Retraining the Gulf Coast through Information Technology Pathways: Impact Evaluation Interim Report

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

The Retraining the Gulf Coast Workforce through Information Technology (IT) Pathways Consortium project is a four-year project funded by the Department of Labor's (DOL) Round Two Trade Adjustment Community College grants program. The grant was awarded in September 2012 to Bossier Parish Community College (BPCC), who is leading a consortium of eight additional colleges across the states of Louisiana and Mississippi. The project's objective is to capitalize on the region's growing IT sector and its increased demand for skilled labor by training almost 2,000 TAA eligible workers, veterans, and other individuals with basic skills needs for jobs. In designing the project, the consortium focused on three IT specialty areas: health information technology, cyber security, and industrial information IT. The project includes five inter-connected strategies to help build career pathways that allow students to earn industry -recognized credentials and access in demand job opportunities.

The Aspen Institute Workforce Strategies Initiative (AspenWSI), in collaboration with the Ray Marshall Center for the Study of Human Resources at the Lyndon B. Johnson School of Public Affairs at the University of Texas Austin (The Ray Marshall Center), is conducting an implementation study and a quasi-experimental impact analysis to assess the effectiveness of the project. The Ray Marshall Center (RMC) is the lead for the impact analysis and intends to use a difference-in-difference (DID) approach to estimate the impact of the program on student outcomes. The comparison group will be drawn from students who were not enrolled in IT programs, and this methodology is designed to answer the research question: To what extent did the implementation of the IT pathways program improve student outcomes compared to programs/subjects in the same colleges that were not impacted by the TAACCCT initiative?

This report describes the Gulf Coast IT program participants from the first year of program implementation, which is considered to be the 2013-2014 academic year[1]. In addition, the report provides an update on the Ray Marshall Center's impact evaluation activities and provides an overview of data quality, gaps in data and implications for the impact evaluation.

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[1] The first official year of the grant was 2012-2013, but the majority of that year was dedicated to setting up systems and contracts to implement the grant. With the exception of 2-3 pilots, all colleges officially started work on the grant during the 2013-2014 academic year.

DATA QUALITY

A. Student Academic Data

Student academic data was exported by the Consortium's data partner , the National Strategic Planning & Analysis Research Center (nSPARC) at Mississippi State University, in mid-November and transferred to RMC through the secure protocols laid out in data sharing agreements[2]. This data comprises postsecondary variables requested by RMC (see Appendix A) and captures student demographics, educational background, and educational outcomes. The data provided to us covered a total of 53,889 academic records from the nine participating consortium colleges during the academic years 2012-2013 and 2013-2014. We will use this data to conduct our planned impact analyses; specifically, we will:

1. Identify an appropriate comparison group for GCIT program participants, using propensity score matching methods.

2. Track educational outcomes for the treatment and comparison groups in the first academic year of program implementation, as well as the treatment and comparison groups from the year prior, using a difference-in-differences estimation method.

In addition to the data, RMC received a detailed data dictionary and notes regarding missing data issues. We worked with nSPARC and the consortium to ensure that the data were clean and accurate, and received explanations for questions we had regarding the data. We also assessed whether the data transferred include all of the variables needed for the impact evaluation. After a careful review of the data provided to us, we have identified the following issues with the data.

  i.   Missing variables

 ii.   Missing data for students in non-credit courses

iii.   Missing data for students in for-credit courses

iv.   Missing workforce data

 v.   No comparison data for impact analysis

In the following sections, we discuss in detail these concerns, the implications for the impact evaluation, and the steps we are taking to address those concerns.

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[2] Data sharing agreements were developed over summer 2014 and signed in July 2014.

I.   *Missing Variables*

nSPARC noted that some of the variables requested by RMC were not available for colleges in Mississippi, a few variables were not available for colleges in Louisiana, and a few variables were not available for any of the nine Consortium colleges (see Table 1). Because we have other non-missing demographic and academic background measures that we can use to construct a matched comparison group, we plan not to use the following variables: high school GPA, high school class rank, academic standing, cumulative hours earned, enrolled code, and total contact hours. However, the educational outcome variables (credential level, credential major and credential date) will be required for both outcome reporting and our impact analysis. BPCC and nSPARC are currently working to ensure that these educational outcome variables are included in the next data export planned for March 31, 2015.

Table 1. Missing Variables

Missing for Mississippi Colleges	Missing for Louisiana Colleges	Missing for all Colleges
High School GPA	Credential Level	Credential Date
High School Class Rank	Credential Major	Total Contact Hours
Academic Standing		
Cumulative Hours Earned		
Enrolled Code		

II.   *Missing Data for Students in Non-Credit Courses*

During a conference call in August, it was brought to RMC's attention that two consortium colleges – Meridian Community College and Northeast Mississippi Community College – are only offering non-credit training courses in their GCIT program. As a result, the two colleges had not collected data for these students on a majority of the variables in our data request (see Appendix B). Initially, the Consortium planned to work with the two colleges directly to try and collect the missing data. As described in our previous progress brief[3], we reviewed and prioritized the missing variables according to our evaluation needs. However,

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[3] Ray Marshall Center for the Study of Human Resources. (2014). *Retraining the Gulf Coast Workforce through IT Pathways: Y2Q4 Progress Brief*. Austin, TX.

when the data was ready for export in mid-November, we were informed that despite the consortium's best efforts, these data were simply not available for the non-credit students.

This missing data required us to reexamine our proposed impact evaluation design. Upon reviewing the data, we found that these non-credit students make up about 18% of the total student participants. We also found that the non-credit students are missing key indicators of academic background, program participation and academic success (see Appendix C). The extent of missing data for these non-credit students poses significant challenges to identifying a matched comparison group and conducting our planned impact analyses for this group of students.

Our plan now is to move forward with the impact analyses as designed (using a combination of propensity score matching and difference-in-differences estimation) for students in for-credit programs. Since our study sample will be reduced, we anticipate reduced power of our analyses and a weakened ability to draw causal inferences. RMC will also work with BPCC to explore alternatives for identifying a comparison group for the non-credit training students, in order to study impacts.

In addition, we will describe and analyze outcomes for non-credit students. BPCC and nSPARC to work directly with the colleges to obtain educational outcome measures for these students such as a pass/fail course outcomes, Industry Based Credential attainment, and Mississippi Workforce Certificate attainment.

III.   *Missing Data for Students in For-Credit Courses*

For students in for-credit courses, we found that demographic data, admission data, and course enrollment data was complete for nearly all academic records, with a few notable exceptions (see Appendix C). Although course CIPs are missing for all Mississippi academic records, this is not a concern since we can use the Major CIP (i.e. CIP for the major field of study) in constructing the matched comparison groups. For those variables that are missing some data (course grades, high school graduation year, and current term GPA), we intend to impute missing data using standard multiple imputation methods.

IV. Missing Workforce Data

In our original data requests made to LCTCS and nSPARC in March 2014 and April 2014, RMC had requested workforce data on students for up to 3 years prior to their initial enrollment in one of the Consortium institutions. These data are essential for us to study the impact of the program on labor market outcomes. We also wished to use labor market data while constructing our comparison groups since pre-program earnings and work history are useful characteristics to be considered when constructing matched comparison groups. However, the data provided to us in November 2014 did not include any workforce data.

RMC submitted fresh data requests in December 2014 to LCTCS and nSPARC that specify the workforce data needed for the evaluation. BPCC, LCTCS and nSPARC are currently compiling this data and plan to include earnings history and employment outcomes data for GCIT participants in the next data export planned for March 31, 2015. LCTCS and nSPARC also currently exploring the feasibility of providing this data for non-participants i.e. the comparison group.

V. No Comparison Data

The student academic data provided to us covered a total of 53,889 academic records from the nine participating consortium colleges during the academic years[4] 2012-2013 and 2013-2014 (see Table 2). After examining the data in detail and conferring with consortium partners, we found that we only have data for:

(1) GCIT participants from the nine Consortium colleges in the first year of program implementation (academic year 2013-2014), and

(2) "Similar" students from the nine Consortium colleges for the year prior to program implementation (academic year 2012 -2013). nSPARC identified "similar" students by matching on the CIP codes for GCIT participants.

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[4] Academic year 2012-2013 includes the Fall 2012 and Spring 2013 semesters, while academic year2013-2014 includes the Fall 2013 and Spring 2014 semesters.

