Racialized Experiences and Academic Success of Minority Students in Postsecondary Career and Technical Education

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Abstract

This mixed method study examined the education success and experiences of racial and ethnic minorities (REM) at one technical college within the Wisconsin Technical College System. Through the use of quantitative archival institutional data, student success was analyzed over a five-year period. Statistical significance difference was found between race/ethnicity and educational success. Further analysis was conducted and specifically analyzed disaggregation of REM students into a singular racial or ethnic category. Focus groups were used to collect qualitative data on REM student experiences. Thematic analysis was conducted to analyze this data, which revealed five key themes: offensive course content, assumption of being foreign, racial invalidation, attribution/misattribution of ability, and racial expert. Implications of this study's findings are discussed.

Keywords: racial minority, ethnic minority, post-secondary, microaggression, student success

1. Introduction

The United States has seen significant increases in minority and immigrant populations in the last three decades (United States Census Bureau, 2010). Additionally, minority children and youth make up the fastest-growing group in American schools (Fix & Passel, 2003; Rong&Preissle, 1998). According to the National Center for Educational Statistics, by 2021, there will be a significant rise in minority enrollment in postsecondary education. These trends provide foresight into potential demographic changes that educational systems will continue to experience as these children progress into adulthood and seek postsecondary education (Iannarelli, 2015). Simultaneously, awareness of institutional, subconscious, color-blind, and overt racial and ethnic injustices also has increased and can be seen in social commentary throughout various media channels.

These changes, coupled with the unyielding erosion of the middle class, increases stratification of rich and poor and cause significant workforce changes with a misalignment of workers' skills to the workforce needs (Fuller, Burrowes, Raman, Restuccia, & Young, 2014). The cumulative effect of these phenomena has been the entrenchment of racial attitudes, a growing awareness of the discrepancies in racial/ethnic educational attainment, and the accompanying workforce skills gap. This ostensibly elevates the importance of understanding racial and ethnic variation in enrollment and performance in postsecondary career and technical education (CTE).

2. Historical

Historically, a criticism of CTE research has been the absence of racial and ethnic minorities (REMs) from research and discussion (Rojewski& Xing, 2013). This lack of engagement is notable considering the demographic changes in the United States and the relative ubiquity of research featuring REMs in other education and social science subdisciplines. The limited research conducted to date has shown the influential nature of demographic variables such as race and ethnicity in CTE participation and career selection (Lewis & Cheng, 2006; Wald, 2004).

Over 40 years ago, Sheppard (1975) presented research at the American Vocational Association's annual convention about the absence of REM-focused research in CTE. Sheppard posited that REMs have many commonalities including deprivation, discrimination, and disparity of opportunities, yet also have important dissimilarities, which are necessary to examine. Greer and Collard (1999) acknowledged the notable absence of research focused on the two largest REM groups—Blacks/AfricanAmericans, and Hispanics in CTE. Maldonado and Farmer's (2006) targeted research found that few Latino students enroll in and graduate from postsecondary CTE programs. Hirschy, Bremer, and Castellano (2011) also discovered similar findings on success, concluding that White/non-Hispanic students are more likely than REM students to complete CTE programs. Although the need for research has been acknowledged, decades later, little has changed.

3. Statement of the Problem

The majority of studies about REM student success in CTE have occurred at the secondary level. At the postsecondary level, REM student success studies have focused on liberal arts colleges and universities. This dearth of information, specifically focusing on REM student performance in CTE, is problematic. Current research, which may include CTE students and programs, is usually aggregated with community college research. This hides potential differences in CTE versus non-CTE student performance.

4. Purpose and Research Questions

The primary focus of this investigation was to examine the influence of race/ethnicity on the success of students at a post-secondary CTE institution and to investigate the experiences and obstacles that REM students face. For the purpose of this study, educational success was defined as students who successfully complete a postsecondary career and technical education program within 200% of the standard program schedule timeframe. REM groups were examined as an aggregated category. The study will help to inform this technical college of performance differences between REM and non-REM students. The following research questions guided this study:

- 1. Are there disparities in educational success between REM and non-REM CTE students?
- a. Are there disparities in educational success when REM students are disaggregated into singular racial or ethnic categories?
- 2. What are the experiences and obstacles of REM students?

