

## **Exploring Standardized Testing and Access in a Community College Radiography Program**

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*Increasing demand for radiography professionals, declining participation and completion rates of programs indicated the need to explore program admission processes to increase access. We examined demographics, TEAS test scores, completion rates, and pass rates of students, relationship between student demographics and TEAS test scores, relationship between TEAS test scores and student success as measured by completion when controlling for demographics, relationship between TEAS test scores and success of students as measured by the registry pass rate documentation when controlling for demographics, and explore differences in race, gender, and socioeconomic when TEAS scores were used in admissions and the group when TEAS scores were not used. Using logistic regression, data from the radiography program cohorts of 2013–2019 were examined finding no significant associations with demographic characteristics and student success outcome variables. Results indicated that the TEAS score was the only significant predictor of program completion for the pre-2019 cohorts, however lacked significance for the 2019 cohort. Findings suggest that weighted GPA is a better predictor of success than TEAS scores.*

**Keywords:** radiography program admissions, TEAS test scores, logistic regression analysis, program access and equity

### **EXPLORING STANDARDIZED TESTING AND ACCESS IN A COMMUNITY COLLEGE RADIOGRAPHY PROGRAM**

With an increase in the shortage of radiographers (Konstantinidis, 2024), it is necessary to reevaluate the admissions requirements of radiography programs (Miller, 2023). Examining the admissions requirements may help reduce barriers to access and completion that unnecessarily hinder entrance into the workforce. Among the 58 community colleges in North Carolina, 25 offer an Associate of Science in Radiography. While community colleges are often associated with open enrollment (Scherer & Anson, 2014), many health programs, including radiography, have selective admission processes (Miller, 2023).

This means students must meet general requirements and compete with other programs for student enrollment. While admissions requirements differ by program and college, they can be burdensome (Kudlas, 2006) and may affect who gains access to these more selective programs. One of the admission requirements for many of the health programs is the scores from a standardized test (Helm, 2008). Meyer (2019) stated that standardized test scores are not the best predictors of student completion, and they often present undue barriers to students. The use of this type of score can even be seen more problematic if you consider Jencks and Phillips (1998), co-editors of The Black-White Test Score Gap, who reported that in 1970, Black students scored lower than White students on tests measuring academic aptitude and intelligence. Although Helm (2008) noted that this gap has narrowed, the average Black student in the United States still scores lower than 75% of White students on most standardized tests.

Healthcare professionals have long sought to improve access to care and increase the representativeness of the workforce (Helm, 2008). However, Helm (2008) stated, “Despite the efforts, the number of diverse and underrepresented health professionals still lags behind their representation in the overall population, with the largest majority of the graduates being white” (p. 169). Since standardized test scores are a major deciding factor for acceptance into programs, it is important to understand how they impact equitable access, prediction of program completion, and predication of success on professional certificate exams. Many radiography programs require students to take the TEAS as a leading indicator of success for the health programs. However, colleges have not sufficiently examined the data to determine how these admissions criteria relate to students’ success, the diversity of the student population, or registry pass rates.

## **PURPOSE STATEMENT**

This study examines the relationship between student demographics, Test of Essential Academic Skills (TEAS) scores, and student success in a radiography program, as measured by completion rates, curriculum GPA, and registry pass rates. It identifies patterns in demographics of students required to submit TEAS scores and those who were not, analyzes TEAS scores and evaluates success outcomes across various student cohorts. The study also explores how demographic factors influence both TEAS performance and academic success. Additionally, it investigates whether significant differences exist in race, gender, and socioeconomic status between students whose TEAS scores were used for admission and those whose scores were not. The following research questions guide this study:

**Research Question 1:** *What are the demographics, TEAS scores, completion rates, and registry pass rates of the students by cohort?*

**Research Question 2:** *What is the relationship between student demographics and TEAS test scores?*

**Research Question 3:** *What is the relationship between demographics and curriculum GPA of participants?*

**Research Question 4:** *What is the relationship between TEAS test scores and the success of students as measured by completion rates when controlling for demographics?*

