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Drawing on students' funds of knowledge: using identity and lived experience to join the conversation in research assignments

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Abstract

Despite programmes and initiatives intended to enable access to higher education for underrepresented students, higher education in the United States suffers from a persistent social class achievement gap. Although research exists about the social and academic factors that contribute to the social class achievement gap, one ubiquitous practice in higher education has been neglected – the research assignment. In this article, I share a subset of findings from a qualitative study that explores first-generation college students' experiences with research assignments in college. In particular, I present four case studies of participants who relied on their identities and prior knowledge to successfully complete a research assignment. Finally, I introduce the funds of knowledge concept, which honours students' identities and lived experiences, to provide a conceptual approach for engaging underrepresented and minoritised students through research assignments.

Keywords

Critical social theories; first-generation college students; funds of knowledge; information literacy; research assignments; social class achievement gap

1. Introduction

Despite programmes and initiatives intended to enable access to higher education for student populations who have traditionally been marginalised, the United States suffers from a persistent social class achievement gap in higher education (DeAngelo, Franke, Hurtado, Pryor & Tran, 2011; Engle & Tinto, 2008; Ishitani, 2006; Stephens, Hamedani & Destin, 2014). The social class achievement gap, a phrase coined by Stephens et al. (2014), points to the differences in academic outcomes, including grades, retention, and degree completion rates, between students of lower and higher socioeconomic status (SES). First-generation students' outcomes and experiences are frequently used to explore this achievement gap, as information related to family income and financial aid awards is often protected and can be difficult to obtain. (In general, a first-generation student is a student whose parents have not completed a four-year postsecondary degree; however, this category can be defined and operationalised in a variety of ways depending on the purpose of the exploration and the data that is available.) Existing research points to several potential reasons for this gap, including, but not limited to, differences in college readiness and academic preparation (DeAngelo & Franke, 2011; Warburton, Burgarin, Nuñez & Carroll, 2001). In addition, the culture of higher education, which has its historical roots in white, patriarchal, middle- and upper-class, heteronormative values, may be alienating to students whose cultural backgrounds are different from the privileged culture(s). Mann (2001) theorises that academic culture can produce feelings of alienation for underrepresented and minoritised students, and these students may feel as if they are expected to change their identities to succeed within academic culture (Jehangir, 2010; Rendón, Jalomo & Nora, 2000). In addition, some marginalised students do not find their identities and experiences reflected in the academic curriculum, thus exacerbating feelings of alienation (Jehangir, 2010).

Although much research exists about the social and academic factors that contribute to the social class achievement gap, particularly as it relates to first-generation college students, one ubiquitous practice in higher education has been neglected – the research assignment. Research assignments are reflective of both academic and disciplinary cultural values, and instructors expect students to participate in discourse and apply the vocabulary, theories, and methods of disciplines to which they are just gaining entry. Furthermore, research assignments have a direct connection to students' academic outcomes (i.e. grades). In this article, I share a subset of emergent findings from a qualitative hermeneutic phenomenological study that examined how 30 first-generation students at two small college campuses in the United States report experiencing research assignments (Folk, 2018). In particular, I will present four case studies of participants who relied on their identities and prior knowledge to successfully complete a research assignment and indicated their awareness of a discourse that they intended to join. Finally, I introduce the funds of knowledge concept (Kiyama & Rios-Aguilar, 2017; Moll, Amanti, Neff & González, 1992; Rios-Aguilar & Kiyama, 2012; Vélez-Ibáñez & Greensburg, 1992), which honours students' identities and prior experiences, to provide a conceptual approach related to engaging students whose identities traditionally have been marginalised in American higher education through research assignments. These emergent findings suggest that instructors and librarians should consider the ways in which academic research assignments can serve as asset-based and identity-conscious opportunities for academic engagement and student success (Pendakur, 2016), particularly for students whose identities have traditionally been marginalised in higher education, as well as considering the connection between students' intrinsic motivation to learn and the development of their information literacy. A funds of knowledge approach to research assignments may help to both engage students academically and develop their information literacy, though further research is necessary.

2. Literature review

2.1 Scholarship as conversation

The *Framework for Information Literacy for Higher Education* (Association of College & Research Libraries (ACRL), 2016) articulates six threshold concepts that comprise information literacy along with associated knowledge practices and dispositions. In my own practice working with undergraduate (i.e. bachelor's degree-seeking) students, I have found the 'scholarship as conversation' threshold concept to be a valuable gateway to developing the other threshold concepts (Johnston & McCracken, 2016). Students might not realise that, in general, their instructors expect them to join an existing discourse related to their research assignment's topic by asking a question or developing an argument. Once students begin to understand the discursive nature of research assignments and the expectation that they both participate in and contribute to that conversation, I believe it becomes easier to discuss issues related to the other five threshold concepts, including the key points within the conversation, who does and does not have authority in the conversation, where to find the relevant pieces of the conversation, who their audience is, and how the student will contribute to the conversation. However, joining an ongoing discourse about a relatively new topic, particularly in an academic context, is challenging for many college students (Leckie, 1996).

