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ROLE STRAIN AND ROLE SATISFACTION OF ACADEMIC PROGRAM COORDINATORS AT A SOUTHERN RESEARCH-INTENSIVE DOCTORAL GRANTING UNIVERSITY

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DISSERTATION

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A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Education in the
College of Education
at the University of Kentucky

By
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Lexington, Kentucky
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Lexington, Kentucky
2022

ABSTRACT OF DISSERTATION

ROLE STRAIN AND ROLE SATISFACTION OF ACADEMIC PROGRAM
COORDINATORS AT A SOUTHERN RESEARCH-INTENSIVE DOCTORAL
GRANTING UNIVERSITY

The research dissertation examined, through a self-administered survey, the activities academic program coordinators perform at a US research-intensive university and whether they suffered from role strain during the 2020-2021 academic year. The dissertation also explored what academic program coordinators found satisfying in performing their roles. The research contributes to the field of higher education by providing a better understanding of the roles and activities academic program coordinators perform, along with factors that cause role strain among program coordinators. A total of 47 program coordinators responded to the survey representing a 20% response rate.

The research found that program coordinators perform both program-level administrative and service activities. The most important activities program coordinators performed during the 2020-2021 academic year were: ensuring the effective functioning of the program and mentoring students. Program coordinators experience role strain caused by role overload, COVID-19, and the limited rewards for program coordination work. Finally, program coordinators find satisfaction by seeing students complete their studies and grow academically. Intrinsic factors such as growing professionally and developing new knowledge and skills satisfied program coordinators in performing their roles.

Limitations of the study are presented as are recommendations for institutions and individuals. Implications for future research are also discussed.

KEYWORDS: Program Coordinators, Role Strain, Role Satisfaction, Role Challenges.

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04/14/2022

Date

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First and foremost, I would like to thank Allah, Almighty Creator of the universe, the heavens, the earths and everything in between who says in the Holy Qur'an: "If you appreciate my favor on you, I will give you more of it". In Arabic it states:

بِسْمِ اللَّـهِ الرَّحْمَـٰنِ الرَّحِيمِ {وَإِذْ تَأَذَّنَ رَبُّكُمْ لَئِنْ شَكَرْتُمْ لَأَزِيدَنَّكُمْ} صدَقَ الله العَظِيم

I thank Allah, Almighty for giving me the strength, knowledge, determination, enthusiasm, and the opportunity to complete my doctoral studies and research dissertation successfully. Without the blessings of Allah, the Almighty this achievement would not have been possible.

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LIST OF ABBREVIATIONS

AAUP: American Association of University Professors

COACHE: Collaborative on Academic Careers in Higher Education Survey

COVID-19: Coronavirus

DOE: Distribution of Effort

HEIs: Higher Education Institutions

LSD: Least Significant Difference

NCES: National Center for Education Statistics

NTTF: None Tenure Track Faculty

ORT: Organizational Role Theory

STEM: Science, Technology, Engineering, and Mathematics

UCEA: University Council for Educational Administration

US: United States of America

CHAPTER 1. INTRODUCTION

The three main activities that account for higher education faculty work, time, and effort are: research, teaching, and service (Farrell and Flowers, 2018; Cassuto, 2016; Mamiseishvili et al. 2016; COACHE, 2014; Green, 2008; Schuster and Finkelstein, 2006; Hardré and Cox 2009; Ward, 2003; Boyer, 1990; Wilson, 1942, Caplow and McGee, 1958; Riesman and Jencks, 1968; Clark 1983). Faculty also frequently undertake as part of their higher education careers different administrative roles, and are expected to be able to constantly balance different workloads, role expectations, and responsibilities.

Balancing research, teaching, service, and administration is demanding and becomes even more challenging when dealing with various external and internal forces such as continuous declines in state funding, higher education institutions (HEIs) corporatization shifts, global consequences, and the increase in non-tenure and adjunct faculty (Moser, 2014; Fink, 2008; Lerner, 2008; Sallee and Tierney, 2011). These different internal and external forces along with the increase in workloads and expectations could result in role strain and tension for faculty in general and academic program coordinators in particular (Kruse, 2020; Gigliotti, 2021; Armstrong and Woloshyn, 2017; Harris et al. 2004; Carrol and Wolverton, 2004).

1.1 Background:

In addition to performing research, teaching, and service, a number of higher education faculty are frequently entrusted to undertake different administrative appointments during their careers and professional trajectory. Academic program

coordination represents one of the most common faculty administrative appointments in higher education (Ingle, et al. 2020). Arguably, the number of program coordinators increased as a result of the diverse academic programs offered by HEIs. Academic programs offered by US public R1 institutions have evolved in response to changes in discipline, market, and students' needs (Mintz, 2019). For example, Ohio State University and Pennsylvania State University currently offer over 520 and 575 academic programs, respectively (Ohio State University, 2020; Pennsylvania State University, n.d.). Similarly, Indiana University-Bloomington and University of Wisconsin–Madison both offer more than 450 undergraduate and graduate programs (Indiana University, n.d.; University of Wisconsin–Madison, n.d.). The University of Michigan and the University of Florida (two public R1 institutions) both offer over 300 and 275 degree programs, respectively (University of Michigan, n.d.; University of Florida, n.d.). Remarkably, the University of Tennessee in Knoxville, a similar R1 classified public institution, has over 900 academic programs. On average, these public R1 institutions combined have around 500 programs. All these academic programs are offered in different forms: full-time, part-time, asynchronous, and hybrid; and all require academic coordination by faculty.

Faculty appointed as academic program coordinators represent an important asset to their institution as they contribute towards generating enrollment income and improving student learning for the programs they coordinate (Golnabi et al. 2021). They also address and answer various program-related questions and communicate with various groups including program alumni, prospective students, and parents. Moreover, they facilitate and coordinate with fellow faculty members on meeting program level accreditation requirements (regional and specialized), which are tied with federal funding, and

institutional and program reputation. Furthermore, faculty appointed as program coordinators will be required to work closely with fellow faculty, and possibly other stakeholders on proposing and designing new educational programs, specializations, and tracks. They are also expected to work with stakeholders and implement program curriculum changes and improvements to existing offerings. Academic program coordinators are also expected to contribute to the ongoing R1 institution efforts to secure state performance funding especially since student enrollment, retention, and graduation rates are among the state performance funding indicators that a number of public institutions in certain US states need to meet to secure state support. Faculty appointed as program coordinators are also responsible for ensuring the smooth operation of the program(s).

Program coordinators are required to constantly perform different service and administrative roles as part of their program coordination appointments and need to shift between both regularly. Program coordinators also need to balance various academic, service, and administration expectations while having limited time (Ingle, et al. 2020). Program coordinators are also required to manage and operate in times of higher education uncertainty, marketization shifts, and decline in state funding (Moser, 2014; Fink, 2008; Lerner, 2008; Sallee and Tierney, 2011). These different challenges[1] could cause role strain for academic program coordinators. Boardman and Bozeman (2007, p. 431) explain the extent to which environmental changes impact the role strain of higher education faculty by arguing that when HEIs rapidly change, "the lives of the actors within them typically

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[1] I refer to challenges in this dissertation as internal or external forces and/or obstacles that may cause role strain for academic program coordinators.

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become more complex and sometimes more difficult". In such challenging situations, faculty, especially tenured and tenure-track faculty, will "take on additional roles". These additional roles faculty assume could result in individual stress, burnout, and role strain (Boardman and Bozeman, 2007, p. 431).

Not only are program coordinators required to manage programs during times of rapid higher education change and uncertainty, but they are also expected to perform research, teaching, and service. These wide and sometimes conflicting work and role expectations could lead to academic program coordinators' role strain (Hargreaves, 1972).

Another factor that could lead to program coordinators' role strain is the lack of rewards, compensation, and support for professional development. Ingle, et al. (2020) studied 93 program coordinators of leadership preparation programs in University Council for Educational Administration (UCEA)-member HEIs and found that there is a lack of structural support and compensation for the additional responsibilities academic program coordinators performed. Program coordinators, especially those with less work experience and inadequate professional development and preparation to perform their program coordination roles, may experience role strain.

1.2 Problem statement:

Faculty appointed as program coordinators perform program related administrative and service activities in addition to carrying out research, teaching, and service loads. These different responsibilities could sometimes result in role overload and conflict if they are not appropriately balanced and managed. Program coordination could entail role strain in the absence of a balance between research, teaching, service, and program-level

administrative aspects. Another factor that may lead to role strain among academic program coordinators could be tied to rewards and compensation. Most program coordinators at R1 institutions are rewarded for their research, teaching, and service work listed as part of their distribution of effort (DOE) or typically known at some HEIs as faculty effort. Such rewards, in the form of compensation, are awarded as part of their annual merit salary increases. However, in times of budget cuts and higher education uncertainty facing many public R1 institutions, academic units may be unable to offer faculty additional compensation for their program-level administration and service roles, such as course reductions or summer stipend pay. Thus, some program coordinators may feel additional strain performing their program coordination roles. Moreover, unclear and continually changing role expectations, due to internal and external forces, may also cause strains in the roles academic program coordinators perform, thereby potentially impacting their role and job satisfaction. Kalleberg (1977, p. 126) refers to job satisfaction as "an overall effective orientation on the part of individuals towards work roles which they are presently occupying". There is empirical evidence suggesting that faculty dissatisfaction with their work increases the likelihood that they might leave higher education (Flaherty, 2020a: 2020b; Zivin et al., 2020; Mansourian, et al. 2019; Sabagh et al. 2018; Johnson, et al., 2017; Rockquemore, 2012; Tümkaya, 2006; Brazeau, 2003; Keita and Hurrell, 1994). Gappa et al., (2007) argue that productive and satisfied faculty are vital for today's universities. Mamiseishvili and Rosser (2011, p. 100) believe that "higher education institutions need to rethink their reward structures, value systems, and expectations placed on faculty work in order to keep productive faculty satisfied with their jobs, and provide them with [a] workplace that is more appealing and attractive". Empirical evidence also

suggests that increased faculty satisfaction has an impact on performance improvement and the reduction of turnover among productive faculty members (Hagedorn 2000; Mamiseishvili and Rosser 2011; Rosser 2004; Smart 1990).

