Unpacking Implementation Capacity and Contexts for Degree Reclamation Strategies: What Factors Move the Equity Needle?1

Jason L. Taylor  
Paul G. Rubin  
University of Utah  
Sheena A. Kauppila  
Coastal Carolina University  
&  
Leanne Davis  
Institute for Higher Education Policy  
United States


1 This research was funded by Ascendium, ECMC, Lumina Foundation, Kresge Foundation.
Abstract: This paper used data from a multi-institutional study of community colleges developing and implementing degree reclamation strategies (adult reengagement and reverse credit transfer) to understand and unpack the factors that influence implementation and capacity development. The data come from seven colleges that are implementing equity-focused degree reclamation strategies aimed to reduce the population of “some college, no degree.” The research team used an interdisciplinary lens to identify these factors drawing from literature on capacity-building. Prior to the start of implementation, researchers surveyed institutions and institutional stakeholders to assess baseline capacity, and they tracked institutional participation and engagement in the strategy development and implementation process. This paper highlights findings from this research to identify which factors are most related to implementation variation and strategy outcomes.

Keywords: degree reclamation; community college; equity; reenrollment; higher education; college completion; capacity

Análisis de la capacidad de implementación y los contextos de las estrategias de diploma reclamando: ¿Qué factores conducen a la equidad?

Resumen: Este artículo utilizó datos de un estudio multiinstitucional de colegios comunitarios que desarrollan e implementan estrategias de diploma reclamando (reintegración de adultos y transferencia inversa de créditos) para comprender los factores que influyen en su implementación y desarrollo de capacidades. Los datos provienen de siete facultades que están implementando estrategias de recuperación de títulos con foco en acciones dirigidas a reducir la población de “alguna universidad, sin diploma”. El equipo de investigación utilizó una lente interdisciplinaria para identificar estos factores basándose en la literatura de capacitación. Antes del inicio de la iniciativa, los investigadores encuestaron a instituciones y partes interesadas institucionales para acceder a la capacidad de referencia y monitorearon la participación e involucramiento institucional en el desarrollo de la estrategia y el proceso de implementación. Este documento identifica los factores más relacionados con la variación en la implementación y los resultados de la estrategia.

Palabras-clave: diploma reclamando; colegio comunitario; capital; reinscripción; enseñanza superior; finalización de la universidad; capacidad

Análise da capacidade de implementação e contextos para estratégias de diploma reclamando: Quais fatores levam à equidade?

Resumo: Este artigo usou dados de um estudo multi-institucional de faculdades comunitárias desenvolvendo e implementando estratégias de diploma reclamando (reengajamento de adultos e transferência reversa de crédito) para entender os fatores que influenciam sua implementação e desenvolvimento de capacidade. Os dados vêm de sete faculdades que estão implementando estratégias de recuperação de diplomas com foco em ações destinadas a reduzir a população de “alguma faculdade, sem diploma”. A equipe de pesquisa usou uma lente interdisciplinar para identificar esses fatores com base na literatura sobre capacitação. Antes do início da iniciativa, os pesquisadores pesquisaram instituições e partes interessadas institucionais para acessar a capacidade de linha de base e acompanharam a participação institucional e o envolvimento no desenvolvimento da estratégia e no processo de implementação. Este documento identifica os fatores mais relacionados à variação da implementação e aos resultados da estratégia.

Palavras-chave: diploma reclamando; faculdade comunitária; equidade; reinscrição; ensino superior; conclusão da faculdade; capacidade
Introduction

Improving postsecondary degree attainment has been a national policy focus in the US for over a decade. Motivating this policy agenda were several reports suggesting that the country would lack the educated population necessary to meet the economy’s workforce needs in the near future based on current educational trajectories (Carnevale et al., 2010; Matthews, 2009). Despite a concerted effort in the implementation of a variety of policy solutions across the country at the federal, state, regional, and local levels (Perna & Finney, 2014; Rubin & Hearn, 2018), some research suggests that the US has made minimal gains in improving its degree attainment rate overall and may still fall short from reaching the country’s educational and workforce needs (Shapiro et al., 2015; Vossensteyn et al., 2015). One reason for this gap is that there are not enough traditionally aged high school and college students to meet the needs of the country (Johnson et al., 2015; Pingel et al., 2016). In response, states and institutions have focused on non-traditional adult learners as a population of potential students to help address postsecondary educational attainment rates. Interest in adult learners is particularly relevant among community colleges, which disproportionately serve older students in the higher education system and have lower completion rates with nearly half of students leaving without completing any credential or transferring credits (Bers & Schuetz, 2014; Cohen et al., 2014; Radford et al., 2010). Moreover, it is likely that more students will leave college without a credential in the near future due to enrollment trends caused by the COVID-19 pandemic (St. Amour, 2020).

The subset of adult learners that have received particular attention recently are those who attended a postsecondary institution and received college credit, but stopped out or transferred to a different institution prior to completing their degree. National data show that approximately 35 million Americans aged 25 and older have some college, no degree (Ryan & Bauman, 2016). Many of these individuals have accumulated significant amounts of credit and may be close to the finish line (Shapiro et al., 2014). Bers and Schuetz (2014) argue that these “nearbies” must be considered in policy discussions to improve degree attainment and help these individuals reclaim the degrees they have previously worked towards (p. 167). More importantly, students with “some college, no degree” (SCND) are more often Students of Color, from low-income backgrounds, and/or are first-generation postsecondary education students—the students least likely to make it to graduation (Ryan & Bauman, 2016; Wheatle et al., 2017). Thus, policy efforts aimed at improving the educational outcomes for these former students provide an opportunity to address existing inequities in postsecondary attainment.

One targeted initiative aimed at improving educational outcomes for these students with SCND is Degrees When Due (DWD), which serves as the subject of the current study. DWD emerged from two previous multi-state initiatives – Project Win-Win (PWW) and Credit When It’s Due (CWID) – that helped states and institutions implement adult reengagement and reverse credit transfer strategies, respectively. Through PWW, colleges in nine states (Florida, Louisiana, Michigan, Missouri, New York, Ohio, Oregon, Virginia, and Wisconsin) identified students who were no more than 12 credits short of a degree and worked to locate and reengage these students. After identifying 41,710 students who had not previously received a degree or reenrolled at a different institution, PWW colleges awarded 4,550 degrees and reengaged an additional 1,668 students to return to college (Adelman, 2013). The other initiative, CWID, helped colleges in 15 states establish reverse credit transfer programs to award associate’s degrees to students who transferred from a community college to a bachelor’s degree-granting institution by transferring and applying course credit from the baccalaureate program to the associate’s degree. In CWID’s first three years, nearly 16,000 associate’s degrees were conferred (Taylor & Cortes-Lopez, 2017).
DWD draws on these two initiatives’ successes and has created an equity-focused strategy to reduce the population of individuals with SCND. The Institute for Higher Education Policy (IHEP), which is leading the implementation of DWD, states that DWD is “a completion and equity initiative to help states and colleges increase degree attainment among the ‘some college, no degree’ population” by helping institutions develop and implement degree reclamation programs (IHEP, 2019, para. 1). Degree reclamation programs include adult reengagement programs similar to PWW and reverse credit transfer programs similar to CWID (Wheatle et al., 2017). As stated by IHEP, the DWD initiative is designed “to build expertise, capacity, and infrastructure on campuses across the nation to get near-completers over the finish line” (IHEP, 2019, para. 1).

At its core, the DWD model is intended to grow institutional capacity to help institutions develop and implement degree reclamation programs through a technical assistance model that includes several components described below. One primary component of the DWD model is institutional team members’ engagement in an online learning management system (LMS) intended to help explain why degree reclamation matters, describe how to apply an equity lens in degree reclamation, and improve institutional staff and leaders’ knowledge about how to implement and sustain degree reclamation programs and policies. The LMS was borne out of lessons learned from PWW and CWID and sought to serve as both a teaching tool and reference space for institutions to consider during their participation in the initiative. The DWD model assumed that implementation of degree reclamation—with a focus on equity—was based on engagement in and learning from the LMS content. Yet, it was entirely possible for colleges to implement degree reclamation policies and practices with little to no engagement in the LMS because they may have other means of learning or approaching implementation of initiatives such as DWD.

Thus, it was important to understand factors that contributed to institutional engagement in the LMS and what ultimately may influence whether DWD successfully reduces equity gaps in degree attainment. The purpose of this paper was to understand what influences engagement in the DWD LMS because engagement might ultimately influence how DWD is implemented which, in turn, impacts equity. Since announced in 2017, DWD has partnered with over 175 institutions in 23 states in three cohorts. The first cohort of institutions included approximately 20 institutions which began work in October 2018, and the second cohort of institutions included more than 100 institutions which began work in October 2019. The current study focuses on a set of seven institutions in the first cohort based on the availability and completeness of the data available at the time of the paper. Given the small sample size, this paper is largely exploratory in that it explores the type of factors that relate to engagement in the DWD LMS (a proxy for implementation) and initial DWD outcomes related to institutional capacity; the study does not seek to generate broad and generalizable findings. The study draws from individual- and institutional-level survey data to answer the following two research questions: (1) What capacity factors and policy priorities influence DWD implementation? and (2) How does DWD implementation variation influence the development of institutional capacity?