The description of the 'scholarship as conversation' threshold concept states:

Instead of seeking discrete answers to complex problems, experts understand that a given issue may be characterized by several competing perspectives as part of an ongoing conversation in which information users and creators come together and negotiate meaning. Experts understand that, while some topics have established answers through this process, a query may not have a single uncontested answer. (ACRL, 2016).

Writing a decade prior to the release of the framework, Fields (2006) argued that the kinds of 'complex problems' described by the framework are ill-structured problems or problems that do not have clear right or wrong answers. Addressing ill-structured problems is challenging for many undergraduate students, because these students are novices in their discipline(s). Indeed, Leckie (1996) argues that the expert-researcher perspective, on which many research assignments are predicated, is inappropriate for novices in a discipline, stating that instructors' expectations in terms of scope and complexity are often inappropriate for undergraduate students, because these students typically have not yet been fully exposed to relevant key concepts and important literature. Research assignment prompts that seem straightforward to an instructor may be too complex and sophisticated for a novice scholar to tackle successfully in a relatively short timeframe. This causes a 'disjuncture between the expectations of the faculty members as the expert researcher, and the capabilities of the undergraduate as the novice researcher' (p.203). Leckie believes that this causes undergraduate students to adopt an information-seeking strategy that is actually a coping strategy. Findings from Project Information Literacy reinforce this, as students reported that they had not developed adequate 'research competencies' in high school that they could apply to college-level research assignments (Head, 2013, p.3), which, in turn, amounted to frustration for students as they worked on research assignments in college (Head & Eisenberg, 2009).

2.2 Academic alienation in higher education

Both Fields (2006) and Leckie (1996) suggest that joining a scholarly conversation is likely difficult for many undergraduate students, particularly those who have just started college. If this is a common difficulty for undergraduate students, why is it important to explore and understand the experiences of students whose identities traditionally have been marginalised in American higher education, in particular? I argue that research assignments, in general, are artifacts of academic culture, because students are expected to demonstrate the vocabulary, theories, and methods of a discipline, as well as exhibiting skills curiosity and critical thinking. Indeed, Graff (2003) refers to academia and higher education as 'a culture of ideas and arguments' (p.3) that is often opaque to newcomers and outsiders. In American higher education, research assignments often serve as the medium to express those ideas and arguments. When research assignments are viewed as cultural artifacts, questions about who is prepared to participate successfully in academic culture arise. In addition, cultural insiders (i.e. faculty and instructors) design and assess performance on these assignments, which has a direct connection to academic outcomes (i.e. grades). Given these cultural implications and the persistent social class achievement gap in higher education, we can then ask if research assignments are potential contributors to this gap.

There is a rich literature that examines educational institutions and culture as sites of alienation, isolation, and marginalisation for students who do not come from the culture(s) privileged in higher education. Cultural capital (Bourdieu, 1986) is a commonly used theoretical lens through which this phenomenon is explored. Underlying cultural capital is the argument that society is stratified into social classes, some with more power and others with little to no power. Cultural capital includes class norms related to how one speaks or dresses or one's knowledge of literature, art, or music, all of which signal belonging to a particular social class. When one acquires the cultural capital of a more powerful social class, then upward mobility becomes a possibility. Both Delpit (1988) and Lareau (2011) have demonstrated the importance of cultural capital in educational settings, particularly in primary and secondary educational settings. Delpit identifies a 'culture of power' in education, in which she argues there are 'codes or rules for participating' in the classroom which reflect the dominant or privileged culture (1988, p.282). Students who are not from the dominant culture may not be aware of these rules, and teachers, who are part of the culture of power, may not be aware of or are unwilling to acknowledge that a power differential exists. Tapp's (2015) definition of academic literacy is helpful for thinking about how cultural capital may manifest in postsecondary academic contexts – 'particular ways

of constructing meaning, making judgments, and determining what counts as valuable knowledge reflecting tacit beliefs and values' (p.712) – all of which are related to information literacy as defined in the threshold concepts, knowledge practices, and dispositions articulated in the ACRL framework. Not only does this power differential influence who has access to and participates in higher education, but students who have not accumulated the privileged cultural capital (or academic literacies) may be viewed as 'intellectually inferior' or 'lacking ability' (Burke, 2012, p.193) through no fault of their own.