5. Methodology

5.1 Quantitative methods and procedures. To measure education success of REM students compared to non-REM students, a secondary data analysis was conducted of those formerly enrolled at the selected technical college based on how they chose to self-identify as Hispanic, Asian, American Indian, Alaskan Native, Black, Native Hawaiian, Other Pacific Islander, Multiracial, or White on institutional enrollment forms.

Since the operational definition of educational success in this study is program completion within 200% of the standard program schedule timeframe, only students enrolled in these targeted degree programs, 2-year associate degrees and technical diplomas, were included in the study, and the data included only the academic periods of Fall 2009 through Fall 2013. With a population of 7,238 students, there were 6,599 non-REM students and 639 REM students. A stratified random sample was then taken to create comparable sample sizes, since the two groups have disproportionate values. This provided an n = 658 of non-REM and an n = 639 of REM students for this study.

Of the REM students selected for this sample, the largest REM group were Asians who made up 18.7% of the population followed by Hispanics at 10.7%, Blacks 9.6%, Multiracial at 6.2%, American Indian/Alaskan Native at 3.3% and Pacific Islanders at .6%. Based on the categorical nature of the variables, a chi-squared analysis was conducted to determine if a statistically significant difference exists between non-REM and REM students in program completion. Since chi-square analysis indicated a significant relationship, Cramer's V was used to evaluate the strength of the relationship as suggested by Fields (2006).

5.2 Qualitative methods and procedures. To fully understand the contextual antecedents that affect these numbers, focus groups were conducted to explore unique barriers that affect REM student success. The qualitative data for this study was drawn from focus groups. An email list was provided by the institution of REM program students enrolled Spring 2017 who had attended and were enrolled in the institution for at least one semester resulting in a population of 397. A series of three emails was sent out for recruiting participants to the focus groups. Interested students were asked to respond to an online questionnaire.

Fifty-two students completed the survey and reported availability during the scheduled focus groups times. Three focus groups were then conducted yielding an N of 25 students. Of the REM students selected for this sample, the largest REM group were Asians who made up 41.7% of the population followed by Blacks at 33.3%, Hispanics at 12.5%, American Indian/Alaskan Native at 8.3% and Multiracial at 6.2%. Each group was scheduled for 1 hour, and participants were questioned about their transition to postsecondary CTE, social supports, access to role models and or mentors, and their experiences within the postsecondary CTE institution. All focus group sessions were recorded and transcribed verbatim. This researcher used Braun and Clarke's (2006) six-phase model of thematic analysis to examine the data set from the focus groups. Thematic analysis identified, analyzed, and reported patterns or themes within the qualitative data.

6. Results

There were two primary research objectives in this study. The first was to examine performance differences between REMs and non-REM students at one technical college within the WTCS. This study specifically examined the relationship between race/ethnicity and educational success in CTE programs. REM groups were examined as an aggregated category and disaggregated into individual racial and ethnic categories (i.e., Hispanic, Asian, American Indian or Alaskan Native, Black, Native Hawaiian, or Other Pacific Islander). The second objective was to investigate experiences and obstacles that REM student face in postsecondary CTE at this same technical college within the WTCS. Results are organized and discussed by research question.

6.1 Research question 1: Are there disparities in educational success between REM and non-REM CTE students? The first objective was to determine if there was any significant difference in educational success between REM and non-REM CTE students. Educational success was examined through the analysis of CTE program completion. Based on the categorical nature of these variables, chi-square tests were utilized to determine what, if any, relationship exists between race/ethnicity (REM and non-REM) and educational success (successful program completion of a postsecondary CTE program within 200% of the standard program schedule timeframe). A chi-square goodness of fit was conducted between race/ethnicity and education success for the aggregated five cohorts of students starting two-year CTE programs from one technical college (Fall 2009 through Fall 2013).