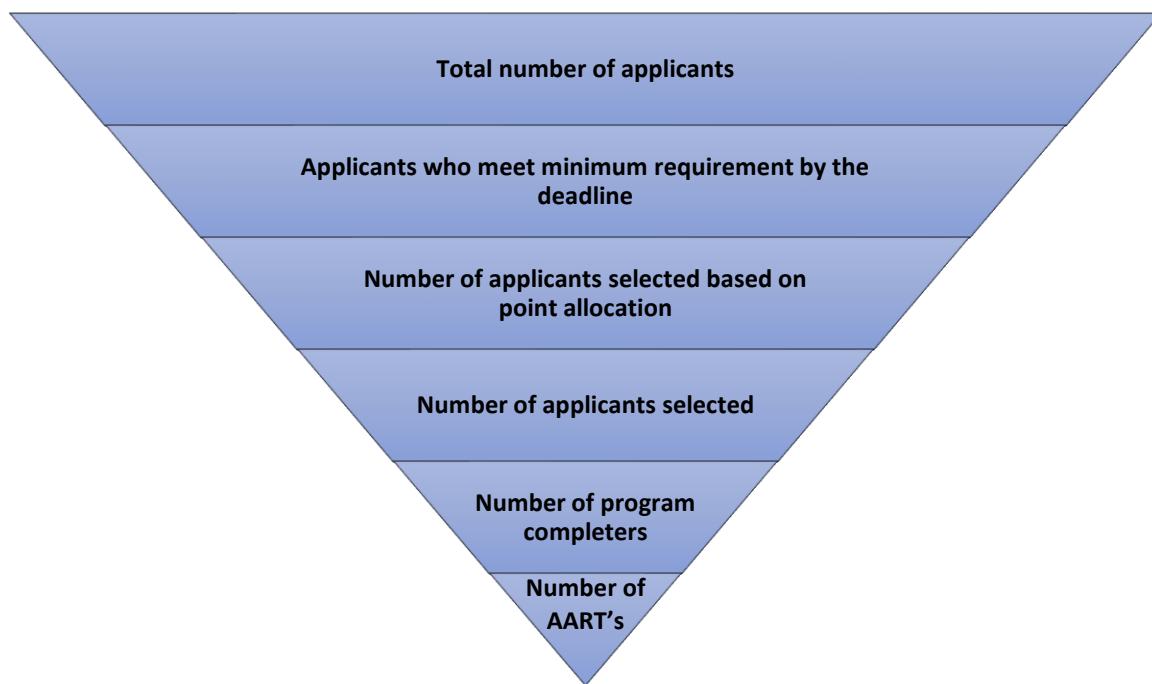
**Research Question 5:** *What is the relationship between TEAS test scores and the success of students as measured by the registry pass rates when controlling for demographics?*

**Research Question 6:** *Is there a difference in race, gender, and socioeconomic status of the group of students whose TEAS scores were used and the group of students whose TEAS scores were not used?*

## THEORETICAL FRAMEWORK

The framework used in this study was the Radiography Program Progression Funnel Framework (RPPF), which mirrors the Admission Funnel Framework (AFF). The AFF, sometimes referred to as the “recruitment funnel” or “enrollment funnel” is a means of imagining and managing the process of advancing students from a (relatively large) pool of prospects in several key stages for a pathway to the workforce, such as inquiry, application, admission, and enrollment (Dupaul & Harris, 2012). The following Figure 1 shows the RFFF and funnel represents how the numbers of each stage often shrink.

**FIGURE 1**  
**RADIOGRAPHY PROGRAM PROGRESSION FUNNEL**



The Radiography Program Progression Funnel Framework (RPPF) illustrates the steps in the radiography program's acceptance process, including participation in the registry exam. As students progress through the funnel, the pathway narrows, and the number of students decreases based on the outcomes at each stage.

