Review of Research

A Systematic Review of Research on Rural College Access Since 2000

Stephanie Sowl
Andrew M. Crain

Aligning with the NREA's "college and career readiness" research priority, this article presents a systematic literature review of 134 publications regarding the state of rural college access and choice research between the years 2000 and 2020. We use Perna's (2006) college choice model to guide our comprehensive summary of current themes as well as remaining challenges and opportunities. We find that studies in the Appalachian region were overrepresented and that a majority of publications focused on the roles of rural habitus or K-12 and community context in shaping college aspirations and enrollment for rural students. Future research should prioritize rural regions outside of Appalachia, rural youth of Color, rural forms of capital, and how higher education and social, economic, and political contexts impact rural college access and choice.

According to the U.S. Census Bureau (2016), rural areas encompass 97% of the United States; enrolling 24% of the nation's students with high school graduation rates exceeding the national average. Yet, only 59% of rural youth enroll in a postsecondary institution directly following high school compared to 62% and 67% of those living in urban and suburban areas, respectively (National Student Clearinghouse, 2018). With the dramatic decline of rural industries (e.g., mining, millwork, or farming) in recent decades, postsecondary degree attainment has taken on increased importance for social mobility (Marcus & Krupnick, 2017). Many rural residents can no longer secure stable employment in these industries (Mitra & Halabi, 2012; Schafft et al., 2010), and coming from a rural area often has serious implications to accessing college opportunities (Jackson, 2010). Additionally, rural people and places are often overlooked in national conversations about educational policy (Nelson, 2016; Tieken & San Antonio, 2016).

Rural scholars argue that rural people are inherently different from urban - in terms of values centering land, financial gain, or academic achievement - and face different challenges. However, education and economic policies are typically urban-centric – defining "rural" as that which is not urban - and may not meet the needs of rural youth (Crain & Newlin, 2021; McDonough et al., 2010). Higher education cannot respond to issues of rural educational inequity, particularly college access, if it does not understand the processes and mechanisms involved in rural life. As stated by Coladarci, "The absence of a current and comprehensive synthesis of research in rural education is an impediment to researchers and it also hinders the work of practitioners, policymakers, and others who wish to use the findings of research to inform their craft" (2007, p. 6). Few attempts have been made to synthesize scattered findings - despite a rich history of interest in rural students within the field of postsecondary education. While some scholars have recently sought to synthesize existing literature on rural education inequities (Thier et al., 2021), most previous rural education research literature reviews (e.g., DeYoung, 1987) are long outdated with no literature review focusing specifically on the topic of rural college access.

In this article, we offer a systematic literature review summarizing the current state of rural college access. By reviewing 134 publications on this topic over the last two decades (2000-2020), we present a comprehensive summary of the current themes - as well as remaining challenges and opportunities - prevalent within the field of rural college access. Our analysis is organized and informed by Perna's (2006) conceptual framework of the college choice process. Our specific research questions are as follows:

1. How is rurality typically defined in college access studies?
2. What regions of the United States are represented?
3. What factors have been explored at length in regard to college access, choice, and enrollment for rural youth? Where are the predominant gaps in the research literature?

Conceptual Framework

The conceptual framework for this study is Perna's (2006) model of college choice. Grounded in the work of Hossler et al. (1989) and Paulsen (1990), Perna's model extended existing theoretical constructs by acknowledging the vastly growing body of research on college access and college choice early in the twenty-first century. For example, Hossler and Gallagher's (1987) three-stage model of college choice – including predisposition, search, and choice – offered an important functional description of pathways to college enrollment but could not fully integrate many theoretical concepts which might be used to explain how these functions unfold for individual students. By effectively bridging both economic (e.g., human capital) and sociological (e.g., Bourdieusian) concepts into a single model, Perna more accurately depicted the complexities of the college choice process that occur at the individual, K-12 and postsecondary, and the larger social, political, and economic levels relevant to college choice.

Widely utilized in the field of higher education research, the breadth of issues addressed in Perna's college choice model provide a number of benefits for the systematic review of literature on rural college access. Perna's integration of divergent bodies of literature articulates the myriad influences on college access. Such influences may include financial constraints, institutional or environmental characteristics, demographic characteristics, and other aspects of the social, cultural, and economic capital necessary to navigate college enrollment. The inclusiveness of Perna's model is also beneficial because it facilitates conversation across methodologies and integrates research on a wide variety of subgroups (i.e. racial/ethnic minorities, first generation students) which may intersect with rurality.

Perna's model considers various "layers" at which policy and/or educational interventions may occur, or at which students may experience college choice processes and decisions. At the broadest level – Layer 4 – Perna's model considers the social, economic, and policy context within which all other college choice processes unfold. For rural students, this context may include a rural economy in the United States that is frequently characterized by the offshore departure of manufacturing jobs or the increasing corporatization of U.S. agriculture (Ulrich-Schad & Duncan, 2018) – all of which may shape student perspectives and decisions around the value of a college degree. Nested within this societal context are aspects of the higher education system itself (Layer 3) and K-12 school characteristics (Layer 2), which represent the actual systems navigated by students on route to a postsecondary degree. Within these layers, for instance, students may (not) be provided with access to key resources to facilitate their college enrollment. Layer 3 also acknowledges the notion of physical access to a college campus, an important consideration for rural students. Finally, in Layer 1, Perna highlights the economic and sociocultural dynamics at the individual or household levels. Here we consider research on the role of social or cultural capital or the unique college choice experiences of racially minoritized or low-income rural students.

