

Piecing It All Together: An Examination of Land-Grant History and Contemporary Contexts

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Abstract

The land-grant system’s tripartite mission of teaching, research, and Extension was intended to improve the American livelihood while making contributions to the advancement of U.S. agriculture and economic development. To date, historical analyses within the field of agricultural education have focused on special interest topics rather than a broader understanding of land-grant system history and current events. This study sought to examine both the historical and contemporary contexts for the U.S. land-grant system’s development and current place in society. Twenty primary source and forty-nine secondary source documents were analyzed with historical research methods to better understand historic sentiments toward land-grant education and the contexts for topics currently relevant to the land-grant system. Findings suggest that financial concerns are common in 1862 land-grants but are more so among 1890 and 1994 land-grants. There is financial inequity among 1890 land-grants due to a funding disparity compared to their 1862 peer institutions. Reports also substantiate how much land the federal government illicitly requisitioned from Native American and indigenous groups to support land-grant development in the 19th Century. Recommendations include additional research on this topic using integrative approaches to better understand inequity within the land-grant system and so that the field of agricultural education scholars is better equipped to educate key stakeholders such as K-12 educators, advocacy groups, and policymakers.

Introduction

Positive sentiment for land-grant universities has existed since their genesis. In 1862, President Abraham Lincoln remarked that “the land-grant university system is being built on behalf of the people, who have invested in these public universities their hopes, their support, and their confidence” (as cited in Dethloff & Shurgin, 2012, p. 3). Motivated by both the desire to educate the common man (industrial classes) and to advance the American academy’s curriculum to one of modern sciences predicated on classical, agricultural, and mechanical precepts, land-grant education was intended to fundamentally benefit American agriculture, the economy, and society at large. In an address celebrating the 25th anniversary of the first Morrill Act’s passage, Justin Morrill himself noted that land-grant institutions were intended to provide a state’s population access to higher education its denizens could attain an education that was both enlightening and of practical benefit (as cited in True, 1929).

Jonathan Baldwin Turner, arguably the country’s most outspoken proponent of agricultural and practical sciences education, also recognized the need for what Morrill considered practical and liberal education. Over a decade prior to the passage of the Morrill Act of 1862, Turner pontificated the need for a new educational system to revitalize the curricula that existed in the Antebellum, emphasizing that such efforts should be practical in nature so as to be of relevance to the working class American (as cited in Powell, 1918).

Though much has changed in the United States since 1862, land-grant universities continue to carry out their tripartite mission of teaching, research, and Extension. Nevertheless, as the complex problems of the world evolve, land-grant universities must find ways to continue to meet the needs of the public so that

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the American livelihood may be improved. This can be challenging given the issues that land-grant leaders must address, including those outlined by Gavazzi and Gee (2018) such as funding declines, research vs. teaching and service, the pursuit of knowledge vs. applied knowledge, college rankings relative to access and affordability, meeting rural needs vs. meeting urban needs, global concerns vs. those at home, and growing sentiment for the devaluation of a college degree.

Using a historical perspective to better understand the land-grant system and its multifaceted origins, purpose, and its present, offers students of agricultural history, land-grant advocates, and policymakers (be they in favor or not in favor of land-grant education) a unique opportunity to inform their decision making regarding the land-grant system with the appropriate context in hand. Indeed, historian Dr. Penelope Corfield noted that history's usefulness and its essentialness are not mutually exclusive since they allow society to better understand the human condition (Corfield, 2008).

Within the field of agricultural education, historical analyses have been carried out on a variety of specialized topics including the FFA (Connors et al., 2010), 4-H (Hoover et al., 2007), high school agricultural education (see Twenter & Edwards, 2017), and Cooperative Extension (see Hillison, 1996). These efforts are both interesting, and they are also of relevance to the scholarship of agricultural education and its external stakeholders. However, at present, efforts to summarize the broader history of the land-grant system remain absent from our field. Furthermore, there seems to be no evidence of formal efforts toward synthesizing the historical context of the land-grant system with related contemporary land-grant topics and trends. This study is intended to begin addressing this gap in the literature. It is hoped that these efforts will encourage other scholars within our discipline to carry out analyses of a similar kind to contribute to historical awareness and perspective within agricultural education and to better inform the philosophy of land-grant education among agricultural education scholars, practitioners, and stakeholders alike.