## RESEARCH DESIGN

This study uses a Quantitative, correlational case study research design. An existing dataset was analyzed to explore the relationship between the use of TEAS scores and program completion, registry pass rates, and the program demographics of preexisting cohorts of radiography students. Quantitative research examines relationships between measurable variables to test objective theories using instruments for data collection and statistical analysis (Creswell & Creswell, 2018). This quantitative case study investigated a population of students who applied to and were accepted into the BCCC radiography program, focusing on numeric (dichotomous) student data, making a quantitative approach the most suitable. The study employed a correlational design to measure the degree of association between variables or sets of scores. This approach was appropriate as the study aimed to explore the effects of various demographic variables on TEAS scores, a continuous variable, and for examining the relationship between demographics, TEAS

scores, program completion, and registry pass rates. The results were compared to cohort outcomes that did not require the TEAS test. The study aimed to assess the relationship between TEAS scores, program completion, registry pass rates, and demographic factors in preexisting radiography student cohorts. Since this study used archival data, no investigational interventions could be introduced to impact student academic performance, classifying the study as nonexperimental (Creswell & Creswell, 2018).

## PARTICIPANTS

The study population consisted of 389 students who applied to the radiography program at BCCC between Fall 2013 and Fall 2019, meeting application deadlines and minimum requirements. The sample included TEAS scores, TEAS usage (except for the 2019 cohort, which did not require it), gender, race, Pell status, and program completion rates. Of these students, 232 enrolled and graduated, with data covering cohorts from Fall 2013 to Fall 2019 and graduation dates spanning from Spring 2015 to Spring 2021. According to Bartlett et al. (2001), the sample size for this organizational research will be adequate for the proposed data analysis. Registry pass rates were based on first-time pass rates within three months of graduation. Non-random convenience sampling was implemented due to the accessibility of preexisting data, to gain an initial understanding of an under-researched population within a short timeline. Data were collected from the college's internal and ARRT's national databases.

## DATA COLLECTION

The study received approval from the Institutional Review Boards (IRB) of both North Carolina State University and the community college under a minimal risk category. Data collection began with gathering and aggregating raw data, including TEAS test use, program completion and registry pass rates, GPAs, and Pell status, while ensuring anonymity by assigning alphanumeric codes to the students and the name of the college was anonymized. Archival student data, including TEAS scores, GPAs, Pell grant status, program completion, registry data, and demographic profiles, was collected for students enrolled in the radiography program between Fall 2013 and Fall 2019. The ARRT database provided the registry data. Data collection followed eight steps: IRB approval, retrieving institutional data, assigning alphanumeric codes, gathering registry pass rates, and creating demographic profiles. The data was uploaded into Excel according to enrollment year and imported into SPSS for descriptive analysis. Finally, a coding scheme for the categorical variables was developed, and logistic and multiple regression analysis were conducted using SPSS.

Data preparation involved entering the collected data into Excel to import into SPSS 29 to perform descriptive data analyses. Pearson correlation and chi-square analyses examined the relationships between the TEAS scores and other variables. Categorical variables were coded as follows: gender (female = 1, male = 0), race (White = 1, non-White = 0), Pell grant status (yes = 1, no = 0), and registry pass/fail (pass = 1, fail = 0). Continuous variables included TEAS scores and GPAs. Students from the 2019 cohort, who did not use the TEAS test, were coded to reflect TEAS nonuse. The study excluded students who withdrew from the program, and demographic data was simplified to dichotomous variables: gender (male/female), race (White/non-White), and Pell status (yes/no).