1.3 Purpose of the study and research questions:

The purpose of the study is to identify potential internal and external factors and forces that may lead or contribute to role strain among academic program coordinators at a US southern R1 institution. The study also aims to highlight what satisfied academic program coordinators in performing their program coordination roles and activities during the 2020-2021 academic year.

1.4 Research questions:

The study aimed to answer the following questions:

Q1. What are the key roles and responsibilities that academic program coordinators perform at the southern R1 institution?

Q2. To what extent do program coordinators at the R1 institution experience role strain?

Q3. To what extent are program coordinators at the R1 institution satisfied with their program coordination roles?

Q4. What are the main challenges that program coordinators at the R1 institution faced as part of their program coordination roles during the 2020-2021 academic year?

1.5 Research significance:

Exploring role strain and its impact on academic program coordinators' satisfaction with their roles may provide substantial benefits to faculty and their employing institution, especially since increased job satisfaction leads to greater performance and a reduction in turnover among productive faculty (Hagedorn 2000; Mamiseishvili and Rosser 2011; Rosser 2004; Smart 1990). Faculty satisfied with their roles results in higher levels of faculty engagement, appreciation, and loyalty towards their institutions (Hagedorn 2000). Understanding the degree to which strains exist among academic program coordinators and whether they are satisfied with their roles would provide valuable insight to the research university's senior administration and College Deans as they navigate during times of rapid change facing US higher education. The changing environmental conditions and the large number of academic programs offered by R1 institutions, numbering in the hundreds, place greater significance on studying role strain and role satisfaction of faculty assigned to coordinate academic programs.

1.6 Research gap:

The higher education literature has not placed enough emphasis on academic program coordination and the different administrative and service activities program coordinators perform as part of their roles despite the significant increase in the numbers of academic programs offered by US research universities (Ingle, et al. 2020; Golnabi et al. 2021). I also have not come across any research that focused exclusively on role strain and role satisfaction among academic program coordinators in a research university. Nor was I able (from my review of the literature) to find strategies and recommendations that

may help program coordinators balance different work obligations and responsibilities. Few studies looked at role conflict and role strain in higher education (e.g. Colbeck, 1998; Faia, 1981; Fulton and Trow, 1974). These are relatively old and may be superseded by recent changes and impacts facing higher education. Moreover, these studies looked into strain for two faculty roles, research and teaching, while not examining whether faculty experience any role strain when they undertake service or administration work related to academic program coordination (Peeke, 1980; Boardman and Bozeman, 2007; Hammond, 2012).

In an effort to address the limited research on academic program coordinators' role strain and tension, I relied on the more robust department chair literature to better understand the factors that might contribute to our understanding of the potential role strain and tension facing academic program coordinators as well as any aspect of academic program coordinators' job responsibilities that goes unsaid in the literature. In my study, I also aimed to identify the different program-level administrative and service activities academic program coordinators typically perform at an R1 institution and what aspects satisfy program coordinators the most during their program coordination appointment.

1.7 Variables, constructs, and hypotheses:

Role satisfaction was selected to be the dependent variable. Kalleberg (1977, p. 126) argues for the importance of studying individual work and role satisfaction. Faculty satisfaction with their work has a positive impact on performance improvement and the reduction of turnover among productive faculty (Hagedorn 2000; Mamiseishvili and Rosser 2011; Rosser 2004; Smart 1990). The literature also highlights that role

expectations, rewards, gender, and faculty rank are among the factors that may influence and contribute towards role strain and role satisfaction among higher education faculty (Boardman and Bozeman, 2007; Goode, 1960; Peeke, 1980; Hargreaves, 1972). It is also expected that the number of years of experience that program coordinators have and the number of students enrolled in the program may also have an impact on program coordinators' role strain. In light of this pervious research, gender, race/ethnicity, faculty rank, tenure status, annual contract length, years of program coordination experience, number of programs coordinated, number of students in the program, and DOE percent committed to program coordination have been selected to act as independent variables for the study. Role strain, role satisfaction and role challenges have been selected to act as constructs. (Each of these variables and constructs will be discussed in greater detail below). The following hypotheses are tested as part of the dissertation:

Hypothesis 1: There is a statistically significant differences at a significance level less than 0.05 between the mean scores of role strain based on the following variables: gender, race/ethnicity, faculty rank, tenure status, length of contract, program coordination years of experience, number of programs coordinated, number of students in the program, and DOE percent committed to program coordination.

Hypothesis 2: There is a statistically significant differences at a significance level less than 0.05 between the mean scores of role satisfaction based on the following variables: gender, race/ethnicity, faculty rank, tenure status, length of contract, program coordination years of experience, number of programs coordinated, number of students in the program, and DOE percent committed to program coordination.

Hypothesis 3: There is a statistically significant differences at a significance level less than 0.05 between the mean scores of challenges to program coordination efforts based on the following variables: gender, race/ethnicity, faculty rank, tenure status, length of contract, program coordination years of experience, number of programs coordinated, number of students in the program, and DOE percent committed to program coordination.

1.8 Theoretical framework:

Role strain models draw from Organizational Role Theory (ORT) which was initially developed in the 1960s by Katz and Kahn and others. The theory provides insights into the processes that affect the emotional and physical state of individuals in the workplace, thus affecting their working behaviors in organizations. ORT stresses that workers in organizations prefer to operate and work in accordance with clear role expectations and requirements. Whenever employees feel that their roles are not clear and they are unable to know how they will be evaluated or rewarded for their roles, they will experience role dissatisfaction and role strain (Katz and Khan, 1966; Wickham and Parker, 2006). ORT has four main branches or basic assumptions: role-taking, role-consensus, role–compliance, and role-conflict (Parker and Wickham, 2005).

The fourth assumption in ORT, role conflict, normally occurs when an individual finds that their expectation of two or more of their occupational roles are incompatible, thereby feeling a sense of role overload, role dissatisfaction and role strain (Goode, 1960; Somech and Oplatka, 2014).

Role strain typically occurs when an individual experiences role overload and role conflict (Goode, 1960). Role strain was initially developed by Merton (1957a, 1957b), Good (1960)

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and Kahn et al. (1964) studied the conflicts and difficulty individuals experience fulfilling different work and family-related roles (Goode, 1960). Role strain is an approach in social psychology and sociology that views most interpersonal activity to be the acting-out of socially constructed and understood roles (Miller, 2016). Feldman (2011, p. 793) defines role strain as a "condition whereby an individual experiences unease or difficulty in fulfilling role expectations". Goode (1960) similarly believes that role strain occurs as a result of workers struggling to perform specific roles and experiencing difficulty fulfilling different role obligations. Role strain may also occur "when an individual believes that the expectations and demands of two or more of his or her occupational roles are incompatible" (Somech and Oplatka, 2014, p. 64). Role strain could also result when employees struggle to choose and adjust among different organizational obligations and expectations (Rowlands, 2010). These struggles and difficulties could be attributed to a number of sources, one of which is the individual lack of competencies and skills performing the role (Hargreaves, 1972). Hibbler (2020, p. 26) states that "role strain can result from one or a combination of the following: role conflict (the expectations of one role are incompatible with the expectations of another); role overload (lack of time to fulfill role obligations); and role ambiguity (lack of information or clarity about expectations to meet role obligations)". Role strain can also result when an individual cannot meet the competing requirements of a particular role or lacks the resources to meet these demands (Howson, 2015).

Boardman and Bozeman (2007) use the term "role strain" interchangeably with "role stress" and "role conflict," as these concepts reference similar theoretical and practical models. Hardy (1978) believes that role conflict and role strain are to a great extent related.

Role strain theory is also a set of concepts that is connected to role overload and role conflict (Cranford, 2013; Nye, 1976).

I also believe that role strain is closely related to role conflict and role overload since individuals may experience difficulty fulfilling different "role obligations" (Goode, 1960, p. 483). Role strain is related to and may potentially overlap with role conflict, role contagion, and role overload as clearly defined by Home (1998):

- Role conflict: is simultaneous and incompatible demands from two or more sources.
- Role contagion: a preoccupation with one role while performing another.
- Role overload: insufficient time to meet all role demands.

Role strain could be managed by individuals and its negative consequences reduced. Goode (1960, p. 484) believes that role strain could be reduced when the individual "determines whether or when he [she] will enter or leave a role relationship".

1.9 Chapter 1 summary:

Chapter one highlights the potential role strain for academic program coordinators at R1 institutions and why it is becoming increasingly important to study faculty appointed as academic program coordinators in US higher education and the different roles and activities they perform. The chapter argues that the growth of program coordination appointments in US higher education and the wide and diverse academic programs offered by R1 institutions, along with the limited literature on academic program coordinators, necessitates the reasons for studying this unique faculty population. By understanding the

factors that may contribute to program coordinators' role strain, and setting the appropriate policies and strategies to overcome any potential strains program coordinators may face in the future, R1 institutions will be in a stronger position to maintain the work satisfaction of their academic program coordinators and potentially retain them from leaving the position of program coordinator, their current institutions, and perhaps higher education in general.