This study is significant for several reasons. First, as described in more detail below, the SCND population is disproportionately Students of Color, low-income students, and adult students. These students are less likely to graduate, particularly at community colleges where nearly half of students leave before completing a credential or transferring (Bers & Schuetz, 2014; Radford et al., 2010). Expanding and sustaining degree reclamation strategies could significantly reduce existing

---

2 A more detailed description of DWD and equity is provided later in the manuscript.
3 DWD is funded through multiple philanthropic sources. Lumina Foundation and The Kresge Foundation provide funding for implementation, ensuring that participating institutions receive all technical assistance and resources, such as access to the learning management system and toolkits, at no cost. The DWD research agenda is funded by ECMC Foundation and Ascendium Education Philanthropy.
equity gaps in degree attainment and help community colleges better serve their local communities. Second, many of these students who leave college without a degree leave with significant student debt burdens (Barshay, 2017). These students are more likely to come from for-profit colleges, more likely to be Black or Latinx, and more likely to default on their loans than completers (Miller, 2017, 2019). If community colleges do not develop new policies to reengage the SCND population, inequities in degree completion by race/ethnicity and income are unlikely to close. Finally, this study helps illuminate how institutional capacity and resources can shape the effectiveness of implementation efforts within community colleges. This study can inform how community colleges and institutions approach the adoption of new policies and programs by focusing on capacity and capacity development.

### Literature Review

The literature review covers two broad areas of research relevant to the current study. First, we discuss the extant literature about the SCND population in the US, barriers experienced by the SCND population, and policies aimed at supporting the SCND population. Second, we review research on policy implementation and the role of street-level bureaucrats in successful policy adoption.

**The “Some College, No Degree” Population and Barriers to Completion**

Although college graduation rates are slowly improving over time (Causey et al., 2020), many individuals still begin college but never complete a credential, including many with who complete a significant number of credits. For example, data from the National Student Clearinghouse indicated about 60% of community college students will complete 30 or more credits within 6 years of entry (Horn & Radwin, 2012), but empirical studies suggest nearly half of all students (46%) will leave postsecondary education prior to completion of a certificate, degree, or transferring (Bers & Schuetz, 2014; Radford et al., 2010). Although these statistics suggest it is not uncommon for students to stop-in and stop-out of college, particularly at community college (Crosta, 2014), few empirical studies directly explore the specific population of students with some college credit but no degree.

This gap in the literature can be attributed partly due to the National Center for Education Statistics’ limited attention to and data collection on the SCND population, but recent literature from the U.S. Census Bureau (Ryan & Bauman, 2016) and the Institute for Higher Education Policy (Wheatle et al., 2017) offer some insights into the SCND population and potential barriers that impede their completion. This research shows that the SCND population is more often Students of Color, students from low-income backgrounds, and/or the first in their family to pursue postsecondary education (Ryan & Bauman, 2016; Wheatle et al., 2017). Notably, students in these demographics are typically underrepresented in higher education overall, and prior research suggests they are at greater risk for taking longer to complete their credential and/or ultimately dropping out prior to completion than their peers (Cohen et al., 2014). Research on why these students leave college highlights both academic and non-academic barriers to degree completion (Bers & Schuetz, 2014; Bonham & Luckie, 1993; Woosley, 2004) including changes to family situations, health, and desires to be more geographically proximate to their family; these barriers all disproportionately impact students that have been historically marginalized in higher education.

In the United States, colleges and universities have only recently implemented strategic programs to systematically support the SCND population. Project Win-Win (PWW) was one of the first national initiatives to focus on reengaging formerly stopped out students. Adelman (2013) defined a sequence of five tasks for institutions to complete in order to reengage adults: (1) identify the universe of interest; (2) remove students receiving degrees or reenrolling elsewhere from the universe of interest; (3) perform degree audits to identify students “eligible” for degrees and “potential
completers;” (4) award degrees to the eligible students; and (5) locate, contact, and reenroll potential completers to eventually award them a degree. Although the project involved coordination with state system offices, most of the implementation and day-to-day decision-making occurred at the institutional-level. Unsurprisingly, PWW saw significant variation in success across the participating states but, equally, saw differences between institutions within each state (Adelman, 2013).

Since PWW, several local and state policies and initiatives have emerged aimed at reengaging near-completers who have stopped-out, including initiatives such as Tennessee Reconnect, Complete to Compete in Mississippi, and the Warrior Way Back program at Wayne State University, for example. These programs have prompted the development of new policies and programs that directly reengage adult students to encourage them to reenroll, often offering financial incentives such as reduced tuition or tuition waivers. Although many reengagement initiatives have been implemented in recent years, we have little evidence of their efficacy. Early data from the Tennessee Reconnect program show that of the nearly 18,000 students who received a Reconnect Grant in the first year of the program, 61% had either completed a degree or were still enrolled within a year of beginning (THEC, 2020). Further, Reconnect Grant applicants and recipients were more likely to be Black relative to the state’s adult population, suggesting the potential for the initiative to address racial gaps in degree attainment (THEC, 2020). In a recent experimental design study, Ortagus, McFarlin, and Tanner (2020) examined the impact of a text message reenrollment nudging campaign coupled with a tuition waiver incentive among community colleges in Florida. They found that the effects of the text message nudging campaign were small, but the effects of the text message nudging campaign and a tuition waiver increased reenrollment rates by 1.5% (Ortagus et al., 2020). These studies are promising and suggest that intentional efforts by institutions to reengage adult students can lead to increased enrollment and completion outcomes.

Institutional Actors, Capacity, and Policy Implementation

Policy implementation focuses on the events following the adoption of a policy, often characterized by the shift from uncertain proposals to concrete actions (Anderson, 2015). One of the challenges complicating this change in the policy process is the existence of a divide between the policymakers who decided to adopt the policy and the individuals in charge of implementation at the more localized level. Lipsky (1980) coined the phrase “street-level bureaucrats” to define those individuals in charge of the implementation of policy, noting their substantial discretion in how they execute their work and close proximity to the citizenry impacted by the policies adopted. Although the work of Lipsky (1980) and related studies focused on the street-level bureaucracy focus primarily on public human services, such as welfare, policy, and medical care, a related idea from sociology—institutional agents—underscores the independence and power afforded to localized individuals in charge of policy implementation.

Stanton-Salazar (1997, 2004, 2011) introduced the concept of institutional agents to highlight the role of “high-status, non-kin, agents occupying relatively high positions in the multiple dimensional stratification system, and who are well positioned to provide key forms of social and institutional support” (2011, p. 1066). In particular, he argues that these actors have the independence and power to provide critical forms of support to benefit certain populations and shape how policies are ultimately executed. Previous higher education research has suggested college and university leaders (e.g., presidents, vice presidents, enrollment management staff, registrar, and faculty) serve in roles akin to institutional agents and have the ability to shape how policies are implemented and, ultimately, the success of specific student populations (Dowd et al., 2013; Museus & Neville, 2012; Nienhusser, 2018; Nienhusser & Espino, 2016). For example, Dowd et al. (2013) underscored the role of college practitioners in raising the aspirations of community college students identifying as Students of Color and low-income students, which ultimately contributed to their
successful transfer to selective four-year institutions. More recently, Nienhusser (2018) discussed the role of institutional agents at community college in the implementation of policies affecting undocumented and DACAmented students. Highlighting various roles institutional agents can undertake in the policy implementation process, Nienhusser (2018) notes that these individuals in charge of executing policies can ultimately shape their efficacy and success.

A related factor that often mitigates the role of institutional agents is the capacity for policy adoption and change within the policy setting. For example, previous research discussed the need for policy implementers to have adequate time, interest, and a knowledge base related to the issues and goals in question to successfully enact new education policies (Honig, 2004; Ness et al., 2018; Porter et al., 2015). When such capacity factors are not sufficiently robust, successful policy adoption is less likely regardless of the intentions and values of individual institutional agents. Similarly, individual agents and actors are important to the organizational readiness and capacity to implement. To this end, research has noted the role of partnerships and intermediary organizations as mechanisms to improve capacity through the availability of technical assistance, information provision, and policy advocacy (Harcleroad & Eaton, 2005; Honig, 2004; Ness et al., 2018). These opportunities can present themselves through formal and informal associations, partnerships, and organizations, as well as through broader initiatives, such as DWD. For purposes of the current study, DWD helped institutions coordinate a cross-functional team of actors that could ultimately influence the success of the SCND population, and offered programmatic and technological expertise to further the potential policy implementation at institutions, which aligns with the previous literature on higher education institutional agents and institutional capacity building.