## DATA ANALYSIS

SPSS was used for all data analysis in this study. First, pre-data analysis was conducted to ensure data quality and assess missing items. Second, descriptive statistics, including means, standard deviations, frequencies, and percentages, were calculated to summarize student characteristics and outcomes by cohort. An independent sample t-test compare group means between cohorts on outcomes. Correlation analysis explored relationships between demographic and TEAS scores and curriculum GPA. Binary logistic regression models were used to evaluate the predictive relationships between key factors and program outcomes (program completion and registry passing). Finally, for Research Question 6, chi-square analysis

tested for significant differences in categorical variables between cohorts. These statistical techniques provided a comprehensive approach to analyzing the factors associated with student success in the radiography program. Effect sizes will be interpreted based on the suggestion of Kotrlik et al. (2003).

## FINDINGS

This study examined students enrolled in BCCC's radiography program between Fall 2013 and Spring 2019, which created a population of 389 eligible applicants. Data for 232 students (60%) had data included, with 196 (84.5%) from the 2013–2018 cohorts, where TEAS test scores were part of the admissions process, and 36 students (15.5%) from the 2019 cohort, where TEAS scores were not required for admission. a minimum of 2 years to take the certification examination from their start is given to provide time for the students to, the registry pass rate date was from 2019 to 2021.

### Research Question 1

The first research question sought to describe the demographics, TEAS scores, program completion, and registry pass rates of the students for each cohort. Cohort 1 (students in which the TEAS test was used in admissions, and Cohort 2 (students in which the TEAS test was taken but not used in the admissions decisions) combined. Table 1 presents the demographic characteristics and outcomes of radiography students', comparing the two cohorts. The majority of students were female (78%,  $n=181$ ), White (69%,  $n=160$ ), and received Pell Grants (68.5%,  $n=159$ ). Among students whose TEAS scores were used in the admissions process, 78.1% ( $n = 153$ ) were female and 21.9% ( $n = 43$ ) were male, compared to 77.8% ( $n = 28$ ) female and 22.2% ( $n = 8$ ) male in the group where TEAS scores were not used. Regarding race, 70.4% ( $n = 138$ ) of students in the TEAS-used group were White, while 29.6% ( $n = 58$ ) were non-White. For the TEAS-not-used group, 61.1% ( $n = 22$ ) were White and 38.9% ( $n = 14$ ) were non-White. Pell Grant recipients comprised 67.9% ( $n = 133$ ) of the cohort whose TEAS scores were used and 72.2% ( $n = 26$ ) of those who did not consider the TEAS scores. Completion rates, when comparing the percentage of completers) were higher when TEAS scores were used, with 88.9% ( $n = 32$ ) completing the program, compared to 68.4% ( $n = 134$ ) in the group when TEAS scores were not used. The registry pass rates were also lower for the 2019 cohort, with only 25% ( $n = 9$ ) passing, compared to 56.1% ( $n = 110$ ) in the earlier cohorts. Non-registry pass rates were similar, at 2.6% ( $n = 5$ ) for groups that used the TEAS score and 2.8% ( $n = 1$ ) for those that did not use the TEAS scores.

**TABLE 1**  
**DEMOGRAPHIC CHARACTERISTICS OF RADIOGRAPHY STUDENTS FROM DATA**

	Cohorts Prior to 2019		2019 Cohort		Total	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
<b>Gender</b>						
Male	43	21.9	8	22.2	51	22.0
Female	153	78.1	28	77.8	181	78.0
<b>Race</b>						
White	138	70.4	22	61.1	160	69
Non-White	58	29.6	14	38.9	72	31

	Cohorts Prior to 2019		2019 Cohort		Total	
	f	%	f	%	f	%
Pell status						
Pell recipient	133	67.9	26	72.2	159	68.5
Non-Pell recipient	60	30.6	10	27.8	70	30.2
Radiography completion						
Completers	134	68.4	32	88.9	166	71.6
Noncompleters	62	31.6	4	11.1	66	28.4
Registry pass						
Pass	110	56.1	9	25.0	119	51.3
Did not pass	5	2.6	1	2.8	6	2.6

*Note.* Missing data in cohorts prior to 2019: Registry Pass (n = 81, 41.3%); Pell Status (n = 3, 1.5%); Missing data in 2019 cohort: Registry Pass (n = 26, 72.2%); Missing data in total of those that were not in the Registry Pass (n = 107, 46.1%) data.