Table 2. Breakdown of Students in nSPARC Academic Data

State	2012 Fall	2013 Spring	2013 Fall	2014 Spring	Total
Louisiana	19,858	21,660	262	263	42,043
Mississippi	5,675	5,231	470	470	11,846
Total	25,533	26,891	732	733	53,889

Table 3 summarizes the cohort groups needed for our impact analyses, which is described in greater detail in our evaluation plan.[5,6] The data we have been provided only allows us to construct Groups 3 and 4 i.e. the treatment groups. However, we do not have the data we need to construct Groups 1 & 2 i.e. the comparison groups. As per our evaluation design, the comparison groups will be drawn from students who enrolled in Consortium colleges but did not enroll in one of the IT pathways programs. We will employ a statistical matching procedure that reduces systematic differences between the treatment and comparison groups on observed characteristics. The goal of this procedure is to create a comparison group of students that are both enrolled in relatively similar educational programs and are observably equivalent to students in the treatment group. This will allow us to produce unbiased estimates of the program's impact. Hence, in order to construct the comparison groups, we need the student academic data for all students at the 9 consortium colleges during the academic years 2012-2013 and 2013-2014. nSPARC is currently working on compiling this data and plans to include this data in the next data export planned for March 31, 2015.

Table 3. Cohort Groups for the Impact Analysis

	Comparison	Treatment
Year 0 (2012-13)	Group 1	Group 3
Year 1 (2013-14)	Group 2	Group 4

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[5] Ray Marshall Center for the Study of Human Resources. (2013). Retraining the Gulf Coast Workforce through IT Pathways: Impact Evaluation Plan. Austin, TX.

[6] Ray Marshall Center for the Study of Human Resources. (2014). Retraining the Gulf Coast Workforce through IT Pathways: Y2Q3 Mid-Year Progress Brief. Austin, TX.

B. Student Intake Data

With assistance from nSPARC, the colleges created a common intake form to collect information on participants enrolled in the program. The intake form collects a wealth of data on GCIT participants' academic background, employment history, financial aid status, and other relevant information. Intake forms were administered to all GCIT program participants by student navigators and the data were entered into the nSPARC web portal. Intake data were exported and provided to RMC in mid-August 2014, and includes all GCIT program participants from the project start. A second updated export was provided to RMC in mid-November 2014.

The intake data provided to us included all the fields from the intake form (listed in Appendix D). In addition, we were provided a detailed data dictionary that described the record layout and how values were coded for each field. Since the intake data is only collected on GCIT participants (i.e. the treatment group), and is not collected on non-participants (i.e. the comparison group) the utility of these data is limited for the purposes of the impact evaluation which compares the treatment group to a matched comparison group. However, the intake data is a rich dataset and is essential for understanding the population served by the program, for providing context to participant outcomes, and for enhancing the implementation evaluation. We use this intake data to comprehensively describe GCIT program participants later in this report.

I.   Missing Data

The extent of missing intake data varies by the type of data, and is summarized with the variable list in Appendix D. Fields related to financial assistance, career and academic goals, and academic needs are all optional and are, on average, missing for a little over half of all participants. In contrast, the fields related to demographics, employment backgrounds and education backgrounds are mostly required and thus are complete for all participants, with a few minor exceptions: place of birth (optional, 48% missing), offender status (required, 16% missing), disability status (optional,19% missing), current or previous employer name (optional, 45% missing), and year completed highest grade (optional, 38% missing). Unsurprisingly, fields related to follow-up outcomes are, on average, missing for about 95% of all participants.

Follow-up data is documented as part of the case management for students at the campus level, and is not required to be entered into the intake portal.

Some fields in the intake form are "required", i.e. the fields are required to be completed by all participants. Of the 31 required fields, a vast majority of the fields are complete with no missing data. However, 4 required fields have extensive missing data: offender status, application date, interview date and FAFSA application date. RMC consulted with nSPARC and determined that offender status, interview date and FAFSA application date were required fields when the intake portal was first deployed; however, these fields were then likely changed to optional once program staff realized that they were not applicable for all students.

But it remains unclear why the application date field is missing for nearly a third of the students in the intake portal. The application date field is a critical field since it indicates a student's entry into the TAACCCT program and is an important measure for evaluation purposes. The consortium colleges are currently working to backfill this field for those students who are missing data. We expect this field to be complete and non-missing in the next data export planned for March 31, 2015.

DESCRIPTIVE PORTRAIT OF TREATMENT GROUP

A. Intake Characteristics

The intake data cover the time period from project start to the date of data export in mid-November 2014, and includes a total of 1,504 unique participants. In the following section, we focus only on students served during the first year of program implementation i.e. the 2013-2014 academic year[7]. We define these first year participants as students who applied for the GCIT program prior to May 01, 2014.

Of the 1,504 students identified in the intake data, we found 523 students who applied for the GCIT program prior to May 01, 2014 and 524 students who applied after May 01, 2014. An additional 457 students (30%) were missing application date. The following sections describe the 523 students who applied for the GCIT program prior to May 01, 2014. Due to the missing application date field, the treatment group we have identified in the data likely does not include all the participants actually served in the first year of program implementation[8]. Therefore, the findings described below should be interpreted with care.

Intake Patterns

Intakes in the first year of program implementation appear to be much higher in Mississippi Consortium colleges than in Louisiana Consortium colleges (see Figure 1): 362 student intakes in Mississippi Consortium colleges compared to 161 student intakes in Louisiana Consortium colleges. Meridian Community College had the most student intakes (see Figure 2), followed by Bossier Parish Community College and Pearl River Community College; Delgado Community College had the smallest number of intakes in the first year of program implementation.

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[7] The first official year of the grant was 2012-2013, but the majority of that year was dedicated to setting up systems and contracts to implement the grant. With the exception of 2-3 pilots, all colleges officially started work on the grant during the 2013-2014 academic year.

[8] We excluded 457 students in the intake data who were missing application dates. Without the application date, we have no way of determining if these students entered the program in the first year of program implementation. As described in previous sections, the Consortium is working on back—filling this missing data.

Figure 1. GCIT Student Intakes, by State

161, 31%

362, 69%

■ Louisiana   ■ Mississippi

Figure 2. GCIT Student Intakes, by College

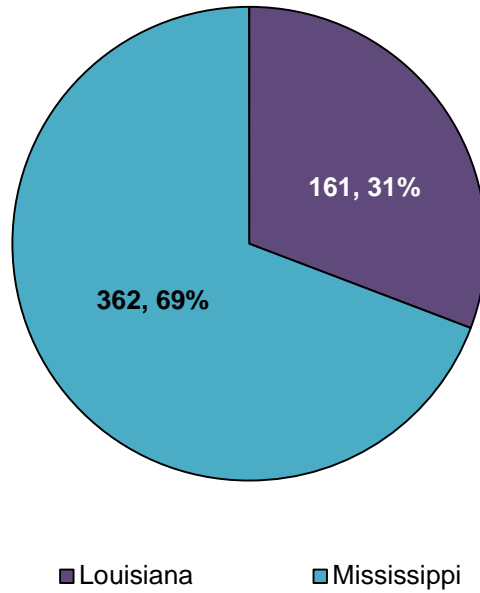| College	Intake
South Louisiana Community College	24
Pearl River Community College	86
Northeast Mississippi Community College	43
Mississippi Delta Community College	30
Meridian Community College	144
Louisiana Delta Community College	24
Delgado Community College	9
Copiah-Lincoln Community College	59
Bossier Parish Community College	104
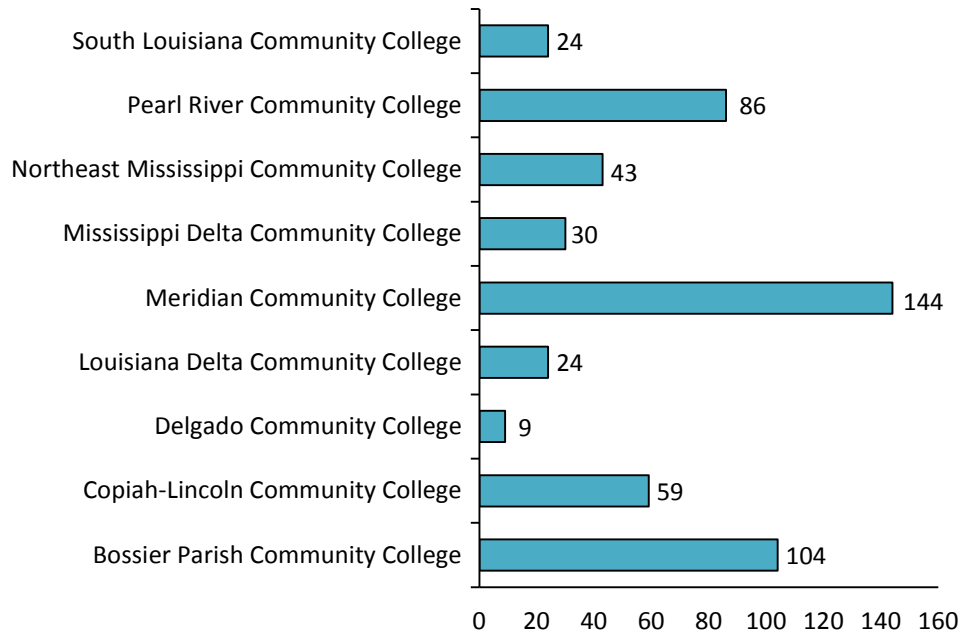
Predictably, student intake was highest at the start of the Fall semester in August 2013, with a smaller peak at the start of the Spring semester in January and February 2014 (see Figure

10

3). While student intake peaked in August 2013 and then dropped the following month in Louisiana Consortium colleges, intake in Mississippi Consortium colleges continued and showed additional small peaks in October and November 2013. Discussions with the Consortium indicate that this may be because of the non-credit courses offered by some Mississippi Consortium colleges: these courses vary in length and begin at different points during the semester. A closer examination of the data by college confirms this – Pearl River Community College had a high number of intakes in October 2013 and Meridian Community College had a high number of intakes in November 2013.

