching section of the Sustainability Plan, a list of CGTC Career Services workshops were listed. The workshops covered several important aspects necessary for student success in the area of seeking and gaining employment.

As it relates to external partners, the Georgia Department of Labor (DOL) sponsored career panels, mock interviews, networking sessions, and hands-on-labs. The collaboration with the local Georgia DOL offices allowed continued awareness of the programs and services being offered for students in the community. The collaborations with the college on career fairs was also a form of outreach.

Another area of outreach involved Navicent Health, a local healthcare industry partner, whom collaborated with the College to assist the Cardiovascular Technology program participants with opportunities for gainful employment. The collaboration entailed CGTC students obtaining employment or “on the job” training in their field, while continuing to work toward completion of requirements for their credential.

Articulation Agreements

The College, under the umbrella of the Technical College System of Georgia (TCSG), currently has 26 articulation agreements with University System of Georgia (USG) institutions. These articulation agreements are formal agreements to transfer credits from one educational institution or system to another. CGTC graduates can take advantage of several local and statewide articulation agreements to minimize repeating coursework and to facilitate a smooth transfer of earned credits into a four-year college or university. The TCSG-USG agreement specifies 27 general education courses that are guaranteed to transfer between SACSCOC-accredited institutions statewide. The college will continue to build, maintain and expand agreements between CGTC and four year institutions statewide. Of the 27 transferrable courses, 3 are taught via the BlendFlex instructional model.

BUDGET PROCESSES

Annually, the Academic Affairs Vice President submits budget requests for new initiatives and/or programs after careful consultation and engagement with the Deans. The Vice President of Academic Affairs evaluates and prioritizes proposals and recommends those identified as high priorities to the

College Executive Leadership. This Executive Leadership chaired by the President evaluates all college proposals, and makes recommendations to fund those that are determined most critical for the college to introduce or sustain. In addition, the input from advisory committees comprised of local business and industry leaders is also considered when credentials and/or course content is proposed to be updated. The BlendFlex initiative is one of the Executive Leadership initiatives that has been deemed relevant to continue enhancing the educational growth of students and plans are to financial sustain the program upon the ending of the grant funded period.

CONCLUSION:

The DOL sustainability process was developed utilizing feedback from the CGTC faculty, staff, students and business and industry partners. The overall consensus from the aforementioned list was to sustain vital portions of the DOL grant and to make an effort to develop internal collaborations among college departments and external partners that would allow services to students to be as unaffected as possible by the eventual end of grant funding.

Appendix H. People Touched by the Grant

TAACCCT Meetings and Presentations Log		
Date	**Nature of Meetings or Presentations**	**Total # of Attendees**
1/31/2014	Inaugural TAACCCT Grant Steering Committee Mtg.	8
2/20/2014	Steering Committee Meeting with External Evaluator, Dr. Terri Manning to solidify the set-up of the cohorts, data collection and other evaluative systems.	10
3/21/2014	Steering Committee Meeting to discuss grant funded staff selections process, smarthinking tutorial services, proposed BlendFlex pilot for summer 2014 and data collection & external evaluator update	11
4/21/2014	Meeting with Technology department to discuss all TAACCCT grant funded equipment purchases and needs	4
4/28/2014	Steering Committee meeting to discuss 1. Equipment Installation and Readiness (Gardner Long & Carol Lee) 2. Academic Test Pilot for Summer 2014 (Amy Holloway & Paula Pena) 3. Staffing Acquisition and Job Descriptions (Carol Lee) 4. Training with External Evaluator (Demetrius Smith)	14
5/7 - 5/8/2014	Meeting with External Evaluator to discuss employee acquisition updates, evaluation process, recruitment, health science faculty development and professional development	11
5/20/2014	Meeting with Marketing to design print and visual media for recruitment of program participants. Provide marketing with an overview of the TAACCCT grant.	3
6/3/2014	The session was designed to acclimate the Career Services Division to all of the great educational growth opportunities that are being availed to students who are either TAA, WIA, Veteran or dependent and unemployed or underemployed are interested in pursuing or presently enrolled in any of the health care programs at CGTC.	5
6/10/2014	Required informational session on TAACCCT grant related to health care instruction was presented to ALL health science faculty. Meeting was conducted by Project Director Demetrius Smith and Educational Technology Director Carol Lee.	100
6/26/2014	TAACCCT Grant presentation to the Psychology Department	5
7/8- 7/9/2014	BlendFlex strategy discussed during open dialogue at session	30
7/15/2014	BlendFlex strategy professional development session provided to CGTC faculty and staff.	25
7/22/2014	Evaluation and Data Collection Conference Call with B. Quinn & D. Smith to discuss plans for forthcoming meetings.	2
7/28 - 7/31/2014	Round 3 Grantees convened to learn from the Round 1 and 2 grantees about the best practices as well as to discuss accomplishments thus far with our Round 3 grants. BlendFlex strategy discussed in general sessions and with conference attendees.	50
8/7/2014	BlendFlex strategy discussed with Tracey Thornton, Special Assistant to U.S. Congressman, Sanford D. Bishop, Jr. in preparation for a Town Hall meeting U.S. Secretary of Labor, Thomas Perez in Atlanta, GA in collaboration with Albany Technical College.	8