All expected cell frequencies were greater than five. The statistical results, $\chi 2$ (1, n = 1,297) = 7.390, p = .007, Cramer's V= .75, indicated that the frequencies of students by race/ethnicity are not equally distributed within educational success. Frequencies are statistically significant in difference from what would be expected by chance. The analysis revealed that non-REM students (n = 295) are disproportionately over-represented in the educationally successful group and REM students (n = 239) are under-represented. Cramer's V indicated that there is a large or strong association between REM status (REM versus non-REM) and educational success or lack of educational success.

6.1.1 Research question 1a: Are there disparities in educational success when REM students are disaggregated into singular racial or ethnic categories? When REM students were disaggregated into singular racial or ethnic categories, disparities in educational success were revealed. Pacific Islander students are most likely to be educationally successful, with 62.5% successfully completing a 2-year postsecondary CTE program within 200% of the standard program schedule timeframe. It is worth noting this was the smallest REM group when disaggregated with an n of 8. American Indian/Alaskan Native students are the least likely to experience educational success, with only 11.6% successfully completing a 2-year postsecondary CTE program within the 200% of the standard program schedule timeframe.

Asian students are the second most successful group when disaggregated, with 47.3% successfully completing a 2-year postsecondary career and technical education program within 200% of the standard program schedule timeframe. Pacific Islanders and Asian students are the only two REM groups that have higher rates of success than the White students in the sample with White students yielding a 44.8% success rate. Table 1 provides a breakdown of educational success by disaggregated racial or ethnic grouping.

1.		Dercentage	•	Dercentage
Race and Ethnicity	Frequency Educational Success	Percentage Educational Success	Frequency Educational Success	Percentage Educational
	No	No	Yes	Success
				Yes
American Indian/Alaskan Native	38	88.4%	5	11.6%
Asian	128	52.7%	115	47.3%
Black	88	70.4%	37	29.6%
Hispanic	92	66.2%	47	33.8%
Pacific Islander	3	37.5%	5	62.5%
Multiracial	51	63.0%	30	37.0%
White	363	55.2%	295	44.8%
Total	763	58.8%	534	41.2%

Table 1 Educational Success by Race and Ethnicity

6.2 Research question 2: What are the experiences and obstacles of REM students? Braun and Clarke's (2006) six-phase model of thematic analysis was applied through the combined transcripts of three focus groups.

This process yielded five key themes: offensive course content, assumption of being foreign, racial invalidation, attribution/misattribution of ability and racial expert. Table 2 captures these themes and provides a brief definition of each.

Table 2. Theme Definitions and	Illustration of	Microggrossions	with Examples
Table 2. Theme Deminuous and	i musu anon or	which baggi essions	with Examples

Theme and Definition	Type of Microagression	Example
Offensive course contentLecture, class discussions, or course materials that promulgate inaccurate information of minority	Microassault	 Racial slurs (e.g., "Chinky eyes") Stereotyping career goals (e.g., the suggestion that Asian student
groups or promote stereotypes of groups	Microinsult	 wanted to own a nail salon) Derogatory terminology (e.g Oriental versus Asian, mulatt versus multiracial, or illegal alier versus undocumented people)
Assumption of foreignAssuming that a REM student is foreign-born or a non-U.S. citizen	Microinsult	 Associating minorities with poverty Asking REM students' questions of origin (e.g., "Where are you from?" "Where were you born?")
	Microinvalidation	 Faculty assuming that a REM struggling academically needs hell with English Praising REM students for English
Racial invalidation	Microinsult	skills (e.g., "You speak goo American." "You have no accent")
 A statement made to minimize or question a REM students' racialized experience 	Micromsuit	 Negative non-verbal body languag when REM students share experiences (e.g., eye-rolling, and/or angry facial expressions)
	Microinvalidation	 Failing to acknowledge REN students or experiences Non-REMs expressing skepticism of
		REM students personal accoun (e.g., "How do you know it is abour ace?
Attribution/misattribution of abilityThe assigning of ability or inability based on race	Microinsult	 Assumptions of academic abilitie based on race (i.e. assuming Asia students are good at math an science)
		 Negative non-verbal body language when REM students are assigned to groups during class
		 Devaluing REM students input of contributions Stating a REM students gained entri
Decisioner	Minutine It	into a program or obtain a jo because of affirmative action
 Racial expert The expectations that a REM student is an expert on REM group history or the assumption that the REM student desires to educate others on about 	Microinsult	 REM students being starred at a eye contact voided with topics a race are discussed Expecting REM students to perform
REM cultures		as racial experts