Even though TEAS scores were not used in the admissions decisions of the 2019 group, all individuals in this group completed the TEAS test. Table 2 shows the TEAS score for all participants was 67.9 ( $SD = 9.77$ ). Results from the independent samples t-test ( $t=3.23$ ,  $df=198$ ,  $p<0.001$ ), revealed a statistically significant difference in TEAS scores between students in cohorts before 2019 where TEAS scores were used ( $M=68.6$ ,  $SD=9.6$ ) and those after 2019 in which the TEAS scores were not used ( $M=64.1$ ,  $SD=10.1$ ), and with a medium effect size ( $d=.457$ ).

**TABLE 2**  
**MEAN AND STANDARD DEVIATION FOR THE COHORTS THAT USED THE TEAS AND NOT THE TEAS**

	TEAS Used			TEAS Not Used			Total of Both Groups		
	N	M	SD	N	M	SD	N	M	SD
<b>TEAS</b>	195	68.6	9.6	36	64.1	10.1	231	67.9	9.77

*Note.*  $t=3.23$ ,  $df=198$ ,  $p<0.001$ ,  $d=.457$

### Research Questions 2 and 3

The second research question was to explore the relationship between the student demographics and the TEAS test scores, as well as the curriculum GPA of all students from 2013 to 2019. When exploring curriculum GPA, there was a positive, statistically significant correlation between age and curriculum GPA ( $r = .163$ ,  $p < .05$ ) and race and curriculum GPA ( $r = .196$ ,  $p < .01$ ) however it was negligible. A statistically significant correlation between age and TEAS scores ( $r = .256$ ,  $p < .01$ ) was also found but negligible. Lastly, there was a statistically significant relationship between curriculum GPA and TEAS ( $r = .370$ ,  $p < .01$ ) that can be interpreted as low.

**TABLE 3**  
**RESEARCH QUESTION 2: PEARSON CORRELATION ANALYSIS**

Variable	1	2	3	4	5	6
1. Age	-					
2. White	-.055	-				
3. Female	-.118	.071	-			
4. Pell Recipient	.150*	-.055	.055	-		
5. CUR	.163*	.196**	-.034	.087	-	
6. TEAS	.256**	.042	-.121	.121	.370**	-

*Note.* \* $p < .05$ . \*\* $p < .01$ . Davis's (1971) descriptors 0.01 and 0.09 =negligible, 0.10 to 0.29 = low, 0.30 to 0.49 = moderate, 0.50 to 0.69 = substantial, and 0.70 or higher = very strong.

#### Research Question 4

The fourth research question sought to explore the extent to which TEAS test scores explain the variance in student success, as measured by completion when controlling for demographics. The logistic regression analysis investigates the relationship between demographic factors, academic performance, and the likelihood of completing the radiography program. **Model 1** included age, race (White), gender (female), Pell Grant recipient status, and curriculum GPA as predictors, while **Model 2** added the TEAS score. No individual predictor in either model reached statistical significance ( $p>0.05$ ) for any of the covariates. Neither model significantly predicted program completion overall, with Model 1 ( $\chi^2=3.924$ ,  $p=0.560$ ) and Model 2 ( $\chi^2=6.134$ ,  $p=0.408$ ) failed to achieve statistical significance.

Despite the lack of statistical significance, some trends are worth noting. In Model 1, curriculum GPA ( $\text{Exp}(B)=1.743$ ,  $p=0.099$ ) suggests that higher GPA may modestly increase the likelihood of completing the program, though this result was not statistically significant. Similarly, in Model 2, the TEAS score shows a small positive association ( $\text{Exp}(B)=1.026$ ,  $p=0.141$ ), but again without reaching significance. Goodness-of-fit measures, including Cox and Snell  $R^2$  and Nagelkerke  $R^2$ , indicate a small proportion of variance explained (Model 1:  $R^2=0.017$ , Model 2:  $R^2=0.027$ ), suggesting that these variables alone cannot explain program completion. Further research with additional predictors or a larger sample may be needed to better understand the factors influencing radiography program completion.