In the present study, we utilize Perna's model of college choice as a coding mechanism for the systematic review of research on rural college access. Importantly – and as the model suggests – we aim to not only identify themes and gaps in the scholarly literature on rural college access but to enhance our understanding of how studies in each of Perna's "layers" are in conversation with one another to paint a more complete picture of rural college access.

Method

The purpose of a systematic review is to use a particular methodology in an effort to limit bias, with the goal of determining "what is known, how it is known, how this varies across studies, and thus also what is not known from previous research" (Gough et al., 2017, p. 3). We used Petticrew and Roberts' (2006) review process, which includes (1) creating research questions, (2) identifying databases and search terms, (3) screening references, (4) developing inclusion and exclusion criterion to refine the search, (5) extracting data from each article to answer the research questions, and (6) synthesizing the studies.

Data Collection

Literature Search and Inclusion Criteria

We searched for and selected rural college access articles in two phases. In the first phase, we sourced literature from the following databases: ProQuest, JSTOR, EBSCO, and Google Scholar. A Boolean search scanned article titles and abstracts for keyword combinations that included "rural" AND "college access" OR "college choice" OR "higher education" OR "college enrollment." We

intentionally included "rural" in our search as we were seeking publications that centered rurality. Thus, other publications that may have been situated in a rural context but did not specify in the title or abstract are not included in our sample. We also bounded our search to the years 2000 to 2020 in an effort to assess the state of rural college access literature over the last two decades. Additionally, studies must have been written in English. This initial search yielded 1,381 results. We then excluded articles that were not based in the United States, which brought our sample to 290. We limited our sample to peer-reviewed publications as a goal of this project was to analyze academic discourse related to rural college access research. To ensure a comprehensive search, we manually searched the following journals for articles related to college access: *Journal of Research in Rural Education, The Rural Educator,* and *Rural Sociology*. This resulted in an additional 31 studies, providing a total list of 321. Several relevant books published by academic presses during this time period (e.g., Ardoin, 2018; Carr & Kefalas, 2009) were also considered for inclusion in the analysis.

Our second phase consisted of going through the 321 articles and reading the abstracts, methods, and findings sections. We excluded articles that (1) only discussed college adjustment, success, or attainment and made no mention of access or enrollment or (2) had no findings related specifically to rural people. This left us with a final sample of 134 publications.

Data Extraction

We then extracted information from the 134 publications based on our research questions. Our spreadsheet contained the following:

1. Author(s), year of publication, title, name of journal/publisher
2. How the study defined rurality and the region/geographic focus of the study
3. Conceptual/theoretical frameworks and research methodology
4. Findings related to college access (each component of Perna's model was a column)

Data Analysis

Data were analyzed using a framework synthesis approach (Thomas et al., 2012). A framework synthesis builds on thematic summaries "by allowing the initial conceptual framework to evolve during the synthesis as the reviewers become more familiar with the literature being reviewed" (p. 187). Because we coded articles based on Perna's (2006) model to understand differences between studies and overall themes among findings, we engaged in thematic summaries. However, we also allowed room for recognizing findings that did not fit into our initial conceptual framework. Although a framework synthesis does not always generate an entirely new framework, especially when the initial framework's concepts and relationships are already understood, we used this approach to understand the data and identify areas within Perna's (2006) model that were saturated with respect to rural college access and choice. This approach was tested by a pilot analysis wherein the authors independently evaluated a subsample of the same seven articles and held a review meeting to discuss thoughts and areas of disagreement prior to assignment of the remaining articles.

Findings

We begin our findings section by addressing how rurality has been defined and the regional characteristics represented in studies of rural college access. Using Perna's (2006) conceptual model, we then highlight the themes and gaps in recent research literature on college access and choice for youth in rural communities.

Defining Rurality

As Coladarci (2007) notably wrote: "rural far too often is reduced in research reports to a veritable black box. The researcher announces simply that, say, 'rural communities were selected' or 'classroom observations were conducted in rural schools'" (p. 2). Indeed, an important aim of this study is to further understand how rurality is defined within the most recent body of research on rural college access and what methodological challenges or opportunities abound within the process of defining rurality itself.

Recently, this topic has been explored to great effect within the work of Manly et al. (2019), who illustrated that varying definitions of rurality within national longitudinal surveys produced significantly different analytical outcomes for researchers. Not only do varying definitions of rurality correlate to different educational outcomes, but disparities in defining rurality also make it challenging to bring studies of rural college access into conversation with one another. At times, research teams studying the

same topic may use completely different sampling strategies – say, survey research on a college campus with respondents self-selecting a rural identity versus an analysis of national survey data using the U.S. Census Bureau's definition of rurality – or, may omit a definition of rurality from their study altogether. While defining social groups is a challenge to some extent across the social sciences, integrating research findings on rural students is made especially difficult by both the variation in definitions of rurality and the diversity of the rural landscape itself.