Figure 3. GCIT Student Intakes Over Time
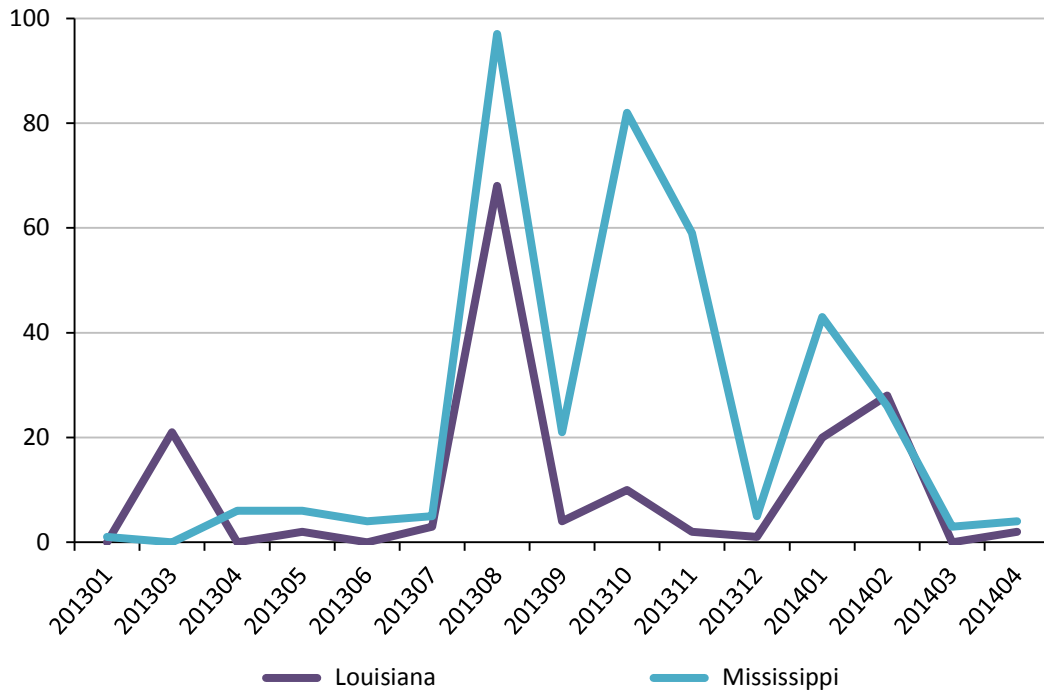
Demographic Characteristics

Demographic characteristics of GCIT participants from colleges in both states looked very similar, with a few notable exceptions (see Figure 4). Three-quarters of GCIT participants (75%) in Mississippi Consortium colleges were female, compared to only about a third of GCIT participants (34%) in Louisiana Consortium colleges. Overall, GCIT participants were mostly white (52%) and African-American (44%). Just 1% of GCIT participants were active-duty military.

Louisiana Consortium colleges had more GCIT participants who were veterans (17%) or eligible family members (8%), compared to Mississippi Consortium colleges (6% and 1% respectively).

Figure 4. Demographic Characteristics of GCIT Students

Figure 4. Demographic Characteristics of GCIT Students

Category	Mississippi	Louisiana
Individual With a Disability	1%	6%
Offender	5%	6%
Active Duty Military	1%	1%
White	51%	53%
Black or African American	46%	39%
Hispanic or Latino	1%	1%
Female	75%	34%
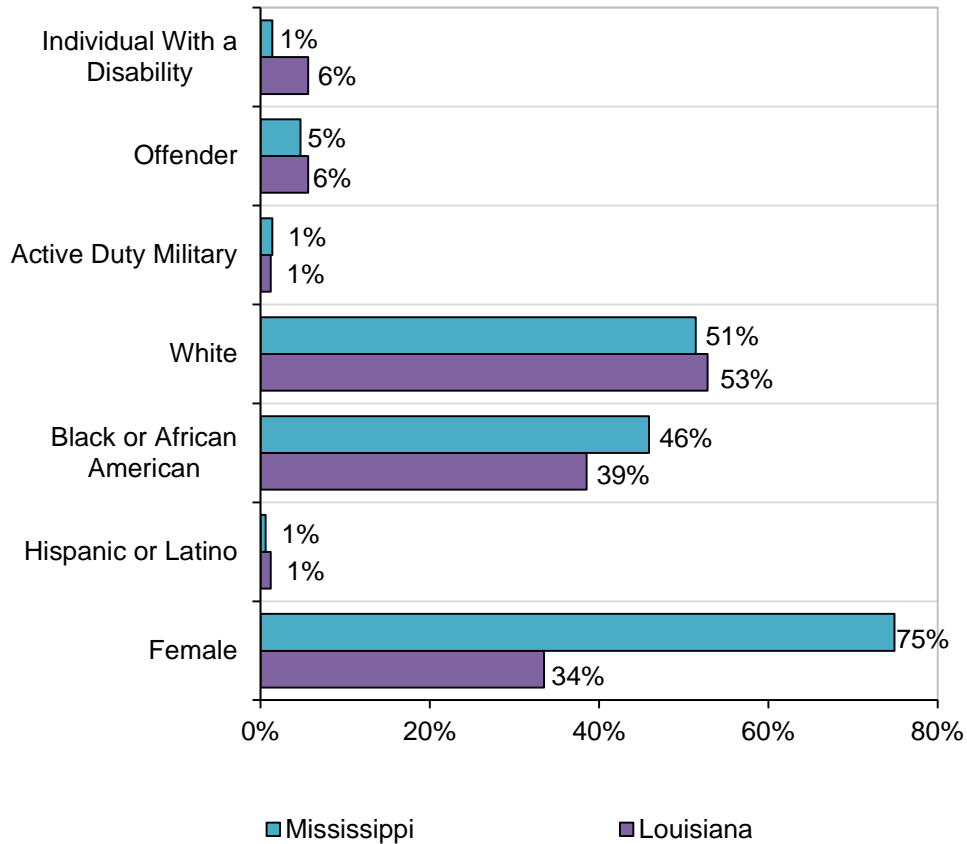
Employment Background

The employment background of GCIT participants from Louisiana Consortium colleges and Mississippi Consortium colleges was very similar (see Figure 5). Only about half of GCIT participants were employed (44%) and about a tenth were dislocated workers (9%). Louisiana Consortium colleges had more GCIT participants who were TAA eligible (16%), compared to Mississippi Consortium colleges (4%).

Figure 5. Employment Background of GCIT Students

Category	Mississippi	Louisiana
Incumbent worker	2%	4%
Dislocated worker	10%	8%
TAA eligible	4%	16%
Ui claimant	6%	3%
Employed	44%	45%

Mississippi   Louisiana
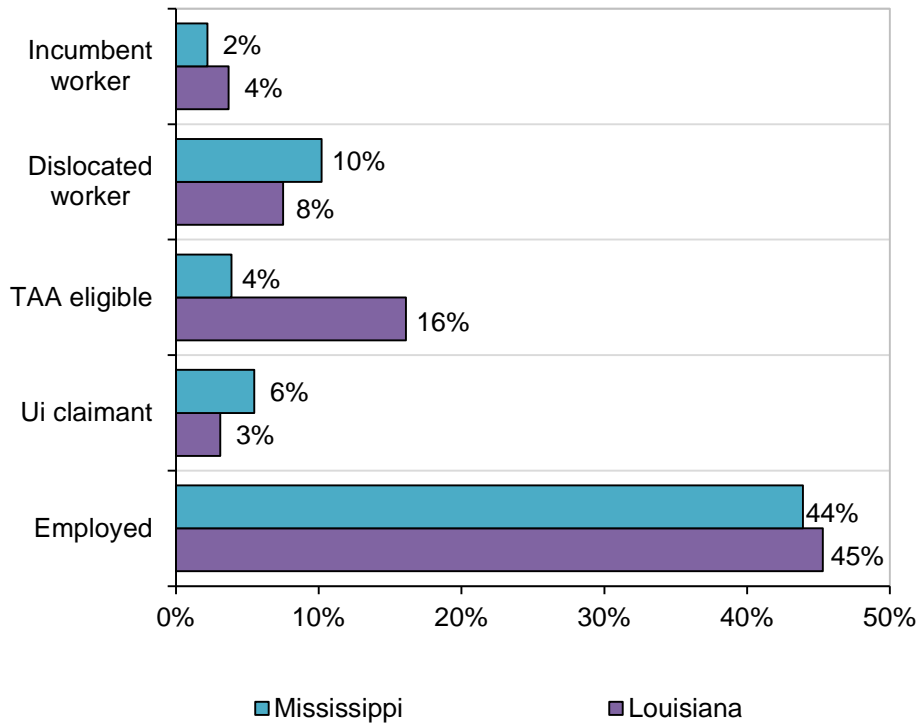
Educational Background