8/22/2014	Town Hall meeting which was hosted by U.S. Congressman Sanford D. Bishop, Jr. with U.S. Secretary of Labor, Thomas Perez, as the special guest. Dr. Ivan Allen, CGTC President, Mr. Jeff Scruggs, Executive Vice President, Mrs. Deborah Burks, Vice President of Institutional Effectiveness, Mrs. Bonnie Quinn, Director of Institutional Effectiveness and Mr. Demetrius Smith, CGHWA Project Manager were present at the Roundtable at the Georgia Power Corporate Headquarters in Atlanta, GA to witness this great meeting. CGTC's Director of Global Initiatives, Mr. Rick Hutto, served as the Moderator for the event. It was streamed live from Atlanta to CGTC and Albany Technical College, both locations had faculty, staff, industry partners, area DOL staff and a representative from Team Bishop Staff on hand. The event was a huge success!	100
8/25 - 8/26/2014	Dr. Manning provided a report on the evaluation tasks and timeline for data collection. Faculty, Staff and Student Forums were developed to gain insight into the perception of the BlendFlex strategy and how to enhance going forward. Updates about enhances on the BlendFlex strategy from Institutional Effectiveness, Student Affairs, Career Services and Academic Affairs were presented to the External Evaluator.	20
9/15 - 9/16/2014	The Technical College System of Georgia sponsored a 2 day workshop with breakout sessions and seminars to update the state technical leadership on the updates and enhancements planned for the ensuing school year, 2014-2015. Provided general information on the TAACCCT grant initiative and BlendFlex strategy during sessions and with random colleagues.	40
9/29 - 10/3/2014	Attended the TAACCCT ON! 2014 conference co-hosted by Kansas Round 1 TRAC-7 Consortium and OPEN Professionals Education Network. The conference was focused on peer-to-peer sessions and to provide inclusion of OPEN brought a special focus on supporting round 1 TAACCCT grantee participation, showcasing of round 1 grantee work and planning completion and close-out of round 1 projects. All round 3 grantees were provided a 2 hour session to discuss their individual projects to include best practices and lessons learned.	30
10/20/2014	Area business and industry partners convened for the inaugural CGHWA Advisory Board meeting. Information on the TAACCCT grant funded BlendFlex strategy was presented to the volunteer board members.	8
10/29 - 10/30/2014	Meeting with External Evaluator to discuss employee acquisition updates, evaluation process, recruitment, health science faculty development and professional development. External Evaluator also conducted focus groups with BlendFlex faculty, BlendFlex students and non-BlendFlex students to garner their feedback about best practices and enhancements or services needed to make the project more successful.	30
11/3 - 11/5/2014	Attended the National TAACCCT Rounds 2 AND 3 Convening in Arlington, VA to learn about all of the ambitious initiatives and promising results that have emerged and lessons learned from the earlier round of the TAACCCT grantees nationwide. The BlendFlex strategy was discussed with attendees during lunch and open sessions about what the project entailed.	50
11/17 - 11/19/2014	Attended the Regional Sector Strategies Convening to to learn about all of the ambitious initiatives and promising results that have emerged and lessons learned from the earlier round of the TAACCCT grantees from the region. The BlendFlex strategy was discussed with attendees during lunch and open sessions about what the project entailed.	25
12/3/2014	Visited BlendFlex courses and provided and displayed new BlendFlex flyers for recruitment of participants.	60