Table 1
Selected Characteristics of Rural College Access Literature

Definitions of Rurality	N (%)
No Definition Provided	41 (31%)
Urban-Centric Locale Codes	29 (22%)
Other	17 (13%)
U.S. Census Bureau Locale Codes	13 (10%)
Rich Description	10 (8%)
Office of Management & Budget Non-Metropolitan Locale Codes	8 (6%)
Proprietary	8 (6%)
N/A	6 (5%)
Participant Self-Identification as "Rural"	2 (2%)
Region	
Appalachia	37 (29%)
United States	36 (28%)
Southeast	13 (10%)
West	13 (10%)
Midwest	12 (9%)
New England	11 (9%)
Does Not Specify	4 (3%)

Across the study's sample of 134 studies from the United States, we coded nine distinct categories for the definition of rurality. Table 1 recounts these findings, in order of most to least common. Surprisingly, the most common finding was that no definition was provided. In a shocking 30 percent of the studies within the sample (n=41), no definition of rurality was articulated despite an emphasis on rural students within the study's title and/or abstract. In many instances, rurality was treated in a very offhanded manner as suggested by Coladarci in the paragraph above (e.g., "a rural school was selected"). Even for qualitative studies, a failure to articulate the rural context in sufficient detail makes extension of the study's findings highly problematic, as the "rural" landscape is immensely diverse in terms of demographic, economic, and physical characteristics (Flora et al., 2018; Lichter, 2012).

The second tier of studies was dominated by the use of federal government frameworks for geographic locale. Although three of these federal frameworks were commonly utilized, the most frequently deployed system was the urban-centric locale coding utilized by the NCES (n=29). In part, this finding reflects the fact that many recent studies of rural college access utilize NCES survey data (such as ELS:02 or NELS:88) or other proprietary survey instruments (e.g., the Rural High School Aspirations survey) with urban-centric locale codes already embedded. Some researchers also utilized the urban-centric locale coding to generate empirically defensible sampling strategies for smaller-scale surveys or qualitative studies of rural stakeholders. Additional federal government frameworks that were commonly utilized include the U.S. Census Bureau's four-part locale coding (i.e., rural, town, suburban, urban) and the Office of Management & Budget's (OMB) non-metropolitan locale coding. It is important to note that even within these groups there is significant overlap – for instance, researchers who utilized the full range of rural codes from the urban-centric locale coding system (i.e., rural-remote, rural-distant, or rural-fringe) would essentially be focusing on the same geographic areas as they would if they had used the U.S. Census Bureau's rural classification. Numerous researchers (e.g., Agger et al., 2018; Hutchins et al., 2012; Irvin et al., 2012; Irvin et al., 2016; Petrin et al., 2011; Petrin et al.,

2014; Walker & Raval, 2017) opted to focus on both rural and town locales in their research – an approach that aligns somewhat (although not exactly) with the OMB's metropolitan/nonmetropolitan classification. The latter is a particularly interesting phenomenon since little cohesive research exists about the "town" geographic classification. However, this approach is empirically justifiable as the NCES contends that most communities within the town classification are smaller than 10,000 people (Geverdt, 2015).

Lastly, we observed a range of other assorted approaches to defining rurality within the research sample. The most common of these was the "Other" grouping (n=17), wherein researchers drew upon an existing definition (e.g., a state policy) to define rural locales. Some authors of qualitative studies chose to use rich description to contextualize the rural location of their study (n=10), while others simply invented a definition that suited their research questions (labeled here as "Proprietary"). Finally, a handful of researchers allowed student respondents to self-identify as being rural as part of their sampling process. It should be noted that, in a few instances (see Ardoin, 2018), researchers utilized multiple overlapping definitions of rurality to ensure that their sampling approach was valid. Those studies are coded here as part of the "Other" category. There are also six studies categorized as "N/A" to reflect publications based on a literature review, conceptual, or methodological argument in which a single empirical definition of rurality was not appropriate.

Regional Characteristics

From Table 1 the highest proportion of articles (29%) are from the Appalachian region. The second highest proportion (28%) is of nationally-representative samples from the United States, often utilizing datasets such as the Rural High School Aspirations Study, the National Education Longitudinal Study of 1988, the Education Longitudinal Study of 2002, or the High School Longitudinal Study of 2009. Studies from New England, Midwest, Southeast, and West were roughly comparable at 9-10% each.

Appalachian regional studies tended to focus on individual, familial, school, and community contextual factors that influence college and career aspirations, educational expectations, and/or college enrollment. No studies followed students longitudinally. These articles explored youth's perceived barriers to college, how families and communities supported youth in the college process, or values and beliefs of communities with respect to college. Several articles evaluated specific programs in rural communities designed to build college readiness and school-community partnerships. Studies conducted at the national level were all quantitative (due to their reliance on largescale survey datasets) and overwhelmingly compared rural to nonrural outcomes in terms of academic preparation, high school resources, college aspirations and college enrollment. In national studies that centered rurality and college access, foci included youth's college aspirations, their perceptions of parental college expectations and support, high school characteristics, community attachment, and distinct forms of capital (e.g., community, cultural, social). The remaining regional studies focused on similar topics (e.g., educational aspirations and expectations, school-community collaborations, familial and community factors associated with college enrollment), but were more likely to focus on specific identities, such as African American/Black youth in the Southeast, low-income first-generation youth in New England, or Indigenous or Latinx youth in the West and Southwest.