Conceptual Framework

The conceptual framework for this study was identified based on the purpose and nature of the DWD model, which employed an institutional and organizational learning strategy to help institutions expand capacity to implement degree reclamation. Thus, we were interested in understanding the factors that relate to capacity of an organization to achieve a certain goal: developing and implementing degree reclamation. For this study, we looked outside the higher education literature and turned to literature on capacity building to understand the types of factors that influence capacity in an organization or context. Our conceptual framework was adapted from the World Bank’s Capacity Development Results Framework (CDRF). In the CDRF, Otoo, Agapitova, and Behrens (2009) outlined a new approach, and step-by-step guide for the “design, implementation, monitoring, management, and evaluation of development programs” (p. Abstract). Developed to address gaps in capacity development work such as lack of definitions, conceptual frameworks, and monitoring of results, the CDRF is a systematic approach focused on the use of learning interventions to improve capacity factors through locally driven change to achieve development goals. Otto et al. (2009) state that “key actors in the change process must be identified and offered the knowledge and tools that they need to produce change in the direction of the goal” (p. Abstract). Capacity development, change, and goal achievement is an iterative process and includes the identification of critical points, and the inclusion of new knowledge and assessment at each of these points. The CDRF is informed by “change theory, capacity economics, pedagogical science, project management, and monitoring and evaluation practice” (p. Abstract). This literature includes work by Acemoglu, Johnson, Robinson, and Thaicharoen (2002), Finsterbusch (2006), Harrison (2005), Hoff (2003), North (1990, 2005), and World Bank (2002, 2004). Although the CDRF framework was developed for the purpose of establishing and assessing development goals in countries, the framework’s focus is on capacity development through a learning infrastructure intended to equip and empower local change; this is precisely how the DWD model was designed and is intended to work.
The CDRF defines capacity for development as “the availability of resources and the efficiency and effectiveness with which societies deploy those resources to identify and pursue their development goals on a sustainable basis” (Otoo et al., p. 3). Resources may include human, financial, and technical and are a necessary but not sufficient condition for change. Effectiveness and efficiency depend on sociopolitical, institutional (policy-related), and organizational factors that influence actors. Sustainability involves local ownership of the change process and development goals, allowing for replication and scaling. The process of developing capacity is defined as a “locally driven process of learning by leaders, coalitions and other agents of change that brings about changes in sociopolitical, policy-related, and organizational factors to enhance local ownership for and the effectiveness and efficiency of efforts to achieve a development goal” (p. 3). The foundational concepts of the CDRF of change, and learning as an instrument of change are rooted in institutional economic literature (Harrison, 2005; Hoff, 2003; North, 1990, 2005).

The capacity framework posits that capacity toward a goal is: (a) dependent upon a change process directed toward capacity factors; (b) locally driven and intended to enhance local ownership for and the effectiveness and efficiency of resource use; and (c) affected by three capacity factors, conduciveness of the sociopolitical environment, efficiency of policy instruments, and effectiveness of organizational arrangements. The three capacity factors that constitute the framework are:

- **Conduciveness of the sociopolitical environment**, made up of the political and social forces that determine the priority given to the development goal by the government, the private sector, and civil society.
- **Efficiency of policy instruments**, or the formal mechanisms to be used to guide stakeholder actions toward achievement of the development goal. Those formal mechanisms include administrative rules, laws, regulations, and standards.
- **Effectiveness of organizational arrangements**, or the systems, rules of action, processes, personnel, and other resources that government and non-government stakeholders bring together to achieve development goals (Otoo et al., 2009, p. 11).

The framework articulates a set of indicators that align with each factor that, if influenced, are theorized to improve the capacity to achieve a goal. We adapted these factors and indicators to a higher education context to try to understand what influences community colleges to expand capacity and change as it relates to a specific initiative, in this case, DWD. There are likely factors at several levels of the institutional and state context that influence the capacity of institutions to implement initiatives and their outcomes. For example, the capacity factor **conduciveness of sociopolitical environment** includes an indicator to assess leadership commitment which is evaluated with survey items such as: Does institutional leadership support degree reclamation? Since the DWD model aimed to “build expertise, capacity, and infrastructure,” the CDRF framework provides a way to examine capacity development. The methods section further outlines how these capacity factors and related indicators were operationalized through survey items.

It is critical to note that the capacity development framework does not explicitly address equity. Rather, as described below, equity is a core feature and goal of the DWD model, so the framework helps us assess how institutions develop capacity to implement an equity-based strategy such as degree reclamation. We also believe the use of the CDRF is innovative in research on policy implementation and adds to existing literature. For example, literature that focuses on institutional agents and their roles in the policy implementation process often do not address the organizational and cultural factors that also influence implementation (Dowd et al., 2013; Museus & Neville, 2012; Nienhusser, 2018; Nienhusser & Espino, 2016).
Degrees When Due Model

As previously noted, the purpose of DWD is to “to build expertise, capacity, and infrastructure on campuses across the nation to get near-completers over the finish line” (IHEP, 2019, para. 1). That is, the purpose of the DWD initiative is to develop institutional capacity to develop and implement degree reclamation strategies. DWD was designed by the Institute for Higher Education Policy (IHEP) in partnership with the research team. The DWD theory of action model includes five primary change and capacity-building dimensions: (a) a cross-departmental institutional team; (b) an online learning management system (LMS) platform; (c) coordination from a state representative; (d) technical assistance and support from experienced coaches and subject matter expert webinars; (e) research and reporting guidance and input. Collectively, these components represent the development and implementation model for community colleges to approach degree reclamation; each component is described below.

Cross-Departmental Institutional Teams

The DWD model acknowledged that implementation of successful degree reclamation programs requires a cross-functional team of institutional staff. DWD encourages the development of cross-functional teams at the beginning of the initiative that include representatives from academic affairs, the registrar’s office, student services and student affairs, and institutional research. A critical component to the institutional team is a Team Lead who is responsible for advancing the teams’ work over a 9-month period. Including the Team Lead, institutional team membership varied in size from three to over ten based on the distribution of responsibilities at each institution.

An Online Learning Management System (LMS) Platform

The LMS serves as the primary hub for learning among institutional team members and for engagement between the institutional teams, IHEP, and state coordinators. The primary purpose of the LMS is to provide DWD team members with the knowledge, tools, and resources to effectively develop and implement degree reclamation. The LMS platform includes four core blocks of content: (a) Initiation; (b) Identifying Award-Eligible Students; (c) Engaging Students; and (d) Sustainability. Each content block has a set of modules that provide tools, templates, research, resources, and a step-by-step process for how to develop and implement degree reclamation that all team members have the opportunity to access. Another critical component of the LMS is to provide a set of toolkits to be used by campuses to further assist their equity, completion, and communication efforts. Each toolkit provides an interactive self-assessment for institutions to identify their areas of greatest need and the more appropriate resources and shared in response. In particular, the equity toolkit is designed to help institutions understand the impact of equity considerations in policy decisions to ensure equity is at the forefront within degree reclamation policy development and implementation. Finally, the LMS offers discussion boards to facilitate conversation with other participating institutions, coaches, and content experts. DWD’s expectation is that each team member engage in the LMS and have the LMS content guide institutional implementation.

State Coordination

Although decision-making and policy development for degree reclamation occurs at the institution-level or in partnership between multiple institutions, DWD recognizes that regional differences can influence decision-making in implementation. As such, all participating institutions are coordinated and admitted to the initiative at the state or regional level to offer institutions an added level of support from neighboring institutions that may be facing similar challenges. Each
state or region was designated a state liaison that was expected to provide coordination on various aspects of the initiative, connect institutions and problem solve, and support institutions as needed.

**Coaches and Subject Matter Experts**

Each participating DWD institution and state is assigned a coach with experience in the development and implementation of degree reclamation strategies. The coach serves as a subject matter expert in the area and is positioned to support states and institutions as they consider how to develop and implement degree reclamation. The coaches help guide institutions, solve problems as they arise, and serve as consultants for the DWD team’s work. DWD also includes subject matter expert webinars hosted by IHEP that feature best practices and offer advice to institutions as they consider different approaches to adopting and implementing degree reclamation strategies.

**Research and Reporting**

Finally, DWD includes a research component that seeks to both track the initiative’s outcomes and inform the initiative’s work. The research and reporting component provides standard guidance to institutions on reporting progress and outcomes, and it is helping assess the impact of the initiative on both student outcomes and institutional change. The goal in conducting this research is to create a feedback loop with IHEP and decision makers to consider improvements that could be possible in real time or between cohorts to improve the experience of participating institutions.

**Degrees When Due and Equity**

As previously noted, the DWD initiative is described as an equity-oriented initiative. What does this mean in practice? First, DWD launched and recruited community colleges to participate based on the rationale that degree reclamation strategies could help them close attainment gaps, particularly for Students of Color and low-income students. IHEP worked with institutional presidents and academic leaders to participate in DWD, and these leaders were aware of the goals of DWD and degree reclamation strategies when they agreed to participate, suggesting an underlying commitment to equity at top leadership levels. Second, the LMS included specific content to help DWD teams develop an equity lens that would be applied to subsequent degree reclamation work and policy decisions to ensure that campus teams are working to close completion gaps for Students of Color and low-income students. The initiation block contained a module devoted to facilitating learning of key equity terms and concepts, discussing and forming clear equity goals in relation to each institution’s student population, and identifying metrics to track progress toward equity goals. Team members were prompted to test their various choices throughout the modules to determine the impact on equity. The equity toolkit in the LMS provides institutional teams an equity decision tree analysis to help users interrogate systemic barriers at the heart of inequities on campus. Finally, coaches and subject matter experts promoted the role of equity in degree reclamation practices.

IHEP provided training to coaches on the practical application of the equity toolkit so they could better direct institutional teams to take advantage of that resource. IHEP also hosted subject matter expert webinars on “equity in action” to underscore the equity imperative central to DWD.

The terms equity, equity-mindedness, and equity lens are used throughout DWD. To promote a shared understanding of these terms and what they mean, IHEP clearly defined the terms within the LMS. Equity is essentially fairness - an educational system in which race, ethnicity, socioeconomic status, or any social or cultural factor are not predictors of student success - while equity-mindedness is a mindset and an equity lens is the approach. An equity lens is a framework that shapes the practice and commitment to ensuring equity in DWD by institutionalizing the decision in policies affecting internal operations and external affairs. While LMS participants were guided to ground their institutional team equity conversations in data, they were also encouraged to
develop a framework to help determine whether degree reclamation strategies are intentionally designed to address inequities.

Methods

To answer the research questions in this paper, we drew from several data sources from a larger study, and the data sources included two surveys and LMS engagement data. Below we describe the sample, data collection and measures, data analysis, and limitations.