Mann's (2001) theoretical discussion of engagement and alienation in higher education advances this argument that academic literacies, such as information literacy, may be a form of cultural capital in postsecondary academic culture. Mann notes that students are joining an academic discourse that, in many cases, has been in existence for decades, which can be particularly disempowering and alienating for new students. Many students, particularly those who are not part of the dominant or privileged social class(es), come to higher education as outsiders and feel that they must somehow transform their identities in order to fully immerse themselves into their new community. Jehangir's research provides empirical evidence for this assertion, as she found that first-generation students often did not see their identities or their lived experiences reflected in the curriculum. In addition, because of cultural differences between home and school, these students experienced 'a sense of being an imposter in one world and a traitor to the other' (2010, p.42), which may prevent first-generation students from feeling like they fully belong in higher education or in their home cultures.

Current student success models seeking to engage and retain students through degree completion are inadequate. Pendakur (2016) articulates a source of this inadequacy, stating that 'students are either being engaged through retention efforts in an identity-neutral framework or in diversity and cultural spaces in an identity-centered framework' (p.2). He argues that institutions must find intersectional and identity-conscious models of engagement for students whose identities traditionally have been marginalised in higher education. Identity-conscious student success strategies are designed to be inclusive of students' identities and are also tied specifically to traditional measures of student success, including grade point averages, persistence, and degree completion (p.7). In addition, programmes and initiatives designed to help retain students whose identities have traditionally been marginalised are often framed using a deficit perspective (Bensimon, 2005). When approached from a deficit perspective, these programmes attempt to remediate or fix these students, rather than surface the strengths that these students bring to their collegiate academic experiences that can be leveraged for academic success.

2.3 Prior knowledge as an academic engagement tool

One potential strategy to combat feelings of academic alienation and to help students join scholarly conversations is to incorporate their identities, as well as their prior knowledge, lived experiences and interests, into their academic work. Jehangir's (2010) research focused on a multicultural learning community (MLC), which drew upon both critical pedagogy and a social reconstructionist approach to multicultural education. Jehangir argues that this approach allows for the 'challenging of 'legitimate knowledge' and reductionist pedagogy' (pp.54-55). This reductionist pedagogy is especially pernicious, because it 'emphasizes not the construction of meaning but the acquisition of meanings constructed by others', which might not represent underrepresented and minoritised students' identities or experiences (Rivera & Poplin, 1995, as cited in Jehangir, 2010, p.55). In addition, the approach used in the MLC honours 'students' stories in ways that allow them to gain voice and empowerment' (p.55), as well as helping students to view 'themselves as contributors to knowledge construction rather than as merely bystanders' (p.58), both of which are at the heart of information literacy as articulated by the ACRL framework.

Castillo-Montoya's (2017) research exploring the ways in which first-generation college students 'reflect sociopolitical consciousness in their discussion about their lives and sense of self and society' in an introductory sociology course (p.587) provides further evidence. Castillo-Montoya found that students can exhibit two modes of thinking – an awareness (surface-level, novice thinking) or an understanding (complex, expert-thinking) – based on their prior knowledge rooted in their lived experiences, and this prior knowledge can relate to subject-area content. Applying these findings to the 'scholarship as conversation' frame, students with marginalised identities are already participating in discourse communities outside of their academic lives, with varying levels of sophistication, and participation in those discourse communities can likely be applied to their academic coursework. Not only does this strategy diminish the barrier of joining a conversation or discourse with which one has little to no familiarity, it may be an opportunity for students to bring their identities to bear in ways that allow them to develop a more sophisticated understanding of their lived experiences and to succeed academically in college.

3. Research study

The case studies shared in this article come from a larger hermeneutic phenomenological study that explored how first-generation college students figure out expectations for academic participation as they transition into and within college through their experiences with research assignments. The purpose of hermeneutic phenomenology is to 'to construct a possible interpretation of the nature of a certain human experience' (van Manen, 1990, p.41), and the phenomenological question asks what it is like for participants to experience a particular phenomenon. The phenomenological question driving this study was 'What is it like for first-generation college students to complete research assignments as they transitioned into and within college?' Hermeneutic phenomenology is both descriptive and interpretive, requiring both the participants and the researcher to describe fully, to the extent that is possible, participants' experiences with the phenomenon and to make meaning of the participants' reflections about their experiences with the phenomenon. Because of this, the researcher must simultaneously suspend and integrate her own experiences with and knowledge about the phenomenon under investigation.