Historical Context for the Land-Grant System's Development

Since the advent of American higher education with Harvard's founding in 1636, American tertiary education has seen a great deal of change in curriculum, administration, outcomes, and public perception (Geiger, 2014; Lucas, 2006; Thelin, 2011). By the 1840s, the majority of collegiate curricula had transitioned from classical courses of study, predicated on the instruction of Greek, Latin, and theology, to courses of study that engaged students in classical topics as well as mathematics and the natural sciences (Geiger, 2014). Additionally, professional outcomes espoused by university administrators and institutional governing boards had shifted from preparing students for service in the church, as well as grooming American sons in gentility, to more practically inclined careers in law, medicine, and public service (e.g., statesmen) to the young United States (Geiger, 2014). As career opportunities diversified, so too, albeit slowly, the types of people who went to college diversified. By the Antebellum, the American college student population comprised more than upper class white men (although this was still the majority of students). In small numbers, at the very least, women, persons of color, and individuals of socio-economic strata other than the hyper elite had attended and graduated from institutions of higher learning before the start of the American Civil War (Lawson & Merrill, 1983; Parker, 2015). As the Union North battled the Confederate South, the remaining federal legislators (representing Northern states) debated a multitude of topics, one of which was practical education for students in American higher education.

Justin Morrill served as a congressman from Vermont in the years preceding and during the American Civil War. Along with Jonathan Baldwin Turner and other educators (Cross, 1999; see also Nelson, 2017; Sorber, 2017), he found himself concerned with the educational opportunities for the industrial classes (Sternberg, 2014). After the secession of the Southern members of the federal legislature, Morrill was able to garner enough support for the passage of the Land-Grant Agricultural and Mechanical College Act of 1862. The act directed that federal lands, forcibly acquired from native and indigenous tribes of North America (see Lee & Ahtone, 2020), would be awarded to those institutions of higher learning

Where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life. (Morrill Act, 1862, p. 2)

Funds generated from the lands, or sale of land scrips, would go toward the respective universities' endowments. In effect, this legislation signaled a shift toward practical education in American universities in addition to the long-term investment in the education of farmers and blue-collar, working-class Americans. Other anticipated outcomes of the Morrill Act of 1862 included the preservation of classical courses of study, which would be grounded in a holistic, blended curriculum that provided instruction of the practical arts (agriculture and related sciences) and the applied sciences (mechanic arts) (Campbell, 1998). Furthermore, it was hoped that the legislation would contribute to the eventual betterment of American agriculture (Geiger, 2014). Such economic aspirations are in line with the disposition of the United States' infrastructure at the time: upwards of 80% of the populace was classified as rural and nearly 60% of the populace could be identified as agrarian (Place, n.d.). Although initially slow to develop in popularity among the various state legislatures of the day, by the early 1870s, all 37 states in the Union had an institution classified as a land-grant under the tenets of the Morrill Act of 1862 (Place, n.d.).

Ensuing federal legislation in the decades that followed would precipitate the foundational support for the manifestation of the land grant system's tripartite mission of teaching, research, and Extension. The Hatch Act of 1887 would provide the funds necessary to establish agricultural experiment stations, which would oversee cutting edge research to better inform the teaching of the land-grant universities and to apprise the public of advances in agricultural and related sciences (Sternberg, 2014). Additionally, the Smith-Lever Act of 1914 would establish the Cooperative Extension Service, which would see each state, through partnerships with the USDA, its respective land-grant university, and its county governments, disseminate research-based best practices and programming for the public so that a person could improve their livelihood across a variety of areas in the agricultural, natural, and life sciences (Seevers & Graham, 2012).

Additional legislation would further expand access to land-grant education to an already diverse American populace both in the continental United States and the U.S. Territories. In the years that followed the American Civil War, segregation continued to lace daily life in Southern states. Consequently, Black Americans were generally barred from attending institutions of higher learning in these states (Alabama A&M University, n.d.). The Morrill Act of 1890 was passed to curtail this iteration of racial discrimination and to provide access to university and land-grant education for African Americans (Lawrence, n.d.). Colleges would be granted funds (in lieu of land or land scrips) that would be put toward the establishment of a separate land-grant college for the instruction of African Americans if a state could not substantiate that college admissions decisions were not made on the basis of race (AAMU, n.d.). As a result of the Morrill Act of 1890, there are 19 Historically Black Colleges and Universities (HBCUs) with land-grant status presently in operation (United States Department of Agriculture, n.d.).

The Equity in Educational Land-Grant Status Act of 1994 would extend land-grant status to the then 29 tribal colleges (presently 36) to offer access to land-grant education to persons of Native American and indigenous heritages (Campbell, 1998). The legislation directed that financial support would be appropriated to these institutions annually through the 1994 Institutions Endowment Fund (Equity in Educational Land-Grant Status Act, 1994). Most recently, in the 2022 fiscal year, reporting indicated that interest from the fund generated approximately \$4.5 million to be distributed among the land-grant tribal colleges (Faulkner, 2023).

The University of Puerto Rico was afforded land-grant status in 1908 (under the original tenets of the Morrill Acts of 1862 and 1890), while colleges in the U.S. Virgin Islands and Guam were given land-grant status under Section 506 of the Educational Amendments of 1972 (Croft, 2022).

Purpose and Objectives

The purpose of this study was to examine both the historical and contemporary contexts for the U.S. land-grant system's development and current place in society. The objectives of the study were

1. To explore the historic sentiment in favor of or not in favor of land-grant education, and
2. To consider the context for current topics relevant to the land-grant system.