**TABLE 4**  
**BINARY LOGISTIC REGRESSION ANALYSIS OF DEMOGRAPHICS AND TEAS**  
**PREDICTING RADIOGRAPHY COMPLETED AS A DEPENDENT VARIABLE**

Covariates	Model 1					Model 2				
	B	S.E.	Wald	p	Exp (B)	B	S.E.	Wald	p	Exp (B)
Age	.004	.016	.057	.812	1.004	-.001	.017	.005	.941	.999
White	-.059	.329	.032	.858	.943	-.060	.330	.033	.857	.942
Female	.281	.376	.557	.455	1.324	.219	.380	.333	.564	1.245
Pell Recipient	.046	.333	.019	.890	1.047	.095	.337	.079	.778	1.099

Covariates	Model 1					Model 2				
	B	S.E.	Wald	p	Exp (B)	B	S.E.	Wald	p	Exp (B)
Curriculum GPA	.556	.337	2.716	.099	1.743	.383	.360	1.137	.286	1.467
TEAS Score						.025	.017	2.164	.141	1.026
Constant	-1.01	1.156	.757	.384	.366	-2.01	1.348	2.218	.136	.134

Note.  $p < 0.05$ ; Model 1:  $X^2 = 3.924$ ,  $df = 5$ ,  $p = .560$ , Cox and Snell  $R^2 = .017$ , Nagelkerke  $R^2 = .025$ ; Model 2:  $X^2 = 6.134$ ,  $df = 6$ ,  $p = .408$ , Cox and Snell  $R^2 = .027$ , and Nagelkerke  $R^2 = .039$

### Research Question 5

The fifth research question explored if there was a relationship between TEAS test scores and the success of students as measured by the registry pass rates, while controlling for demographics? The logistic regression analysis examines the relationship between demographic characteristics, academic metrics, and the likelihood of completing the radiography program. Model 1's predictors include age, race (White), gender (Female), Pell Grant recipient status, and curriculum GPA, while Model 2 adds the TEAS score. None of the covariates were statistically significant predictors of radiography program completion ( $p > 0.05$ ), and the TEAS scores did not enter the model. Despite this, some variables showed odds ratios worth noting. For instance, in Model 1, curriculum GPA had the highest Exp(B) at 4.273, suggesting that higher GPAs were associated with increased odds of passing the registry. However, the lack of statistical significance ( $p = 0.138$ ) indicates that the observed association may be due to variability or insufficient sample power. Similarly, in Model 2, being White had the largest odds ratio (Exp(B) = 3.061), but this result was also not significant ( $p = 0.334$ ). The findings highlight that while some predictors may suggest trends in registry pass likelihood, further research with larger sample sizes or additional covariates may be needed to draw more definitive conclusions.

**TABLE 5**  
**BINARY LOGISTIC REGRESSION ANALYSIS OF DEMOGRAPHICS AND TEAS**  
**PREDICTING RADIOGRAPHY COMPLETED AS A DEPENDENT VARIABLE**

Covariates	Model 1					Model 2				
	B	S.E.	Wald	p	Exp (B)	B	S.E.	Wald	p	Exp (B)
Age	.026	.062	.178	.673	1.026	.005	.063	.006	.939	1.005
White	1.043	1.143	.833	.361	2.839	1.119	1.159	.932	.334	3.061
Female	.698	1.175	.353	.552	2.010	.643	1.205	.285	.594	1.902
Pell Recipient	-.138	.948	.021	.884	.871	.065	.981	.004	.947	1.067
Curriculum GPA	1.452	.979	2.198	.138	4.273	1.025	1.098	.872	.350	2.788
TEAS Score						.082	.053	2.377	.123	1.086
Constant	-2.72	3.211	.719	.397	.066	-6.24	4.171	2.238	.135	.002