Sample

The sample for this study includes seven community colleges in Michigan, which we anonymized as Colleges A, B, C, D, E, F, and G. We selected these institutions for this paper for several reasons. First, these institutions began adoption of degree reclamation strategies and were able to complete implementation and submit complete data prior to the coronavirus pandemic reaching the United States. Second, this sub-set of institutions were all pursuing an adult reengagement strategy, which was the more dominant strategy pursued relative to reverse credit transfer among DWD participating institutions. Finally, by only considering participating institutions in Michigan, we accounted for any several state-level characteristics that previous research suggests influences the policy adoption and implementation process, including governance structure, financing models, student demographics, and academic pathways (El-Khawas, 2005; Hearn et al., 2017). Table 1 provides baseline institutional characteristics and student demographics for the sample of colleges included in the analysis. These institutions include two larger institutions in more urban areas (A, G) and five smaller institutions in more rural areas (B, C, D, E, F). Students of Color range from 5%-30% of institutional enrollment, while adults aged 25+ range from 15-33%, and Pell Recipients from 22-64%; these demographics highlight the potential impact of DWD on larger numbers of low-income students, older students, and Students of Color.

Table 1
Sample Description and Institutional Characteristics

<table>
<thead>
<tr>
<th>College</th>
<th>Locale</th>
<th>3-year average FTE</th>
<th>Students of Color</th>
<th>Adults 25+</th>
<th>Pell Recipients</th>
<th>Female</th>
<th>3-year average Associate's conferred</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>City</td>
<td>20,989</td>
<td>22%</td>
<td>30%</td>
<td>22%</td>
<td>52%</td>
<td>2381</td>
</tr>
<tr>
<td>B</td>
<td>Rural</td>
<td>1,525</td>
<td>5%</td>
<td>20%</td>
<td>38%</td>
<td>50%</td>
<td>261</td>
</tr>
<tr>
<td>C</td>
<td>Rural</td>
<td>1,145</td>
<td>15%</td>
<td>30%</td>
<td>50%</td>
<td>64%</td>
<td>174</td>
</tr>
<tr>
<td>D</td>
<td>Town</td>
<td>1,877</td>
<td>11%</td>
<td>25%</td>
<td>34%</td>
<td>64%</td>
<td>302</td>
</tr>
<tr>
<td>E</td>
<td>Rural</td>
<td>1,198</td>
<td>18%</td>
<td>15%</td>
<td>30%</td>
<td>61%</td>
<td>98</td>
</tr>
<tr>
<td>F</td>
<td>Rural</td>
<td>3,991</td>
<td>12%</td>
<td>18%</td>
<td>41%</td>
<td>56%</td>
<td>368</td>
</tr>
<tr>
<td>G</td>
<td>Suburb</td>
<td>17,150</td>
<td>30%</td>
<td>33%</td>
<td>25%</td>
<td>54%</td>
<td>2403</td>
</tr>
</tbody>
</table>

Note: All data were retrieved from IPEDS. Students’ of Color include all race/ethnicity categories in IPEDS other than White, including: American Indian or Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander and 2 or more races.
Data Collection and Measures

Data collection for the study and the purpose of this paper involved two primary components: (a) institutional surveys and (b) LMS implementation data. Each of these are described in more detail below.

Institutional Surveys

The study includes two surveys administered to colleges at the beginning of the initiative and two parallel surveys administered at the end of the initiative. At the beginning of the initiative, we administered a baseline policy and practice survey at the institutional level (completed by the DWD team leader) and a survey to individual DWD team members. The instruments were developed based on our conceptual model and rooted in the three factors that influence capacity articulated in the CDRF: conduciveness of the sociopolitical environment, efficiency of policy instruments, and effectiveness of organizational arrangements. To develop the survey questions, the authors reviewed a robust set of indicators provided by the CDRF that aligned with each of the three CDRF factors. We engaged in an iterative process of question development to translate the indicators to a higher education context and develop a survey instrument based on them. Ultimately, we developed eight measures in two primary categories: (a) Policy Goals and Policies; and (b) Capacity: Sociopolitical and Organizational Resources. Table 2 describes each measure within each category, a description of each measure based on the survey items, and a notation of whether the survey items came from the individual survey (IS) or the survey completed by the team leader at the institutional level (TLS); items for each measure are located in Appendix A. The Policy Goals and Policies category included three measures: Equity Goals (IS), Completion and DR Goals (IS), and Written Policies for AR (TLS). This category of factors most closely align with CDRF’s efficiency of the policy instrument factor. The category for Capacity: Sociopolitical and Organizational Resources included five measures: AR Understanding, Beliefs, and Value (IS); Student Conduciveness (TLS); Overall Resources and Support for AR (IS); Adequacy of Institutional and State Resources for AR (TLS); and Technology Capacity (TLS). This category of factors most closely aligns with CDRF’s conduciveness of the sociopolitical environment and effectiveness of organizational arrangements factors.

Table 2
Survey Measures, Measure Description, and CDRF Factor Alignment

<table>
<thead>
<tr>
<th>Survey Measure</th>
<th>Policy Goals and Policies</th>
<th>CDRF Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity Goals (IS)</td>
<td>5 items that asked respondents to indicate if their institution has goals related to equity.</td>
<td>Efficiency of Policy Instrument</td>
</tr>
<tr>
<td>Completion &amp; DR Goals (IS)</td>
<td>6 items that asked respondents to indicate if their institution has broad completion goals and goals related to adult and transfer students.</td>
<td>Efficiency of Policy Instrument</td>
</tr>
<tr>
<td>Written Policies for AR (TLS)</td>
<td>7 items that asked respondents to report if they have written policies related to AR. Scale is sum of all items, ranging from 0-7.</td>
<td>Efficiency of Policy Instrument</td>
</tr>
</tbody>
</table>
### Table 2 cont.

**Survey Measures, Measure Description, and CDRF Factor Alignment**

<table>
<thead>
<tr>
<th>Capacity: Sociopolitical and Organizational Resources</th>
<th>Description</th>
<th>CDRF Factor Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR Understanding, Beliefs, and Value (IS)</td>
<td>14 items that asked respondents about their understanding of, beliefs about, and value of adult reengagement.</td>
<td>Conduciveness of the Sociopolitical Environment</td>
</tr>
<tr>
<td>Student Conduciveness (TLS)</td>
<td>5 items that asked respondents to indicate if they believe their institutions and students are conducive to factors relevant to DR.</td>
<td>Conduciveness of the Sociopolitical Environment</td>
</tr>
<tr>
<td>AR Barriers (IS)</td>
<td>5 items that asked respondents if they believe AR implementation will encounter barriers related to student disinterest, inadequate programming, and program quality.</td>
<td>Conduciveness of the Sociopolitical Environment</td>
</tr>
<tr>
<td>Overall Resources and Support for AR (IS)</td>
<td>10 items that asked respondents if they believe there is adequate fiscal, technology, and personnel resources and if they have support from institutional, government, and community leaders.</td>
<td>Conduciveness of the Sociopolitical Environment, Effectiveness of Organizational Arrangements</td>
</tr>
<tr>
<td>Adequacy of Institutional and State Resources for AR (TLS)</td>
<td>6 items that asked respondents to indicate if institutional and state resources are adequate for AR related to professional development, funding, and technology.</td>
<td>Effectiveness of Organizational Arrangements</td>
</tr>
<tr>
<td>Technology Capacity (TLS)</td>
<td>4 items that asked respondents to indicate if they believe that institutional technology is conducive to AR.</td>
<td>Effectiveness of Organizational Arrangements</td>
</tr>
</tbody>
</table>

Although the sample size was small for the first cohort of institutions, we ran factor analysis and calculated Cronbach’s alpha for each measure. Generally, we found the measures to be reliable, but because the sample size is small, we do not have strong confidence in the factor analysis and expect a larger sample size with the addition of a second cohort of institutional participants in DWD. To conduct the analysis described below, we calculated a simple item average for each measure for each college. Among the seven colleges in the sample, we had \( n = 28 \) individual survey responses that were averaged at the institutional level. For the team leader surveys, we had a response from the team leader for each college, and for five of the seven colleges, both the pre- and post-survey were completed by the same team leader. The survey scales included both 4-point and 5-point Likert scales, so we standardized the scales for ease of interpretation and comparability across measures. All means were standardized to 0 and results are reported in standard deviations (SD).
Implementation Data from the LMS

The second data source came from user data in the LMS. The LMS tracked how institutional team members engaged in the LMS. We derived one core measure that reflects user engagement and take-up of the DWD model. The LMS structure included four core blocks of content, and each block had a series of modules for team members to start and complete. The total number of modules for which team members could be exposed varied by team role. To create a meaningful measure, we calculated the total number of modules that were started for each DWD team member and divided this by the total number of modules that were offered to the team member. We learned through discussions with DWD teams that some teams relied on one team member to engage in the LMS content and share information back with their team. As a result, some DWD team members engaged with a very small percent of their modules in the DWD LMS. In order to not disadvantage institutions with larger DWD teams or those reliant on one team member to disseminate LMS information, we opted to use LMS data for each institution’s team member that was most engaged with the platform (represented by largest number of modules started) to represent LMS engagement for the team overall. Similarly, many engaged with the LMS content but did not “complete” the module because completion often required submission of information that was not essential to their implementation efforts. That is, team members could review and engage all of the LMS content in a module, but they might not have “completed” the module because they did not check a box or write a reflection on their experience and press submit, for example. Because of this, our primary measure of engagement/implementation is starting LMS modules rather than completing them. Although we could not actually measure individual learning from the LMS, this measure was a proxy for learning and implementation because the LMS was one of the primary mechanisms theorized to build capacity in the DWD model and engagement in the underlying goals of the initiative. As previously noted, the LMS content was the primary way institutional staff learned how to mine institutional data to identify near-completers, apply new degree audit techniques, apply an equity lens to implementation, develop and implement a re-engagement strategy, and ultimately re-enroll students and confer degrees, among other things. Thus, more engagement in the LMS was an indicator of higher quality implementation. In theory, institutional staff could implement degree reclamation by learning through other means (e.g., calling a colleague from another institution, google search), but it is reasonable to infer that more engagement in the LMS translated to better implementation.