Methods

This study was carried out using qualitative historical research methods (Ary et al., 2018) beginning in the summer of 2023 and concluding in the fall of 2023. Primary source documents were analyzed whenever available (See Appendix A). These included eight journal publications, three government agency reports, three congressional records, three speeches, two letters, and one newspaper article. They were complemented by secondary sources from both the 20th and 21st Centuries (See Appendix B). These included nineteen digital news outlets, thirteen books, eight university websites, five non-governmental educational agency websites, and four government agency websites. All sources were subject to internal and external criticism. External criticism (Ary et al., 2018) deals in determining the authenticity of a document. For example, for this study, verifying whether a digital copy of the original Morrill Act of 1862 is genuine and accurate (if not, perhaps it is a fake or maybe another document was incorrectly digitized/uploaded in its place). Internal criticism (Ary et al., 2018) deals in evidentiary worth. In effect, it befalls the researcher to determine whether a document accurately reports evidence relevant to the research question under consideration. Ary et al. (2018) recommends comparing a document under investigation with related documents or bodies of evidence to gauge consistency and the nature of what the document contributes to a larger body of evidence. For this study, internal criticism relied heavily on the vetting of sources from which primary and secondary sources were pulled. Consequently, sources that stemmed from educational outlets (e.g., universities, their library systems, and/or their historical repositories), U.S. Government outlets (e.g., congressional archives and government agencies), academic journals (E.g., *The Journal of Agricultural Education*, etc.), and reputable news outlets relative to the topic under investigation (e.g., *The Washington Post*, *The Chronicle of Higher Education*, etc.) were used for this study. Sources that originated from dot-coms were only included if they were articles from substantiated and relevant news outlets. Sources from partisan agencies (e.g., a lobbyist group) were not included in this study. Sources from dot-orgs were only included if there was a tie in with a governmental or educational entity such as a federal/state agency or an academic, peer-refereed publishing outlet. Following the vetting process of all sources under consideration, in addition to a period of thorough documental comparison, the primary and secondary sources in this study were deemed to be both authentic in their origin and of relevance to this study's purpose.

Researcher Subjectivity

This study was a qualitative undertaking. As the sole author and researcher for this study, I wish to provide a brief statement of subjectivity to acknowledge any experiences, beliefs, and biases that might have influenced this study. The researcher is presently faculty at a land-grant university and received all educational degrees from another a land-grant university. I firmly believe in the value of land-grant education and concede that this manuscript was born of a scholastic fervor for land-grant universities. Beyond the scope of my standard research agenda, I find the subject under study to be one of both professional and personal interest. Finally, the impetus for this study was an analysis carried out for a large literature review with a subsection on land-grant history, which informed a study on land-grant administration and academic leadership development. The original analysis took place in the summer of

2022, resulting in an approximate one-year gap leading up to the renewed, expanded analysis for this manuscript in 2023. In addition to the methods that I employed for this study to ensure a thick description and multiple sources of data, it is my intention that this statement also contribute to this study's overall trustworthiness (Lincoln & Guba, 1985).

Findings

Historic Sentiment in Favor of or Not in Favor of Land-Grant Education

Although such visions and ideals as those championed by Justin Morrill and Jonathan Turner would take time to materialize, in due course they did. Land-grant ideology and enthusiasm recruited many notable academicians to advocate for a new kind of American higher education. Two of these individuals were Andrew D. White and Ezra Cornell. Through their efforts in founding and operationalizing Cornell University, the institution would go on to exemplify the ideals of land-grant education espoused by the Morrill Act of 1862, serving as the archetype for land-grant universities during the latter decades of the 19th Century (Halliday, 1905; see also Geiger 2014). While serving as first president of Cornell University, Andrew D. White stated: "I ask you to look a moment at the passage of that bill [Morrill Act of 1862]. Centuries hence, men shall look back upon it as one of the noblest things in American annals" (Cornell University, n.d., p. 2).

The University of Wisconsin would go on to embrace the role of service to the public through the realization of President Charles Van Hise's Wisconsin Idea (Lucas, 2006). Van Hise (1905) once noted that "I shall never be content until the beneficent influence of the University reaches every family of the state" (p. 5). This affirmation served as the impetus for what would become both Van Hise and his institution's mission: "to ensure that the people of the State could retain and exercise power in their government and economy" (Morgridge Center for Public Service, n.d., para. 1). Much of this service to the public was grounded in the transfer of technical and practical skills for the fields of agriculture. However, Van Hise also directed that the university aid in the public's understanding of practical sciences and civics so that Wisconsinites could make effective decisions and take personal autonomy in their everyday lives. Such an "egalitarian and democratic" (Morgridge Center for Public Service, n.d., para. 5) approach would prove fundamental as American higher education's role shifted during the 20th Century (particularly with respect to state and university cooperation), with the University of Wisconsin serving as an exemplar for land-grant institutions and non-land-grant (public) schools alike (Geiger, 2014; Lucas, 2006).