12/4/2014	Visited BlendFlex courses and provided and displayed new BlendFlex flyers for recruitment of participants.	60
12/15/2014	Meeting with Middle Georgia WIOA Leadership. Introduced the WIOA Leadership Staff to the TAACCCT grant funded BlendFlex strategy and the great educational enhancements that it can provide students that they serve. Leadership staff invited and accepted the invitation to join the CGHWA Advisory Board.	7
1/14/2015	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	50
2/11/2015	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	40
2/17/2015	Provided hand outs and other useful documents in advance and assisted Mrs. Willis with getting more acclimated to the TAACCCT grant management process.	2
2/18 - 2/19/2015	VSU Center for E-Learning hosted a conference where a session was presented on the TAACCCT grant funded BlendFlex strategy.	20
2/24/2015	Steering Committee meeting to discuss Preliminary Data from Fall 2014 BlendFlex Courses, Proposed BlendFlex Courses through 2016, Budget Updates, FPO Monitoring Visit Planning, Departmental Reports and CGTC High School Senior Recruitment Days	15
2/26/2015	Meeting with CGHWA Advisory Board to 1. Update on the CGHWA's BlendFlex courses completion data and Faculty Professional Development course; 2. Selection of a Chairperson for the Advisory Board; 3. Updates on potential employment, internship opportunities and participant services with your business; 4. Availability on April 6th from 1P-2P for a meeting with FPO at CGTC Warner Robins Campus, 80 Cohen Walker Drive, Building A Boardroom, Warner Robins, GA 31088.	10
2/27/2015	Presented a 2 minute BlendFlex Promotional Video, gave a 2 minute overview, provided flyers to attendees and answered questions about the strategy.	200
3/4/2015	Presented a 2 minute BlendFlex Promotional Video, gave a 2 minute overview, provided flyers to attendees and answered questions about the strategy.	250
3/11/2015	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	40
3/12/2015	Presented a 2 minute BlendFlex Promotional Video, gave a 2 minute overview, provided flyers to attendees and answered questions about the strategy.	150
3/18 - 3/20/2015	BlendFlex strategy discussed in a session about technological advances to enhance learning opportunities at CGTC.	50
3/25/2015	Provided hand outs and other useful documents to attendees to inform them about the TAACCCT grant funded BlendFlex strategy and services it provides to participants.	100
3/31/2015	Provided advisory board with BlendFlex strategy updates, discussed FPO planned visit, critiqued BlendFlex recruitment flyers, provided information about the proposed BlendFlex courses through fall 2015.	10
4/8 - 4/9/2015	BlendFlex strategy discussed in a session about technological advances to enhance learning opportunities at CGTC.	40
4/20/2015	Visited 3 BlendFlex courses and provided and displayed new BlendFlex flyers for recruitment of participants.	40