7. Themes

7.1 Theme 1: Offensive course content. The REM students reported numerous examples of faculty presenting materials or making erroneous statements about REM groups by using inappropriate or dated terminology, endorsing stereotypes, or other offensive comments. These experiences occur directly during course lectures, class discussions, and in course materials. A multiracial student shared how an instructor was discussing the importance of ordering cultural inclusive meal options; however, the example they provided was erroneous. "He was talking about if certain groups of people would be present [at a business function], like Muslims, it would be important not to serve chicken."The student went on to explain that the instructor failed to acknowledge his mistake and went on to make a second erroneous statement. "I figured he meant pork, so I raised my hand asked, 'do you mean pork?' and he responded, 'no, people from India don't eat pork.' I was honestly shocked and didn't know what to even say."Similarly, an Asian student shared how an instructor inaccurately reported marriage practices of an ethnic group."The teacher said, 'most Hmong [people] practice arranged marriage.' I was like here we go again.

Then this White guy chimed in and said, 'And they kidnap young women and force them to get married." She went on to explain how the instructor affirmed the White student's comment with the response, "I am sure that happens sometimes."REM students also reported that representations of minorities in course materials reinforce stereotypes. In the following account, as Asian student shared an experience about a class discussion: Like I said, my experiences here are a little more different than in high school because in my first year of college here in [name of class], we talk about people's body language, speech, and that kind of stuff. The teacher asked, "Can you give me an example of a racial difference in body language or speech?" A student [White] shared, "Well, there was lots of Asians in my high school. Those people make bad eye contact, but Asian people have 'Chinky eyes.'" The teacher said, "Can you define Chinky eyes?" The student just pulled his eyes to imitated Chinky eyes at us [the class], and everyone in the classroom were all quiet. The teacher said, "that's rude" but nothing more. Multiple REM students articulated how images on PowerPoint slides during class associate minorities with poverty. One student said: I don't know if you noticed this [said to other focus group members], but on some of our slides [PowerPoint], I feel like there's relationship between minorities and poverty. It is almost like minorities and poverty are not used interchangeably. I just noticed that throughout many of my classes.REM students also shared how their career goals have been framed in racially stereotypical ways. An Asian student recounted, During class, we were discussing our dream jobs. I said, "I want to be my own boss one day, own my own shop." I can't remember just how the teacher said it, but they assumed I meant nail salon. I kinda [sic] snapped, "no, a clothing store!"

Additionally, several students commented on faculty using dated terminology when discussing REM groups. Examples included referring to Asian people as oriental, Native American people as Indians, multiracial people as mulatto and undocumented people as illegal aliens or the illegals.

7.2 Theme 2: Assumption of being foreign. TheREM students reported various interactions with faculty, staff, and peers that treat them as though they are non-U.S. citizens, non-native English speakers, and/or foreign born. They talked about frequently being asked seemingly innocuous questions such as "where are you from?" or "where were you born?" sending the message to REM students that they are foreign or a non-U.S. citizen. Many REM students disclosed that these statements are commonplace. One REM student expressed the frequency of these comments by making a joke, "If I had a dollar for every time someone asked where I was from, I would be debt free!" Other members of the focus group affirmed that student's comment with head nodding and laughter.

REM students described experiences of people making assumptions about their language skills. One student talked about an interaction with a faculty member: "I was having a hard time in class, and so I went to see my teacher. The instructor suggested I go to the ESL lab, but that wasn't the problem, I only speak English!" Another student shared an experience with a person in the financial aid office when asking a question about loans: "They explained everything really slow and loud ... I just wanted to scream, "I speak English!" REM students disclosed being complemented on their English skills or lack of accent, which further expresses the assumption of being a non-native English speaker. One REM student recounted an experience after doing a class presentation: We had to give 5-minute speeches ... I was nervous ... I mean everyone hates standing in front of people talking, right? When I was done, this guy in class said me ... I think meaning to be nice, "You speak good American ... almost no accent."