Note.  $p < 0.05$ ; Model 1:  $X^2 = 3.924$ ,  $df = 5$ ,  $p = .560$ , Cox and Snell  $R^2 = .032$ , Nagelkerke  $R^2 = .098$ ; Model 2:  $X^2 = 6.134$ ,  $df = 6$ ,  $p = .408$ , Cox and Snell  $R^2 = .051$ , Nagelkerke  $R^2 = .158$ .

## Research Question 6

The final research question examined if there is a difference in race, gender, and socioeconomic status of the group of students whose TEAS scores were used and the group of students whose TEAS scores were not used? Table 6 presents the findings indicating there are no differences in the demographics of race, gender, and Pell status.

**TABLE 6**  
**CHI-SQUARE ANALYSIS**

	Cohorts Prior to 2019		2019 Cohort		Chi-square	
	f	%	f	%	$\chi^2$	p
Race					1.228	.268
White	138	70.4	22	61.1		
Non-White	58	29.6	14	38.9		
Gender					.001	.970
Male	43	21.9	8	22.2		
Female	153	78.1	28	77.8		
Pell Status					.157	.692
Pell-Recipient	133	67.9	26	72.2		
Non-Pell Recipient	60	30.6	10	27.8		

*Note.* Missing data in Pell Status (n = 3); p < 0.05

## DISCUSSION OF FINDINGS

The study compared data from the pre-2019 cohorts with that of the 2019 cohort. Determining the relationship between TEAS scores and cohorts was analyzed using descriptive statistics and logistic regression analyses. Pearson correlations were used to find the relationship of TEAS scores to demographics and student success. The pre-2019 cohorts included 0.3% more female students than the 2019 cohort, which reflected a slight increase in male students. The number of White students in the cohorts before 2019 was 9.3% greater than that of White students in the 2019 cohort. Pell Grant recipients were 4.3% more prevalent in the 2019 cohort than the pre-2019 cohorts. The 2019 cohort had a 20.5% higher program completion rate than the pre-2019 cohorts. However, the pre-2019 cohorts had a 31.1% higher registry pass rate than the 2019 cohort. A comparative examination of all variables showed that the TEAS score was the only significant predictor of program completion for the pre-2019 cohorts. Each one-point increase in TEAS scores correlated with a 4.1% increase in the likelihood of program completion. However, this finding lacked significance for the 2019 cohort, which suggests that TEAS scores had no impact on the program completion of this cohort.

Selective health programs, like radiography, often have competitive admissions processes driven by accrediting agencies that limit annual enrollment. Factors like limited lab capacity and clinical affiliations for community college radiography programs necessitate careful student selection. These programs aim to produce enough entry-level workers to meet labor market needs, with goals such as increased retention, registry pass rates, and job placement rates. Admissions processes often use cognitive criteria, including minimum GPA and standardized test scores, such as the TEAS, as indicators of student success. This study examined how TEAS scores relate to students' demographic makeup, such as gender, race, and Pell Grant receipt, and their success in program completion and registry pass rates. It also explored how TEAS scores

predict course completion and whether differences exist between students admitted with or without TEAS scores.

## **RECOMMENDATIONS FOR FUTURE RESEARCH**

### **Continuous Evaluation of Admissions Processes**

Considering the findings from the study, one recommendation is for continuous evaluation of admission processes and examining the validity and reliability of the variables used in the process. This would be helpful for leaders when determining the fairness and equity of the processes. Radiography program leaders must continuously assess their admissions criteria to ensure they are equitable and effective. Since many programs use selective admissions processes, understanding the fairness and predictive power of variables like TEAS scores and GPA is essential. These studies should involve large enough sample sizes to produce accurate and actionable outcomes, and they should occur continuously.