4/21 - 4/23/2015	TCSG Executive Director of Georgia Virtual Technical Connection, Robert Keown, lead the discussion. CGTC staff provided a presentation on the BlendFlex strategy.	45
5/13/2015	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	40
5/14, 15, 18/2015	Visted all campuses to ensure all flyers and recruitment materials were appropriately displayed and up to date.	40
6/4/2015	Steering committee convened to discuss BlendFlex recruitment and promotional materials, TAACCC grant budget and modifications update, FPO visit follow-up, Year One Overview Response to the External Evaluator, Spring Semester BlendFlex coures data and departmental reports.	15
6/10/2015	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	40
6/18/2015	Visited 4 BlendFlex courses and provided and displayed new BlendFlex flyers for recruitment of participants.	25
6/24 - 25/2015	Meeting with External Evaluator to discuss latest data and project successes and challenges. External Evaluator met with BlendFlex faculty, students and CGHWA Advisory Board members.	35
7/1/2015	Attended the Veterans Town Hall meeting hosted by U.S. Congressman Sanford D. Bishop, Jr. with special guest, U.S. Secretary of Veteran Affairs McDonald. Provided some flyers to attendees that I dialogued with about the opportunities for educational enhancement provided via the TAACCCT grant funded BlendFlex strategy.	15
7/7/2015	Met with Carol Willis from Southwest Georgia Technical College. Provided her with an overview and information about our BlendFlex strategy as well as information to prepare her for her FPO visit.	3
7/8/2015	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	40
7/13/2015	Visited ALHS 1011, BIOL 2114 and PSYC 1010 BlendFlex courses and provided feedback and obtained feedback on BlendFlex flyers for recruitment of participants.	20
7/14/2015	Visited ALHS 1060 BlendFlex course and provided feedback and obtained feedback on BlendFlex flyers for recruitment of participants.	10
8/18/2015	Visited ALHS 1060 BlendFlex course and introduced the students to the new Health Science Success Coach and provide information about the BlendFlex strategy and services.	12
8/18/2015	Project Manager spoke with 11 students about the BlendFlex support services and availabilty of the Health Sceince Success Coach, who was also introduced to the students.	11
8/18/2015	Introduced the Health Sciences Success Coach to Academic Success Center Director to reiterate the CGHWA mission and how important the role of collaboration with the Academic Success Center is to the project.	1
8/18/2015	Introduced the Health Sciences Success Coach to the Military and Veteran Service Coordinator to ensure communication and event planning was collaborated on as it related to the TAACCCT grant funded CGHWA.	1
8/19/2015	Health Sceince Success Coach spoke with students about the uniqueness of the class and opportunities available to them with Blendflex. Mrs. Patterson from the Academic Success Center also spoke to the students and told them of the opportunities there and how they had helped students in Blendflex	6

	classes. Health Science Success Coach informed students that she would be back around midterm and registration to give them priority for additional Blendflex offerings.	
8/19/2015	Health Sceince Success Coach spoke to students about BlendFlex course offerings and about the upcoming visits to satellite campuses this semester to provide assistance with any questions or concerns.	11
8/19/2015	Met with Warner Robins Campus Special Populations Director Meeting, Donna Dutcher, about the Early Alert Hardship system in place and how this system is going to benefit students that are struggling and trying to get their education. I told her how I believed the Blendflex formatted classes would benefit the spec pop student. The flexibility of the class could certainly help them achieve.	1
8/25/2015	Health Sceince Success Coach spoke with 10 students about the BlendFlex support services.	10
8/25/2015	Health Sceince Success Coach spoke with 10 students about the BlendFlex support services.	10
8/26/2015	Health Science Success Coach spoke with about 7 students outside Dr. Clarington's and Mrs. J. Wilcox's classes around 9:15- 9:30 about technical difficulties with the BlendFlex courses and access to lectures.	7
8/26/2015	Health Science Success Coach spoke with about 10 students in Blendflex class on WR campus as well as students attending via Cisco Telepresence from RO, MA and MI	16
8/26/2015	Met with Julia Nell Shaw, Assistant Vice President of Student Affairs, to reacquaint her with the Health Science Success Coach and requested involvement with the Early Alert students and retention.	1
8/27/2015	Met with Dann Webb concerning how the Health Science Success Coach can assist with Spring Semester Selection.	1
8/27/2015	Met with 12 Blendflesx students on the WR campus. Talked to student about my services and encouraged students to contact me with issues that I may assist with. 4 student attended via Cisco Telepresence	16
9/1/2015	Visited the campuses to introduce the New Health Sciences Success Coach to the staff, speak with students and ensure the new, improved BlendFlex recruitment flyers were displayed.	60
9/9/2015	Visited the campuses to introduce the New Health Sciences Success Coach to the staff, speak with students and ensure the new, improved BlendFlex recruitment flyers were displayed.	100
9/10/2015	Disseminated over 50 student recruitment flyers, 25 business and industry flyers and 45 ready reference guides to satellite campus staff and students.	50
9/10/2015	Disseminated over 50 student recruitment flyers, 25 business and industry flyers and 45 ready reference guides to satellite campus staff and students.	50
9/10/2015	Disseminated over 50 student recruitment flyers, 25 business and industry flyers and 45 ready reference guides to satellite campus staff and students.	50
9/17/2015	Attended employers conference sponsored by the Georgia Department of Labor, CGTC, Career Smart, Macon Occupational Medicine and the Middle Georgia Employers Committee, LLC for Bibb, Houston, Putnam and surrounding counties. Disseminated over 50 employer flyers and 25 student recruitment flyers.	50
9/29/2015	Disseminated over 100 student recruitment flyers and 75 business and industry flyers to advisory board members and CGTC Career Services.	175
9/30/2015	QEP Kick Off Session: Disseminated over 100 student recruitment flyers.	100