REM students also shared that when being praised for their English skills, they are frequently asked if they were adopted, which further reinforces the assumption of being foreign.

7.3 Theme 3: Racial invalidation. This theme presented itself in statements made by faculty or students that challenged or minimized a REM student's racial experiences. These experiences include denying a REM student's racial reality by seeking alternative explanations for the experiences or directly asserting to the REM student that their experience is not a result of discrimination, racism, or prejudice.

REM students reported that when class discussion have turned to topics of race and ethnicity, they have often met with invalidating comments such as "not everything is about race" or White students expressing skepticism of their personal accounts. One REM student said, "I was sharing how DWB [driving while Black] in this very White town was a problem, and this White girl said, 'that's not a thing." The student then went on to reassert the experience again by giving a specific example, and another White student said, "Maybe you're getting stopped because you suck at driving."

Another REM student recounted how they had shared in class about being treated as a janitor at their internship site:I was taking a break and this person came up to me and told me someone had spilled coffee. I was confused ... I realized they thought I was a janitor. When I told this story in class, the teacher said it had nothing to do with race. It was because I was young. They are wrong; this is not the first time something like this had happened to me. More than one REM student disclosed frustration about non-REM faculty and students wanting them to prove their experiences were racially influenced. One REM student said, "I am so sick of people telling me it is not about race I could throw-up. Like 'how do you know it's about race?' and I'm like 'how do you know it wasn't?'"

A multiracial student talked about having a hard time finding a job in their field. This was notable since most of the other students in their program were already working in the field. The student spoke about an encounter with the program director: I was telling them [program director] I am having a hard time finding a part-time job. I keep getting interviews and they [company hiring] say, "Oh, the interview went well, blah, blah," but I keep waiting for their call. No luck at getting the job. I told them [program director], it's because I am Black, and they jumped all over it. "Maybe you need to work on your interview skills."

In the following passage, a Latina student discussed expressing concerns to a faculty member about how she was treated during a clinical experience: I had a situation at clinicals. A person referred to me as the dark one. I asked her if she's talking about my hair color, and she said "no." I briefly brought I up with my classmates who were actually offended. My classmates were like, "You should say something." It briefly got brought up, but it wasn't really addressed. They [the instructor] brushed it off as not being about race. Maybe they were uncomfortable because they couldn't do anything, but I just wanted to talk about it and feel heard.

The REM students also expressed racial invalidation through non-verbal body language (i.e., eye-rolling, angry facial expressions) and paralinguistic communication (i.e., tone expressing doubt) by faculty and non-REM students.

7.4 Theme 4: Racial attribution/misattribution of ability. This theme was illustrated by REM students' ability or inability to be framed by race and/or racial stereotypes. At times, these experiences framed the REM students as having added ability because of race, yet other times REM students also have been framed as having less ability. In the following excerpt, a REM student discussed a class experience: Asian peoplein general are given this stereotype of being smart; excelling in certain fields, and I experienced this the first time in my [science] class. I understood the material really well because I studied and am good at studying and ask questions when I'm confused. This gal was just like, "I'm gonna [sic] sit with the smart Asian kid because he knows what he's talking about." There was an awkward pause in the classroom and one gal was just like, "Oh my gosh, I can't believe you said that." I wish the instructor would have said something.

Many focus group participants shared experiences about how their REM status influenced their experience involving group work. One particular student spoke about being put into groups during class: When teachers assign you in groups, and then you're assigned to a group, a lot of them [non-REM students] roll their eyes, which is kind of a non-verbal way of saying, "You had to be in my group?" I was feeling like, "Hey, I'm here. I've made ... I mean I'm at this level. I didn't make it without having any prerequisites or being accepted, I'm sitting in the same chair as you are, so potentially I have the same knowledge background, you know?"