College Access and Choice Factors

As mentioned previously, Perna's (2006) model organizes contexts within four layers that influence decision-making regarding the expected costs and benefits of higher education and the many contextual elements that shape college choice. The following section will summarize the themes identified within each of these layers within the sample of articles from 2000-2020.

Layer 1: Habitus

The first contextual layer is the individual's *habitus*. Habitus includes an individual's demographic characteristics (gender, race/ethnicity, SES), as well as cultural and social capital, and is defined as the internalized set of dispositions shaped by one's surroundings (McDonough, 1997). Social capital refers to membership in a group that "provides each of its members with the backing of the collectively-owned capital, a 'credential' which entitles them to credit, in the various senses of the word" (Bourdieu, 1986, p. 21). Also according to Bourdieu, cultural capital is a system of attributes (e.g., language skills, cultural knowledge) that individuals acquire through their family, social

context, and education and give the individual a status or position within society. This section will focus on demographic characteristics, social capital and cultural capital influences on college access for rural youth in the United States.

Demographic Characteristics

In terms of demographic characteristics, 49% of the studies in our review did not include detailed descriptions of their samples. There were 26 studies (24%) that centered rural students of Color, with 10 Latinx, eight Black/African American, five Native, and five students of Color (no race specified). These articles tended to utilize qualitative methodologies or literature reviews and focused especially on educational aspirations and narratives regarding successful outcomes of rural youth. For example, Means et al.'s (2016) case study explored how one rural context shaped college and career aspirations of Black high school students and found students perceived few local opportunities for careers they desired but also wished to stay close to home when choosing a college. Studies that emphasized gender were rare (4%) and binary (men versus women) and typically focused on gender differences in educational aspirations and college enrollment. In the proportion of studies that focused on low-income students or high poverty schools (17%) or first-generation students (13%), quantitative studies were likely to examine how the interaction of rurality and first-generation status and/or income level impacts college aspirations, choice, and enrollment. Qualitative studies explored the role of parents, community context, and the challenges and supports associated with rural college access.

Studies that utilized quantitative methods to examine race predominantly compared outcomes between races and ethnicities. This included: (1) Black and Latinx students had more perceived barriers to postsecondary education than white students (Irvin et al., 2012); (2) white, Black, and Latinx students and their parents had similar levels of educational aspirations (Irvin et al., 2016); (3) among Texas-non-metro areas, Latinx students had lower college enrollment (Sansone et al., 2020); and (4) Latinx boys had higher educational aspirations than their white counterparts and both Latinx and African American students had higher educational aspirations and college attendance than white students (Koricich, 2014; Meece et al., 2013; Meece et al., 2014). Another quantitative study that focused on a specific race/ethnicity discussed how Latinx migrant farmworker students were interested in college to become successful, achieve a better life, or make their parents proud and that their parents were their most important resources in making the decision to attend college (Zalaquett et al., 2007).

Qualitative studies that centered rural students of color tended to describe the benefits related to college access and success programs (Araujo, 2011; Davis-Maye et al., 2013; Goldman, 2019; Jones & Cleaver, 2020; Means, 2019; Starobin & Bivens, 2014). Other studies used an asset-based approach to explore college aspirations and decision-making. Forms of support included parental expectations and emotional support for Mexican immigrant students (Valadez, 2008) and Black students (Hines et al., 2015; Means et al., 2016), a desire of Latinx students to give back to their families through attending higher education (Stone, 2018), and the role of *ganas* (the drive to succeed) in improving college-going for Latinx youth (Cabrera et al., 2012). Finally, in a study of rural African American youth in the deep South, researchers investigated the parent, teacher, and community leaders' perceptions of successful outcomes for their young people and described the tension that is often portrayed for youth in rural communities. That is, participants described two types of successful outcomes: (1) youth leaving the community to receive more education since it was not possible in the home community or (2) youth staying in the community and securing a job to support their families (Farmer et al., 2006).

There were few studies that focused specifically on gender and its influence on college-going. All of the studies that included gender (men/women only) utilized quantitative methods: West Virginian high school boys and girls had no differences in college intentions (Chenoweth & Galliher, 2004), Midwestern and New England girls had higher college expectations than boys (Lapan et al., 2003; Sharp et al., 2020), and in national studies, women were more likely than men to seek out information about future plans (Griffin et al., 2011) or aspire to and enroll in college (Agger et al., 2018; Byun et al., 2012; Koricich, 2014; Meece et al., 2013; Meece et al., 2014; Petrin et al., 2014). Agger and colleagues note that these gender differences could be due to gendered employment structures in rural areas, particularly because in this study, men had more positive perceptions of local employment opportunities than women.

There were two articles focused on LGBTQ individuals. Wilkinson & Pearson (2015) used the Add Health National Longitudinal Data Study to examine the association between same-sex sexuality and gender. While no significant differences were found among same-sex sexuality of women in rural and suburban school locales, rural men who reported same-sex sexuality were six times more likely than their suburban counterparts to enroll in a four-year college. In Christiaens (2015) article, they discuss how their own identities as rural, white, and queer influenced their college transition and development by specifically noting they did not think there was a possibility to be queer in a rural area.