After receiving approval from the institutional review board (IRB) and permission from administrators at the research sites, I worked with institutional researchers at the research sites, two small regional campuses of a large research university in the United States, to identify first-generation students who were in at least their third year of study. Using this information, I successfully recruited and interviewed 30 first-generation students in late 2016 and early 2017. The semi-structured interviews lasted approximately 60 to 75 minutes and participants received a \$25 incentive upon completion of the interview. The interview protocol was based on a modification of Seidman's (2009) approach to phenomenological interviewing, in which participants are asked to describe their past and present experiences with the phenomenon, as well as reflecting upon those experiences. In the interview, I asked participants to describe and reflect upon:

- their experiences transitioning academically into college from high school,
- their experiences with the earliest college research assignment they could remember,
- their experiences with the most recent college research assignment they had completed.

Each interview concluded with a reflection on the student's collegiate academic journey and their experiences with research assignments throughout college. The interviews were audio recorded and sent to a third-party transcription service prior to data analysis. Before beginning fine-grained qualitative analysis of the data, I wrote an experiential memo (van Manen, 2014) for each of the participants based on the audio recording of their interview. The purpose of these memos was to create a coherent narrative of each student's experiences transitioning academically into and within college and their experiences with research assignments

throughout college. I sent each participant the experiential memo I had constructed based on their interview, and eight participants (23%) responded to my email, all of whom indicated that the narrative I had constructed accurately represented their experiences. I initially analysed interview transcripts using roughly 20 codes related to the study's research questions, theoretical and conceptual frames, and themes that emerged from the experiential memos. After this initial analysis of the data, a more detailed coding schema, which included roughly 171 codes, was applied to each interview transcript using Dedoose, an online qualitative analysis tool.

3.1 Limitations

The findings of this study cannot be generalised to the experiences of first-generation college students in the United States; they are only representative of the students who participated in the study. If I or another researcher were to conduct this study at different type of institution, such as a large research university or an elite liberal arts college, the findings may be different. However, the findings can be used to make naturalistic generalisations (Stake, 1995), meaning that readers have the opportunity to interpret the findings based on their own experiences with the phenomenon and consider the ways in which the findings are (in)congruent with those experiences.

This study did not seek to assess students' information literacy; rather, the purpose was to explore the ways in which the critical, analytical and reflective modes of thinking related to information literacy were or were not evident in students' descriptions of and reflections on their experiences with research assignments in college. In addition, this study was exploratory in nature, meaning that the potential relationship of a students' orientation to a research assignment and evidence of information literacy presented in the findings is tenuous. Further rigorous exploration focusing explicitly on this potential relationship is necessary.

Finally, the use of categories to report the findings may suggest a sense of neatness or tidiness, but these categories are imperfect and students' experiences may include elements from more than one category. In addition, I, as the researcher, have imposed these categories onto the students' experiences in good faith. I believe these to be representative and true to the participants' experiences, but the participants may disagree with the ways in which I have characterised and categorised their experiences.

4. Findings

The purpose of this study was to explore first-generation students' experiences transitioning academically into and within college, including their strategies for determining instructors' expectations for participation and performance, through their experiences with research assignments. Through learning about their experiences with research assignments, I found that students often perceived that the final product, which was typically a research paper, was more important than the research process they used to create that product. The majority of students articulated a checklist approach to evaluating their sources, an approach which often neglected critical engagement with information sources. (Students often described a checklist approach to evaluating and using sources, which is an approach that many of them reported developing or learning in their secondary education. In this approach, students were aware of the basic evaluation criteria – date of publication, the author's credentials, fact-checking content with other sources, a website's domain (i.e. .com vs. .edu or .gov). As students moved beyond their first-year of college, scholarly or peer-reviewed was typically added as a criterion. The descriptions of this approach largely exhibited a lack of critical thinking or engagement with the content of the sources.) In addition, students reported that they drew upon their identities, prior experiences, prior knowledge and interests, including career interests, to select topics for research assignments when they were given the opportunity to do so. Students used this strategy when they first started college, as well as when they were selecting topics for the

culminating research project (i.e. capstone project) that each student was required to complete prior to graduation. In the United States, capstone projects, or culminating research assignments, are considered to be high-impact educational practices. Capstones are offered both in departmental programmes and, increasingly, in general education as well. The American Association of Colleges & Universities (AAC&U, 2008) states that capstone projects are

...culminating experiences [that] require students nearing the end of their college years to create a project of some sort that integrates and applies what they've learned...The project might be a research paper, a performance, a portfolio of "best work," or an exhibit of artwork.