For all of its supporters, land-grant education had its detractors as well. From the introduction of the first Morrill Act as a prospective bill in 1858, Southern politicians, in particular, expressed their distaste (Cruzado, 2010). Alabama Congressman Clement Clay stated that the Morrill Act was "one of the most monstrous, iniquitous and dangerous measures which have ever been submitted to Congress" (as cited in MacDonald, 1910, p. 411). Virginia Congressman James Mason affirmed that the Morrill Act was "one of the most extraordinary engines of mischief ... an unconstitutional robbing of the Treasury for the purpose of bribing the states" (United States Congress, 1859, p. 718). Indeed, the bill would pass through the halls of congress by only slim margins and would eventually be vetoed by President James Buchanan.

Notwithstanding this initial opposition, the Morrill Act would eventually be signed by President Lincoln in 1862; yet, opponents of the system persisted. With the advent of the American research university, two ardent critics of land-grant universities emerged: President Charles Eliot of Harvard and President James McCosh of Princeton. Eliot's initial musings on educational reform in the latter half of the 19th Century intentionally discarded land-grant institutions from consideration because he deemed them too green to take part in his vision for American higher education (Geiger, 2014). Moreover, Eliot and McCosh both initiated public critiques of land-grant institutions at the 1873 convention of the National Education Association (Geiger, 2014). The source of their ire is not entirely clear. It could have been a prejudice against agriculture as an academic discipline and/or the practical sciences; or, it might be best reflected in

Eliot's (1869) own words on the subject of land-grant education: "the practical spirit and the literary or scholastic spirit are both good, but they are incompatible" (para. 38).

Context for Current Topics Relevant to the Land-Grant System

Whatever the reasons in favor of or against land-grant education, it has evolved since 1862. By the end of the 20th Century, in a novel survey of the public's view of higher education, Christenson et al. (1995) found that few people recognized the term land-grant with only 30% of respondents indicating having ever used that term as a descriptor for a university and only 26% correctly naming one or more land-grant universities in their home states. Martin (2001) noted that many academicians and politicians felt that land-grant universities had lost their relevance at the beginning of the new millennium. He further outlined various challenges that such institutions faced at the beginning of the 21st Century, including lack of a true land-grant system, prioritizing inputs over outputs, public distrust of science, mission creep (other organizations carrying out facets of land-grant mission/education), and shrinking fiscal support from legislatures and other stakeholders. These kinds of challenges have not disappeared nearly 25 years since the start of the millennium with land-grant institutions facing concerns over funding; the way that scholarship is carried out and to what end; an almost fanatical obsession with rankings; serving rural America; and the very relevance of higher education as a whole (Gavazzi & Gee, 2018). Likewise, most of these challenges are met fervently with competing priorities (e.g., serving rural America vs. meeting the needs of an increasing urban populace). Nevertheless, Gavazzi (2020) noted that the tripartite mission, via the land-grant institutions, persists in the precipitation of high caliber research and innovations as well as high rates of college graduates. If this is to continue, he believes that equally high caliber leadership will be needed to ensure public benefit at the state and national levels (Gavazzi, 2020).

Stedman and Andenoro (2015) noted that with the global population expected to reach 9.6 billion people by the year 2050, one of the principal problems for leaders will be global food production. Moreover, Silva (2018) pointed out that global agricultural production should be increased by 60-70% from current levels so that demand can be met. In a report on food and nutrition security, it was noted that "public and land-grant universities have been instrumental in solving food and agricultural challenges both at home and abroad" (APLU, 2017, p. 19). For example, it is estimated that roughly 50% of the gain in U.S. farm productivity is correlated to public and land-grant universities (Alston et al., 2010). Furthermore, land-grant universities have been noted for their improvements to applied agricultural sciences such as agronomy, soil management, and plant pathology, all in the effort to meet the challenges faced in food and nutrition during the 20th and 21st centuries (APLU, 2017).

Despite its role in combatting grand challenges in agricultural and natural sciences, funding, as in much of higher education, remains one of the most prevalent issues for the land-grant system in the 21st Century. Public financial support for agricultural research and development has decreased dramatically since 1970, constituting less than 30% of the total funding for agricultural research and development as of 2014 (Cross, 2022). As such, increased private support would seem to be the natural recourse for land-grant administrators as they seek to offset diminishing public funds. For example, outsourcing funds from private sector sources (e.g., agribusinesses) is becoming a necessity for land-grant institutions in Oklahoma, Kansas, and Iowa (Bodine & Peikes, 2021). The marriage of public and private funds supporting land-grant activities would seem to be fruitful. One such recent example includes the University of Georgia's new poultry science complex, developed at an estimated \$54.1 million. The complex is set to impact Georgia's poultry industry profoundly (the number one agricultural and agribusiness industry in the state per UGA's Center for Agribusiness and Economic Development). The state legislature committed to allocating \$23.9 million for the project with a separate goal of \$27 million to be supplied by private donorship (Lameiras, 2021).