CHAPTER 2. LITERATURE REVIEW

To understand what might count as role strains potentially impacting the role satisfaction of academic program coordinators at a public southern R1 institution, I will first look holistically into the external influences that have led HEIs to increasingly operate and function as corporate entities, thereby impacting faculty research, teaching, service and administrative roles. Second, I will review the department chair literature on role strain in order to better understand potential factors that may cause role strain among academic program coordinators. I will highlight the reasons and rationale for selecting department chairs to represent the role strain program coordinators may experience as part of their program-level service and administrative roles. Third, I will examine how role strain could positively or negatively impact program coordinators' role satisfaction. Fourth, I will point out what might motivate faculty to engage in service functions along with faculty perception towards service and administrative roles. I will argue that intrinsic factors remain a main source motivating and encouraging faculty to undertake service and administrative roles. Finally, I will show how faculty tenure status, gender, and race relate to higher education service and administration work.

2.1 Increasing corporatization of universities:

Universities in the US have undergone many changes over the years (Thelin, 2019; Thelin et al. 1988; Jencks and Riesman, 1977). In their widely cited book *The Academic Revolution,* Jencks and Riesman (1968:1977) articulate these changes arguing that the rise of US universities since the 1970s onwards has been consequential to higher education and society. "College instructors have become less and less preoccupied with educating young

people, more and more preoccupied with educating one another by doing scholarly research which advances their disciplines" (Jencks and Riesman, 1977, p. 13). Katz (2006) believes that the post-war era resulted in a shift of many academics' loyalty from institutions to commitments to national disciplines and research. The shift has also impacted the research priorities of young faculty who now 'devalue' teaching (Light et al. 1973, p. 8).

In addition to the focus on research, the rise of universities has led to a wide variety of institutions serving students with different cultural, religious, gender, social, and ethnic backgrounds. Although the increase in the number of institutions has led to mass education accessibility, it has also caused social stratification in the system (Thelin, 2019; Jencks and Riesman, 1977). Undergraduate instruction has also shifted as a result of the rise of universities; undergraduate teaching has become a 'terminal enterprise' for graduate schools (Jencks and Riesman, 1977, p. 13). Standards employed for graduate schools consequently bear the basic characteristics for most undergraduate colleges (Heath, 1971; Jencks and Riesman 1968). Ward (1969, p. 74) explains the influence of professional schools and standards on the higher education system: the "influence of secular, professional standards, spreading out and accelerating for a century, has brought into being the present system of higher education, crowned and ruled by the professional schools and served by the mobile scholars and scientists engaged in impressing each other and reproducing their kind". The final consequence of the rise of universities is the redistribution of power between administration and faculty especially on issues related to curriculum and faculty hiring (Jencks and Riesman, 1968:1977; Thelin et al. 1988; Lewis and Altbach, 1996). Nowadays, key strategic decisions are mostly made by university administrators and senior leaders; however, curriculum and what should be taught to

students still remains largely the responsibility of faculty (Jencks and Riesman, 1968:1977).

The rise of universities that occurred after the World War II is also known as the "golden age" of higher education marked by the academic professionalization of college and university faculty (Thelin, 2019; Gerber, 2014; Keller 1983). Research productivity and teaching in graduate programs became the preferred work for faculty and research publication became the most important criterion for rewards and promotion in most HEIs (Williams, 2009).

Subsequent to the rise of the universities, a shift towards corporatization among public institutions due to ongoing decline in state appropriations is another force impacting faculty work and the functioning of HEIs (Sallee and Tierney, 2011; Fink, 2008; Weerts and Ronca, 2006; Gerber, 2014; Moser, 2014; Abbas and McLean, 2001). Corporatization refers to the "process and resulting outcomes of the ascendance of business interests, values and models in the university system" (Brownless, 2015, p. 787-788). For example, according to Slaughter (1993, p. 251) during the financial crisis in the 1980s "university managers - presidents, chancellors, provosts, [and] deans - responded to fiscal constraints in the same ways that corporate CEOs responded to declines in productivity and foreign competition: they began reorganizing internally, concentrating resources on the divisions they expected to be most profitable".

In addition to corporatization shifts, unforeseen external and global consequences also impact faculty work. For instance, the global COVID-19 health pandemic disrupted higher education in many parts of the world including the US in 2020 (Flaherty; 2020a; Roache,

et al. 2020; Roache, et al. 2020; Nietzel, 2020; Hartocollis, 2020; Coyne, et al. 2020; Mickey, et al., 2020). Mickey, et al., (2020) argue that "COVID-19 has impacted faculty members and their careers, with rushed transitions to online teaching, disruptions to nearly all research activities and added service and mentoring work". Although the pandemic will become a historic event in US higher education, it is clear that HEIs and faculty work are impacted by unforeseen challenges and external forces with short-term as well as long-term consequences. Among the forces that could soon impact HEIs and faculty work is the expected decrease in undergraduate enrollment levels.

The 2008-2009 economic recession impacted the economic welfare of US families causing many to postpone childbirth (Selingo, 2018). This postponement is expected to have a long-term consequence and impact on postsecondary undergraduate enrollment levels (Barshay, 2020; Geiger, 2010). The National Center for Education Statistics (NCES) projects that between 2018-2029 undergraduate enrollment in degree-granting postsecondary institutions is expected to increase by only 2%. This is a significant decrease in enrollment rates of degree-granting postsecondary institutions as opposed to the time period from 2000-2010. During 2000-2010, enrollment growth rate was 37% (NCES, 2019b). US colleges and universities will soon be required to react to expected enrollment and revenue declines.

Indeed, the different external and internal forces and the increased corporatization business and strategic decisions made by senior leadership could impact the work priorities, expectations, and demands of department chairs and program coordinators working at public R1 institutions.

2.2 Department chairs and academic program coordinators:

There is not a lot of higher education literature on academic program coordination service and administrative roles despite the growth in academic programs offered by R1 institutions. One of the most common faculty administrative appointments that is widely covered in the US higher education literature is department chairs. The department chair literature could help highlight potential factors that may lead to role strain and tension among academic program coordinators working at public research-intensive universities.

Department chairs are one of the most common examples of university faculty administrative appointments in US higher education (Wald and Golding, 2020; Weaver, et al. 2019; Jenkins, 2016; Smith, 2005). Institutions refer to departmental-level leadership positions using different titles such as head of department, department head, and department chair (Bryman and Lilley, 2009; Smith, 2005:2002; Moses and Roe, 1990).

Chairs offer significant contributions to their academic departments and institutions as they help foster and implement higher education progress and change (Freeman et al., 2020; Gardner and Ward, 2018; Bryman, 2007; Lucas and Associates, 2000). Chairs are vital for the success and advancement of academic departments (Bryman, 2007). They continually act as a mediator and communicator between department faculty and university administration (Armstrong and Woloshyn, 2017; Higgerson and Joyce 2007). Chairs also guide, manage and influence work and educational policies and practices as well as faculty career trajectories, curriculum changes, and departmental budgets (Su et al. 2015; Taggart 2015). The chair position covers both service and administrative work and is considered middle management in HEIs (Armstrong and Woloshyn, 2017; Berdrow 2010; Higgerson

and Joyce 2007). Caron (2019) argues that a "department chair, whether at a public or private institution, must serve multiple masters which include, senior academic administrators, departmental faculty, staff, students, parents, alumni, community partners, and donors" (p. 1). Indeed, department chairs "set the tone and culture in their departments" (Cipriano, 2011, p. 19). They act as agents of culture change since their administrative role ties closely with the three main faculty activities: research, teaching, and service (Lucas and Associates, 2000). Department chairs are also crucial to faculty productivity and retention in academic departments (Gardner and Ward, 2018). It is not surprising that the quality and well-being of academic departments are attributed to the chair's effectiveness (Normore and Brooks, 2014; Wolverton et al. 2015). Perhaps because of the importance of department chairs to universities and colleges, their role is highly complex, resulting sometimes in conflict between two systems of management and academics (Wald and Golding, 2020; Caron, 2019; Bolden et al. 2012). Department chairs always find themselves in need of balancing a dual identity between administrative and faculty expectations (Armstrong and Woloshyn, 2017; Gonaim, 2016; Benoit and Graham, 2005; Carrol and Wolverton, 2004; Barge and Musambira, 1992; Bredrow, 2010). According to Gardner and Ward (2018) "the department chair [position] is arguably one of the most difficult roles in a college or university. [Department chairs] straddle the often-precarious line between colleague and supervisor, between faculty and administrator, and between the present and the future" (p. 59). As a result of these difficult and conflicting roles, department chairs are sometimes torn between meeting the expectations and interest of the department faculty they represent and those to whom they report (Williams 2007; Bess and Dee 2008; Gmelch, 2004; Carrol and Wolverton, 2004). Department chairs are also

expected to shift constantly from service to administration and vice versa as part of their roles (Tucker, 1992). Lees (2006) argues that department chairs are expected to perform different administrative and service roles. Among the roles department chairs are expected to perform are "developing innovative programs, seeking new revenue streams and external funding sources, and playing more active roles in recruiting students and designing programs to retain them" (pp. 17–18).