Unfortunately, the LMS did not provide accurate data about the amount of time users spent in the LMS and we did not have measures of staff completing all of the tasks in the LMS (we elaborate on this in the limitations). Table 3 illustrates the distribution of modules started for the seven colleges within the sample, which ranged from 11% to 83% (see Table 3).
Table 3
LMS Module Engagement, by College

<table>
<thead>
<tr>
<th>College</th>
<th>Percent of LMS Modules Started</th>
</tr>
</thead>
<tbody>
<tr>
<td>College A</td>
<td>11%</td>
</tr>
<tr>
<td>College B</td>
<td>13%</td>
</tr>
<tr>
<td>College C</td>
<td>27%</td>
</tr>
<tr>
<td>College D</td>
<td>29%</td>
</tr>
<tr>
<td>College E</td>
<td>50%</td>
</tr>
<tr>
<td>College F</td>
<td>77%</td>
</tr>
<tr>
<td>College G</td>
<td>83%</td>
</tr>
</tbody>
</table>

As Table 3 suggests, there was a clear distinction between colleges that engaged more with the LMS. For the purpose of this analysis, we created two categories of LMS implementation or engagement. Low Implementation included Colleges A through D (11% - 29%; n=4) and High Implementation included Colleges E through G (50% - 83%; n=3).

Data Analysis

We used exploratory descriptive analysis to answer the two research questions. Given the small number of institutions in the first cohort of DWD and the small sample size, we used descriptive analyses to examine averages and descriptive relationships between capacity and factors and implementation. To answer the first research question, we examined differences in the pre-survey standardized means among Low Implementation and High Implementation colleges. To answer the second research question, we examined the average change in mean for each pre-survey and post-survey measure and compared the differences in mean change between the Low Implementation and High Implementation colleges.

Limitations

There are at least three primary limitations of this study. First, the second research question examines how implementation of DWD influences capacity change. We recognize that there are many contextual factors that could influence an institution’s capacity to implement degree reclamation outside of what we measured in the study, such as the local economy, institution’s size and geographic region, for example. The purpose of our study was not to examine how many of these multiple factors also influenced capacity development, but it is important to recognize that high and low implementation could be related to other contextual factors that were not measured. Second, and as it relates to this volume, our measure of degree reclamation implementation is not comprehensive. We used LMS engagement as a proxy for implementation and assume that colleges that began more LMS modules were more likely to use content and implement with more fidelity. Our anecdotal data from several colleges suggested this to be the case, but it is possible that colleges started modules and did not engage with or use the information they learned through their LMS engagement. A final limitation is the small sample of institutions included in this study. Differences in means should be interpreted with caution because of the small sample size. That said, descriptive...
data in small sample sizes are still relevant and reflect the unique responses and experiences of individuals at the institutions that participated in DWD.

Results

The first research question aimed to understand what factors explained differences in degree reclamation implementation. As Table 4 and Figure 1 show, High Implementation institutions reported greater capacity on nearly all measures at the beginning of the initiative. On all but two capacity and policy measures, the difference between High Implementation and Low Implementation pre-survey means was between .28 and 1.07 standard deviations. Interestingly, the largest gap was the AR Barriers measure, which means that High Implementation colleges reported they expected more barriers to implementation than Low Implementation colleges. Table 4 and Figure 1 also show that High Implementation colleges reported that state and institutional resources were less adequate compared to Low Implementation colleges. It is also important to note that the smallest difference between High and Low Implementation colleges was on the equity goals measure, suggesting that High and Low Implementation colleges were similarly committed to equity goals at the beginning of the initiative.

Table 4

<table>
<thead>
<tr>
<th>Pre-Survey Measure</th>
<th>Pre-Survey Mean (Standardized) Low Implementation</th>
<th>Pre-Survey Mean (Standardized) High Implementation</th>
<th>Mean Difference (High minus Low)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity Goals (IS)</td>
<td>-0.12</td>
<td>0.16</td>
<td>0.28</td>
</tr>
<tr>
<td>Completion &amp; DR Goals (IS)</td>
<td>-0.349</td>
<td>0.466</td>
<td>0.815</td>
</tr>
<tr>
<td>Written Policies for AR (TLS)</td>
<td>-0.109</td>
<td>0.219</td>
<td>0.328</td>
</tr>
<tr>
<td>AR Understanding, Beliefs, and Value (IS)</td>
<td>-0.35</td>
<td>0.466</td>
<td>0.816</td>
</tr>
<tr>
<td>Student Conduciveness (TLS)</td>
<td>0.27</td>
<td>-0.359</td>
<td>-0.629</td>
</tr>
<tr>
<td>AR Barriers (IS)</td>
<td>-0.46</td>
<td>0.614</td>
<td>1.074</td>
</tr>
<tr>
<td>Overall Resources and Support for AR (IS)</td>
<td>-0.331</td>
<td>0.441</td>
<td>0.772</td>
</tr>
<tr>
<td>Adequacy of Institutional and State Resources for AR (TLS)</td>
<td>0.178</td>
<td>-0.238</td>
<td>-0.416</td>
</tr>
<tr>
<td>Technology Capacity (TLS)</td>
<td>-0.306</td>
<td>0.408</td>
<td>0.714</td>
</tr>
</tbody>
</table>
The second research question aimed to understand how differences in implementation influenced the outcomes of the DWD initiative. The primary outcome that was examined was changes in capacity and policy, a primary goal of the DWD initiative. Table 5 and Figure 2 report the results from this research question and show average differences in the pre- and post-survey change between the High and Low Implementation colleges. The results are mixed in that for about half of the capacity and policy measures, High Implementation colleges saw an increase in capacity and half saw a decrease in capacity.

The largest capacity increase was for written policies, whereby the average pre- to post-survey change was about a half of standard deviation higher at High Implementation colleges than Low Implementation colleges. High implementation colleges were also more likely to report higher commitments to completion and degree reclamation goals, an institutional environment that was more conducive to students, and perceptions that their institutional and state resources for degree reclamation were adequate.

Alternatively, Low Implementation colleges reported more change on four capacity measures: Technology Capacity, Equity Goals, AR Understandings/Beliefs/Values, and Overall Resources & Support for AR. These findings may be somewhat counterintuitive, given that DWD was intended to expand capacity along all of these dimensions; we expand on these findings in the discussion below.
Table 5

Mean Change between Pre- and Post-Survey and Difference between High and Low Implementation

<table>
<thead>
<tr>
<th>Pre- to Post-Measure Change</th>
<th>Mean Change (Standardized) Low Implementation</th>
<th>Mean Change (Standardized) High Implementation</th>
<th>Mean Change Difference (High minus Low)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity Goals (IS)</td>
<td>0.292</td>
<td>-0.39</td>
<td>-0.682</td>
</tr>
<tr>
<td>Completion &amp; DR Goals (IS)</td>
<td>-0.087</td>
<td>0.117</td>
<td>0.204</td>
</tr>
<tr>
<td>Written Policies for AR (TLS)</td>
<td>-0.18</td>
<td>0.363</td>
<td>0.543</td>
</tr>
<tr>
<td>AR Understanding, Beliefs, and Value (IS)</td>
<td>0.055</td>
<td>-0.073</td>
<td>-0.128</td>
</tr>
<tr>
<td>Student Conduciveness (TLS)</td>
<td>-0.117</td>
<td>0.156</td>
<td>0.273</td>
</tr>
<tr>
<td>AR Barriers (IS)</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Overall Resources and Support for AR (IS)</td>
<td>0.049</td>
<td>-0.066</td>
<td>-0.115</td>
</tr>
<tr>
<td>Adequacy of Institutional and State Resources for AR (TLS)</td>
<td>-0.14</td>
<td>0.187</td>
<td>0.327</td>
</tr>
<tr>
<td>Technology Capacity (TLS)</td>
<td>0.499</td>
<td>-0.666</td>
<td>-1.165</td>
</tr>
</tbody>
</table>

Figure 2

Mean Change Difference between High and Low Implementation Colleges
Discussion

Degree reclamation strategies are a relatively new policy approach in higher education, even more so at community colleges. Two national initiatives, PWW and CWID, supported cohorts of states and institutions to develop and test adult reengagement and reverse credit transfer strategies, the result of which produced thousands of new associate’s degrees and reenrolled students (Adelman, 2013; Taylor & Cortes-Lopez, 2017). However, given the limited scope and participation in these initiatives as well as their common goals and considerations, combining these separate programs into a single degree reclamation program was needed to accelerate the adoption and implementation of these policies nationwide. Enter the DWD initiative, which provided community colleges with a standardized infrastructure and equity-focused framework for advancing degree reclamation programs by expanding institutional capacity to implement these policies. However, despite providing an in-depth and multi-resource platform to inform and help guide institutions, participation levels and success varied across campuses. To this end, our study sought to understand what capacity factors influenced colleges’ differences in degree reclamation implementation and how differences in implementation influenced institutional capacity. Focusing on seven community colleges in a single state that participated in Cohort 1 of the DWD initiative, the study provides descriptive evidence and insight about what influences implementation of a new initiative (DWD) and how initiatives similar to DWD, particularly those with an equity focus, can help institutions develop capacity to change.