At the intersection of funding challenges and minority populations, HBCUs with land-grant status have suffered greatly from a lack of consistent funding: "some of these HBCUs have gone decades without

getting a full state contribution, leaving them with decaying campuses even as flagship public schools were lavished with financial resources” (Lorin, 2021, para. 3). Indeed, steady governmental cashflow would contribute to improving the operations, infrastructure, curricular reforms, and diverse faculty recruitment (at 1862 land-grants and 1890 land-grants) that are so desperately needed (Clark, 2021; Lorin, 2021; Stamps, 2021). Moreover, more equitable funding would aid those HBCU land-grants that are striving to augment their research expenditures and output in an effort to attain Carnegie Research 1 University status (Mangan, 2022; 2023). More attention is being drawn to the issue of funding inequity among land-grants. In 2023, the secretaries of agriculture and education pressed the governors of 16 states on the inequity of state-based funding between 1862 land-grants and 1890 land-grants, noting a \$12.6 billion funding disparity (see National Center for Education Statistics, 2020) that accumulated between 1987 and 2020 (Douglas-Gabriel, 2023). Efforts to ameliorate the financial disparity are ongoing, and some felt that the 2023 Farm Bill was a mechanism to take these initial steps toward improved funding for 1890 land-grants (Knott, 2023). These efforts and their impact stalled as the Farm Bill deliberations have continued into 2024, with the old iteration of the Farm Bill having been extended by the Further Continuing Appropriations and Other Extensions Act of 2024 (USDA, 2023).

The secretaries’ joint letter (see Cardona & Vilsack, 2023) to the 16 governors also underscored the annual economic impact of HBCUs in addition to pointing out the importance of other minority serving institutions such as the Tribal Colleges (1994 land-grants), which, like 1890 land-grants, have their own history of funding inequities when compared to the 1862 land-grants (American Indian Higher Education Consortium, 2014; Nelson & Frye, 2016; Stein, 2017). Historians have often indicated that the capacity for executing the tenets of the Morrill Act of 1862 are the direct result of the forced diaspora of Native Americans and seizure of their lands by the U.S. Government (Almeroth-Williams, n.d.). Recently, data was amassed in a report entitled “Land-Grab Universities” whereby the investigators brought to light that approximately 11 million acres of indigenous land were illicitly taken from nearly 250 tribes, bands, and communities, serving as the foundation for the land-grant university system (Lee & Ahtone, 2020). It is believed that this information will prompt new research regarding the history of native and indigenous lands and the land-grant system in both localized and broader contexts (Leckrone, 2020). Furthermore, the lead investigator speculated that how land-grants are discussed and the way that the Morrill Act of 1862 is taught in schools might be altered in the future (Leckrone, 2020). Gavazzi and Low (2020) maintained that steps toward a greater sense of atonement for this polemic aspect of land-grant history are possible, noting that possible avenues include land acknowledgement, financial assistance for Native American students, partnerships between the 1862 and 1994 land-grant institutions, and a general state of collaboration in which land-grant universities may “confront the truth of their founding” (para. 23). Above all, they believe that humility and honesty underpinning these efforts will be of the utmost importance moving forward.

Discussion & Recommendations

Land-Grants Today

Since the passage of the original Morrill Act of 1862, land-grant universities have played a major role in American higher education. Today, there are 112 land-grant institutions presently operating throughout the United States and U.S. Territories (National Education Association, 2022). Of the nearly 18.4 million college students estimated to have been in the United States in 2017 (U.S. Census Bureau, 2018), 1.7 million of those students were enrolled in land-grant colleges and universities (Croft, 2019). Although intended for the benefit of the American livelihood, a byproduct of the land-grant system is its global outcomes. Abaye et al. (2018) noted that “the importance of adapting the land-grant model [is] to link teaching, research, and outreach to tackle food security issues globally” (p. 6). In addition to a great deal of success in the United States, applying a cooperative extension framework has proven to reap benefits in tackling food security issues in a variety of other countries including Senegal, Nigeria, and Saudi Arabia (Abaye et al., 2018; Fiaz et al., 2018; NwosuU, 2012).