The educational background of GCIT participants from Louisiana Consortium colleges and Mississippi Consortium colleges differed slightly (see Figure 6). Overall, 8% of GCIT participants had some post-secondary education. In Mississippi Consortium colleges, over half of GCIT participants (55%) had a high school diploma or GED compared to less than a third of GCIT participants (27%) in Louisiana Consortium colleges. Instead, in Louisiana Consortium colleges, more than half of GCIT participants (61%) had only completed twelfth grade or lower, compared to 38% of GCIT participants in Mississippi Consortium colleges

Overall, a majority of GCIT participants were categorized as "in-school post-secondary school" (defined as "individual has received a secondary school diploma or its recognized equivalent and is attending a post-secondary school or program, or is between school terms and intends to return to school"). Nearly a quarter of GCIT participants (23%) in Mississippi Consortium colleges were classified as "In-School Adult-Education" (defined as "individual is currently enrolled in an adult education program"), compared to just 8% of GCIT participants in Louisiana Consortium colleges. A closer examination of GCIT participants in adult education

programs indicates that most of these individuals were enrolled in Meridian Community college (55%) and Northeast Mississippi Community College (24%).

While a majority of GCIT students in both states had a full-time course load, 20% of GCIT students in Mississippi Consortium colleges had an "other" course-load, compared to just 3% in Louisiana Consortium colleges. A closer examination of GCIT participants with an "other" course-load indicates that most of these students (92%) were enrolled in Meridian Community college; these individuals were likely taking the non-credit training courses that do not fit a traditional course load.

Figure 6. Educational Background of GCIT Students
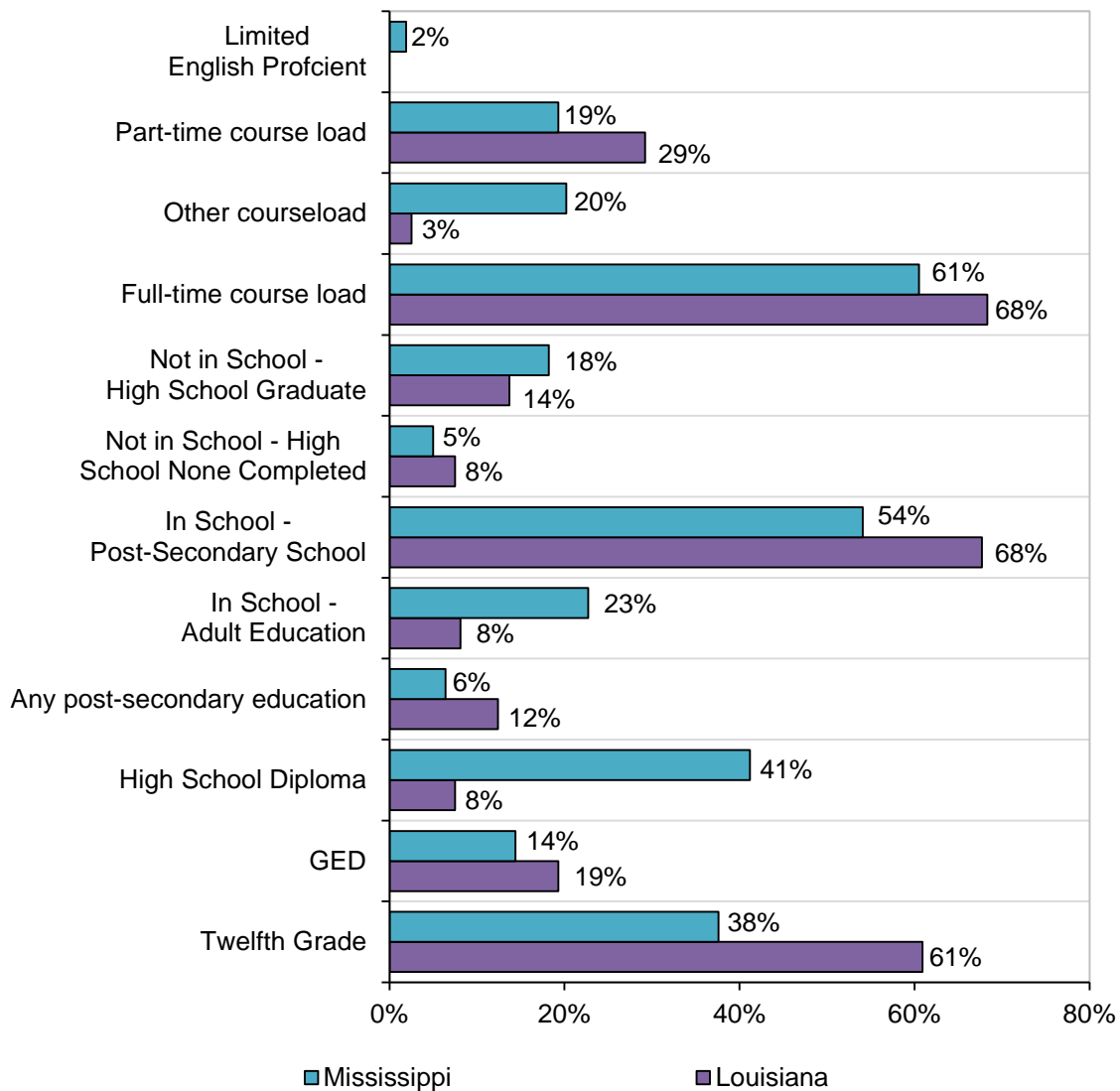
Financial Needs

The financial needs section of the intake form was optional and was not completed by nearly half of the GCIT participants (46%). The financial needs of GCIT participants from Louisiana Consortium colleges and Mississippi Consortium colleges were very similar (see Figure 7). Nearly half received a Pell Grant (44%) and about a fifth had taken student loans (21%). Louisiana Consortium colleges had more participants with assistance from the U.S. Department of Veterans Affairs (9%) and vocational rehabilitation (4%), compared to Mississippi Consortium colleges (4% and 1% respectively).

Figure 7. Financial Needs of GCIT students

Legend: ■ Mississippi   ■ Louisiana

Category	Mississippi	Louisiana
Debt	9%	7%
Other	10%	5%
Loans	21%	21%
Scholarships	6%	4%
Vocational Rehabilitation	1%	4%
VA	4%	9%
Pell Grant	45%	42%
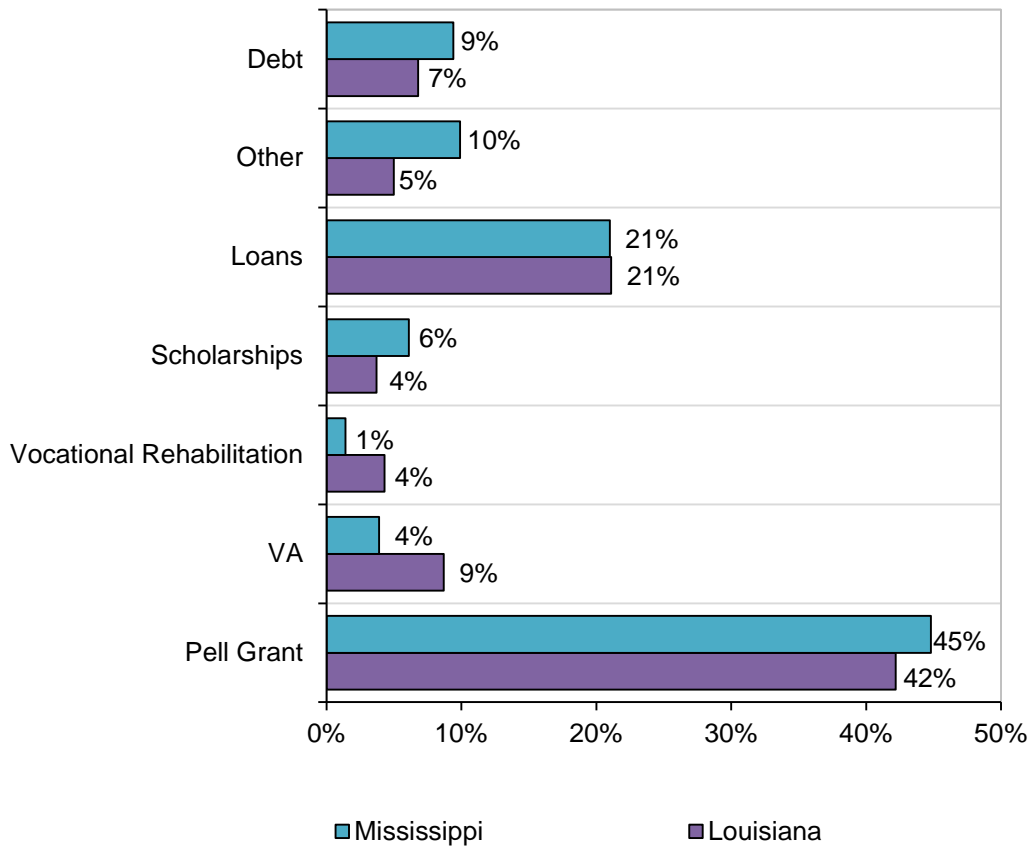
Academic Needs

The academic needs section of the intake form was also optional and was not completed by 40% of the GCIT participants. Overall, about a third of GCIT participants stated that they needed computer skills and Math skills. In addition, about a third of GCIT participants in Mississippi Consortium colleges stated that they needed writing skills, test-taking skills, memorization skills, time-management skills, concentration skills, and typing skills.