### **Comparative Studies With Other North Carolina Community Colleges**

Institutional researchers should compare the data from the radiography programs of other North Carolina community colleges that use TEAS scores as admissions requirements. This would help determine the impact of the TEAS on student diversity and success across the discipline, enabling the greater generalization of the results. Such comparisons across multiple institutions could reveal broader trends and provide insights into the effect of TEAS scores on admissions practices across the state. Additionally, examining GPA as a predictor of success alongside TEAS scores would provide a clearer picture of how these factors contribute to student outcomes.

### **Longer-Term Analysis of Non-TEAS Admissions**

It may also be valuable for administrators to continue to monitor and analyze the BCCC admissions process (without the use of TEAS scores) for the next four years to determine the accuracy of the assessment of the impact of TEAS scores on diversity as predictors of student success. Given the limited data from only one cohort without TEAS scores, a longer-term analysis will help determine whether these scores truly affect diversity and student success. Further research should also focus on whether curriculum GPA can be a more reliable predictor of success in place of standardized test scores.

### **Monitoring ARRT Pass Rates and the Impact of COVID-19**

Researchers should study the ARRT results of the 2021 graduating cohorts of all radiography programs, continuing to monitor the results until after the COVID-19 pandemic has subsided. The pandemic introduced significant challenges to education and certification processes, which may have impacted student performance. A thorough analysis of how COVID-19 has influenced ARRT pass rates is essential for understanding the broader effects of this unprecedented disruption on student success. Qualitative research could also explore why some students struggled more than others during this period.

### **Research on Test-Optional Policies at Four-Year Institutions**

There is a need for additional research on the cohorts at four-year institutions where leaders have waived standardized test requirements for the admissions process. This research would help to evaluate whether the absence of standardized tests, such as the TEAS or SAT, impacts student diversity and success at larger universities. By comparing outcomes from test-optional and test-required admissions, researchers could provide valuable insights for institutions deciding whether to retain or eliminate standardized testing as part of their admissions criteria. This research should also examine programs that require additional standardized tests or certification exams to identify how these variables affect student success.

## IMPLICATIONS FOR PRACTICE

### Revising Admissions Criteria

Based on the study's findings, BCCC's radiography program leaders may want to consider not reinstating the TEAS score requirement, instead focusing on GPA as a more reliable indicator of student success. The increase in GPA requirements for the 2019 cohort correlated with higher program completion rates, suggesting that GPA may be a better predictor of student achievement. Future admissions practices should prioritize demonstrated learning abilities and overall academic performance over standardized test results.

### Enhanced Pre-Application Advising and Support

Offering intensive pre-application advising and academic enrichment programs is crucial for improving student readiness and success. These programs can especially benefit underrepresented minorities (URM), providing students with the tools to succeed in the radiography program. Furthermore, culturally competent advising and mentorship will be vital in guiding URM students through the academic process and enhancing diversity within the student body and faculty.

### Broader Recruitment Strategies

Radiography programs should expand their recruitment efforts to attract a more diverse applicant pool. As the need for healthcare professionals grows, program leaders must ensure their admissions processes are inclusive and effective at targeting a wide range of students. Examining which factors in the admissions process have the most significant impact on student demographics will help create more diverse and robust healthcare workforces.

## CONCLUSION

In conclusion, the study's findings highlight that TEAS scores were not a significant predictor of student success or diversity, while GPA emerged as a more reliable measure of program completion. BCCC's radiography program leaders should consider extending the non-TEAS admissions process for the next four years to collect more comprehensive data on its impact. Further research across other health sciences programs and institutions, particularly in light of test-optional policies and the effects of the COVID-19 pandemic, will help shape future admissions strategies. Ultimately, continuous evaluation of these processes will ensure that institutions are better able to meet diversity and success goals, while addressing the growing demands of the healthcare industry.

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