Chairs are also responsible for faculty growth and department productivity (Lees, 2006). DeLander (2017) argues that department chairs need as part of their roles to establish strategic plans to support departmental decision-making processes, recruit competent faculty, develop junior faculty and establish professional relationships. Tucker (1992) identified 41 roles that department chairs typically perform.

In addition to performing constantly different service and administrative roles and responsibilities, department chairs need to manage various work and life obligations which could be demanding and stressful (Armstrong and Woloshyn, 2017; Harris et al. 2004). Freeman et al. (2020, p. 897) argue that "chairs [often] find themselves in liminality; somewhere on a continuum between faculty and administration without feeling a home in either".

Another problem associated with the department chair position is that the role is ambiguous and not clearly articulated (Freeman et al., 2020). Gonaim (2016) defines the role of department chairs as a "greyish area, ambiguous, and complex" position (p. 281). Freeman et al. (2020) interviewed 15 department chairs at US research universities and found that the chair position is unattractive to many faculty members because of its ambiguity and

limited professional development. The role also lacks specific standards for success (Benoit and Graham 2005; Gordon et al. 1991). The ambiguity and complexity of the role escalate in times of higher education uncertainty and rapid change (Major, 2020; Weaver, et al. 2019). Wald and Golding (2020, p. 2121) argue that chairing academic departments is challenging and some faculty members may be 'reluctant' to assume the responsibilities tied with the chair position. Another reason why a lot of faculty do not "opt" for the chair position is due to the dual-nature - academic and administrative - of the role (Freeman et al., 2020, p. 896). Department chairs also struggle to balance their work roles and responsibilities (Kruse, 2020).

Department chair roles can be conflicting, challenging, and may lead to role tension and role strain. Carrol and Wolverton (2004) argue that department chairs' tensions as middle managers are exacerbated further by trying to maintain their own research, teaching, and service agendas. Tensions could also occur when department chairs try to manage the position itself along with other departmental groups. Armstrong and Woloshyn (2017, p. 97) studied department chairs in Canadian universities by interviewing 10 department chairs at a medium-sized Canadian university. The authors found that department chairs experienced role tension as a result of trying to manage 'dual roles'. "Department chairs need to manage changing role expectations along with trying to balance faculty voices and opinions, especially at times when faculty are not able to reach a collective agreement on different academic and departmental matters" (Armstrong and Woloshyn, 2017, p. 97). Another study by Kruse (2020) demonstrates the complexity of the role. Kruse (2020) interviewed 45 department chairs and found that department chair roles are challenging and chairs continue to operate in an overwhelming political landscape with limited

institutional authority. The author argues that the challenges facing department chairs and their need to balance different work aspects could lead to tension (Kruse, 2020). Gigliotti (2021) surveyed 172 department chairs to study the impact and challenges COVID-19 had on chairs. The study highlighted the fact that further professional development opportunities are needed to assist chairs in dealing with higher education times of uncertainty and similar health crises.

Higher education marketization and corporatization shifts is another challenge that could impact how department chairs react, behave, and handle changing work expectations (Armstrong and Woloshyn, 2017; Hinson-Hasty, 2019; Normore and Brooks, 2014; De Boer et al. 2010). Corporatization shifts could result in tension and challenges for department chairs, especially when they try to balance different expectations and acts (Gmelch, 2004). One reason for such tension is due to the fact that most department chairs are not prepared well to assume their positions, receiving substantially less professional development than other senior administrators (Brown, 2001; Gordon et al., 1991). Gardner and Ward (2018) argue for the importance of investing in professional development of chairs in order to allow them to effectively perform their role and drive institutional change and progress. The lack of professional development is also evident among newly appointed chairs. Newly appointed department chairs are sometimes not fully informed about their role expectations, the complexity of being a chair, the time demands for the role, and the potential negative impact the role will have on their professional and personal relationships (Aziz et al., 2005; Czech & Forward, 2010). In addition, faculty undertaking administrative department-level roles may not find their efforts and work financially and professionally rewarding (Buller, 2012, 2015; Gmelch et al., 2017). According to Gardner and Ward

(2018, p. 59) "chairs are critical to fostering change and developing faculty, yet many lack training, support, and compensation".

In addition to the impact of corporatization shifts, lack of professional development, and the lack of compensation for department chairs, few department chair studies looked into diversity, equity, and inclusion. Freeman et al. (2019) illustrate that US universities department chairs and college deans are largely male dominated, with fewer numbers of faculty of color and women faculty in such leadership positions. The authors argue for the need for greater diversity, equity, and inclusion efforts to be implemented in US higher education. Similarly, Hinson-Hasty (2019) argues that department chairs need to foster sustainability, and further support the inclusion of diversity in academic departments. In a study, Bystydzienski et al. (2017) state that despite the implementation of a number of policies and procedures to increase women representation in leadership positions such as department chairs, these policies and procedures have not had a large impact especially in science, technology, engineering, and mathematics (STEM) fields.

In light of the above literature, it seems quite plausible that limited professional development and the lack of adequate preparation for faculty to undertake the chair position could lead to role strain among department chairs, especially newly appointed ones. Moreover, the continuous changes in role expectation and work demands, due to corporatization shifts in higher education, could cause role strain and tension for department chairs. Also, the lack of rewards and compensation for department chairs could be another factor resulting in role strain, thereby impacting their performance and work satisfaction. It is not surprising that many department chairs view their departmental

administrative role as service towards their units, rather than an inspiration for upward career mobility (Cipriano, 2011; Buller, 2006; Gemlch and Miskin, 1995). Gmelch et al. (2017) discovered in a study that the majority of chairs (95%) are not interested in progressing into other leadership positions beyond the chair role.

The roles, activities, and challenges facing department chairs are very similar to what program coordinators may experience as part of their program-level administrative and service roles. For example, managing program quality, developing program curriculum in addition to serving various groups and stakeholders inside and outside academe are similar administrative and service responsibilities commonly experienced by both department chairs and program coordinators[2]. A main difference between a program coordinator and a department chair could be the scope of the work. Department chairs will most likely need to deal with academic and staff personnel more than what an academic program coordinator will experience as part of his/her role. Chairs will also most likely be required to act as a mediator and communicator between department faculty and university administration, something that a program coordinator will perhaps do but at a smaller scale. Moreover, like department chairs, program coordinators are required to constantly perform different service and administrative roles and are expected to shift between both instantly. Program coordinators are also expected to balance various academic, service, and administration expectations while having limited time (Ingle, et al. 2020). They are also required (like department chairs) to manage and operate in times of higher education uncertainty, marketization shifts, and decline in state funding. Program coordinators also need, in

[2] These points were mentioned by an interviewee during the pilot study. A pilot study was conducted to review and develop the survey instrument.

addition to fulfilling their program coordination activities, to perform research, teaching, and service. These wide and sometimes conflicting work and role expectations could lead to program coordinators' role strain (Hargreaves, 1972).

Another factor that could lead to program coordinators' role strain are rewards and compensation. Most program coordinators at R1 institutions are rewarded for their research, teaching, and service work in the form of their DOE. Such rewards, in the form of compensation, are awarded as part of their annual merit salary increases. However, in times of budget cuts and higher education uncertainty facing many public R1 institutions, academic units may be unable to offer faculty entrusted to coordinate academic program with additional compensation, such as course reduction or summer stipend pay. Like department chairs, a number of program coordinators may view their academic program coordination efforts as a service towards their department and/or college rather than an opportunity for promotion and upward mobility.

In addition to the factors that may lead to role strain among program coordinators, the decline in the number of faculty appointed on the tenure-track system, which now represents around 30% of US higher education faculty, could be another factor impacting program coordinators' workload and allocation of program coordination activities (Kezar and Sam, 2010; Kezar et al. 2006; Gerber, 2014; Kezar and Maxey, 2015; Anderson, 2002). Academic units have to rely on a shrinking population of tenure and tenure-track faculty to carry-out the different academic program coordination activities, placing greater work expectations on them.

The lack of institutional reward for service, and the continuous changes in role expectations

due to internal and external factors, can all result in different levels of role strain among academic program coordinators at research universities. Peeke (1980) believes that faculty role strain could potentially occur in higher education as a result of the lack of goal planning, discussion over priorities, appraisal, rewards, and development policies. As explained earlier, when HEIs rapidly change, "the lives of the actors within them typically become more complex and sometimes more difficult"; faculty, especially tenure and tenure-track faculty, will "take on additional roles". These additional roles faculty assume could result in individual stress, burnout, and role strain (Boardman and Bozeman, 2007, p. 431).

2.3 Role strain and role satisfaction:

It is conceivable that role strain could positively impact academic program coordinators and contribute towards their role satisfaction. Peeke (1980) noted that role strain is a key feature in many HEIs calling for the need to look into the positive attributes of role strain among faculty and how they may impact faculty role satisfaction. Sieber (1974) found that role strain (role accumulation) does not always negatively impact employees. Role strains could offer positive benefits to individuals, thereby contributing towards their satisfaction. The author classified the positive outcomes of role accumulation into four types: "(1) role privileges, (2) overall status security, (3) resources for status enhancement and role performance, and (4) enrichment of the personality and ego gratification" (Sieber, 1974, p. 569). Also, Grove (1972) and Marks (1977) showed that role strain and the expansion of role opportunities could be beneficial to the individual.

Role satisfaction, as explained earlier, is crucial for retaining productive faculty and improving faculty performance (Flaherty, 2020a: 2020b; Zivin et al., 2020; Mansourian, et al. 2019; Sabagh et al. 2018; Johnson, et al., 2017; Rockquemore, 2012; Tümkaya, 2006; Brazeau, 2003; Keita and Hurrell, 1994; Gappa et al., 2007; Hagedorn 2000; Mamiseishvili and Rosser 2011; Rosser 2004; Smart 1990).