First, results strongly suggest that an institution’s capacity along all dimensions of the CDRF is critical for strong engagement and policy implementation. Colleges that were High Implementers had higher levels of capacity at the outset of the initiative on nearly all pre-survey measures. The two measures that were exceptions were the measures related to student conduciveness and the adequacy of institutional and state support, which reflect dimensions of the CDRF’s sociopolitical environment and organizational arrangements. One potential explanation for these differences is the variation by institutional context within the state, which our study did not account for. For example, pre-implementation capacity differences could be explained by differences in local funding or state support, as well as student demographics factors; these could all influence how DWD team members responded to the surveys.

A second result found engagement with and implementation of the initiative (as measured by LMS engagement) was associated with mixed levels of capacity change. We found that High Implementation colleges expanded their capacity on about half of the capacity measures and decreased capacity on the other half of the measures. Given that DWD was intended to expand capacity, the results presented here are mixed in terms of whether the initiative achieved that goal with this initial cohort. Perhaps the most promising and insightful results suggest that the largest positive change among High Implementers was the expansion of Written Policies for adult reengagement. DWD provided colleges with the tools, guidance, and instruments needed to implement adult reengagement, and so it follows that those colleges with higher levels of implementation also reported increases in the development of adult reengagement policies. This finding aligns with prior policy implementation literature that underscores the role of institutional agents in shaping and advancing new policies and practices to support minoritized populations (Dowd et al., 2013; Museus & Neville, 2012; Nienhusser, 2018; Nienhusser & Espino, 2016). Specifically, similar to these studies, members of the DWD teams in High Implementer colleges served as institutional agents and likely guided the development of written policies to enact change that benefited students. Comparatively, the limited change in written policies at Low Implementer institutions may suggest that DWD team members did not take the onus of responsibility to serve as institutional agents of change.
The results also showed that High Implementation colleges reported bigger changes to their goals related to completion and degree reclamation, which reinforces the potential of institutional agents who believe in the work of degree reclamation for adult students. Despite these findings, High Implementation colleges reported lower levels of change for equity goals compared to Low Implementation colleges, which is concerning because of DWD’s focus on equity. There are three potential explanations for this. First, it is possible that some colleges began the equity modules within the LMS but did not complete them, so they might not have been fully exposed to the equity-related content, which is a limitation of our LMS measure. That said, a significant amount of DWD communication to the colleges was framed around equity, so we would expect an increase in equity goals related to degree reclamation among the high implementing colleges. Second, the survey used a broad definition of equity, including age, income, race/ethnicity, and gender, and it is possible that aggregating these items together diluted variation within these groups. In other words, the measure may have been too broad to decipher if individual equity measures, such as age or race/ethnicity, were an institutional priority. The third potential explanation is that the High Implementation colleges already started a little bit ahead of Low Implementation colleges based on the pre-survey data, which means they had slightly less room to improve. Either way, this finding suggests that although DWD helped institutions implement and change policy, it might not have moved equity goals in a way that it intended.

Third, it is important to connect the findings back to the CDRF framework that guided this study (Otto et al., 2009). The mixed findings for the second research question do not point clearly to DWD’s impact on one factor from the CDRF—both positive and negative (or null) findings were observed for all three factors: conduciveness of the sociopolitical environment, efficiency of policy instrument, and effectiveness of organizational arrangements. To some extent, this finding suggests all three factors were impacted by DWD. The most positive change was observed within the efficiency of policy instrument factor. Positive changes were observed in High Implementation sites for two of the three measures that aligned with this factor—Written Policies for AR and Completion & DR Goals. It is important to note that the CDRF argues that capacity development is not only related to the availability of resources, but how these resources are deployed in a sustainable manner. Although the DWD institutions did not receive funding to develop and implement degree reclamation policies, they were supported by the DWD infrastructure, which is not indefinitely available to DWD institutions. The DWD initiative was strategically designed in a less prescriptive manner to allow institutions to develop their implementation policies and procedures in a way that aligned with their institutional context.

Implications and Conclusion

The purpose of DWD was to accelerate institutional capacity to develop and implement degree reclamation, and the results from this study show that the initiative helped create policy change by supporting a shift in policy and goals at the institutional-level, especially among those colleges that were High Implementers. An important marker of success of similar past initiatives is short-term conferral of degrees or reenrollment of stopped-out students, but the early evidence from DWD shows that the long-term success may extend beyond immediate return in degrees awarded and levels of equity achieved to a broader focus on capacity development and policy change at institutions. If sustained, these longer-term institutional changes will likely have ripple effects on minoritized community college students for years to come.

Given the short-term nature of this study, future research should examine the extent to which degree reclamation policies are sustained over time. Although we found that DWD led to critical short-term policy changes and the establishment of new goals, the evidence was not clear that the sociopolitical environment had changed in favor of degree reclamation. This suggests that
conditions might not be susceptible to sustaining the initiative, so future research should assess how (and if) change is sustained. Future research should also examine the extent to which the policy changes prompted by DWD actually result in more equitable outcomes for Students of Color, low-income students, and adult students—the target populations of the initiative. This research could be accomplished by relating differences in implementation to the characteristics of students impacted by the initiative.

In terms of implications for policy and practice, the results lead to two important implications. First, the results suggest that initial institutional capacity is critically important to expanding capacity in the context of degree reclamation. This is a signal of readiness and suggests that community colleges and institutions that seek to adopt new programs and policies should assess initial implementation and readiness because that could influence engagement and implementation. Community college leaders should conduct formal readiness and capacity assessments prior to new policy implementation efforts because this can help determine the extent to which implementation will be successful. Second, if community colleges are interested in making significant change to increase degree attainment and close equity gaps, efforts to change institutional policy and practice are needed. This study showed that community colleges, when adequately prepared and supported through an initiative such as DWD, may be able to expand capacity to implement. It suggests that successful implementation requires adequate resources and support, and that states and other entities can and should provide technical assistance and support institutional implementation. This is particularly critical for policy implementation efforts aimed at reducing inequities.

Acknowledgements

We acknowledge and appreciate the data analysis contributions of Karen Stovall and Taylor Kevern. We also thank the staff at the community colleges who committed to implementing DWD and who supported data collection for this study. All opinions, conclusions, and errors reflected in this manuscript are solely those of the authors.