Figure 8. Needs of GCIT Students

Skill	Mississippi	Louisiana
Note-Taking Skills	24%	14%
Typing Skills	33%	19%
Concentration Skills	33%	19%
Reading Skills	25%	15%
Time Management Skills	36%	21%
Memorization Skills	33%	21%
Communication Skills	28%	15%
Math Skills	37%	34%
Computer Skills	38%	32%
Test Taking Skills	34%	19%
Listening Skills	24%	6%
Writing Skills	31%	26%
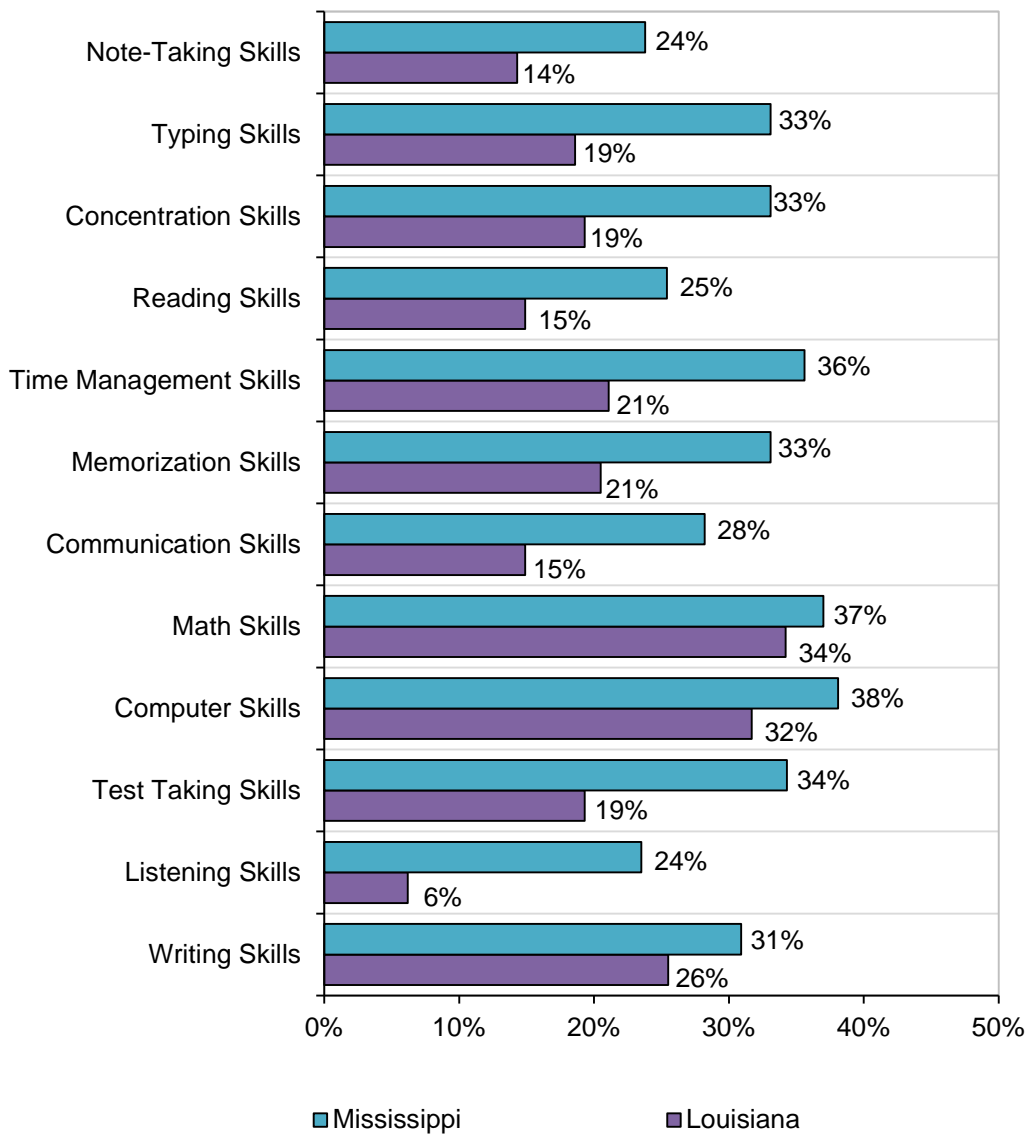
Career and Academic Goals

The career and academic goals section of the intake form was also optional and was not completed by over a third of the GCIT participants (38%). The career and academic goals of GCIT participants varied by state (see Figure 9). In Mississippi Consortium colleges, nearly half (46%) of GCIT participants stated that they wanted to work in Health Informatics, a third (32%) stated that they were interested in accelerating opportunities[9], and a third (36%) stated that they wanted to pursue higher education. In contrast in Louisiana Consortium colleges, half (52%) of GCIT participants stated that they wanted to work in Cyber Security/Networking, half (52%) stated that they wanted to pursue further education, and only about a fifth (21%) stated that they were interested in accelerating opportunities.

Figure 9. Career & Academic Goals of GCIT Students

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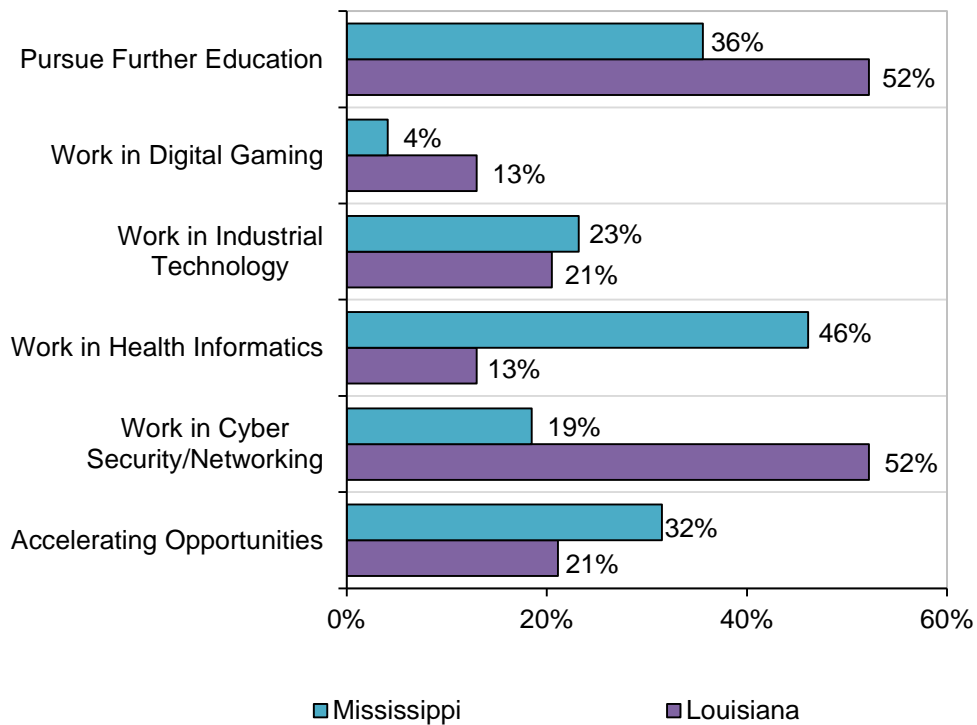
[9] Students stating they were "interested in accelerating opportunities" should be interpreted as students interested in opportunities to accelerate their life and academic career, not the Jobs for the Future's Accelerating Opportunity initiative.

B. Academic Characteristics

Student intake data was linked to the student academic data compiled by nSPARC using student ID. Nearly three-quarters of the GCIT participants in the intake data (73%) were matched to the academic data. The following sections describe the academic characteristics of the 375 GCIT participants who could be identified in the nSPARC academic data.