Faculty satisfaction with service and administration roles received wide attention in the higher education literature. Reviewing these studies is important to understand what might satisfy and/or motivate academic program coordinators to perform their roles. The studies were also useful in building and developing the survey instrument. It is worth mentioning that when I refer hereafter to service, it also applies to administration as most department chairs and arguably academic program coordinators will tend to view their administrative work as a service function towards their institution rather than an opportunity for upward career mobility (Gmelch et al. 2017; Cipriano, 2011; Buller, 2006; Gemlch and Miskin, 1995). Moreover, in most colleges and academic departments both positions are appointments for specific timeframe. Most faculty will resume their research/teaching roles once their service appointment ends.

Evans (1999) studied faculty involvement and participation in faculty senate and concluded that faculty who participated in faculty senate showed an increase in morale, creative problem-solving for difficult challenges, increase in buy-in and a better work attitude as compared to faculty that did not participate in faculty senate. Service work also impacts faculty loyalty, commitment to their institution and profession (Maehr and Braskamp 1986). In addition to the benefits faculty members may experience from engaging in service, service activities could also impact faculty satisfaction. Knefelkamp (1990)

believes a source of faculty satisfaction to engage in service is to give something back to their professional (and civic) communities including guiding early career faculty. Another study by Fox (1992) points out that research faculty who are able to align and integrate their research and teaching with their service responsibilities experience greater work productivity and satisfaction. Other faculty satisfaction research (not specifically focused on service activities) shows that faculty satisfaction is affected by institutional factors such as leadership, relationships with colleagues, students, and administrators, and perceptions of climate and culture of the university (e.g., Eagan, Jaeger, and Grantham, 2015; Hagedorn, 2000; Moors et al. 2014).

In addition to faculty service satisfaction, the decision to engage in service has been examined in a number of studies. A national faculty survey looked at the different service activities faculty perform and how faculty perceive service. The survey found that faculty view service to the discipline and to the university as being the most "vital" form of service (COACHE, 2014). Hurber (2001) believes that personal reasons could motivate faculty to service work, arguing that "faculty members who can extend their intellectual curiosity into their service activities can unify their professional lives, bringing together their teaching, research, and service in a synergistic way, to the benefit of each aspect of their work and the benefit of those with whom they work" (Hurber, 2001, p. 3). Harris (2008) believes that personal fulfillment and job responsibility may act as an 'intrinsic' motivator for faculty to perform service. Professional development and faculty ability to strengthen their connections with industry may also motivate faculty to perform service (Pfeifer, 2016). O'Meara (2003) argues that intrinsic motivation can sometimes overcome the lack of external sources when it comes to faculty motivation to engage in service.

Academic program coordinators may also be intrinsically satisfied and motivated to engage in program coordination work in order to enhance their knowledge and skills beyond their teaching and research interests. Personal fulfillment and program coordinators' ability to show commitment towards their institutions may also encourage university faculty to coordinate academic programs.

2.4 Tenure, gender/race, and role strain:

The role of faculty tenure and gender in service and departmental-leadership positions received substantial attention in the higher education literature. Both tenure status and gender could impact faculty role strain. There is empirical evidence suggesting that the amount of administrative and service load and time performed by faculty could be attributed to tenure status, gender, and race. Faculty service work significantly increases once faculty attain tenure (Neumann and Terosky, 2007; Holland, 1999; Jaeger and Thorton, 2006). Other studies show that service and serving on committees are carried out more by women as opposed to male faculty (Antonio, 2002; Antonio, et al., 2000; Baez, 2000; O'Meara, 2002; Vogelgesang et al., 2005; O'Meara, 2016; Wood et al. 2015; Farrell and Flowers, 2018; Adams, 2002; Laden and Hagedorn, 2000; Turner, 2002; Tireney and Bensimon, 1996). In a qualitative study, women faculty indicated that male faculty did not show interest and commitment to take on departmental-level service viewing the service work as 'housekeeping' and less significant (O'Meara, 2016). Other scholars found similar service concerns among women faculty (e.g. Bird et al., 2004; Acker and Armenti, 2004; Park, 1996). Pyke (2011) argues that there is service workload inequity between men and women faculty.

Service is time consuming and the extensive amount of time performing service and serving on committees can negatively impact women faculty rewards and promotion (Porter, 2007; Pyke, 2011). Throm (2018, p. 30) agrees that service is time consuming and argues that "all service involves unrecognized and unremunerated tacit knowledge and emotional labor". Miller and Lee (2016) believe that faculty service requires an investment in time and energy. Several studies looked at faculty service time and how it compares with teaching and research (Bellas and Toutkoushian, 1999; Blackburn and Lawrence, 1995; Fairweather,1996; Finkelstein et., 1999; Singell and Lillydahl, 1996); others looked at the time spent on service and measuring its impact on tenure and promotion (O' Meara, 2015).

The time invested in performing service may also impact negatively minority faculty. Minority faculty are more likely to participate in service due to institutional demands, or for holding different higher education beliefs and expectations (Baez, 2000; Tierney and Bensimon, 1996; Tierney and Rhoads, 1993; Antonio, 2002; Baez, 1999; Gonzalez and Padilla, 2008). Minority faculty and faculty of color could experience greater service roles that may impact their tenure and promotion potential.

In addition to the time needed to perform service by women and minority faculty, a number of studies looked at faculty race and student mentoring as a service to undergraduate and graduate students (Brissett, 2020; Freeman and Kochan, 2019; Chan, 2018; Lunsford, et al. 2017). Mentoring in higher education is vital for student success and retention. Lunsford, et al. (2017) argue that "mentoring improves students' transition to university, by either helping them to attend university or once they are there, to be retained through to degree completion" (p. 318). Student mentoring that faculty in general and faculty of color

in particular perform could be challenging and demanding. Brissett (2020) examined student mentoring in predominantly White US colleges and universities. The author found that faculty of color viewed mentoring students of color as a social responsibility. The study also found that mentoring students of color is demanding and may impact negatively faculty of color rewards and promotion. The author also found that student mentoring lacks financial rewards. Turner (2002) in a study argued that women faculty of color are sometimes overwhelmed with service responsibilities and student mentorship roles. Freeman and Kochan (2019) studied student mentoring across gender and race in higher education. The authors found that students had a strong mentorship relationship with women faculty that shared similar race/ethnicity backgrounds with them.

In light of the above literature, it seems that women faculty and faculty of color do experience administrative and service challenges as part of their roles. It also plausible that women faculty and faculty of color may experience program coordination role strain due to several reasons. Program coordination is time consuming and requires a great deal of emotional labor. Also, program coordination work could be perceived and valued differently among faculty. Furthermore, program coordination involves several service functions including mentoring students. Mentoring students on programs could impact the research and publication of women faculty and faculty of color. There is also a possibility that there could be an institutional stigma on who should perform program coordination at research institutions. Moreover, women faculty and faculty of color may feel that they must engage in program coordination activities due to institutional demands and higher education work expectations. Women faculty and faculty of color may also feel that they must coordinate different program activities including student mentoring because they hold

strong beliefs on the importance of serving students.

2.5 Chapter 2 summary:

Chapter two covered the main literature on the rise of the US university and faculty role strain and how role strain can occur as a result of various internal and external influences and changes in US higher education. The chapter also illustrated through the review of the department chair literature the changes in service and administrative role for department chairs. The chapter argued that the shift towards corporatization among public R1 institutions along with various external forces caused additional workload, tension and strain for department chairs. The chapter also presented the shared similarities between academic program coordinators and department chairs along with arguing the rational for utilizing the department chair literature as a basis for better understanding what might cause role strain among faculty appointed as academic program coordinators at the selected R1 institution. The chapter also highlighted other factors causing potential role strain for department chairs and academic program coordinators such as the limited rewards, lack of professional development opportunities, and gender/race inequality. The chapter concluded by highlighting the factors that may satisfy academic program coordinators to engage in program-level service and administrative work, along with showing how intrinsic motivation and satisfaction may contribute in minimizing the potential role strain program coordinators may experience as part of their roles.

CHAPTER 3. METHODOLOGY

The research followed an exploratory approach design. Exploratory research is useful for understanding a topic, studying behaviors, attitudes, and opinions among people (Nardi, 2018).

The research utilized a self-administered survey (Appendix 1) that included closed-ended and open-ended items. The survey was predominantly quantitative with three qualitative open-ended questions. The survey questions and items aimed to explore and gain better insight into faculty experiences in performing academic program coordination roles, and whether program coordinators experienced potential role strain performing their roles during the 2020-2021 academic year.

Self-administered surveys are useful in many ways. According to Nardi (2018):

"self-administered questionnaires [surveys] are best designed for (a) measuring variables with numerous values or response categories that are too much to read to respondents in an interview or on the telephone, (b) investigating attitudes and opinions that are not usually observable, (c) describe characteristics of a large population (like demographics), and (d) studying behaviors that may be more stigmatizing or difficult for people to tell someone else face to face" (p. 73).

The dissertation study falls under the investigating attitudes and opinions category.