References


Appendix A

**Survey Measures and Items**

<table>
<thead>
<tr>
<th>Survey Measure</th>
<th>Survey Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity Goals (IS)</td>
<td>Reducing educational inequalities broadly</td>
</tr>
<tr>
<td></td>
<td>Reducing educational equity gaps by race/ethnicity</td>
</tr>
<tr>
<td></td>
<td>Reducing educational equity gaps by age</td>
</tr>
<tr>
<td></td>
<td>Reducing educational equity gaps by income</td>
</tr>
<tr>
<td></td>
<td>Disaggregating data to understand equity gaps</td>
</tr>
<tr>
<td>Completion &amp; DR Goals (IS)</td>
<td>Increasing the number of degrees conferred</td>
</tr>
<tr>
<td></td>
<td>Reducing the population of &quot;some college, no degree&quot;</td>
</tr>
<tr>
<td></td>
<td>Increasing the number of adults enrolled at the institution</td>
</tr>
<tr>
<td></td>
<td>Creating and sustaining policies and structures that support adult students</td>
</tr>
<tr>
<td></td>
<td>Increasing the number of students who receive an associate’s degree after transfer</td>
</tr>
<tr>
<td></td>
<td>Creating and sustaining policies and structures that support more seamless transfer pathways and outcomes</td>
</tr>
<tr>
<td>Written Policies for AR (TLS)</td>
<td>Adult reengagement is written into institutional strategic plans</td>
</tr>
<tr>
<td></td>
<td>Adult reengagement is written into departmental strategic plans</td>
</tr>
<tr>
<td></td>
<td>Adult reengagement is written into institutional key performance indicators</td>
</tr>
<tr>
<td></td>
<td>Adult reengagement is written into the course catalog</td>
</tr>
<tr>
<td></td>
<td>Adult reengagement is written into the job responsibilities of institutional staff</td>
</tr>
<tr>
<td></td>
<td>Our institution has written goals related to Adult reengagement</td>
</tr>
<tr>
<td></td>
<td>Our institution has written procedures and protocols for Adult reengagement</td>
</tr>
<tr>
<td>AR Understanding, Beliefs, and Value (IS)</td>
<td>I understand the purpose and goals of adult reengagement</td>
</tr>
<tr>
<td></td>
<td>The purpose and goals of adult reengagement have been clearly described to me</td>
</tr>
<tr>
<td></td>
<td>I understand why my campus should implement adult reengagement</td>
</tr>
<tr>
<td></td>
<td>Adult reengagement is currently part of my job responsibilities</td>
</tr>
<tr>
<td></td>
<td>I believe adult reengagement should be part of my job responsibilities</td>
</tr>
<tr>
<td></td>
<td>I believe reverse transfer should be part of my job responsibilities</td>
</tr>
<tr>
<td></td>
<td>I understand my role and responsibilities as they relate to reverse transfer</td>
</tr>
<tr>
<td></td>
<td>I believe that my institution should fully implement and scale reverse transfer</td>
</tr>
<tr>
<td></td>
<td>Information about adult reengagement is communicated to a wide audience at my institution</td>
</tr>
<tr>
<td></td>
<td>The amount of time needed to implement adult reengagement is likely to be burdensome</td>
</tr>
<tr>
<td></td>
<td>The potential benefits will be worth the time and costs to develop and implement adult reengagement</td>
</tr>
<tr>
<td></td>
<td>Adult reengagement does not conflict with other institutional goals and policies</td>
</tr>
<tr>
<td></td>
<td>I share information about adult reengagement goals and policies with colleagues on my campus</td>
</tr>
<tr>
<td></td>
<td>I frequently hear about adult reengagement goals and policies around my campus</td>
</tr>
<tr>
<td></td>
<td>I am committed to developing and implementing adult reengagement on my campus</td>
</tr>
<tr>
<td></td>
<td>Students value the associate’s degree</td>
</tr>
<tr>
<td>Survey Measure</td>
<td>Survey Items</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| Student Conduciveness (TLS) | Students understand/know the economic benefit of an associate's degree  
Students have many competing responsibilities that are barriers to finishing their associate's degree  
Students feel welcome/supported at our institution  
Students can navigate complex institutional processes and procedures |
| AR Barriers (IS) | Adult reengagement will prompt students to reenroll who are probably not able to complete a degree  
Adult reengagement will allow students to cut corners to get their degree  
Adult reengagement will lower the integrity and quality of the degree  
Adult reengagement will not be successful because our institution is not equipped to meet the needs of adult students (e.g., child care, flexible scheduling)  
Adult reengagement will confer degrees to students who don't need them |
| Overall Resources and Support for AR (IS) | Institutional technology capacity and infrastructure is adequate to support adult reengagement  
Institutional fiscal resources are adequate to support adult reengagement  
State/system fiscal resources are adequate to support adult reengagement  
Institutional personnel capacity is adequate to support adult reengagement  
State/system personnel capacity is adequate to support adult reengagement  
Institutional leadership supports adult reengagement  
State leadership supports adult reengagement  
Local government officials support adult reengagement policies  
State government officials support adult reengagement policies  
Local business and industry leaders support adult learners and adult reengagement policies |
| Adequacy of Institutional and State Resources for AR (TLS) | Existing state and/or system professional development/training is adequate to support Adult reengagement  
Existing institutional professional development/training is adequate to support Adult reengagement  
Existing state and/or system funding is adequate to support Adult reengagement  
Existing institutional funding is adequate to support Adult reengagement  
Existing institutional technology capacity is adequate to support electronic exchange of transcript information  
Existing institutional technology capacity is adequate to support large scale degree audits |
| Technology Capacity (TLS) | Overall, the technology used at my institution is conducive to Adult reengagement  
The technology used to exchange transcripts between institutions is conducive to Adult reengagement  
The technology used to audit degrees is conducive to Adult reengagement  
The technology used to generate lists of students is conducive to Adult reengagement |

Note: All items were on a strongly agree to strongly disagree scale and asked respondents to indicate the extent to which they agree with the survey items.
About the Authors

Jason L. Taylor
University of Utah
jason.taylor@utah.edu
https://orcid.org/0000-0002-1946-867X
Jason L. Taylor is an assistant professor in the Department of Educational Leadership and Policy at the University of Utah. His broad research interests are at the intersection of community college and higher education policy, and educational and social inequality.

Paul G. Rubin
University of Utah
paul.rubin@utah.edu
https://orcid.org/0000-0001-6691-898X
Paul G. Rubin is an assistant professor in the Department of Educational Leadership & Policy at the University of Utah. His research focuses on the intersections of higher education policy, governance of the postsecondary sector, and the use of research and information in the state and federal policy process.

Sheena A. Kauppila
Coastal Carolina University
skauppila@coastal.edu
https://orcid.org/0000-0001-5396-7790
Sheena A. Kauppila, Ph.D., is an assistant professor of higher education administration at Coastal Carolina University. Her research interests are focused on the success and outcomes of college students, student-faculty engagement, and faculty development.

Leanne Davis
Institute for Higher Education Policy
ldavis@ihep.org
Leanne Davis is the Associate Director of Applied Research at the Institute for Higher Education Policy, where she leads projects and research focused on transfer and postsecondary degree completion and advocates for policies that support students from populations historically underrepresented in postsecondary education.

About the Editors

Eric R. Felix
San Diego State University
efelix@sdsu.edu
https://orcid.org/0000-0002-6116-0214
Eric R. Felix is a critical policy scholar examining the ways policymakers craft higher education reform and how institutional leaders implement them. His research focuses on understanding how policy implementation may benefit, harm, or render invisible Latinx students and other minoritized groups in the community college context.

H. Kenny Nienhusser
University of Connecticut
H. Kenny Nienhusser is an Assistant Professor in the Higher Education & Student Affairs Program in the Neag School of Education and Faculty Director of La Comunidad Intelectual at the University of Connecticut. His research examines the origins of public policies and their implementation environments that affect the postsecondary education access of minoritized youth in the United States.

Ángel de Jesus Gonzalez
San Diego State University
agonzalez2426@sdsu.edu
https://orcid.org/0000-0001-6361-7399
Ángel de Jesus Gonzalez is a third-year doctoral candidate in the Community College Leadership Ed.D. program at San Diego State University. Their research examines the conditions, experiences, and outcomes for LGBTQ+ students at community colleges, with a focus on Queer Latinx students and professionals.

Luz Burgos-López
University of Connecticut-Storrs
luz.burgos_lopez@uconn.edu
https://orcid.org/0000-0002-2394-4456
Luz Burgos-López is a second year doctoral student in the Learning, Leadership, and Educational Policy Ph.D. program at the Neag School of Education, University of Connecticut. Her research explores anti-Black ideology in existing research pedagogy on the Latinx students and the role racial classifications in scholarship production and policy implantation within higher education. Her current research project uses critical analysis of the construction of Latinidad as a racial classification to examine the erasure of Blackness and the monolith representation of Latinidad.
SPECIAL ISSUE
Policy Implementation as an Instrument to Achieve Educational Equity in the Community College Context

education policy analysis archives
Volume 29 Number 27  March 8, 2021  ISSN 1068-2341

Readers are free to copy, display, distribute, and adapt this article, as long as the work is attributed to the author(s) and Education Policy Analysis Archives, the changes are identified, and the same license applies to the derivative work. More details of this Creative Commons license are available at https://creativecommons.org/licenses/by-sa/4.0/. EPAA is published by the Mary Lou Fulton Institute and Graduate School of Education at Arizona State University. Articles are indexed in CIRC (Clasificación Integrada de Revistas Científicas, Spain), DIALNET (Spain), Directory of Open Access Journals, EBSCO Education Research Complete, ERIC, Education Full Text (H.W. Wilson), QUALIS A1 (Brazil), SCImago Journal Rank, SCOPUS, SOCOLAR (China).

Please send errata notes to Audrey Amrein-Beardsley at audrey.beardsley@asu.edu

Join EPAA’s Facebook community at https://www.facebook.com/EPAAEAPE and Twitter feed @epaa_aape.
Unpacking Implementation Capacity and Contexts for Degree Reclamation Strategies

education policy analysis archives
editorial board

Lead Editor: Audrey Amrein-Beardsley (Arizona State University)
Editor Consultant: Gustavo E. Fischman (Arizona State University)

Associate Editors: Melanie Bertrand, David Carlson, Lauren Harris, Danah Henriksen, Eugene Judson, Mirka Koro-Ljungberg, Daniel Liou, Scott Marley, Keon McGuire, Molly Ott, Iveta Silova (Arizona State University)

Madelaine Adelman Arizona State University
Cristina Alfaro San Diego State University
Gary Anderson New York University
Michael W. Apple University of Wisconsin, Madison
Jeff Bale University of Toronto, Canada
Aaron Benavot SUNY Albany
David C. Berliner Arizona State University
Henry Braun Boston College
Casey Cobb University of Connecticut
Arnold Danzig San Jose State University
Linda Darling-Hammond Stanford University
Elizabeth H. DeBray University of Georgia
David E. DeMatthews University of Texas at Austin
Chad d’Entremont Rennie Center for Education Research & Policy
John Diamond University of Wisconsin, Madison
Matthew Di Carlo Albert Shanker Institute
Sherman Dorn Arizona State University
Michael J. Dumas University of California, Berkeley
Kathy Escamilla University of Colorado, Boulder
Yariv Feniger Ben-Gurion University of the Negev
Melissa Lynn Freeman Adams State College
Rachael Gabriel University of Connecticut
Amy Garrett Dikkers University of North Carolina, Wilmington
Gene V Glass Arizona State University
Ronald Glass University of California, Santa Cruz
Jacob P. K. Gross University of Louisville
Eric M. Haas WestEd
Julian Vasquez Heiliger California State University, Sacramento
Kimberly Kappler Hewitt University of North Carolina Greensboro
Aimee Howley Ohio University
Steve Klee University of Maryland
Jackyung Lee SUNY Buffalo
Jessica Nina Lester Indiana University
Amanda E. Lewis University of Illinois, Chicago
Chad R. Lochmiller Indiana University
Christopher Lubinski Indiana University
Sarah Lubinski Indiana University
William J. Mathis University of Colorado, Boulder
Michele S. Moses University of Colorado, Boulder
Julianne Moss Deakin University, Australia
Sharon Nichols University of Texas, San Antonio
Eric Parsons University of Missouri-Columbia
Amanda U. Potterton University of Kentucky
Susan L. Robertson Bristol University
Gloria M. Rodriguez University of California, Davis
R. Anthony Rolle University of Houston
A. G. Rud Washington State University
Patricia Sánchez University of Texas, San Antonio
Janelle Scott University of California, Berkeley
Jack Schneider University of Massachusetts Lowell
Noah Sobe Loyola University
Nelly P. Stromquist University of Maryland
Benjamin Superfine University of Illinois, Chicago
Adai Tefera Virginia Commonwealth University
A. Chris Torres Michigan State University
Tina Trujillo University of California, Berkeley
Federico R. Waitoller University of Illinois, Chicago
Larisa Warhol University of Connecticut
John Weathers University of Colorado, Colorado Springs
Kevin Welner University of Colorado, Boulder
Terrence G. Wiley Center for Applied Linguistics
John Willinsky Stanford University
Jennifer R. Wolgemuth University of South Florida
Kyo Yasumitsu Claremont Graduate University
Miri Yemini Tel Aviv University, Israel