We are also working with nSPARC to determine how this match rate can be further improved. While we expect some dropouts, i.e. individuals who completed an intake form but did not eventually participate in the program, we don't expect that to be as high as 27%. A closer look at the GCIT participants in the intake data who could not be matched to the academic data, reveals that more than half (55%) were from Meridian Community College.

Figure 10. GCIT Student Intakes matched to Academic Data

137, 27%

375, 73%

■ Not Matched   ■ Matched
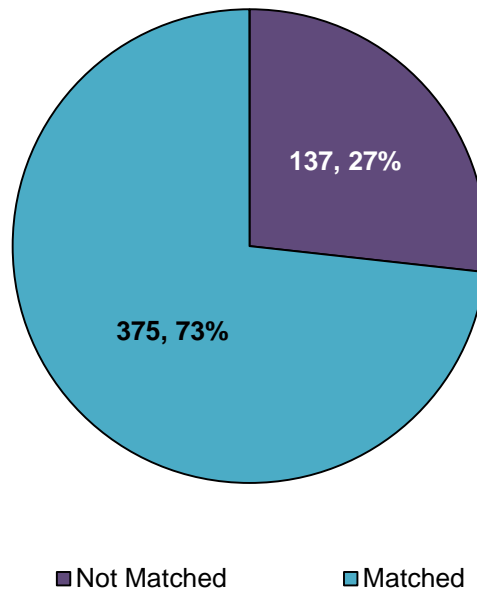
I. *For-Credit Students*

Enrollment Patterns

Of the 375 GCIT participants who could be matched to the nSPARC academic data, 306 participants were in for-credit academic courses. Of these 306 students, 280 students (92%) enrolled in both the Fall 2013 and Spring 2014 semesters, while 4 enrolled in only the Fall 2013 semester and 22 enrolled in only the Spring 2014 semester (see Table 4). Of the 284 students who enrolled in the Fall 2013 semester, 99% were retained in the following semester (Spring 2014).The distribution of students by college mirrors the distribution in the intake data, with most of the students in Bossier Parish Community College, Copiah-Lincoln Community College and Pearl River Community College.

Table 4. Enrollment Patterns for GCIT Participants in For-Credit Programs

Enrollment pattern	2013 Fall	2014 Spring
Enrolled in 1 semester only	4	22
Enrolled in 2 semesters	280	280
College	**N**	**%**
Bossier Parish Community College	81	27%
Copiah-Lincoln Community College	58	19%
Meridian Community College	29	10%
Mississippi Delta Community College	20	7%
Northeast Mississippi Community College	8	3%
Pearl River Community College	77	25%
South Louisiana Community College	11	4%
Louisiana Delta Community College	22	7%

Academic Background

Over a third of these students were classified under admission status as "continuing students (39%). In Louisiana Consortium colleges, another third of GCIT participants were classified as first-time freshmen (see Table 5). In contrast in Mississippi Consortium colleges, a third of GCIT participants were classified as other students. Overall, a little over half (54%) of the GCIT participants were classified as freshmen. In Mississippi Consortium colleges, another 42% of the GCIT participants were classified as sophomores. However, in Louisiana Consortium colleges, only a quarter of the GCIT participants were classified as sophomores while another 18% were classified as other undergraduates.

Table 5. Academic background of GCIT Participants in For-Credit Programs

Admission Status	LA	MS
First-time freshman	31%	18%
Other student	2%	30%
Transfer student	8%	15%
Continuing student	47%	34%
Readmitted student	12%	0%
Visiting student	0%	3%
Student Level	**LA**	**MS**
Freshman	56%	53%
Other Undergraduate	18%	3%
Preparatory	0%	3%
Sophomore	25%	42%
Admission Test Type	**LA**	**MS**
America College Test (ACT)	4%	45%
Adults whose age is 25 or above	51%	55%
[Admission Test Type not recorded]	45%	0%

Program Participation

The CIP major codes indicate that the most popular majors among GCIT participants in Mississippi Consortium colleges were Computer Systems Networking and Telecommunications ; Health and Medical Administrative Services, Other; and Administrative Assistant and Secretarial Science, General. The most popular majors among GCIT participants in Louisiana Consortium colleges were Information Science/Studies; Computer/Information Technology Services Administration and Management, Other; General Studies; and Business/Commerce, General.

Of the 586 semester records we have for these 306 students, nearly a fifth (18%) are missing data on courses such as course number, course credit/contact hours and course grade. We will work with nSPARC to investigate why these students are missing this crucial data. For those records with complete course outcome data, we find that on average students took 132 semester hours, ranging from a low of 30 hours to 240 hours. Students took an average of 4 courses per semester, ranging from a low of 1 course to a high of 9 courses.

Cumulative GPA was missing for 22% of records; for those records with non-missing data, we find the average cumulative GPA for these students was 2.7, and ranged from a low of 0.8 to a high of 4.0.

Table 6. Program Participation of GCIT participants in for-credit programs

Indicator	Statistic	Value
SEMESTER CREDIT HOURS SCHEDULED	Mean	132
	Min	30
	Max	240
NUMBER OF COURSES	Mean	4
	Min	1
	Max	9
CUMULATIVE GPA	Mean	2.7
	Min	0.8
	Max	4.0
CIP	LA	MS
Audiovisual Communications Technologies/Technicians, Other	2%	0%
Animation, Interactive Technology, Video Graphics and Special Effects	1%	0%
Computer and Information Sciences, General	1%	0%
Computer Programming, Other	3%	0%

Table 6. Program Participation of GCIT participants in for-credit programs (cont.)

CIP	LA	MS
Information Science/Studies	18%	0%
Computer Systems Networking and Telecommunications	5%	10%
System Administration/Administrator	1%	0%
System, Networking, and LAN/WAN Management/Manager	2%	0%
Computer and Information Systems Security	5%	0%
Web/Multimedia Management and Webmaster	1%	0%
Computer/Information Technology Services Administration and Management, Other	18%	0%
Teacher Education and Professional Development, Specific Levels and Methods	0%	1%
Industrial Technology/Technician	5%	0%
Manufacturing Technology/Technician	0%	8%
Industrial Production Technologies/Technicians, Other	1%	0%
Petroleum Technology/Technician	2%	0%
Construction Engineering Technology/Technician	2%	0%
Liberal Arts and Sciences, General Studies and Humanities	0%	3%
General Studies	12%	0%
Liberal Arts and Sciences, General Studies and Humanities, Other	1%	0%
Biology, General	0%	1%
Natural Sciences	1%	0%
Criminal Justice/Safety Studies	4%	0%
Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	0%	6%
Industrial Mechanics and Maintenance Technology	2%	0%
Machine Tool Technology/Machinist	0%	2%
Health and Medical Administrative Services, Other	0%	20%
Physical Therapist Assistant	2%	0%
Rehabilitation and Therapeutic Professions	0%	1%
[513801]	1%	0%
Business/Commerce, General	12%	0%
Administrative Assistant and Secretarial Science, General	0%	17%

[999999]	0%	3%
[Missing][10]	0%	30%

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[10] The 57 students whose program CIP code is missing are also recorded as "Z=Adults whose age is 25 years or older" in the admission test type field; this suggests that these student are likely co-enrolled Adult Education students that have not declared a major and have not applied fully to the college.

II.   ***Non-Credit Training Students***

Of the 375 GCIT participants who could be matched to the nSPARC academic data, 69 participants were in non-credit training courses. The challenges surrounding missing academic data for students in non-credit training programs have been discussed previously. We used the limited data available to describe these students' program participation as best we could. Due to the small size of this group, findings described below should be interpreted with care.

Enrollment Patterns

Of these 69 students in non-credit training courses, 63 students (91%) enrolled in both the Fall 2013 and Spring 2014 semesters, while 2 enrolled in only the Fall 2013 semester and 4 enrolled in only the Spring 2014 semester (see Table 7). Of the 65 students who enrolled in the Fall 2013 semester, 97% were retained in the following semester (Spring 2014). All the non-credit training students were from Mississippi and were about equally distributed between Meridian Community College (52%) and Northeast Mississippi Community College (48%).

Table 7. Enrollment Patterns of GCIT Participants in Non-Credit Training Programs

Enrollment pattern	2013 Fall	2014 Spring
Enrolled in 1 semester only	2	4
Enrolled in 2 semesters	63	63
College	**N**	**%**
Meridian Community College	36	52%
Northeast Mississippi Community College	33	48%

Academic Background

A majority of these students (90%) were classified under admission status as "other students" while the remaining 10% of the students were classified as "visiting students" (see Table 8). About half were classified as freshmen (51%), a third as sophomores (36%) and the rest as "preparatory" (10%) and "other undergraduates" (3%) when they first entered the GCIT program.