Social Capital

It is well established that parental education plays an important role in continuing education and that there are persistent gaps in college enrollment between first-generation students and the children of college graduates (Cataldi et al., 2018). This trend is also prevalent within rural communities, as those in rural areas are less likely to have any form of postsecondary degree than in any other locale (USDA, 2017). Several studies found that higher parental education levels indicate higher likelihood of their children aspiring to and enrolling in college as well as different institutional types (i.e., more/less selective, two- vs. four-year; Brown et al., 2009; Byun et al., 2017; Chenoweth & Galliher, 2004; Demi et al., 2010; Hutchins et al., 2012; McGrath et al., 2001; Meece et al., 2014; Moon & Bouchey, 2018; Roscigno et al., 2006; Sharp et al., 2020; Smith et al., 2012; Williams, 2014).

However, considering rural youth are often categorized as potential first-generation college students in studies, what is most focused on are the affordances and constraints of being a first-generation student and from a rural area. Although many rural youth's parents do not have a college education, numerous articles discuss the importance of parental involvement in the college search and application process (King, 2012; Nelson, 2016; Slocum et al., 2020) or rely on siblings, extended family members, parental connections to community members, high schools or extracurricular college preparatory workshops for assistance with the college search (Ardoin, 2018; Bryan & Simmons, 2009; Burney & Cross, 2006; Byun et al., 2012; Davis-Maye et al., 2013; Freeman, 2017; Goldman, 2019; Griffin et al., 2011; Grimard & Maddaus, 2004; Israel et al., 2001; Legutko, 2008; Li, 2019; Means, 2019; Morton et al., 2018; Nelson, 2019; Rosenkoetter et al., 2010; Tillapaugh & McAuliffe, 2019). This reliance on extended families and communities has been described as familial or school and community social capital (Israel et al., 2001; Means, 2019; Morton et al., 2018; Nelson, 2019). Other studies described that rural youth whose parents were not college educated or had no other contacts in their social networks who were college educated often lacked college knowledge, which can be a perceived barrier to college enrollment (Chenoweth & Galliher, 2004; Gibbons et al., 2020; Henley & Roberts, 2016; Hlinka et al., 2015; Kannapel & Flory, 2017; Means et al., 2016; Tieken, 2016).

Cultural Capital

Although there are clear barriers for rural students with less social capital, research has found there are also great benefits associated with cultural capital. Perna (2006) refers to cultural capital to include: (1) values associated with college attendance, (2) parents' expectations for their children to participate in postsecondary education, and (3) parents, extended family, and communities providing encouragement and support. Nearly 40% of the articles we reviewed included at least one of these components of cultural capital.

In terms of the value of a college education, the findings tend to diverge. In some studies, Appalachian families and communities expect youth to not waste time on college and instead value physical labor and working the land (Ali & Saunders, 2009) while other parents viewed that advanced high school courses, which would help their children academically prepare for college, were unnecessary since there was no clear, immediate benefit (Burney & Cross, 2006). Freeman (2017) notes that selecting a college must be considered within the context of other competing values, such as familial responsibilities for children of Hispanic immigrants, rather than college choices based on test scores or financial aid. Other studies described students valuing a college education, influenced by their parents, beyond just the career opportunities often discussed in rural college access literature and instead focused on college being the pathway to a good life (Slocum et al., 2020; Stone, 2018). Tieken (2016, 2019) found both of these themes; valuing higher education because it is a pathway to a well-paid and

stable career or not supporting postsecondary education because it is not necessary for work.

The most common theme throughout the literature regarding cultural capital was parental expectations for their children to attend college (Agger et al., 2018; Ali & Saunders, 2006; Bryan & Simmons, 2009; Byun et al., 2012a, 2012b, 2017; Cabrera et al., 2012; Demi et al., 2010; Hutchins et al., 2012; Irvin et al., 2016; Kannapel & Flory, 2017; Li, 2019; Meece et al., 2013, 2014; Morton et al., 2018; Nelson, 2016; Sharp et al., 2020; Sherman & Sage, 2011; Tieken, 2020; Valadez, 2008; Wells et al., 2019; Williams, 2014). Many studies considered parental expectations as an independent variable in quantitative models, but this theme can often be developed further through qualitative inquiry. Several studies that explored parental expectations also examined parental and community support in the pursuit of college. The articles that specifically focused on support and encouragement often considered that although parents/community members may not have college knowledge (i.e., social capital), emotional support provides an influential force on college aspirations and enrollment (Doyle et al., 2009; Gelber, 2017; Goldman, 2019; Hendrickson, 2012; Henley & Roberts, 2016; Hines et al., 2015; Hlinka et al., 2015; Hlinka, 2017; Means et al., 2016; Means, 2019; Nelson, 2019; Starobin & Bivens, 2014; Wettersten et al., 2005).

Layer 2: School and Community Context

Perna's conceptualization of "Layer 2" – School and Community Context – leans heavily upon McDonough's (1997) notion of organizational habitus in an effort to acknowledge "the ways in which social structures and resources facilitate or impede student college choice" (Perna, 2006, p. 117). In rural settings where schools often play a prominent role in community life (Schafft, 2016; Sherman & Sage, 2011) – and the lives of community members may be more closely intertwined (McNamee, 2019) - it seems reasonable to assume that school and community factors have an important role to play in postsecondary access. Indeed, many researchers exploring rural college access have sought to account for the effects of school and community dynamics within small rural communities, with 70% of the articles focusing on this topic or including significant considerations of school/community factors in their analyses. Perna (2006) argued that institutional agents often provide access to key resources and that institutional structures may enhance or inhibit access to college. The research highlighted within this review has certainly tested the validity of these claims within rural educational contexts.