10/7/2015	BlendFlex Faculty Meeting: Disseminated over 100 student recruitment flyers, 10 faculty/staff recruitment flyers and ready reference guides to all newly recruited BlendFlex faculty.	120
10/8/2015	REACH Session: Disseminated 20 student recruitment flyers to REACH attendees to disseminate to their fellow students who were healthcare students.	20
10/12/2015	Provided V. Bailey with a list of over 20 potential WIOA eligible students and 50 student recruitment flyers for dissemination to students that she counsels.	50
10/13-16/2015	Disseminate BlendFlex strategy information, recruitment materials and fact sheets to attendees at break-out sessions and networking sessions.	150
10/22/2015	Provided an overview on the BlendFlex strategy, recruitment materials and fact sheets to attendees at training session.	10
10/23/2015	Video presentation on the BlendFlex was shown to attendees at T.A.G. Excalibur Award of Excellence ceremony. CGTC was a finalist for the award.	300
10/27/2015	BlendFlex Faculty Professional Development: Spoke to 5 new BlendFlex faculty at their first professional development session; provided overview about the BlendFlex strategy and recruitment flyers and ready reference guide.	70
10/28/2015	Provided a detailed presentation on the use of TelePresence and the BlendFlex strategy to conference attendees from all over the United States.	30
11/5/2015	CGHWA Steering Committee Meeting: Disseminated 100 student recruitment flyers, 50 faculty recruitment flyers, 10 Fact Sheets and 50 ready reference guides.	210
11/16-17/2015	Disseminated over 75 student recruitment flyers, 75 business and industry flyers and 75 ready reference guides to attendees from all over the U.S.	75
11/19/2015	Disseminated over 25 student recruitment flyers, 25 business and industry flyers and 10 ready reference guides to the satellite campus staff and students.	25
11/19/2015	Disseminated over 25 student recruitment flyers, 25 business and industry flyers and 10 ready reference guides to the campus staff and students.	25
11/19/2015	Disseminated over 50 student recruitment flyers, 25 business and industry flyers and 25 ready reference guides to the campus staff and students.	50
11/19/2015	Disseminated over 25 student recruitment flyers, 25 business and industry flyers and 10 ready reference guides to satellite campus staff and students.	25
11/20/2015	Disseminated over 75 student recruitment flyers, 25 business and industry flyers and 10 ready reference guides to the main campus staff and students.	75
11/20/2015	Disseminated over 25 student recruitment flyers, 25 business and industry flyers and 10 ready reference guides to satellite campus staff and students.	25
11/20/2015	Disseminated over 15 student recruitment flyers, 10 business and industry flyers and 5 ready reference guides to satellite campus staff and students.	15
11/20/2015	Disseminated over 25 student recruitment flyers, 25 business and industry flyers and 10 ready reference guides to satellite campus staff and students.	25
12/9/2015	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	25
1/12/2016	Disseminated over 20 student recruitment flyers and met with the Satellite Director and Instructional Aides at the satellite campus to discuss the selective admissions process and updates on the BlendFlex course offerings.	20
1/12/2016	Disseminated over 20 student recruitment flyers and met with the Satellite Director and Instructional Aides at the satellite campus to discuss the selective admissions process and updates on the BlendFlex course offerings.	20