Two flavours of this strategy were evident in the experiences of these students – a strategic response to an extrinsic motivator (a performance orientation) and a strategy rooted in an intrinsic motivation to learn (a learning orientation). The strategy that a student exhibited in their discussion of a particular research assignment seemed to have a relationship with the demonstration of information literacy.

Students who exhibited a performance orientation (n=13) reported that this strategy helped them to stay motivated and engaged while working on research assignments, which could feel tedious or time-consuming. For example, one of these students believed that research assignments were something that 'you just got to get through' and shared, 'It's always hard to do something where you really don't care. When you want to do something, like write it, it makes it easier, or when you have a purpose to do something, it makes it easier.' These students, in general, demonstrated a checklist approach to finding, evaluating, and using information sources and, for the most part, did not exhibit modes of critical, analytical or reflective thinking about information sources, which was similar to their peers who were not given much latitude in selecting a topic (n=14). (The sample sizes do not total 30, because students were asked to discuss at least two research assignments. A single student may have discussed their experience with an assignment for which the topic was pre-selected, as well as discussing an assignment for which they could select the topic.)

In this article, I focus specifically on the students who exhibited an intrinsic motivation to learn more about a topic (n=14). The topics that the intrinsically motivated students selected were related to their identity or lived experiences. In general, students who were intrinsically motivated to learn more about their topics exhibited four different purposes for their learning: exploring their environment (n=6), making meaning (n=3), developing an authoritative voice (n=4), and asserting an authoritative voice (n=3). (These sample sizes do not add up to 14, which is the number of students who exhibited a learning orientation. Students were asked to speak about two assignments in each interview, and two students exhibited a learning orientation for each of these assignments.) Students whose experiences fell into the first two categories – exploring their environment and making meaning – were mostly seeking to learn more and educate themselves about their topics. Students whose experiences were related to developing or asserting an authoritative voice were more interested in being able to educate others about their topics. Students who were seeking to develop or assert an authoritative voice were almost exclusively students whose identities were minoritised beyond their first-generation status based on either their race or their sexual identity. (Although I did have access to the institutional categorisations of students' race/ethnicity, the races/ethnicities reported in this article were self-reported by the students. I provided students with a list of traditional race/ethnicity categories at the end of the interview, but I verbally encouraged them to use other identifiers when appropriate. One student added a new category to identify her race/ethnicity and added 'Pacific Islander' to the list.) Students who exhibited a learning orientation, particularly those who were making meaning or developing/establishing an authoritative voice, were the only students in the study who exhibited the modes of critical, analytical and reflective thinking included in the ACRL framework in the discussion of their experiences with the

research assignment. In particular, these students indicated an awareness of a discourse related to their topic. The case studies presented below are representative examples for each of the four categories. The names used in this article are pseudonyms that I assigned to the students after their interview.

4.1 Case studies

4.1.1 Exploring their environment

Laila is a Black/African-American, female student in her fourth and final year of study in the biological and health sciences. In her first year of college, Laila had a research assignment in her honours sociology course, and she decided to use her experience as a student athlete to select her topic for the assignment. As a student athlete, Laila was required to attend regular study halls, during which Laila noticed that students behaved differently; some were studying, and others clearly were not. She shared:

Whenever I was in our mandatory study hours, I would look around at the different athletes. I'd be like, "That person does this," and, "Hmm, they're not doing homework." "This person plays this." "They're doing a little bit of something." ...I'm like, "Okay, they're not in season now," and like, "Okay, they're in season now" ... so you're like, "Okay, what's going on here?"

This passage is representative of the 'Research as Inquiry' frame. As she thought about 'what's going on here', Laila asked additional questions about what she was observing, including the potential relationship between the student-athletes' behaviour in study hall and the students' sport being in season. This led Laila to hypothesise that the student athletes who were in season were more likely to be doing their work in study hall, because they did not have as much free time on their hands. Based on this, Laila developed a formal research question about student athletes' academic outcomes, which required her to engage with existing research and literature related to this topic. This research assignment allowed her to apply what she was learning in her honours sociology course, including gaining first-hand experience with designing a research study, to satisfy her curiosity about what she had observed in her immediate environment. In addition, it introduced her to the discourse about college student-athletes and academic outcomes, which was relevant to her personally, as well as considering the ways in which her research question could contribute to the discourse related to student athletes and academic outcomes.

4.1.2 Making meaning

Cheyenne is a white, female student in her fourth and final year of study in communication and the arts. When she was in her third year of college, Cheyenne was wrestling with a tragic incident of student-on-student violence that happened at her high school alma mater. This incident received heavy coverage in the local and regional news outlets, as well as some coverage in the national news media. Part of this coverage included the debate about whether the perpetrator, who at the time of the incident was only 16 years of age, should be tried and punished as a minor or as an adult. Cheyenne was aware of this debate and had strong opinions, so she decided to write about them for a research assignment in her rhetoric and public policy course. While the professor approved her topic, she also encouraged Cheyenne to look at the topic from a different perspective.