Our review yielded nine key themes in the application of school and community factors within the literature sample. The most prominent application of school and community context was via consideration of high school contexts or structures (n=36). In many cases, these factors were explored through an examination of resource allocation within rural schools – including characteristics such as school funding levels, teacher turnover, access to school counselors, or the provision of college preparatory course offerings. One example of this approach is Demi et al. (2010), utilizing structural equation modeling to assess the importance of school climate and parental factors on rural postsecondary enrollment. The authors found student perceptions of school climate to be an indirect predictor of college access. A number of statistical studies have also considered school context by exploring peer effects, such as the percentage of low socioeconomic status students in a given school. For qualitative researchers, high school context was also an important consideration in understanding the dynamics that influence rural student pathways to college. One example is Kryst et al. (2018), whose comparative case study of three high schools in rural Pennsylvania revealed not only structural differences in the amounts of college-going support from one community to the next, but philosophical differences in college preparation as a result of different values espoused by high school administrators. The work of Kryst and colleagues illustrates another point, which is the frequent overlap between high school context/structure and other research themes – in this case pedagogical strategies, a theme that appeared in 11% of the articles within the sample and reflects specific educational interventions or instructional approaches intended to facilitate college access.

A focus on the community environment (n=27) was another prominent theme within Layer 2. As with high school context/structures, the community environment theme reflects a consideration of the larger structural forces within rural community settings that may play a role in college access. This theme also overlapped frequently with other emphases, such as student connections to home community (n=14); community resources (n=8); teacher influences (n=16); or high school

context/structures (n=36). In quantitative research, community environmental factors were often accounted for by including data on local educational attainment levels or student perceptions of the local economy. Qualitative studies tended to focus on community environmental factors such as the attitudes of parents and community members about the value of a college education and the labor market outcomes endorsed by the students' community network. A useful example of the latter is the work of Sherman and Sage (2011), which considered the role of "moral capital" in tracking students toward or away from postsecondary opportunities within an economically declining rural town. Sherman and Sage found that students whose families were seen as morally deficient (e.g., chronically unemployed, abusive of drugs or alcohol) were often framed by school and community members as less deserving of educational investment. Notably, only seven of the 27 studies examining community environmental factors utilized a quantitative approach – perhaps a reflection of the challenges of effectively integrating school, community, and student-level data.

Our exploration of Layer 2 concludes by highlighting some of the remaining school and community themes within the dataset. One of these themes is geographic differences (n=12), which indicates the use of a fairly superficial notation about community environment (e.g., rural locales appear to be at an educational disadvantage vs. non-rural locales) and was typically applied in quantitative analyses. Another notable theme was school-community connections, utilized primarily in qualitative research to examine various forms of school and community partnership to support postsecondary enrollment. At times, this framing centered upon a specific education program – such as Starobin and Biven's (2014) case study on Project Lead The Way implementation in one rural community college setting – and at times it took the form of a broader analysis on the network of support between community members and their local schools (e.g., Alleman & Holly, 2014; Tieken, 2016). The last theme, high school engagement, reflects a consideration of student connectivity to their rural high school experience. Overall, this theme did not appear very often (n=4) and most of the studies utilizing this concept were quantitative. When high school engagement was considered, it often appeared alongside community connectivity (e.g., Sharp et al., 2020) in an overall effort to assess students' place attachment.

Layer 3: Higher Education Context

In Layer 3 of Perna's model, we focus on the role of higher education context in facilitating college access. For rural students, relevant aspects of higher education context may include the systemic ways in which postsecondary institutions interface with rural communities to matriculate rural students, the geographic distribution of college campuses, or the forms of support deployed to help rural students enroll and persist in college. Many of these themes are reflected within our systematic review, with about 30% from the larger sample including a consideration of higher education context. In particular, proximity to higher education was the most prevalent theme (n=18), followed by higher education recruitment efforts (n=12). The latter theme was represented through studies examining the overall recruitment landscape which rural students sought to navigate (e.g., Ardoin, 2018) as well as evaluations of specific college access initiatives (e.g., Jones & Cleaver, 2020). A total of 11 studies examined issues of enrollment stratification – that is, the tendency for rural students to matriculate into different types of institutions (e.g., less selective, two year, or closer to home) than their nonrural counterparts (e.g., Byun et al., 2017; Koricich et al., 2018) – and 10 studies examined various forms of institutional support deployed by colleges to facilitate success for rural students. The remainder of the studies in this grouping fell into a handful of different areas, including benefits of campus visits (n=3), analyses of policies related to rural college access (n=3), transfer pathways (n=2), and connections between rural high schools and community colleges (n=3).