Other REM students disclosed similar experiences with negative non-verbal behaviors from peers when being placed into groups. Focus group participants reported how their race made them desirable when working on certain subjects and undesirable in other subjects. Multiple REM students asserted this duality. One Asian student described this contrast in treatment very directly connected to subjects: "People want me in their group if we are doing math but don't want me in their group if we have to write. I am consistently faced with one stereotype of another."Whereas, another student explained this disparity in treatment in the context of program courses and general education requirement: In my program classes, people want to work with me. Everyone thinks my people [racial group] are great in IT. But it is a different story when I am in English classes. No one ever wants to work with me on stuff like peer editing. REM students talked about their input in groups being devalued. One REM student discussed experiences with taking group exams:In [program area stated by student], sometimes we take a group exam.

Sometimes you may know the answer and you tell them [group] this is it, and then some other person might say ... maybe they're White, "Oh this is so and so," then the whole group tends to favor that other person's answer simply because they are White. Sometimes I feel like, "Oh well, this guy has an accent, he probably doesn't know it."

Other REM students mentioned being underestimated by classmates or the assumption that REM students are held to different standards. A Black student spoke about frustration concerning non-REM peers, believing that she gained access to their program because of affirmative action.

I overheard a couple of students [White] discussing us [two people in the focus group] saying that the only reason they are in this program is that they check the minority box, and not the White one. This has also happened to me at work. Similarly, another Black student described an experience when discussing future jobs. A few non-REM peers told the

Black student, "You will get a job because they will have to hire you because of affirmative action." REM students also expressed non-REM students exerting negative feelings with diversity student services on campus with the non-REM students often making comments that these services make things easier for REM students versus non-REM students.

7.5 Theme 5: Racial expert. This theme presented itself in REM students reporting the expectation that they are supposed to be experts on REM group history, current experiences, or the assumption that the REM students desire to educate others about these topics. This theme most commonly presents itself during class discussions.

The REM students talked about experiences of being directly called upon during class discussions and being asked to share their REM group's perspective. A Native American student shared the following experience: "Last semester, I didn't even know how this came up, but we were discussing the pipeline protest in North Dakota, and the teacher asked me just point blank, "how does your tribe feel about this?" The same student also told about how the background was inaccurately assumed in another class and they were asked, "how to Mexicans feel about NAFTA?" Similarly, a Latino student explained being asked, "do you want to explain to the class how Mexican people felt about immigration?" by an instructor during a class discussion. One particular REM student expressed frustration about class discussions: You happen to find yourself in a class. Maybe you're the only Black guy. Sometimes it seems like. "Oh you're the Black expert, so what's your opinion." In a way, even though they're not trying to be racist against you, they expect you to know all things Black, like you are some kind of expert. REM students described howfellow students have directly asked them to "give the [REM group] perspective." Further, REM students expressed feelings of pressure and frustration about being asked to educate others about their groups. One Black student said,"This is all new to me. In high school, I was the minority, so no one asked me about being Black. Now I feel like I have to know things about my race, cause people ask tons of questions." Other Black students talked about their frustration this way: "I'm just sick of it. I mean now many times am I going to have to explain my people! If I am gonna have to educate people, at least pay me for it."

Several REM students talked about feeling pressured to "set the record straight" about their particular REM group. One said, "Give others an education about [their] history and [their] responsibility to enlighten other people about [their] culture." An Asian student explained about experiences in which she is expected to know about all Asian ethnic groups: I know being Asian. I'm Chinese, but they group all Asian cultures together. We're all extremely different, that's my pet peeve. They're like, "Oh you're Asian, so you're Hmong ... you're Korean." I'm not, and I don't know about these groups, but people expect me to be some kind of authority on all things Asian. REM students also exerted this theme through non-REM, non-verbal body language, such as faculty and students starring at them when race or race related topics are addressed or feeling as though people are trying not to look at them when such topics come up.

8. Discussion

The purpose of this study was to examine the educational success and experiences of REM students in postsecondary CTE. It is projected that based on the changing demographics of students at the primary and secondary level, REM postsecondary enrollment will only continue to rise throughout United States (Fix & Passel, 2003). The analysis of quantitative and qualitative data in this study revealed several key findings. They are organized by the research questions posed in this study.