She also helped me look at different things that I didn't even think to look at or to do research on. That definitely opened up my eyes to just all different things. I didn't even – when I started I wasn't even really looking at the mental illnesses. Then she told me to at least take a gander at it and see if that has any effects to these kids [perpetrators of school violence], which it does... As I kept doing research and everything like that and learning more about different mental illnesses, I wasn't as angry, and I learned a lot of different things.

Rather than simply affirming her existing beliefs, the assignment and the support she received from her professor helped Cheyenne to think critically about this incident and to make sense of the tragedy; the reasons for violence are complex and emotionally charged reactions may prevent one from exploring these tragedies from multiple perspectives. The opportunity to explore this emotional and complex topic helped Cheyenne to make sense of her own reaction and interrogate her own opinions. This is representative of the 'Authority is Constructed and Contextual' frame, as Cheyenne demonstrates an open mind about a personal topic that evokes a strong emotional response. In addition, Cheyenne admitted that she did not know what public policy was at the beginning of the course, so she had a steep learning curve related to the content of the course. However, Cheyenne's awareness of the existing discourse related to this topic combined with an intrinsic motivation to learn more helped her to stay engaged with the assignment, even as her own beliefs were being challenged by what she was learning. What may have seemed like a relatively minor discussion about how to focus a topic for a research assignment had implications for Cheyenne's ability to think critically about public policy issues to which she could personally relate, which likely had implications for her performance given her lack of understanding related to public policy at the beginning of the course.

4.1.3. Developing an authoritative voice

Gabrielle is a Black/African-American, female student in her fourth and final year of study in the behavioural and social sciences. The theme of Gabrielle's capstone course was racism in the United States, and she was one of several African-Americans students enrolled in the course, despite the fact that the campus is predominantly white. Some of Gabrielle's peers of colour complained that they were 'tired of talking about racism', to which Gabrielle responded, 'How could you be tired of talking about it when you're living in it?' She shared:

It was more so like I didn't just wanna leave out of the class and not take nothing from it, so what I did was I got a small group together, and we actually sat down and just talked about it... Like, "Tell me something that you don't know, and I'll tell you something that I don't know, and we'll try to educate each other." Because I'm not gonna lie, sometimes it does get frustrating to continuously keep talking about it, but it's always gonna be there, so you gotta try to at least educate someone else about it that doesn't know. It was like, well, maybe I'll just do my project on it.

In the interview, Gabrielle indicated her awareness of the discourse related to race in the United States, because of her own identity as a Black/African-American woman and the content of her capstone course. For her culminating research experience (i.e. her capstone project), Gabrielle decided to hold discussion groups about ignorance and race with a diverse group of peers that she could incorporate into her final paper. In this way, Gabrielle developed her authoritative voice to educate others by asking provocative questions and facilitating difficult discussions with her peers in service of educating herself at the same time. This meant that Gabrielle was learning alongside her peers, using thoughtful questions to understand their perspectives and lived experiences so that she could help them to understand hers. This indicates an awareness that authority is constructed and contextual. In her interview, Gabrielle spoke about the traditionally authoritative readings that were assigned in the course, as well as the authority of her professor. However, she also recognised the authority of her peers, as well as her own authority, as being important to the discourse about race at her campus and beyond. In addition to helping her to develop her authoritative voice, the facilitation of these conversations also provided Gabrielle with the opportunity to practise using this emerging authoritative voice to be an advocate for change at her campus. In sum, Gabrielle was not only aware of the discourse related to her topic (i.e. her identity), but she aspired to actively contribute to that discourse.

4.1.4. Asserting an authoritative voice

DeShawn is a Black/African-American, male student in his third year of study in management and education. DeShawn knew that his identity as an African-American male from an urban environment would likely require him to have difficult discussions about race with his peers at a predominantly white, rural college campus. However, he was surprised at how quickly he needed to educate his peers. On the second day of classes, one of his college composition classmates used a racial slur. He shared:

The thing with this is, I saw this as an opportunity for me. I could either (a) run and go to a different college or (b) stand my ground and educate people... an opportunity to educate the white populous who really don't understand what it is or what it means to be an African-American student.