The survey I used was electronic, thereby allowing me to reach out to the target audience in an efficient and inexpensive manner (Jones, et al. 2013). Online and electronic surveys

are gaining popularity in various research areas. Dillman (2000) argues that electronic surveys have prompt returns, lower item nonresponse, and more complete participants' answers to open-ended questions that other forms of surveys. Electronic surveys also benefit from the inclusion of visual elements that may enhance the appearance and appeal of surveys (Mahon-Haft and Dillman, 2010; Jones, et al. 2013). Jones et al. (2013) argue that surveys are useful in allowing a large population to be assessed with ease. Surveys are also useful when collecting information from a designated research sample (Ponto, 2015; Check and Schutt, 2012). One of the problems with electronic surveys is the issue of whether the sample population has access to computers and internet connection (Nardi, 2018). It is worth mentioning that higher education faculty likely will not experience such problems when it comes to accessing electronic surveys. Also, the current health pandemic has forced faculty to work remotely, thereby making the electronic self-administered survey an appropriate method for data collection.

3.1 The self-administered survey:

The self-administered survey included a cover page that articulated the aim and purpose of the research, along with highlighting to all participants that participation in the survey and research dissertation is voluntary. The self-administered survey cover page also assured participants of the survey's anonymity and that no identifiable information would be collected. In addition to highlighting the privacy and voluntary nature of the survey, the cover page served as a consent form for all participating program coordinators at the R1 institution. Once program coordinators gave their consent to participant in the survey, the main survey sections, items, and questions would appear on the following page.

The survey consisted of six main sections. Section one included questions on demographics such as gender, race, rank, tenure status, and participants' years of experience coordinating academic programs. The main demographic questions in section one of the survey served as independent variables for the study. Section one also included a list of typical program coordination activities. Participants were asked to mark the type of program-level service and administrative activities they performed during the 2020-2021 academic year. Examples of program coordination activities included student mentoring, program scheduling/planning, student recruitment, and program improvements. Participants also had the option to list any other activities they performed that were not included on the list.

Section two included closed-ended questions on key role strain aspects identified from the literature including role expectations, role overload, limited rewards, and external and internal forces. For instance, participants were asked to rate using a Likert scale the level in which their college/department provided them with clear job expectations for their roles. Also, participants were asked to rate the extent to which they felt their program coordination efforts were fairly rewarded.

Section three included a number of intrinsic and extrinsic satisfaction factors drawn from the literature. Participants were asked to rate different satisfaction factors according to their personal experience, opinions, and views. For example, participants were asked to rate using a Likert scale the extent of professional growth as a result of undertaking program coordination roles in their college/departments. Also, participants were asked to rate the extent to which they found working with diverse people and stakeholders satisfying.

The fourth section of the survey aimed to provide participants with an opportunity to rank

various program coordination activities and expectations in order of importance. These different items of activities were drawn from the literature. It is worth mentioning that I did not come across any research that categorized program coordination activities in order of importance. Moreover, I also did not find any research that classified different program coordination activities into program-level service or administrative activities.

The fifth section on the survey followed-up on intrinsic factors with an aim of better understanding the aspects that satisfied program coordinators the most in performing their program coordination roles and activities during the 2020-2021 academic year. For example, participants were asked to rate using a Likert scale the extent to which they were able to increase their self-efficacy as a result of undertaking program coordination roles. Moreover, participants were asked whether they felt a sense of privilege by undertaking program coordination work.

The final section of the survey provided program coordinators an opportunity to provide open responses to program coordination challenges, additional aspects of satisfaction, and any other comments they wanted to share.

The survey and all relevant sections were organized to be completed in 10-15 minutes.

3.2 Access to program coordinators:

In terms of gaining access to the most recent and up-to-date contact information of faculty appointed as academic program coordinators at the southern R1 institution, I contacted the Institutional Effectiveness Office at the southern R1 university and requested the contact list of program coordinators emails. The office has an up-to-date roster with the

emails of program coordinators in all colleges and departments. In summer 2021, I received the emails of academic program coordinators from the Institutional Effectiveness Office. It is worth mentioning that the R1 institution hires a number of staff members to perform different program coordination roles. I asked the Institutional Effectiveness Office to remove all staff members from the list of emails and include only faculty members that carried out program coordination activities during the 2020-2021 academic year.

3.3 Data collection:

I used Qualtrics in building the self-administered survey and for collecting the research data. I enabled the Qualtrics mobile friendly function allowing program coordinators to complete the survey using smart phones and tablets. The survey was compatible with most internet browsers. All responses were reported electronically on Qualtrics and extracted into SPSS and Excel for further analysis. As a graduate student, I was provided free access to Qualtrics software and all responses were stored electronically in a secure database.

For cleaning the data, I removed all missing data and incomplete responses. I also included in the survey a filter question to ensure that all those who complete the survey did perform program coordination work during the 2020-2021 academic year. The data collection started on August 23rd, 2021 and ended on September 12, 2021. Two reminders were sent electronically via Qualtrics the first on August 30th and the second on September 7th, 2021. Prior to sending out the two reminders, the total number of academic program coordinators that participated in completing the survey was 42. The two reminders generated an additional five participants. I decided a third reminder was not necessary as I would likely

not be able to generate any additional survey participation.

3.4 Data analysis:

To answer my research questions, I examined the differences between respondents' role strain, role satisfaction, and role challenges by gender, race/ethnicity, faculty rank, tenure status, length of contract, program coordination years of experience, number of programs coordinated, number of students in the program, and DOE percent committed to program coordination. To do so, I compared responses between individuals across two groups (in the case of gender) or two or more groups (for instance in the case of tenure status). To conduct these analyses, I used the following tests:

- T-tests for comparisons across two groups

- One Way ANOVA for comparisons across two or more groups

- Least Significant Difference (LSD) test for showing the direction of statistically significant differences between unrelated groups

Independent Samples T-Test was used to compare the means of two independent groups such as gender, and to determine whether there was statistical evidence that the associated population means were significantly different (Everitt and Skrondal, 2010; Levine, 2014).

One Way ANOVA, also known as One-Factor ANOVA or analysis of variance was used to compare the means of two or more independent groups (unrelated groups) such as faculty rank and tenure status, and to determine whether there was statistical evidence that the associated population means were significantly different (Everitt and Skrondal, 2010).

LSD was used after running One Way ANOVA and determining that there was a statistically significant differences between two or more independent groups. LSD was only used if the ANOVA results were significant (Williams and Abdi, 2010). LSD was also useful in showing the direction of statistically significant differences between unrelated groups.

In addition to the statistical tools used, and in order to measure program coordinators' role strain, role satisfaction, and role challenges, I used Likert scale items on my survey. All Likert items were four-point scales, ranging from "strongly disagree" to "strongly agree". These four levels were recommended during the pilot phase by a number of program coordinators as they showed clarity and simplicity for answer options. All Likert scale item were coded into Qualtrics and in a separate coding sheet as follows: Strongly Disagree (1), Disagree (2), Agree (3), and Strongly Agree (4).

In order to determine the minimum and the maximum of the 4-point Likert scale, the range was calculated. The calculated range helped in determining whether the mean for each Likert scale question trended in a particular direction. To calculate the range, I followed a formula a number of scholars used in their research (Ford, 2021; Pimentel, 2010; Mohammed, 2016; Meijer, 2020).

The formula = (highest value in the Likert scale – lowest value in the Likert scale/highest value of the Likert scale):

Range = highest value - lowest value (4-1 = 3)

Range length: range / number of categories = 3/4 = 0.75

This formula suggest that mean values range can be classified under four main categories:

- 1 to less than 1.75 (Strongly Disagree)

- 1.75 to less than 2.50 (Disagree)

- 2.50 to less than 3.25 (Agree)

- 3.25 to 4 (Strongly Agree)

In addition to determining the mean values for all Likert scale items and identifying the overall trend for the three main research constructs: role strain, role satisfaction, and role challenges, all closed-ended survey questions that included Likert scale items were summarized in tables that included the standard deviation and mean. The standard deviation helped me understand how spread out the data was, while the mean was the average or center point of all collected data.

For all open-ended survey questions, I utilized an analysis technique I learned in one of my graduate classes. The technique involved reading all responses, then, distilling key phrases and words and coding them into an Excel spreadsheet. The coding of key terms and phrases identified by survey participants allowed me to create common categories for all open-ended responses. Once the common categories were identified, I read through all qualitative responses once again and assigned 1 to each category to which I thought was appropriate and clearly summarized the open qualitative responses provided by academic program coordinators. Additional changes or rewording to the categories were made based on participants' open-ended responses, thereby eliminating any epistemological assumptions or subjective conclusions that might have occurred while analyzing the qualitative responses. The assigned numbers under each category were then added together.

I placed formulas into Excel to calculate the percentages of each category. Summary tables for all open-ended questions were prepared using Excel.

3.5 Sample:

The dissertation followed a non-probability purposive sample based on the researcher's own choice (Setia, 2016). This sample involves selecting and studying a particular group that shares similar characteristics (Nardi, 2018). Among the advantages of this sampling strategy is the convenience, affordability, and ease of implementation (Jager, et al. 2017). However, non-probability purposive sampling poses research biases and there are limits for the generalizability of findings and results that could be overcome through the use of probability sampling (Sharma, 2017; Jager, et al. 2017; Ary, et al. 2010). The sample I obtained from the Institutional Effectiveness Office at the southern R1 institution included the email addresses of 228 program coordinators. As stated earlier, the R1 institution hires non-faculty members to perform different program coordination roles and activities. In order to ensure that I receive the most accurate list of faculty performing academic program coordination roles during the 2020-2021 academic year, I asked the Institutional Effectiveness Office to remove all staff and administrators who perform program coordination roles at the R1 institution from the email list and include only those with faculty rank.