Research question 1: Are there disparities in educational success between REM and non-REM CTE students? Through the use of thechi-square test and a further analysis through Cramer's V, this study shows that there is a statistically significant difference in educational success between REM and non-REM students in postsecondary education, with REM students having lower rates of success compared to non-REM students. This result is consistent with other studies that have documented differences in postsecondary success between REM and non-REM groups for decades (Knapp, Kelly-Reid, &Ginder, 2010; Lorah&Ndum, 2013; Miller, 1995; Yeado, 2013; Young, 1994).

Research question 1a: Are there disparities in educational success when REM students are disaggregated into singular racial or ethnic categories? Disaggregation of REM students into singular racial or ethnic categories reveals disparities in educational success between REM subgroups. The differences found in this study are consistent with earlier research (Culpepper & Davenport, 2009; Lorah&Ndum, 2013; Miller, 1995; Young, 1994). For example, in this study, Pacific Islander (62.5%) and Asian (47.3%) experience higher rates of educationally success compared to non-REM students (44.8%). Further, Black (29.6%), Hispanic (33.8%), and American Indian/Alaskan Native (11.6%) students experience lower levels of educational success. These findings are consistent with Ryan and Bauman's (2016) latest report for the United States Census Bureau, which analyzed education attainment by race and ethnicity.

Research question 2: What are the experiences and obstacles of REM students? Through the use of Braun and Clarke's (2006) six-phase model of thematic analysis, five themes emerged, which indicated REM students' experiences and obstacles at a postsecondary CTE institution. These themes include offensive course content, assumptions of being foreign, experiences with racial invalidation, attribution or misattribution of ability based on race, and expectations to be a racial expert. Focus group participants in this study indicated various ways in which their REM status influences their experiences and creates obstacles in post-secondary CTE programs. Focus group participants also shared experiences in a variety of academic settings including, faculty provided course content, class discussions, non-classroom interactions on campus and experiences in off-campus learning experiences (i.e., internships, clinical, and career exploration experiences).

Although no focus group participant used the term "microaggression," the experiences and themes articulated by these REM students are consistent with all three forms of microaggressions identified in earlier studies. In Sue et al. (2007) three different forms of microaggressions were identified, including microassaults, microinsults, and microinvalidations. Microassaults are most direct and closely aligned with overt racial discrimination and racism. Microinsults are communications that are insensitive or demeaning to a person's racial identity or background. Microinvalidations are exchanges that "exclude, negate, or nullify the psychological thoughts, feelings, or experiential reality of a person of color" (Sue et al., 2007, p. 274).

Table 2 shows the themes that emerged from this study, the classification of microaggression they illustrate, and the key examples.Consistent with these findings microaggressions present themselves during class discussions or when REM students share their experiences(Sue et al, 2007; Sue, Lin, Torino, Capodilupo, & Rivera, 2009). Further, focus group REM students reported that ill-prepared faculty members exacerbate these experiences as in the example of when a White student used the racial epithet "Chinky eyes," the instructor only minimally responding to the comment. This is also present when the REM students recalled how instructors "negate or minimize" REM students' experiences during class or individual conversations. The effect of postsecondary education instructors' lack of preparedness is also consistent with results in earlier studies (Sue et al 2009).

Conclusion

Over the last 40 years, significant progress has been made in reducing the poverty rate and increasing the educational success REM people, yet there is significantly more that needs to be accomplished. Although it is important to acknowledge and celebrate some successes, more must be done to build upon these accomplishments and continue to forward with progress. Improvements in educational success are likely to manifest in reducing the poverty rates for REM groups. The postsecondary career and technical institutions throughout the nation are posed to play a critical role in these continued successes. If CTE and these institutions do not fulfill that role, there will be very social and economic consequences for REM groups and society as a whole.

References

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3, 77-101.

- Carnevale, A. P. &Strohl, J. (2013). Separate & unequal: How higher education reinforces intergenerational reproduction of white privilege. Washington DC: Georgetown Public Policy Institute, Center on Education, and the Workforce.
- Culpepper, S.A., & Davenport, E.C. (2009). Assessing differential prediction of college grades by race/ethnicity with a multilevel model. *Journal of Educational Measurement*, 46(2), 220-242.
- DeNavas-Walt, C., & Proctor, B. (2015, September). Current population reports: Incomeand poverty in the United States: 2014. Washington, DC: United States Census Bureau.
- Engles, J., & Lynch, M. (2009, December). *Charting a necessary path: The baseline report of public higher education systems in the access to success initiative*. Washington, DC: Education Trust.
- Field, A. (2006). Cramer's V. In G. Davey, Encyclopedic dictionary of psychology. London, UK: Routledge.