Table 8. Academic Background of GCIT Participants in Non-Credit Training Programs

Admission Status	N	%
Other student	62	90%
Visiting student	7	10%
Student Level	**N**	**%**
Freshman	35	51%
Other Undergraduate	2	3%
Preparatory	7	10%
Sophomore	25	36%
Admission Test Type	**N**	**%**
[Adults whose age is 25 or above]	69	100%

Program Participation

For students in non-credit training courses, major CIP is not recorded; however, the workforce course code is recorded for each course in the course CIP field. These codes indicate that the most popular course taken by these students was "Computer Use & Applications" (40%). The other popular courses taken by these students were "Personal Dev. Skills," "Measurements/Industrial Math," and "Medical/Healthcare" (see Table 9). These students took an average of 1461 semester training hours, ranging from a low of 320 semester training hours to a high of 3950 semester training hours. Students took an average of 3 courses per semester, ranging from a low of 1 course to a high of 10 courses. Since course grades were not recorded for these non-credit training courses, educational outcomes cannot be described for this group.

Table 9. Program Participation of GCIT Participants in Non-Credit Training Programs

Workforce Course Code	N	%
Computer Use & Applications	145	40%
Customer Service	18	5%
Employability/Remediation	8	2%
Industrial Maintenance	2	1%
Measurements/Industrial Math	50	14%
Medical/Healthcare	50	14%
Personal Dev. Skills	86	24%
Welding/Soldering	2	1%
Indicator	**Statistic**	**Value**
Semester training hours scheduled	Mean	1,461
	Min	320
	Max	3,950
Number of Courses	Mean	3
	Min	1
	Max	10

NEXT STEPS - IMPACT EVALUATION TIMELINE

As discussed in previous progress briefs, the evaluation team encountered significant delays in access to data due to delays in the release of student academic data. This required the research team to reevaluate the timeline for the impact evaluation. As a result, RMC and Aspen secured a revised deliverable schedule in summer 2014 (see Table 10) which pushed each intermediate deliverable back by approximately two quarters. This current report was due December 31st on the assumption that data was delivered to RMC no later than October 31st. However, since the data export was delayed by two weeks, the date for this deliverable was moved to January 15, 2015.

Table 10. Revised Deliverable Schedule

Deliverable Date	Quarter	Description
December 31, 2014	Y3Q1	Descriptive portrait of the GCIT program participants
March 31, 2015	Y3Q2	Draft interim impact evaluation report
June 30, 2015	Y3Q3	Final interim impact evaluation report

The delay in receiving the data also resulted in late identifications of the missing data issues (described earlier in this report). Now that these issues have been identified, they are being addressed by BPCC, LCTCS and nSPARC, and we are confident that we will have the data we need for our final impact analysis report at the end of the project period. However, since we are currently waiting for the missing data to be compiled and transferred to us, we anticipate that the dates for the interim impact evaluation report will need to be pushed back.

The key components needed for conducting analysis and preparing the interim impact analysis report are the employment history and outcome data (i.e. UI data), educational outcome data (i.e. credential attainment data) and academic data on all students at the nine consortium colleges for the 2012-2013 and 2013-2014 academic years. nPSARC is currently working on compiling this data for the Ray Marshall Center, and the next data export is scheduled for March 31, 2015. We estimate that we can conduct our analysis and prepare a draft interim report in three months following receipt of the complete data from nSPARC. Once

we receive the data, we will assess the data and determine what gaps, if any, are remaining.

In this next report, we plan to analyze and describe educational and labor market outcomes for GCIT participants. The outcomes for the analysis will correspond to the list of participant outcomes reported by TAACCCT grantees to DOL through the Annual Performance Report (see Appendix E). We will also analyze and describe the impacts of the GCIT program on these outcomes in the next report. Note that the scope of the outcome and impact analysis in this next report will be determined by the quality of this upcoming data export scheduled for March 31, 2015.

In October 2014, the Consortium was notified by the U.S. Department of Labor that their TAACCCT grant had received permission to continue program implementation activities for an additional six months into the fourth year of the grant. Thus, program implementation will now end in March 31, 2016, instead of the previous end date of September 30, 2015. The implications of this extension for the impact evaluation will need to be investigated further and we plan to address questions surrounding this extension in conversations with the consortium over the coming months. Keeping in mind the extension of the program implementation period and the current delays and challenges associated with data needed for the impact evaluation, we propose the following revised deliverable schedule[11].

Table 11. Revised Deliverable Schedule

Deliverable Date	Quarter	Description
June 30, 2015	Y3Q3	Draft interim impact evaluation report
September 30, 2015	Y3Q4	Final interim impact evaluation report
June 30, 2016	Y4Q3	Draft impact evaluation report
September 30, 2016	Y4Q4	Final impact evaluation report

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[11] The dates for the interim impact evaluation report are tentative and should be flexible to change, as the dates depend on when RMC receives the required data from nSPARC. Once we receive the required data, we estimate that we will need three months to conduct our analysis and prepare a draft interim report.

APPENDIX A. ACADEMIC VARIABLES REQUESTED BY RMC

Academic Date
Academic Year Begin
Academic Term
Institution Code
Student Identification Number
Student Race
Student Ethnicity
Student Gender
Fee Residence
Citizenship
Parish/State/Country
Birth Date
Birth Month
Birth Year
Admission Status
Student Type/Level
Program Classification
CIP Code
Degree Level Code
High School Graduation Year/Date
High School Grade Point Average
High School Class Percentile Rank
Admission Test (type and scores)
Current Term Grade Point Average
Cumulative Overall Grade Point Average
Academic Standing at End of Term
Total Student Credit Hours Scheduled
Total Student Contact Hours Scheduled
~~Institution Common Identification Number~~
Cumulative Hours Earned
Attended Summer Session
Student Course Information
Enrolled at Census Date

Developmental Course Flag
Contact Hour Course Flag
Course Abbreviation
Course Classification (CIP)
Course Number
Section Number
Course Credit/Contact Hours
Course Grade
Credential receipt
Level of credential (certificate, associate's, bachelor's, etc.)
Subject/major of credential
Date of receipt
FICE or other institution code of granting institution

APPENDIX B. MISSING VARIABLES FOR NON-CREDIT TRAINING COURSES

Variables in RMC's Data Request	Variables available in reporting system for non-credit training courses
Academic Date	
Academic Year Begin	Yes
Academic Term	Yes
Institution Code	Yes
Student Identification Number	Yes
Student Race	Yes
Student Ethnicity	Yes
Student Gender	Yes
Fee Residence	Yes
Citizenship	Yes
Parish/State/Country	Yes
Birth Date	
Birth Month	Yes
Birth Year	Yes
Admission Status	No
Student Type/Level	No
Program Classification	
CIP Code	No (Not CIP code , but course code available)
Degree Level Code	No
High School Graduation Year/Date	No
High School Grade Point Average	No
High School Class Percentile Rank	No
Admission Test (type and scores)	No
Current Term Grade Point Average	No
Cumulative Overall Grade Point Average	No
Academic Standing at End of Term	No
Total Student Credit Hours Scheduled	No
Total Student Contact Hours Scheduled	No (Not credit hours, but training hours available)
Institution Common Identification Number	
Cumulative Hours Earned	No (Not credit hours, but training hours available)
Attended Summer Session	No

APPENDIX B. MISSING VARIABLES FOR NON-CREDIT TRAINING COURSES (cont.)

Student Course Information	
Enrolled at Census Date	No
Developmental Course Flag	No
Contact Hour Course Flag	No (Not credit hours, but training hours available)
Course Abbreviation	No
Course Classification (CIP)	No
Course Number	Yes
Section Number	No
Course Credit/Contact Hours	No (Not credit hours, but training hours available)
Course Grade	No
Credential receipt	
Level of credential (certificate, associate's, bachelor's, etc.)	No
Subject/major of credential	No
Date of receipt	No
FICE or other institution code of granting institution	No

APPENDIX C. NSPARC ACADEMIC DATA ELEMENTS & EXTENT OF MISSING DATA

Variable	Non-Credit Training Programs (n=178)	Mississippi (n=11,668)	Louisiana (n=42,043)
Student Identification Number	0%	0%	0%
OPE ID	0%	0%	0%
Academic Year Begin	0%	0%	0%
Academic Term	0%	0%	0%
Institution Code	0%	0%	0%
Student Race	0%	0%	0%
Student Ethnicity	0%	0%	0%
Student Gender	0%	0%	0%
Fee Residence	0%	0%	0%
Citizenship	0%	0%	0%
Parish/State/Country	4%	5%	0%
Birth Month	0%	0%	0%
Birth Year	0%	0%	0%
Admission Status	0%	0%	0%
Student Type/Level	0%	0%	0%
CIP Code	N/A for non-credit training programs	2%	0%
Degree Level Code	N/A for non-credit training programs	2%	0%
High School Graduation Year	N/A for non-credit training programs	37%	10%
High School Grade Point Average	N/A for non-credit training programs	Not available for MS	15%
High School Class Percentile Rank	N/A for non-credit training programs	Not available for MS	42%
Admission Test - Type	0%	0%	56%
Admission Test - Score	0%	0%	0%
Current Term Grade Point Average	N/A for non-credit training programs	38%	17%
Cumulative Overall Grade Point Average	N/A for non-credit training programs	8%	5%
Academic Standing at End of Term	N/A for non-credit training programs	Not available for MS	0%