It has been pointed out that land-grants are in danger of moving away from their egalitarian ideals of expanded access and public scholarship. If this is the case, land-grant universities of the 21st Century must be wary of institutional elitism. As a part of an interview on the future of land-grant universities and in reference to how some land-grants have moved away from the original mission of the Morrill Act of 1862, President E. Gordon Gee of West Virginia University noted

I think it's a number of things, but in general, I think it's that too many of us are striving to be elite, research institutions instead of trying to be public entity institutions. In this century, the notion of being very committed to communities, community building, and job creation is very important, and we don't talk about that enough. But the real issue is that many of our institutions, land-grant and otherwise, have become disassociated from the needs of the states and people they represent. (Tyndall & Amuroso, 2019, para. 7)

Future Considerations

Aside from the growing negativity from contentious debates held about the efficacy and indeed the utility of college ranking systems (Diep & Gluckman, 2021; Rivard, 2014; Strauss, 2017; Strauss, 2018), land-grant universities will need to be cautious of their growing dedication to serving the agricultural industry's (and general industry's) endeavors in the place of public needs. While the President's Council of Advisors on Science and Technology (2012) indicated that private funding of agricultural research will allow for the successful combat of agricultural and food production challenges (as cited in Croft, 2019), public funding must also remain competitive in agricultural research as it emphasizes outcomes geared toward the public good rather than the profit that private funding often prioritizes (Croft, 2019).

Balancing private funding influences and staving off institutional elitism will be vital in ensuring the 1890 land-grants and 1994 land-grant institutions are not left in a state of financial disarray. Nearly a decade ago, Lee, Jr. (2013) pointed out the "land-grant but unequal" status of 1890 and 1994 land-grant institutions with respect to funding. As has been outlined in this study, state and federal funding are still issues for these institutions. While recent federal legislation might serve to assuage present financial needs by HBCU land-grants (Clark, 2021; Lorin, 2021), more substantive and sustainable solutions must be devised to ensure that these schools are able to carry out their land-grant mission in such a way that is amenable and equitable in the broader landscape of American higher education. Similar efforts will be needed among 1994 land-grants as well (Partridge, 2023).

Recommendations

It is recommended that scholars within agricultural education carry out more historical analyses on the land-grant system and related topics. The present manuscript was a general, exploratory effort intended to ignite broader efforts to analyze land-grant history within our field. The *Journal of Agricultural Education* (JAE) will serve as an appropriate mechanism for disseminating future work on this topic due to its wide audience and impact within agricultural education and the related disciplines of Extension education, agricultural communication, and agricultural leadership. At present, search results within the journal indicate that land-grant history has not served as the focal point of published manuscripts, so future work in this area would address a knowledge gap in addition to complementing the articles that have been published in JAE regarding the history of agricultural education in school-based settings as well as the historical narratives published about the FFA. Analysis from the present study has indicated that inequity is a common theme among land-grant universities in the 21st Century. It is recommended that further scholarly investigation be carried out regarding this theme. For example, future studies should address the history as well as the challenges faced by 1890 and 1994 land-grant institutions. Their development and the challenges that they face, such as financial inequity, should be investigated to shed more light on their stories and provide a more complete history of the land-grant system. Scholars from our field should be equipped to carry out this work, but integrative approaches to these analysis with scholars who are trained in critical theory would ensure a holistic and more rigorous approach to telling these institutions' stories and exploring

their intersectional nature. Finally, as future studies in land-grant history develop, it is recommended that their findings be summarized in such a way that will be of use to key stakeholders in agricultural education such as policymakers, advocacy groups, K-12 agricultural educators, and Extension faculty. Doing so will ensure that the stories about universities established for the public good are accessible to readers outside of scholarly settings in that very spirit.

Conclusions

The land-grant idea was originally intended to expand access to higher education. Over time, the notion of public scholarship, via the tripartite mission of teaching, research, and Extension, established a broader purpose for the land-grant system. Land-grant efforts have seen a number of advocates and detractors throughout the 20th and 21st Centuries. Issues of financial support both in terms of source, consistency, and amount persist as concerns, but there is an intersectional tenor that has always underpinned these concerns, now having undergone increased scrutiny in recent years. There exists financial inequity vis-à-vis institutional heritage. In particular, 1890 and 1994 land-grant institutions have been grossly underfunded in comparison with the 1862 sister institutions. Consistent, equitable funding practices for these land grants must be addressed moving forward. In addition, the legacy of land-grant universities has until recently failed to underscore the indigenous origins of lands associated with the establishment of the original land-grant institutions in addition to the illicit means by which the federal government forcibly acquired these lands from Native Americans. A better understanding of the historical context for the land-grant system will be paramount so that land-grant decision makers are informed by the past successes and mistakes of the land-grant system as it evolves in the 21st Century. Given their proximity to the land-grant system, its philosophies, artifacts, and cultural parlance, academics in agricultural education and closely related fields should use their research training and teaching to contribute to a broadening conversation around land-grant history and contemporary topics.