3.6 Pilot study:

Prior to administering the survey, I tested and piloted the survey instrument I had developed. The purpose of the pilot was to ensure the accuracy and validity of the survey

and that all survey questions were relevant to the activities and work program coordinators perform. The key changes to the survey based on the pilot study included rewording a number of survey items, rearranging the open-ended questions to be asked at the end of the survey, and providing clearer instructions on how to answer the survey. Moreover, the pilot study helped me ensure that the time for completing the survey by academic program coordinators did not exceed 15 minutes. Further information on the pilot study and the key survey changes that occurred as a result of the pilot study are available in Appendix 2.

3.7 Research ethics:

I obtained IRB approval for my study on July 16th, 2021 after meeting all IRB requirements (Appendix 3).

3.8 Chapter 3 summary:

Chapter three covered the research methodology and approach I utilized for the research dissertation. It also explained the rationale for using an electronic self-administered survey as the means for data collection. The chapter also highlighted the main survey sections, along with the research sample, and how I was able to obtain the most up-to-date contact information of program coordinators at the southern R1 institution during the 2020-2021 academic year. Finally, the chapter highlighted the key changes that occurred on the survey instrument based on the pilot study. All changes helped further improve the survey layout, clarity, questions, and sequence prior to administering the final survey in the beginning of Fall 2021 (23 August - 12 September, 2021).

CHAPTER 4. RESULTS AND FINDINGS

Interesting results emerged from the study. A total of 47 program coordinators participated in the research, representing a 20% response rate from the 228 program coordinators invited to participate in the study. The opportunity to collect closed and open-ended responses from the sample study provided rich insights into the different aspects that led to role strain among program coordinators at the R1 institution along with showing what satisfied program coordinators the most in undertaking program coordination activities and roles during the 2020-2021 academic year. Chapter four will discuss the research constructs and variables. The chapter will also present the key results and findings from the research.

4.1 Research constructs and variables:

The research study included three main research constructs: role strain, role satisfaction, and challenges facing program coordinators in performing their roles. First, role strain could be defined as a "condition whereby an individual experiences unease or difficulty in fulfilling role expectations" (Feldman 2011, p. 793). Goode (1960) believes that role strain occurs as a result of workers struggling to perform specific roles and experiencing difficulty fulfilling different role obligations. Role strain may also occur "when an individual believes that the expectations and demands of two or more of his or her occupational roles are incompatible" (Somech and Oplatka, 2014, p. 64). Role strain could also result when employees struggle to choose and adjust among different organizational obligations and expectations (Rowlands, 2010). Role strain could also occur when workers lack competencies and skills performing the role (Hargreaves, 1972).

Hibbler (2020, p. 26) states that "role strain can result from one or a combination of the following: role conflict (the expectations of one role are incompatible with the expectations of another); role overload (lack of time to fulfill role obligations); and role ambiguity (lack of information or clarity about expectations to meet role obligations)".

The second research construct is faculty role satisfaction. Work satisfaction has a positive impact on performance improvement and the reduction of turnover among productive faculty (Hagedorn 2000; Mamiseishvili and Rosser 2011; Rosser 2004; Smart 1990). Kalleberg (1977, p. 126) refers to job or work satisfaction as "an overall effective orientation on the part of individuals towards work roles which they are presently occupying". There is empirical evidence suggesting that faculty dissatisfaction with their work increases the likelihood that they might leave higher education (Flaherty, 2020a: 2020b; Zivin et al., 2020; Mansourian, et al. 2019; Sabagh et al. 2018; Johnson, et al., 2017; Rockquemore, 2012; Tümkaya, 2006; Brazeau, 2003; Keita and Hurrell, 1994). Gappa et al., (2007) argue that productive and satisfied faculty are vital for today's universities. There is also empirical evidence showing role of personal attributes and intrinsic aspects as sources of faculty satisfaction (Hurber,2001; Harris, 2008; Pfeifer, 2016; O'Meara, 2003).

The third construct is challenges facing program coordinators in performing their roles. Program coordinators are required to manage and operate in times of higher education uncertainty, marketization shifts, and decline in state funding (Moser, 2014; Fink, 2008; Lerner, 2008; Sallee and Tierney, 2011). These different challenges could cause role strain for academic program coordinators. Boardman and Bozeman (2007, p. 431) explain the

extent to which environmental changes impact the role strain of higher education faculty by arguing that when HEIs rapidly change, "the lives of the actors within them typically become more complex and sometimes more difficult". In such challenging situations, faculty, especially tenured and tenure-track faculty, will "take on additional roles". These additional roles faculty assume could result in individual stress, burnout, and role strain (Boardman and Bozeman, 2007, p. 431). Not only are program coordinators required to manage programs during times of rapid higher education change and uncertainty, but they are also expected to perform research, teaching, and service. These wide and sometimes conflicting work and role expectations could lead to role strain (Hargreaves, 1972). Another challenge facing program coordinators is the lack of rewards, compensation, and professional development for program coordination roles and activities (Ingle, et al., 2020). These different challenges could cause role strain among program coordinators.

In addition to the research constructs, the research included a number of variables to explore if program coordinators experienced role strain and challenges as part of their roles during the 2020-2021 academic year. Gender and race/ethnicity were selected as variables since the literature highlighted a number of gender and race implications when it comes to faculty service and administrative roles (Antonio, 2002; Antonio, et al., 2000; Baez, 2000; O'Meara, 2002; Vogelgesang et al., 2005; O'Meara, 2016; Wood et al. 2015; Farrell and Flowers, 2018). Faulty rank and tenure status were also selected as variables due to the fact that tenured faculty are expected to perform more service and administrative roles than non-tenured faculty (Boardman and Bozeman, 2007). Another variable that was included in the study was rewards especially since faculty service and administrative roles and work are not highly recognized and rewarded in US higher education (Porter, 2007; Pyke, 2011;

Throm, 2018).

Indeed, all these variables could be among the factors that may influence and contribute towards role strain and role satisfaction among higher education faculty (Boardman and Bozeman, 2007; Goode, 1960; Peeke, 1980; Hargreaves, 1972). It is also expected that years of experience that program coordinators have and the number of students enrolled in the program may also have an impact on program coordinators' role strain. For instance, program coordinators with less work experience in performing their program coordination roles may not face the same level of strain as those with more years of experience, especially since the level of skills and competencies normally improves with expertise and years of experience. Similarly, program coordinators with low number of students enrolled in the program may have less workload and role obligations than those with larger number of enrolled students in the program they coordinate. Also, the total number of programs each program coordinator coordinates may also have an impact on whether program coordinators experienced role strain and work overload during the 2020-2021 academic year.

4.2 Demographics of participants and general information:

The table below (Table 4.1) shows that 51.1% of the respondents were female, while 46.8% were male. This indicates that there seems to be equal representation of both genders when it comes to carrying out program coordination activities within the R1 institution. The gender sample is largely representative of the total R1 population of academic program coordinators. The total R1 population of academic program coordinators include 47% male and 53% female.

Table 4.1: Gender of participants

Male	Female
46.8%	51.1%

The table below (Table 4.2) shows that the majority of participants 93.62% were White, non-Hispanic, while 6.38% of participants were Black or African American-non Hispanic. The study sample is generally representative of the population with the populations being slightly more racially diverse.

Table 4.2: Race or ethnicity of participants

White, non-Hispanic	93.62%
Black or African American, non-Hispanic	6.38%

The table below (Table 4.3) shows that the majority of program coordinators that participated in the study were either Professors or Associate Professors 38.3% and 44.7% respectively. Both of these two faculty ranks combined represent 83% of the total study sample. It is worth noting that although the literature suggests that most administrative and service appointments in higher education are led by tenured faculty holding Professor and Associate Professor ranks (Boardman and Bozeman, 2007), surprisingly Assistant Professors and Lecturers 12.8% and 4.3% respectively, at the study institution carried out program coordination responsibilities during the 2020-2021 academic year.

The rank of participants is representative of the total R1 population of academic program coordinators, that includes 40% Professors, 46% Associate Professors, 11% Assistant Professors, 2% Senior Lecturers, and 1% Lecturers.

Table 4.3: Rank of participants

Professor	Associate Professor	Assistant Professor	Lecturer
38.3%	44.7%	12.8%	4.3%

The table below (Table 4.4) shows that the majority of program coordinators that participated in the study were tenured faculty 78.7%, while 12.8% of participants were on the tenure track system but not yet tenured. Although the literature suggests that most administrative and service appointments are carried out by tenure and tenure track faculty, it seems that at the R1 institution non-tenure track faculty carry out program coordination activities. The data show that 8.5% of program coordinators that participated in the study were non tenure.

Table 4.4: Tenure status of participants

Tenured	Tenure track but not yet tenured	Non-tenure track
78.7%	12.8%	8.5%

The table below (Table 4.5) shows that 66% of program coordinators are employed on a nine-month contract, while 25.5% are on a twelve-month contract.

Table 4.5: Annual contract length

9 months	11 months	12 months
66%	8.5%	25.5%

The table below (Table 4.6) shows the type of programs that the study sample coordinated during the 2020-2021 academic year. The data show that 42.1% of participants indicated that the level of the programs they coordinated were graduate, while 32.8% identified undergraduate programs as the type they coordinated. Surprisingly, the table shows a focus on graduate certificates; 24.1% of the sample study indicated that the programs they

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coordinated during the 2020-2021 academic year were graduate certificates.