As a result, he used a research assignment in his college composition course to continue educating his peers on race and racism. The topic of his research assignment, which included both a paper and a presentation, was not related to his identity as a Black/African-American student; rather, it was rooted in his love of music. However, for the public portion of the assignment, the presentation, DeShawn felt that he had an opportunity to educate his classmates and intentionally incorporated music from Kendrick Lamar and Kanye West into his presentation. He wanted to provoke his classmates to think about these songs and their lyrics and how they were representative of the African-American community. He wanted to bring his peers into the discourse about race in the United States, since he perceived that many of them were not aware of this discourse. To do this, DeShawn used music that was not only authentic to his identity and experience, but also had the opportunity to engage his peers in this discourse. DeShawn seemed to implicitly understand that the popularity of Kanye West and Kendrick Lamar might convey a type of authority that would resonate with his audience (i.e. his peers). The presentation portion of his research assignments allowed him to share his lived experiences as an African-American male by practising and asserting his authoritative voice.

5. Discussion

First-generation students and other student populations whose identities traditionally have been marginalised in higher education are often approached from a deficit perspective (Bensimon, 2005). Discourse related to these students' academic experiences often highlights their weaknesses (e.g. lack of academic preparedness and overall college readiness) and frequently offers strategies related to how these students can be remediated or fixed. The findings that emerged from this study indicate that first-generation students, including first-generation students with extra-minoritised identities, have strengths that they bring to college by virtue of their identities, lived experiences and interests. In addition, if these strengths are leveraged in research assignments, they may lower the barrier to participating in academic discourse, even when students are not intrinsically motivated to learn more about their topic. Furthermore, when these strengths are combined with an intrinsic motivation to learn, students may organically develop and demonstrate the critical, reflective and analytical modes of thinking related to information literacy. In this study, the students' discussions of their experiences with research assignments provided some evidence of the knowledge practices and dispositions articulated in the ACRL framework. The topics that students were exploring were personally meaningful, and, because of that, students seemed to think critically about who was viewed as authoritative and who was represented in the conversation. This was in direct opposition to the checklist approach to evaluating and using information sources that their peers exhibited. In this section, I introduce the funds of knowledge concept, which honours students' identities and lived experiences, to provide a conceptual approach for engaging underrepresented and minoritised students through research assignments and discuss the potential benefits of this approach.

5.1 Funds of knowledge

Funds of knowledge highlights 'the existing resources, knowledge, and skills embedded in students and their families' (Rios-Aguilar & Kiyama, 2017, p.3). Funds of knowledge emerged from the 'economically changing landscape of the U.S.-Mexico borderlands' (Saathoff, 2015, p.32), and it was a way to honour the knowledge that Mexican and Mexican-American students acquired in their home cultures and households. While funds of knowledge has been used as a "sociocultural" orientation' to inclusively educating Mexican and Mexican-American students in K-12 educational settings for over 20 years, its application to the postsecondary education literature has a much shorter history, despite the opportunities it presents 'for facilitating the success of underrepresented students' education' (Rios-Aguilar & Kiyama, 2017, p.3). Bensimon (2007) was the first to apply funds of knowledge in the postsecondary education setting, and it has commonly 'been used to examine issues related to college access and transition among Latina/o students' in the United States (Rios-Aguilar & Kiyama, 2017, p.3). Funds of knowledge acknowledges the wealth of knowledge and experiences that students bring to their education, regardless of their families' culture or economic situation.

In the case studies presented in the previous section, the students did not report that their instructors explicitly asked them to draw on their identities or lived experiences – their funds of knowledge. The students saw the opportunity to engage with an issue or a question that was meaningful to them and took advantage of that opportunity to incorporate their funds of knowledge into their academic work. Some readers may find that they already are encouraging instructors to consider the ways in which they allow students to incorporate their identities or lived experiences into their academic coursework, or directly encouraging students with whom they interact to draw on their funds of knowledge to select topics for research assignments. I argue that instructors and librarians consider the ways in which they can explicitly encourage students to draw upon their funds of knowledge for research assignments, when appropriate, to help students, particularly those with marginalised identities, to engage academically and to acknowledge the strengths students bring with them to college that can be leveraged for successful participation in postsecondary academic culture. In other words, I argue that the explicit use of a funds of knowledge approach to research assignments with equitable learning outcomes in mind (i.e. closing achievement gaps) may serve as an asset-based and identity-conscious student success strategy that may not have been previously considered.