Limitations

In the spirit of transparency and research ethics, the researcher recognizes the importance of conceding the limitations associated with this study. One of the limitations of this study was that the research was carried out by an individual. A multi-scholar research team could have employed additional perspectives and expertise that could have been helpful to this study. To address this limitation and to ensure methodological reliability, historical research methods that have been used in a multitude of JAE publications that also focused on agricultural history (see Connors, 2004; Connors, 2013; Connors, 2021a; Connors, 2021b; Connors et al., 2010; Foor & Connors, 2010; Hillison, 1996; Hillison, 1998; Hoover et al., 2007; Martin et al., 2006; Smith & Rayfield, 2016; Twenter & Edwards, 2017) were employed in this study. Another limitation of this study was the dearth of publications, particularly peer-reviewed journal articles, in the literature that highlight primary source documents specifically related to land-grant history and development. To address this limitation, a wide variety of primary and secondary sources from the academic literature, grey literature, and media outlets that are both historical and contemporary were analyzed, ensuring that the analysis for this study was as well-informed and versatile as possible.

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Appendix A: Primary Sources

Author(s), Year	Title	Source Type	Topic/Keywords
7 U.S.C. § 534 et seq., 1994	The Equity in Educational Land-Grant Status Act of 1994	Congressional records	Improving America's Schools Act of 1994
7 U.S.C. ch. 13 § 301 <i>et seq.</i> , 1862	The Morrill Act of 1862	Congressional records	Morrill Act of 1862
Abaye et al., 2018	Internationalizing the land grant mission: Lessons from Senegal	Government agency reports	Land-grant mission, internationalizing
Cardona & Vilsack, 2023	1890 letter to governors	Letter	1890 land-grants, inequity
Christenson et al., 1995	The public view of land grant universities: Results from a national survey	Journal article	Land-grant university, public perception
Croft, 2019	The U.S. land-grant university system: An overview	Government agency reports	Land-grant universities, overview
Croft, 2022	The U.S. land-grant university system: Overview and role in agricultural research	Government agency reports	Land-grant universities, research
Cruzado, 2010	Presidential inauguration address	Speech	Land-grant history
Eliot, 1869	The new education	Newspaper article	Land-grant universities, relevance
Faulkner, 2023	1994 institutions endowment fund – 2022 interest distribution	Letter	1994 land-grants, funding
Fiaz et al., 2018	Achieving food security in the Kingdom of Saudi Arabia through innovation: Potential role of agricultural extension	Journal article	Agricultural extension, Saudi Arabia
Gavazzi, 2020	The land-grant mission in the 21st century: promises made and promises to be kept	Journal article	Land-grant mission, 21 st Century
Lawson & Merril, 1983	The antebellum “talented thousandth:” Black college students at Oberlin before the Civil War	Journal article	Antebellum, Black college students
MacDonald, 1910	Justin S. Morrill: Founder of the American agricultural college	Journal article	Justin Morrill
Martin, 2001	The land-grant university in the 21st Century	Journal article	Land-grant university
Parker, 2015	The historical role of women in higher education	Journal article	Women, higher education
Stein, 2017	A colonial history of the higher education present: rethinking land-grant institutions through processes of accumulation and relations of conquest	Journal article	Land-grant universities, rethinking
True, 1929 (Justin Morrill as cited in)	A history of agricultural education in the United States, 1785-1925	Speech	Agricultural education, history, Justin Morrill
United States Congress, 1859	Mr. Mason	Congressional records	Morrill Act of 1862
Van Hise, 1905	Presidential inaugural address	Speech	Land-grant philosophy

Appendix B: Secondary Sources

Author(s), Year	Title	Source Type	Topic/Keywords
Alabama A&M university, n.d.	Morrill act of 1890: 1890 is our history, too! Morrill legislation	University website	1890 land-grants, history
Almeroth-Williams, n.d.	The great university land-grab	University website	Land-grant universities, native lands acquisition
Alston et al., 2010	Persistence pays: U.S. agricultural productivity growth and the benefits from public R&D spending	Book	Land-grants, public scholarship
American Indian Higher Education Consortium, 2014	Statement of the AIHEC to the United States Senate committee on appropriations	Digital news outlet	1994 land-grants, financial inequity
Association of Public Land-grant Universities	The challenge of change: Harnessing university discovery, engagement, and learning to achieve food and nutrition security	Non-governmental educational agency websites	Land-grant system, challenges
Bodine & Peikes, 2021	As tax dollars dry up, university ag schools turn to agribusiness dollars and industry projects	Digital news outlet	Funding, private vs. public
Campbell, 1998	Reclaiming a lost heritage	University website	Land-grant history
Clark, 2021	Black colleges poised for major tech funding boost under Biden bill	Digital news outlet	1890 land-grants, financial inequity
Cornell University, n.d.	Let us now praise famous men [exhibition print]	University website	Land-grant history
Cross, 1999	Justin Smith Morrill: Father of the land-grant colleges	Book	Justin Morrill, land-grants
Dethloff & Shurgin, 2012	The land-grant legacy in the lone star state	University website	Land-grant history
Diep et al., 2021	Colleges still obsess over national rankings. For proof, look at their strategic plans	Digital news outlet	National rankings
Douglas-Gabriel, 2023	States should fix underfunding of land-grant HBCUs, Biden administration says	Digital news outlet	1890 land-grants, financial inequity
Gavazzi & Gee, 2018	Land-grant universities for the future: Higher education for the public good	Book	Land-grants, public scholarship
Gavazzi & Low, 2022	Confronting the wealth transfer from tribal nations that established land-grant universities	Digital news outlet	1994 land-grants, financial inequity
Geiger, 2014	The history of American higher education	Book	American higher education history
Halliday, 1905	History of the agricultural college land grant act of July 2, 1862: Devoted largely to the history of the "land scrip" which under that grant was allotted to the state of New York and afterwards given to Cornell University	Book	Land-grant history
Knott, 2023	How the Farm Bill can address historic underfunding of HBCU land-grants	Digital news outlet	Farm Bill, 1890 land-grants, inequity
Lamerias, 2021	UGA breaks ground on new poultry science complex	Digital news outlet	Funding, private vs. public
Lawrence, n.d.	Celebrating the second Morrill Act of 1890	Government agency websites	1890 land-grants, history
Leckrone, 2020	Why new research class some flagships 'land-grab universities'	Digital news outlet	Land-grant universities, native lands acquisition
Lee & Ahtone, 2020	Land grab universities: Expropriated Indigenous land is the foundation of the land-grant university system	Digital news outlet	Land-grant universities, native lands acquisition