- Fix, M., & Passel, J. S. (2003). U.S. immigration: Trends and implications for schools. Washington, DC: Urban Institute.
- Fuller, J. B., Burrowes, J., Raman, M., Restuccia, D., & Young, A. (2014, November). *Bridge the gap: Rebuilding America's middle skills*. Boston, MA: U.S. Competitiveness Project, Harvard Business School.
- Greer, J., & Collard, R. (1999). Women and Black students in college automotive technology. *Journal of Vocational and Technical Education*. 15(2), 44-49.
- Hirschy, A. S., Bremer, C. D., & Castellano, M. (2011). Career and technical education (CTE) student success in community colleges: A conceptual model. *Community College Review*, 39(3), 296-318.
- Iannarelli, C. M. (2015). Stressing success: Examining Hmong student success in career and technical education. *Hmong Studies Journal*, 15(1), 1-22.
- Knapp, L. G., Kelly-Reid, J. E., &Ginder, S.A. (2010). Graduations rates, 2004 and 2008 cohorts (NCES 2009-155). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, D.C.
- Lewis, T., & Cheng, S. (2006). Tracking, expectations, and the transformation of vocational education. *American Journal of Education*, 113(1), 67-99.
- Lorah, J. &Ndum, E. (2013). Trends in achievement gaps in first-year college courses for racial/ethnic, income, and gender subgroups: A 12-year study. (ACT Research Report Series 2013 (8)). Iowa City, IA: ACT, Inc.
- Miller, L.S. (1995). An American imperative: Accelerating minority educational advancement. New Haven, CT: Yale University Press.
- Rojewski, J. W., & Xing, X. (2013). Treatment of race/ethnicity in career-technical education research. *Career & Technical Education Research*, 38(3), 245-256.
- Rong, X. L. & Preissle, J. (1998). *Educating immigrant students: What we need to know to meet the challenges.* Thousand Oaks, CA: Corwin Press.
- Ryan, C. L., & Bauman, K. (2016). *Educational attainment in the United States: 2015*. Retrieved from https://www.census.gov/content/dam/Census/library/publications/2016/demo/p20-578.pdf
- Sheppard, N. A. (1975) Research focus on ethnic minorities in vocational education. Paper presented at American Vocational Association Annual Convention, Anaheim, CA. ERIC Document Reproduction Service. (ED120382)
- Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A. M. B., Nadal, K. L., &Esquilin, M. (2007). Racial microaggressions in everyday life: Implications for clinical practice. *American Psychologist*, 62(4), 271-286. doi:10.1037/0003-066X.62.4.271
- Sue, D. W., Lin, A. I., Torino, G. C., Capodilupo, C. M., & Rivera, D. P. (2009). Racial microaggressions in the classroom. *Cultural Diversity and Ethnic Minority Psychology*, 15, 183-190. doi:10.1037/a0014191
- U.S. Census Bureau (2010). Income, poverty, and health insurance coverage in the United States: 2010 Income & wealth Newsroom U.S. Census Bureau. *Census Bureau Homepage*. Retrieved from http://www.census.gov/newsroom/releases/archives/income_wealth/cb11-157.html#tablea
- Yeado, J. (2013, July). *Intentionally successful: Improving minority student college graduation rates*. Washington, DC: Education Trust.
- Young, J. W. (1994). Differential prediction of college grades by gender and by ethnicity: A replication study. *Educational and Psychological Measurement*, 54(4), 1022-1029.
- Wald, T. (2004). Race issues in career and technical education: A snapshot in black and white. *Techniques: Connecting Education & Careers*, 79(3), 40-43.
- Wisconsin Technical College System. (2015b, September 15). *Outcomes measurement areas*. Retrieved from http://www.wtcsystem.edu/initiatives/performance-funding