Layer 4: Social, Economic, and Policy Context

In the final layer of the college choice model (Layer 4), Perna explores the social, economic, and policy contexts which influence postsecondary enrollment. The underlying purpose of including an outermost layer for social, economic, and policy factors is to acknowledge the implicit and explicit connections between policies and college choice outcomes (Perna, 2006). Global changes in the social and economic landscape may also exhibit downstream effects on college choice. For instance, Sherman and Sage (2011) describe the educational dynamics playing out in one economically-depressed rural community which once had a much stronger economy based upon forestry - changes which were

wrought by the emergence of conservation legislation in the late twentieth century. This contextualization cannot be understated as it positions rural places within the cultural, political, and economic systems to which they belong and teases apart the false monolith of rurality as an empirical construct. Proper contextualization also highlights the complexities not only of rural educational inequities, but other forms of rural-nonrural social stratification as well.

While a number of researchers incorporated some consideration of social, economic, or policy contexts in their analyses, linkages between rural college access and larger Layer 4 contextual elements often tended to be compulsory or underdeveloped. One illustration of this point is the treatment of policy issues within rural college access literature. Our review found that only three studies offered an analysis of a specific policy initiative related to rural college access. One clear example is the work of Long et al. (2010) who examined the policy implications of the "Top 10 Percent Law" in Texas. The authors found that a policy change guaranteeing admission to flagship universities for the top 10 percent of graduating seniors from any high school in the state bolstered access for students from rural locales and other marginalized areas. Meanwhile, six studies in our sample embedded policy examples within their discussion, either highlighting a program relevant to their study topic or suggesting future policies that might address the issue in their study. Two additional studies focused on the unique policy implications of rural social capital (i.e., policy ideas to foster college-going social capital).

A range of other themes were represented in the Layer 4 articles. Three studies examined historic trends in the rural landscape (i.e., changing patterns of college access over time) and three studies examined some variation of the "Stayers" vs. "Leavers" theme presented by Carr & Kefalas (2009). For instance, Petrin et al. (2014) offered a mixed method study of the factors contributing to rural brain drain, finding that some students were drawn to the unique experience of living in a small town or influenced by their perceptions about job opportunities in the local economy. Two other studies discussed strategies for strengthening alignment between K-12 schools and postsecondary education, and three studies focused specifically on reflexivity and/or methodological issues related to rural college access research, highlighting the potential implications of various approaches to defining and researching rural stakeholders. We considered these studies to represent various forms of Layer 4 contextual analysis - that is, studies which offered meaningful contributions to the larger field of rural college access research or broadened our understanding of how rural places connect systematically to other geographic contexts.

Discussion

We offer this systematic review of rural college access literature from 2000-2020 as an important next step in extending scholarly discourse on this topic. Based on our analysis of 134 articles, we found that a majority of articles focused on the roles of rural habitus (Layer 1, n=96) or school and community context (Layer 2, n=95) in shaping college aspirations and enrollment for rural students. Below we highlight the themes that have been explored most widely within Perna's (2006) college choice model, as well as the areas that remain underexplored.

In particular, publications focusing upon Layers 1 and 2 of Perna's framework include extensive examination of the individual, school, and household mechanisms behind educational aspiration formation college matriculation during the K-12 years. College aspirations were influenced by several factors: (1) student attachment to family and place, (2) family/school/community messaging regarding the value of a college degree, (3) academic self-efficacy and preparation, (4) socioeconomic status, and (5) perceptions of the local labor market (Agger et al., 2018; Ali & McWhirter, 2006; Ali & Saunders, 2009; Bajema et al., 2002; Chambers et al., 2019; Chenoweth & Galliher, 2004; Gelber, 2017; Howley, 2006; Hutchins et al., 2012; Irvin et al., 2011, 2016; Kannapel & Flory, 2017; Li, 2019; Means, 2019; Means et al., 2016; Meece et al., 2013, 2014; Moon & Bouchey, 2018; Petrin et al., 2011, 2014; Rosenkoetter et al., 2010; Sharp et al., 2020; Sherman & Sage, 2011; Tieken, 2016; Williams, 2014). Studies that focused on college enrollment described the importance of (1) parental educational expectations and support, (2) engaging in college preparatory activities through school-community partnerships or access programs, and (3) relationships with family and/or community members with college degrees (Ardoin, 2018; Bryan & Simmons, 2009; Byun et al., 2012, 2017; Carter et al., 2020; Demi et al., 2010; Doyle et al., 2009; Goldman, 2019; Henley & Roberts, 2016; Hlinka, 2017; Hlinka et al., 2015; McGrath et al., 2001; Prins & Kassab, 2017; Ratkos & Knollenberg, 2015). Most notably, several studies

tended to highlight challenges associated with rural college enrollment, such as few AP course offerings, geographic isolation, and a lack of colleges in close proximity, particularly four-year institutions. In the section that follows, we conclude this review by highlighting gaps in the research and suggesting implications for policy and practice.

First, we recommend that research include clear constructions of how rurality is defined and what rurality means in specific studies. If rural sociologists are urging for the recognition of many rural Americas (Brown & Swanson, 2003; Koziol, 2015; Lichter & Brown, 2011; Schafft & Jackson, 2010), any description of "rural" should discuss people, local economies, geography, values, or opportunity structures. This is particularly important for policy decisions- especially if funding is attached to rural categorizations - and for practitioners seeking to understand whether findings from one study can be applied in another context. Second, the emphasis on Appalachia has been used to characterize all rural communities as poor, uneducated, disinclined to pursue college, and exhibiting strong community attachment, which may not reflect the realities of all rural youth (and overemphasizes deficit narratives within Appalachia itself). While learning about this region is undoubtedly valued, we must also consider why some rural locations are researched more than others and how it influences our understanding of rural college access across the United States (Thier et al., 2021).