Author(s), Year	Title	Source Type	Topic/Keywords
Lee et al., 2013	Land-grant but unequal: State one-to-one match funding for 1890 land-grant universities	Non-governmental educational agency websites	1890 land-grants, funding inequity, APLU
Lorin, 2021	Chronically underfunded HBCUs eye scholarships in Biden bill	Digital news outlet	1890 land-grants, financial inequity
Lucas, 2006	American higher education: A history	Book	American higher education history
Mangan, 2022	A race to the top in research	Digital news outlet	University rankings
Mangan, 2023	Black land-grant universities are being starved while white ones flourish, report finds	Digital news outlet	1890 land-grants, financial inequity
Morgridge Center for Public Service, n.d.	The Wisconsin Idea	University website	Land-grants, public scholarship
National Education Association, 2022	Land-grant institutions: An overview	Non-governmental educational agency websites	Land-grant universities
Nelson & Frye, 2016	Tribal college and university funding: tribal sovereignty at the intersection of federal, state, and local funding. American Council on Education	Non-governmental educational agency websites	1994 land-grants, funding inequity
Nelson, 2017	Institutionalizing agricultural research in the early American republic: An international perspective	Book (edited)	Land-grants, public scholarship
NwosuU, 2012	Agricultural extension strategies for climate change adaptation: Proceedings of the seventeenth annual national conference of the agricultural extension society of Nigeria	Non-governmental educational agency websites	Cooperative Extension, internationalizing
Partridge, 2022	The 2023 Farm Bill must address inequities in the land-grant university system	Digital news outlet	Land-grant universities, financial inequity
Place, n.d.	Land grant & sea grant: Events leading to the establishment of land-grant universities	University website	Land-grant history
Powell, 1918	Semi-centennial history of the University of Illinois: The movement for industrial education and the establishment of the university: 1840-1870	Book	Land-grant philosophy
Rivard, 2014	Rankings noise	Digital news outlet	University rankings
Seevers & Graham, 2012	Education through cooperative extension	Book	Cooperative Extension
Silva, 2018	Feeding the world in 2050 and beyond – Part 1: Productivity challenges	University website	Adaptive leadership, change, organizations
Sorber, 2017	Creating colleges of science, industry, and national advancement: The origins of the New England land-grant-colleges.	Book (edited)	Land-grant history
Stamos, 2021	Kentucky state president: Despite our challenges, we keep moving forward	Digital news outlet	1890 land-grants, financial inequity
Stedman & Andenoro, 2015	Emotionally engaged leadership: Shifting paradigms and creating adaptive solutions for 2050.	Book (edited)	Adaptive leadership, change, organizations
Sternberg, 2014	The modern land-grant university	Book	Land-grants, 21 st Century
Strauss, 2017	The problem with the 2018 U.S. news rankings: Junk in, junk out	Digital news outlet	University rankings

Author(s), Year	Title	Source Type	Topic/Keywords
Strauss, 2018	U.S. news changed the way it ranks colleges. It's still ridiculous	Digital news outlet	University rankings
Theelin, 2011	A history of American higher education	Book	American higher education history
Tyndall & Amoruso, 2019	The future of land-grant universities	Digital news outlet	Land grant system, future
United States Census Bureau	More than 76 million students enrolled in U.S. schools, census bureau reports	Government agency websites	Land-grant system
United States Department of Agriculture, 2023	Farm Bill home	Government agency websites	Land-grants, funding
United States Department of Agriculture, n.d.	1890 land-grant institutions national program	Government agency websites	1890 land-grants