Variable	Non-Credit Training Programs (n=178)	Mississippi (n=11,668)	Louisiana (n=42,043)
Total Student Credit Hours Scheduled	N/A for non-credit training programs	2%	1%
Workforce Flag	0%	0%	0%
Total Training Hour Scheduled	0%	Not applicable	Not applicable
Cumulative Hours Earned	N/A for non-credit training programs	Not available for MS	0%
Attended Summer Session	N/A for non-credit training programs	49%	88%
Credential Level	N/A for non-credit training programs	94%	Not available for LA
Credential Major	N/A for non-credit training programs	94%	Not available for LA
Enrolled at Census Date	N/A for non-credit training programs	Not available for MS	0%
Developmental Course Flag	N/A for non-credit training programs	0%	0%
Contact Hour Course Flag	N/A for non-credit training programs	0%	0%
Course Abbreviation	N/A for non-credit training programs	2%	0%
Course Classification (CIP)	2%	100%	0%
Course Number	0%	2%	0%
Section Number	N/A for non-credit training programs	2%	0%
Course Credit/Contact Hours	0%	2%	0%
Course Grade	N/A for non-credit training programs	15%	0%

APPENDIX D. INTAKE FORM DATA ELEMENTS & EXTENT OF MISSING DATA

INTAKE FORM FIELD	OPTIONAL/ REQUIRED	EXTENT OF MISSING DATA
SECTION I: INDIVIDUAL INFORMATION		
Last Name	R	Identifier removed from data
First Name	R	Identifier removed from data
Middle Initial	O	Identifier removed from data
Address Line 1	R	Identifier removed from data
Address Line 2	O	Identifier removed from data
City	R	0%
State	O	0%
Province / Region	O	99%
Zip Code	O	5%
Postal Code	O	96%
Country	R	0%
Primary Phone	R	Identifier removed from data
Secondary Phone	O	Identifier removed from data
Email	R	Identifier removed from data
Date of Birth	R	0%
Place of Birth	O	48%
Gender	R	0%
Ethnicity Hispanic/ Latino	R	0%
American Indian or Alaska Native	R	0%
Asian	R	0%
Black or African American	R	0%
Native Hawaiian or other Pacific Islander	R	0%
White	R	0%
Active Duty Military	R	0%
Eligible Veteran Status	R	0%
Offender	R	16%
Individual With a Disability	O	19%
SECTION II: Financial Assistance		
Financial Assistance: Pell Grant	O	49%
Financial Assistance: VA	O	61%
Financial Assistance: Vocational Rehabilitation	O	62%

INTAKE FORM FIELD	OPTIONAL/ REQUIRED	EXTENT OF MISSING DATA
SECTION II: Financial Assistance (cont.)		
Financial Assistance: Scholarships	O	61%
Financial Assistance: Loans	O	56%
Financial Assistance: Other	O	57%
Financial Assistance: Debt	O	60%
SECTION III: EMPLOYMENT		
Employment Status at Participation	R	0%
Current or Previous Employer	O	45%
Unemployment Insurance Claimant	R	0%
TAA Eligible	R	0%
Dislocated Worker	R	0%
Incumbent Worker Status	R	0%
SECTION IV: EDUCATION		
English Language Proficiency	R	0%
Highest Grade Completed	R	0%
Year Completed Highest Grade	O	38%
School Status at Participation	R	0%
Course Load	R	0%
SECTION V: ACADEMIC NEEDS		
Academic Needs: Writing Skills	O	57%
Academic Needs: Listening Skills	O	59%
Academic Needs: Test Taking Skills	O	56%
Academic Needs: Computer Skills	O	55%
Academic Needs: Math Skills	O	53%
Academic Needs: Communication Skills	O	57%
Academic Needs: Memorization Skills	O	56%
Academic Needs: Time Management Skills	O	55%
Academic Needs: Reading Skills	O	58%
Academic Needs: Concentration Skills	O	57%
Academic Needs: Typing Skills	O	57%
Academic Needs: Note-Taking Skills	O	58%
SECTION VI: PROGRAM OF STUDY		
Career and Academic Goals: Accelerating Opportunities	O	56%

APPENDIX E. ANNUAL PERFORMANCE REPORT

Form ETA-9160

ROUNDS 2, 3 AND 4 ANNUAL PERFORMANCE REPORT
TAA COMMUNITY COLLEGE and CAREER TRAINING GRANTS

OMB No. 1205-0489
Expires: 03/31/2016

A. GRANTEE IDENTIFYING INFORMATION

1. Grantee Name:	2. Grant Number:
3. Program/Project Name:	
4. Grantee Address:	5. Report Year End Date:
City _____ State _____ Zip Code _____	6. Report Due Date:

Performance Items	Year 1 (A) *(REPORT IF AVAILABLE)*	Year 2 (B)	Year 3 (C)	Year 4 (D)
B. CUMULATIVE PARTICIPANT OUTCOMES (ALL GRANT PARTICIPANTS)				
1. Unique Participants Served/Enrollees				
2. Total Number of Participants Who Have Completed a Grant-Funded Programs of Study				
2a. Total Number of Grant-Funded Program of Study Completers Who Are Incumbent Workers				
3. Total Number Still Retained in Their Programs of Study (or Other Grant-Funded Programs)				
4. Total Number Retained in Other Education Program(s)				
5. Total Number of Credit Hours Completed (aggregate across all enrollees)				
5a. Total Number of Students Completing Credit Hours				
6. Total Number of Earned Credentials (aggregate across all enrollees)				
6a. Total Number of Students Earning Certificates - Less Than One Year (aggregate across all enrollees)				
6b. Total Number of Students Earning Certificates - More Than One Year (aggregate across all enrollees)				
6c. Total Number of Students Earning Degrees (aggregate across all enrollees)				
7. Total Number Pursuing Further Education After Program of Study Completion				
8. Total Number Employed After Program of Study Completion				
9. Total Number Retained in Employment After Program of Study Completion				
10. Total Number of Those Employed at Enrollment Who Receive a Wage Increase Post-Enrollment				
C. CUMULATIVE PARTICIPANT SUMMARY INFORMATION (ALL GRANT PARTICIPANTS)				
Gender 1a. Male				
1b. Female				
2a. Hispanic/Latino				
2b. American Indian or Alaskan Native				
Ethnicity/Race 2c. Asian				
2d. Black or African American				
2e. Native Hawaiian or Other Pacific Islander				
2f. White				
2g. More Than One Race				
Degree 3a. Full-time Status				
3b. Part-time Status				
4. Incumbent Workers				
5. Eligible Veterans				
Other Demographics 6. Participant Age (Mean)				
7. Persons with a Disability				
8. Pell-Grant Eligible				
9. TAA Eligible				
10. Other Demographic Measure (Optional - Entered by Applicant)				

D. ACHIEVEMENTS AND SUCCESSES

1. Summarize your most innovative achievement or your greatest success story from the previous year.

Please limit your response to 700 characters.

F. SERVICES and OUTCOMES for TAA ELIGIBLE INDIVIDUALS

1. Provide a description of how the program(s) have served TAA eligible individuals. Specifically, address: 1) the number of TAA Eligible Individuals who participated in TAACCCT funded programs, 2) how many TAA Eligible Individuals enrolled and obtained credentials, certificates or degrees, 3) how many TAA Eligible Individuals enrolled and did not attain credentials, certificates or degrees, and 4) the average duration and whether the duration of education and training was longer or shorter for these individuals than for other non-TAA eligible participants. You may use observations or participant records to compile and summarize this information.

Please limit your response to 700 characters.

G. REPORT CERTIFICATION/ADDITIONAL COMMENTS

1. Report Comments/Narrative:

Please describe any additional outcomes or information about your grant.

2. Name of Grantee Certifying Official/Title:	3. Telephone Number:	4. Email Address:

Persons are not required to respond unless this form displays a currently valid OMB number. Obligation to respond is required to obtain or retain benefits (Workforce Investment Act [Section 185(a)(2)]. Public reporting burden for this collection of information, which is to assist with planning and program management and to meet Congressional and statutory requirements, averages 16 hours per response, including time to review instructions, search existing data sources, gather and maintain the data needed, and complete and review the collection of information. Send comments regarding this burden estimate to the U.S. Department of Labor, ETA, Room N-4643, 200 Constitution Avenue, NW, Washington, DC 20210.