1/12/2016	Disseminated over 20 student recruitment flyers and met with the Satellite Director and Instructional Aides at the satellite campus to discuss the selective admissions process and updates on the BlendFlex course offerings.	20
1/13/2016	Hosted the monthly Middle Georgia Employers Committee in the CGTC Geico Center at the Macon Campus and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	35
1/14/2016	Disseminated over 20 student recruitment flyers and met with the Satellite Director and Instructional Aides at the satellite campus to discuss the selective admissions process and updates on the BlendFlex course offerings.	20
1/14/2016	Disseminated over 20 student recruitment flyers and met with the Campus Director to discuss the selective admissions process and updates on the BlendFlex course offerings.	20
1/15/2016	Disseminated over 50 student recruitment flyers, 25 business and industry flyers and 25 ready reference guides to the campus staff and students.	50
1/27/2016	Visited the ALHS 1040 Course to speak with students and take publicity pictures	7
1/28/2016	Visited the BIOL 2113 Course to speak with students and take publicity pictures	9
1/29/2016	Interviewed TAACCCT Program Assistant applicants and informed them more definitive about what the grant entails and how their potential employment will assist with complete the close out tasks.	4
2/9-11/2016	Disseminated over 50 student recruitment flyers, 50 business and industry flyers and 50 ready reference guides to attendees from all over the U.S.	50
3/2/2016	Attended a session held at CGTC Macon in I232 and provided attendees with information on the BF model.	30
3/2/2016	Health Science Success Coach provided a detailed overview about BlendFlex, selective admissions and other program requirements. Orientation was attended via TelePresence by students in Macon and Milledgeville.	99
3/9/2016	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	25
3/16-18/2016	Provided an overview on the use of TelePresence and the BlendFlex strategy to colleagues from all over the state of Georgia.	35
3/23/2016	Disseminated over 50 student recruitment flyers, 50 business and industry flyers and 50 ready reference guides to attendees.	50
4/12/2016	Provided an overview on the use of TelePresence and the BlendFlex strategy to colleagues from all over the state of Georgia.	50
4/13/2016	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	25
5/11/2016	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	25
5/24/2016	Presented to 2 learning support classes about the BF strategy and other support services available to them as students.	50
5/25/2016	Presented to 2 learning support classes about the BF strategy and other support services available to them as students.	50
5/31/2016	Disseminated over 25 student recruitment flyers, 25 business and industry flyers and 10 ready reference guides to satellite campus staff and students.	25
5/31/2016	Disseminated over 10 student recruitment flyers, 10 business and industry flyers and 5 ready reference guides to satellite campus staff and students.	10

6/1/2016	Disseminated over 8 student recruitment flyers, 8 business and industry flyers and 15 ready reference guides to satellite campus staff and students.	8
6/1/2016	Disseminated over 35 student recruitment flyers, 5 business and industry flyers and 35 ready reference guides to satellite campus staff and students.	35
6/2/2016	Disseminated over 8 student recruitment flyers, 8 business and industry flyers and 15 ready reference guides to satellite campus staff and students.	8
6/2/2016	Disseminated over 10 student recruitment flyers, 10 business and industry flyers and 5 ready reference guides to satellite campus staff and students.	10
6/3/2016	Disseminated over 50 student recruitment flyers, 25 business and industry flyers and 25 ready reference guides to the campus staff and students.	50
6/8/2016	Disseminated over 35 student recruitment flyers and 35 ready reference guides to health science students interested in the new Nursing Program.	35
6/15/2016	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	25
6/15/2016	Disseminated 5 student recruitment flyers and 5 ready reference guides to student and her family.	5
6/28/2016	Disseminated over 40 student recruitment flyers and 40 ready reference guides to WIOA staff at function.	40
6/30/2016	Disseminated over 35 student recruitment flyers and 35 ready reference guides to hospital staff, interns and patients.	35
7/20/2016	Health Science Success Coach provided a detailed overview about BlendFlex, Registered Nursing selective admissions and other program requirements.	74
7/20/2016	Disseminated over 40 student recruitment flyers and 40 ready reference guides to students on campus.	40
8/10/2016	Attended the monthly Middle Georgia Employers Committee and disseminate information about the BlendFlex strategy and educational opportunities available at CGTC.	25
8/22/2016	Disseminated over 80 student recruitment flyers, 25 business and industry flyers and 45 ready reference guides to satellite campus staff and students.	80
8/23/2016	Disseminated over 50 student recruitment flyers, 25 business and industry flyers and 45 ready reference guides to satellite campus staff and students.	50
8/30/2016	Disseminated over 50 student recruitment flyers, 25 business and industry flyers and 45 ready reference guides to satellite campus staff and students.	50
9/2/2016	Disseminated over 50 student recruitment flyers, 25 business and industry flyers and 45 ready reference guides to satellite campus staff and students.	50
9/13/2016	Provided an overview on the use of TelePresence and the BlendFlex strategy to colleagues from all over the southeastern United States.	40
10/4/2016	Provided a detailed presentation on the use of TelePresence and the BlendFlex strategy, required technology and BlendFlex Faculty Professional Development to colleagues from the Seward County Community College, Liberal, Kansas. The vistors were able to attend a BlendFlex course from beginning to end as well as engage the students at the culmination of the class.	4
11/11/2016	Provided an overview on the use of TelePresence and the BlendFlex strategy to colleagues from all over the nation via a virtual conference.	50
1/12/2017	Provided a written overview on TelePresence and the TAACCCT funded BlendFlex strategy in the packet for the University Business Models of Excellence Application; Nominated by CISCO.	5
2/28/2017	Disseminated over 35 student recruitment flyers to students interested in the BlendFlex Instructional Model.	35
2/28/2017	Disseminated over 4 student recruitment flyers to students interested in the BlendFlex Instructional Model.	4