5.2 Benefits of a funds of knowledge approach

As addressed in the literature review, students from underserved and marginalised populations may feel alienated or isolated from their academic work, as they may not perceive that their identities, communities, or cultures are reflected or valued in the curriculum (Jehangir, 2010). Two potential outcomes of these feelings are withdrawal from or disengagement with academic domain (Mann, 2001) or the perception that faculty expect students to abandon their identity and assimilate into the new cultural paradigm (Rendón et al, 2000). With either of these outcomes, students are perceived as being deficient with respect to the cultural values of higher education and the burden is placed primarily, if not solely, on the student to overcome that deficiency. Kiyama, Rios-Aguilar and Deil-Amen (2017) connect funds of knowledge specifically to culturally relevant pedagogy (Ladson-Billings, 1995), which has three criteria: 'an ability to develop students academically, a willingness to nurture and support cultural competence, and the development of a sociopolitical or critical consciousness' (Ladson-Billings, 1995, p.483). When used as the foundation for a culturally responsive pedagogy, funds of knowledge is not simply the acknowledgement or inclusion of students' lived experiences in service of academic engagement; rather, students' funds of knowledge are used to help them to learn and to challenge social issues, as well as 'transforming lived experiences into knowledge and academic success' (p.176). In other words, when students are explicitly encouraged to draw on their funds of knowledge, they are moving beyond listening to the conversation related to their topic; they are doing so to actively participate in the conversation for the purpose of knowledge construction.

Both knowledge construction and the cultivation or nurturing of a sociopolitical conscience are evident in the case studies presented in the previous section. Laila, Cheyenne and Gabrielle all used a research assignment as a way to explore and make meaning of their lived experiences. Gabrielle and DeShawn used a research assignment to leverage their lived experiences in the service of educating others about their identities as Black/African-Americans (i.e. helping others to construct knowledge) and were seeking to challenge stereotypes or deeply held beliefs about race (i.e. nurturing of a sociopolitical conscience). These students used a research assignment to develop their critical consciousness (Freire, 1968), which Elmborg (2006) describes as students learning 'to take control of their lives and their own learning to become active agents, asking and answering questions that matter to them and to the world around them' (p.193). In other words, students shift from passively listening to a conversation in order to summarise and synthesise what they have heard to becoming active and engaged participants in the conversation who believe they have something important to contribute.

Knowledge construction and the development of a critical consciousness are at the heart of information literacy as defined in the ACRL framework. When funds of knowledge is used as a foundation for a critical pedagogical and culturally responsive approach to research assignments, it provides opportunities to honour the wealth of knowledge that students bring with them to college based on their identities and lived experiences and frame this knowledge as strengths that can be leveraged to successfully participate in collegiate academic culture. In addition, existing research suggests that opportunities to explore topics or questions that are meaningful to students also enable learning that can be transferred to other contexts (Eodice, Geller & Lerner, 2016). Because students may already be familiar with the non-academic discourse(s) related to their topics, a funds of knowledge approach to topic selection provides a foundation for discussions about the other information literacy threshold concepts, including the consideration of who has a voice in the conversation and who does not; how the participants in the conversation engage or do not engage with other participants; how the participants signal that (dis)engagement with other participants; how the conversation is shared with stakeholders; and who has access to the conversation vis-à-vis the method used to disseminate the conversation or the language used in the conversation. Finally, it also provides the foundation for students to take agency in knowledge construction, as it places them in a position of authority relative to the topic they are exploring.

6. Conclusion

Despite the ubiquity of research assignments in undergraduate education in the United States and the direct connections these assignments have to students' academic outcomes, little consideration has been given to their potential contributions to the persistent social class achievement gap (Stephens et al, 2014) in American higher education. Information literacy, as articulated in the *Framework for Information Literacy for Higher Education* (ACRL, 2016), is conceptualised by modes of thinking that may remain tacit for students whose identities are often not reflected or valued in the academic culture of higher education. When these modes of thinking remain tacit, students may be viewed as deficient and students may feel as if they do not belong in higher education. My exploration of 30 first-generation students' experiences with research assignments in college suggests that students choose to incorporate their identities and lived experiences into their academic coursework when given the opportunity to do so. The case studies presented in this article suggest that there may be implications for the development of students' information literacy when students select topics based on an intrinsic and personal motivation to learn about a topic that is meaningful to them. A funds of knowledge approach to research assignments, one that is rooted in honouring the wealth of knowledge that students bring with them to college, may reframe research assignments as opportunities for marginalised students to engage academically. Students may already be participating or listening to conversations about topics that are salient to their identities or lived experiences,

which provides a foundation for discussions related to all six of the information literacy threshold concepts. An underlying assumption of this study was that these assignments may be sites of academic isolation or alienation for students whose identities traditionally have been marginalised in higher education. However, after listening to the students' reflections of their experiences, I argue that research assignments have the potential to serve as asset-based and identity-conscious opportunities for academic engagement and student success, as well as opportunities for engagement and empowerment for marginalised student populations.

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