archivos analíticos de políticas educativas
consejo editorial

Editor Consultor: Gustavo E. Fischman (Arizona State University)
Coordinador (Español/Latinoamérica): Ignacio Barrenechea (Universidad de San Andrés), Ezequiel Gomez Caride (Universidad de San Andrés/ Pontificia Universidad Católica Argentina)
Editor Coordinador (Español/Norteamérica): Armando Alcántara Santuario (Universidad Nacional Autónoma de México)
Editor Coordinador (Español/España): Antonio Luzon (Universidad de Granada)

Editores Associados: Jason Beech (Monash University), Angelica Buendia, (Metropolitan Autonomous University), Gabriela de la Cruz Flores (Universidad Nacional Autónoma de México), Alejandra Falabella (Universidad Alberto Hurtado, Chile), Carmucha Gómez-Bueno (Universidad de Granada), Carolina Guzmán-Valenzuela (Universidade de Chile), Cesar Lorenzo Rodríguez Uribe (Universidad Marista de Guadalajara), Antonia Lozano-Diaz (University of Almería), Sergio Gerardo Málaga Villegas (Instituto de Investigación y Desarrollo Educativo, Universidad Autónoma de Baja California (IIDE-UABC)), María Teresa Martín Palomo (University of Almería), María Fernández Mellizo-Soto (University Complutense de Madrid), Tiburcio Moreno (Autonomous Metropolitan University-Cuajimalpa Unit), José Luis Ramírez, (University of Sonora), Axel Rivas (University of San Andrés), María Veronica Santelices (Pontificia Universidad Católica de Chile)

Claudio Almonacid
Universidad Metropolitana de Ciencias de la Educación, Chile

Miguel Ángel Arias Ortega
Universidad Autónoma de la Ciudad de México

Xavier Besalú Costa
Universitat de Girona, España

Xavier Bonal Sarro
Universidad Autónoma de Barcelona, España

Antonio Bolívar Boitia
Universidad de Granada, España

José Joaquín Brunner
Universidad Diego Portales, Chile

Damián Canales Sánchez
Instituto Nacional para la Evaluación de la Educación, México

Gabriela de la Cruz Flores
Universidad Nacional Autónoma de México

Marco Antonio Delgado Fuentes
Universidad Iberoamericana, México

Inés Dussel, DIE-CINVESTAV, México

Pedro Flores Crespo
Universidad Iberoamericana, México

Ana María García de Fanelli
Centro de Estudios de Estado y Sociedad (CEDES) CONICET, Argentina

Juan Carlos González Faraco
Universidad de Huelva, España

Maria Clemente Linuesa
Universidad de Salamanca, España

Jaume Martínez Bonafé
Universitat de València, España

Alejandro Márquez Jiménez
Instituto de Investigaciones sobre la Universidad y la Educación, UNAM, México

José Gregorio Rodríguez
Universidad Nacional de Colombia, Colombia

Mario Rueda Beltrán
Instituto de Investigaciones sobre la Universidad y la Educación, UNAM, México

José Luis San Fabián Maroto
Universidad de Oviedo, España

Mónica Pini
Universidad Nacional de San Martín, Argentina

Omar Orlando Pulido Chaves
Instituto para la Investigación Educativa y el Desarrollo Pedagógico (IDEP)

José Ignacio Rivas Flores
Universidad de Málaga, España

Miriam Rodríguez Vargas
Universidad Autónoma de Tamaulipas, México

José Gregorio Rodríguez
Universidad Nacional de Colombia, Colombia

Yengny Marisol Silva Laya
Universidad Iberoamericana, México

Ernesto Treviño Ronzón
Universidad Veracruzana, México

Ernesto Treviño Villarreal
Universidad Diego Portales Santiago, Chile

Antoni Verger Planells
Universidad Autónoma de Barcelona, España

Catalina Wainerman
Universidad de San Andrés, Argentina

Juan Carlos Yáñez Velazco
Universidad de Colima, México

arquivos analíticos de políticas educativas
Unpacking Implementation Capacity and Contexts for Degree Reclamation Strategies

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gustavo E. Fischman</td>
<td>Arizona State University</td>
<td></td>
</tr>
<tr>
<td>Marcia Pletsch, Sandra Regina Sales</td>
<td>Universidade Federal Rural do Rio de Janeiro</td>
<td></td>
</tr>
<tr>
<td>Andréa Barbosa Gouveia</td>
<td>Universidade Federal do Paraná</td>
<td></td>
</tr>
<tr>
<td>Kaizo Iwakami Beltrao</td>
<td>(EBAPE/FGV), Shezi Calheira de Freitas</td>
<td></td>
</tr>
<tr>
<td>Maria Margarida Machado</td>
<td>(Federal University of Goiás / Universidade Federal de Goiás), Gilberto José Miranda</td>
<td></td>
</tr>
<tr>
<td>Almerindo Afonso</td>
<td>Universidade do Minho</td>
<td>Portugal</td>
</tr>
<tr>
<td>Alexandre Fernandez Vaz</td>
<td>Universidade Federal de Santa</td>
<td></td>
</tr>
<tr>
<td>José Augusto Pacheco</td>
<td>Universidade do Minho, Portugal</td>
<td></td>
</tr>
<tr>
<td>Rosanna Maria Barros Sá</td>
<td>Universidade do Algarve</td>
<td>Portugal</td>
</tr>
<tr>
<td>Regina Célia Linhares Hostins</td>
<td>Universidade do Vale do Itajá,</td>
<td>Brasil</td>
</tr>
<tr>
<td>Jane Paiva</td>
<td>Universidade do Estado do Rio de Janeiro, Brasil</td>
<td></td>
</tr>
<tr>
<td>Maria Helena Bonilla</td>
<td>Universidade Federal da Bahia</td>
<td>Brasil</td>
</tr>
<tr>
<td>Alfredo Macedo Gomes</td>
<td>Universidade Federal de Pernambuco</td>
<td>Brasil</td>
</tr>
<tr>
<td>Paulo Alberto Santos Vieira</td>
<td>Universidade do Estado de Mato</td>
<td>Brasil</td>
</tr>
<tr>
<td>Rosa Maria Bueno Fischer</td>
<td>Universidade Federal do Rio Grande do Sul</td>
<td>Brasil</td>
</tr>
<tr>
<td>Jefferson Mainardes</td>
<td>Universidade Estadual de Ponta</td>
<td>Brasil</td>
</tr>
<tr>
<td>Fabiany de Cássia Tavares Silva</td>
<td>Universidade Federal do Mato</td>
<td>Grosso, Brasil</td>
</tr>
<tr>
<td>Alice Casimiro Lopes</td>
<td>Universidade do Estado do Rio de Janeiro</td>
<td>Brasil</td>
</tr>
<tr>
<td>Jader Janer Moreira Lopes</td>
<td>Universidade Federal de Juiz de Fora</td>
<td>Brasil</td>
</tr>
<tr>
<td>António Teodoró</td>
<td>Universidade Lusófona</td>
<td>Portugal</td>
</tr>
<tr>
<td>Suzana Feldens Schwertner</td>
<td>Centro Universitário Univesates</td>
<td>Brasil</td>
</tr>
<tr>
<td>Debora Nunes</td>
<td>Universidade Federal do Rio Grande do Norte</td>
<td>Brasil</td>
</tr>
<tr>
<td>Lilian do Valle</td>
<td>Universidade do Estado do Rio de Janeiro</td>
<td>Brasil</td>
</tr>
<tr>
<td>Geovana Mendonça Lunardi Mendes</td>
<td>Universidade do Estado de Santa Catarina</td>
<td></td>
</tr>
<tr>
<td>Alda Junqueira Marin</td>
<td>Pontifícia Universidade Católica de São Paulo</td>
<td></td>
</tr>
<tr>
<td>Alfredo Veiga-Neto</td>
<td>Universidade Federal do Rio Grande do Sul</td>
<td>Brasil</td>
</tr>
<tr>
<td>Flávia Miller Naethe Motta</td>
<td>Universidade Federal Rural do Rio de Janeiro</td>
<td>Brasil</td>
</tr>
<tr>
<td>Dalila Andrade Oliveira</td>
<td>Universidade Federal de Minas</td>
<td>Gerais, Brasil</td>
</tr>
</tbody>
</table>