2/28/2017	Disseminated over 2 student recruitment flyers to students interested in the BlendFlex Instructional Model.	2
3/1/2017	Disseminated over 48 student recruitment flyers to students interested in the BlendFlex Instructional Model.	48
3/1/2017	Disseminated over 1 student recruitment flyer to a student interested in the BlendFlex Instructional Model.	1
3/1/2017	Disseminated over 6 student recruitment flyers to students interested in the BlendFlex Instructional Model.	6
3/1/2017	Disseminated over 1 student recruitment flyer to a student interested in the BlendFlex Instructional Model.	1
3/2/2017	Disseminated over 34 student recruitment flyers to students interested in the BlendFlex Instructional Model.	34
3/3/2017	Disseminated over 4 student recruitment flyers to students interested in the BlendFlex Instructional Model.	4
3/8/2017	Disseminated over 1,100 copies of the CGTC Institutional Effectiveness "Review" to all faculty and staff highligting the BlendFlex Instructional Model achievements over the course of the grant.	1,100
3/14/2017	Disseminated an overview and copy of the CGTC Institutional Effectiveness "Review" to the ATD coaches highligting the BlendFlex Instructional Model achievements.	2
5/1/2017	Disseminated over 25 student recruitment flyers to students interested in the BlendFlex Instructional Model.	25
5/1/2017	Disseminated over 7 student recruitment flyers to students interested in the BlendFlex Instructional Model.	7
5/2/2017	Disseminated over 19 student recruitment flyers to students interested in the BlendFlex Instructional Model.	19
5/2/2017	Disseminated over 10 student recruitment flyers to students interested in the BlendFlex Instructional Model.	10
5/3/2017	Disseminated 3 student recruitment flyers to students interested in the BlendFlex Instructional Model.	3
5/3/2017	Disseminated over 10 student recruitment flyers to students interested in the BlendFlex Instructional Model.	10
5/4/2017	Disseminated over 36 student recruitment flyers to students interested in the BlendFlex Instructional Model.	36
5/8/2017	Uploaded TAACCCT grant funded BlendFlex Instructional Model documents to skillscommons.com	0
5/13/2017	Provided a teleconference presentation on the use of TelePresence and the BlendFlex strategy, required technology and BlendFlex Faculty Professional Development to colleagues from Chattahoochee Technical College, Marietta, GA.	5
8/9/2017	Disseminated over 30 student recruitment flyers to employers in the Middle Georgia area about the BlendFlex Instructional Model and how it could benefit their employees.	30
9/14/2017	Disseminated over 9 student recruitment flyers to students interested in the BlendFlex Instructional Model.	9
Total Attendees: 6,964		