There are also several recommendations related specifically to social identities in rural America. For instance, it would be highly beneficial to focus more research on rural students of Color. Despite major racial disparities in rural America (Harvey, 2017; Lawson et al., 2010; Lichter et al., 2010; Slack & Jensen, 2002; Thiede et al., 2018), existing studies have rarely critically examined how the structural disadvantages of living in a rural area are compounded by systemic racism – in other words, specifically exploring *who* receives college opportunities. We also do not have a grasp on how rurality and gender influences educational and career aspirations in the 21st century. This topic was explored in the latter half of the 20th century (e.g., Dunne et al., 1981; Odell, 1989), but is deserving of renewed attention given the reality of a rapidly changing society (Sachs, 2014). That so few studies have explored the college access experiences of rural LGBTQ individuals is also a call for future investigation, particularly in light of the unique social climate of rural communities. Future studies should also consider more inclusive lenses for studying the role of sexual orientation in rural college-going, as traditional framings of "same-sex" sexuality (e.g., Wilkinson & Pearson, 2015) fail to account for the experiences of trans* and gender non-binary individuals.

We also recommend the inclusion of other forms of capital that may be specific to rural people and places. Building on the work of Yosso's (2005) Community Cultural Wealth, which recognizes the assets and knowledge of students of Color and their families, we may also consider other unique advantages within rural spaces. Particularly, this can include Flora et al.'s (2018) Community Capitals Framework, McNamee's (2019) use of spatial, relational, and professional capitals, and Slocum and colleagues' (2020) application of Rios-Aguilar et al.'s (2011) funds of knowledge framework. In addition to expanding on Perna's model and focusing on advantages within rural communities, rural education researchers should also seek to apply Bourdieu's concepts of symbolic capital more critically, with the understanding that these mechanisms are often used primarily to describe the ways in which individuals navigate systems and spaces which were not inherently designed for them. Rather than writing that rural communities and people *lack* these specific forms of capital, we should challenge higher education to examine its own role in social reproduction via its emphasis on traditional forms of capital. Emphasizing other forms of capital unique to rural settings can also help policymakers and practitioners examine the strengths within their own communities – leveraging those strengths to promote college-going and community development.

There is also a need for additional research on higher education contexts, such as financial aid policies, admission recruitment practices of prospective rural students, and the sociocultural dynamics of college "fit". While few studies discuss issues of enrollment stratification for rural students (e.g., Koricich et al., 2018) the mechanisms behind these patterns remain poorly understood. Overall, a major weakness within the current body of literature is connecting issues of rural college access to policy discourse. These notable absences include important policy issues such as rural youth living in education deserts, lack of access to broadband internet infrastructure and public transportation, K-12 school privatization and/or consolidation, and rural economic development. Although studies on these

topics surely exist within other academic subfields, a more explicit connection between these topics and rural college access would be a compelling addition to the field. To date, few educational policies or programs exist to address rural college access because institutions that normally provide these services are often geographically, demographically, and culturally distant from rural communities. The urbanormative rationales underpinning these inequities might be characterized as a form of power manifested through space (Biddle et al., 2019), and rural education scholars have an important role to play in helping to connect these themes more clearly.

Based on our findings, we offer several implications for policy and practice. With regard to policy, state departments of education must take into consideration differences in location when rolling out sweeping state policies for school districts – both amongst rural vs. urban but also rural vs. rural communities. Given that rural schools tend to be under resourced, we suggest states should expand funding for activities that promote college-going, such as dual enrollment, AP courses, or college access programs – or provide additional support to empower under-resourced rural schools pursue their own supplemental funding for these purposes. Finally, policy makers could also explore strategies to bolster rural economies by targeting job growth in diverse career fields – including additional job growth for college-educated workers.

When we consider implications for practice, several promising interventions can encourage college-going: (1) involving extended family and community members in the college-going process through mentoring, career fairs, or job shadowing, (2) providing support to parents in understanding college choice and financing, (3) building relationships/partnerships with local colleges and other businesses/organizations that have college-educated staff, (4) listening and engaging with students themselves to create a college-going culture, (5) understanding the structural barriers that exist for students of Color/low-income/first-generation, (6) incorporating place-based learning to solve local problems, and (7) begin talking about college, and making college preparatory material accessible, earlier than the junior or senior year of high school.

Should rural education scholars accept the challenges outlined above, the field as a whole would benefit from a richer body of work. Our systematic review may also guide the work of policy makers by shaping their understanding of the ways rural college access research may be utilized as a resource to create effective legislation. For practitioners, developing greater awareness of rural educational inequities is an important first step in fostering effective advocacy and long-term change as well as empowering residents to see the strengths within their own communities. It is our hope that this review of rural college access literature from 2000-2020 offers an overview of the field that is accessible to a variety of stakeholders and helps to drive discourse between not only rural education researchers, but also between policy makers, community members, advocates, educators and rural students themselves.

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Authors:

Stephanie Sowl is a PhD candidate in the School of Education at Iowa State University. Contact: ssowl@iastate.edu.

Andrew Crain is Director of Experiential Professional Development at the University of Georgia. Contact: acrain@uga.edu.

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