Table 4.6: Type of academic program coordination

Undergraduate program	Graduate program	Undergraduate certificate	Graduate certificate
32.8%	41.1%	5.2%	24.1%

The table below (Table 4.7) shows the total number of programs each program coordinator was responsible for coordinating during the 2020-2021 academic year. About half of the study sample were entrusted to coordinate one program, while 40.4% indicated that they coordinated 2-3 programs. Surprisingly, 8.5% of participants indicated coordinating 4-5 programs during the 2020-2021 academic year.

Table 4.7: Number of programs coordinated by participants

1	2–3	4–5
51.1%	40.4%	8.5%

The table below (Table 4.8) shows the total number of students enrolled on the programs being coordinated by the sample study. The data show that 42.6% of participants had between 1-49 students enrolled on the programs they coordinated, while nearly 47% of participants had between 50-99 and 100-199 combined students enrolled on their coordinated programs. Remarkably, 10.6% of participants indicated that they had between 200-500 students enrolled in the programs they coordinated during the 2020-2021 academic year.

Table 4.8: Number of students in the program

1 – 49 students	50 – 99 students	100 – 199 students	200 – 500 students
42.6%	23.4%	23.4%	10.6%

The table below (Table 4.9) shows the years of experience program coordinators spent in coordinating academic programs. Nearly 60% of participants had between (2-3) and (4-5) years of program coordination experience. The data show that 14.9% of the study sample indicated that they had only 1 year of experience coordinating academic programs.

Table 4.9: Participants' years of experience coordinating academic programs

1 year	2–3 years	4–5 years	More than 5 years	Missing entry
14.9%	29.8%	29.8%	23.4%	2.1%

The table below (Table 4.10) addresses the first research question: what are the key roles and responsibilities that academic program coordinators perform at the southern R1 institution? The table shows the type of program coordination activities performed by the study sample. Nearly 20% of participants indicated that student mentoring and student enrollment are among the two highest combined activities they performed during the 2020-2021 academic year. Program improvement is the third highest chosen category that program coordinators performed during the 2020-2021 academic year with 9.3%, followed by accreditation and program scheduling/planning. Most program coordination activities that program coordinators performed 52% are associated and linked with student wellbeing, support and services, followed by aspects related to program planning and improvements. Another surprising observation is that despite the budget challenges facing many public institutions, 1% of participants indicated that program fundraising has been an activity they were responsible for during the 2020-2021 academic year.

Therefore, in order to address the first research question (what are the key roles and responsibilities that academic program coordinators perform at the southern R1

institution?) it appears that guiding and mentoring students, in addition to managing student enrollment and addressing problems students may have with the program, are among the main activities academic program coordinators at the R1 institution perform as part of their program coordination roles. The other main aspects that program coordinators typically perform are linked with program improvement, scheduling, and planning. Both program improvement and planning will require program coordinators at the R1 institution to deal and work with various internal and external stakeholders.

When looking into the program coordination activities from an administrative and service perspective, it is clear that the majority of activities program coordinators perform are administrative and institutional-level focused, while only a few activities such as student credit transfer equivalency review and approval as well as curriculum committee work can be classified as service-based activities.

Table 4.10: Program coordination activities sorted by activity type[3]

Program coordination activities	Type of activity	%
Student enrollment	Administrative-based activity	9.7
Student mentoring	Service-based activity	9.7
Program improvements	Administrative-based activity	9.3
Accreditation/assessment	Administrative-based activity	8.6
Program scheduling/planning	Administrative-based activity	8.3
Student recruitment	Administrative-based activity	8.3
Addressing student problems/conduct	Administrative-based activity	8.3
Student retention	Administrative-based activity	7.6
Curriculum committee	Service-based activity	7.1
Credit transfer equivalency approval	Service-based activity	7.1
Budget	Administrative-based activity	4.3
Training/supervising instructors	Administrative-based activity	4.0
Interviewing/hiring instructors	Administrative-based activity	3.6
Coordinating the clinical/practical component for students	Administrative-based activity	2.1
Program fundraising	Administrative-based activity	1.0
Marketing	Administrative-based activity	0.2
Addressing faculty problems	Administrative-based activity	0.2
Awards and funding issues	Administrative-based activity	0.2
Addressing departmental commitment to diversity, equity and inclusivity	Administrative-based activity	0.2

The table below (Table 4.11) shows under which category program coordination work is listed on program coordinators' DOE forms during the 2020- 2021 academic year. The data show that 80.9% of participants indicated that program coordination is listed under administration, while 6.4% stated that it is listed under service on their DOE. This is no surprise since the majority of program coordination activities are classified as

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[3] I used the higher education, service, and shared governance literature to determine and classify the different program coordination activities into administrative and service-based. The typical program coordination activities that emerged from the literature and listed on the survey were validated during the pilot study.

administrative as was previously highlighted.

Table 4.11: Program coordination category on DOE

Administration	Service	Administration and Service	Other	Missing entry
80.9%	6.4%	4.3%	6.4%	2.1%

The table below (Table 4.12) shows the percentage of program coordination listed on program coordinators' DoE form. The first table row in italics includes the percentages that all 47 program coordinators identified on their DOE after grouping the percentages into categories, while the second row show the total percent of responses. The data show that 29.3% of participants had between 6-10% percent of program coordination in their DOE, while 24.4% of participants had between 11-15% on their DOE. Only 19.5% of participants had over 20% of program coordinating work listed on their DOE.

Table 4.12: Percent of DOE committed to program coordination

1–5%	*6–10%*	*11–15%*	*16–20%*	*More than 20%*
12.2%	29.3%	24.4%	14.6%	19.5%

The following section will summarize the extent to which program coordinators experienced role strain based on a number of factors during the 2020-2021 academic year. Before determining the overall trend of the level of agreement/disagreement among program coordinators regarding the different factors influencing program coordinators' role strain, it is important to determine the range of the level of agreement/disagreement among the study sample for the different Likert scale items on the survey. To do so, I relied on the work of (Ford, 2021; Pimentel, 2010; Mohammed, 2016; Meijer, 2020) and used the following formula based on the coding system I already identified for all Likert scale

items.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

Range = highest value - lowest value (4-1 = 3)

Range length: range / number of categories = 3/4 = 0.75

Therefore:

Strongly Disagree	Disagree	Agree	Strongly Agree
1 to less than 1.75	1.75 to less than 2.50	2.50 to less than 3.25	3.25 to 4

The main reasons why I decided to use the overall trend for all Likert scale items along with the mean and standard deviation is because these statistical tools are most appropriate in answering the research questions and serve well the dissertation purpose and goals. Moreover, these tools are most appropriate in dealing with the type of data collected. However, if the aim of the study was, for instance, to examine the relationship between role strain and faculty productivity or faculty performance then perhaps regression analysis would have been among the tools that I would have considered in examining the relationship between two or more variables.

4.3 Role strain, role satisfaction and program coordination challenges: answering research questions two, three, and four:

   To address the second research question (to what extent do program coordinators at the R1 institution experience role strain?), the answer trend was used, as shown in tables 4.13 to 4.17. Complete tables are available in Appendix 4.

The table below (Table 4.13) shows the trend and summary statistics for role expectations. It is clear that program coordinators are in agreement that their department/college had clear job expectations and description(s) for them and that they were aware of what was expected from them as a program coordinator during the 2020-2021 academic year. I can also state that program coordinators were in agreement that their program coordination role expectations have been clearly articulated to them by the academic program leadership in their college/department and unclear role expectations do not seem to be causing role strain among program coordinators at the R1 institution.

Table 4.13: Trends and Summary Statistics for Items Measuring Role Expectations

Role expectations	Answer (Trend)	Mean (SD)
	Agree	2.77 (0.77)
My department/college has clear job expectations and description(s) for a program coordinator(s)	Agree	2.64 (0.84)
I am aware of what it is expected from me as a program coordinator	Agree	2.93 (0.86)
The expectations for my work as a program coordinator have been clearly articulated to me by the academic program leadership in my college/department	Agree	2.74 (0.90)
I have the opportunity to attend professional development in order to carry out my responsibilities as a program coordinator	Agree	2.74 (1.18)

The table below (Table 4.14) shows the trend and summary statistics for role overload. It is clear that program coordinators are in agreement that they were able to balance their program coordination workload with other teaching and research expectations during the 2020-2021 academic year. However, the table shows that program coordinators did not have enough time to complete their program coordination responsibilities during the academic year, indeed this may hint at potential role strain among program coordinators at the R1 institution. Another observation is that program coordinators disagreed that program coordination is distributed equally among faculty in their department.

Table 4.14: Trends and Summary Statistics for Items Measuring Role Overload

Role overload	Answer (trend)	Mean (SD)
	Disagree	2.23 (0.70)
I am able to balance my program coordination workload with other teaching and research expectations	Agree	2.51 (0.83)
I have enough time to complete my program coordination responsibilities during the academic year	Disagree	2.45 (0.82)
I do not need to spend extensive time outside normal weekly working hours to complete the program coordination responsibilities	Disagree	2.20 (0.83)
Program coordination is distributed equally among faculty in our department	Disagree	1.77 (0.91)

The table below (Table 4.15) shows the trend and summary statistics for academic program leadership and faculty colleagues. It is clear that program coordinators are in agreement that the academic program leadership and fellow colleagues view their program coordination work as vital for their departments and for serving current and prospective students during the 2020-2021 academic year. They are also in agreement that they receive support and timely responses from their fellow faculty colleagues on program related issues. Thus, it appears that academic program leadership and faculty colleagues are not a source causing role strain among program coordinators at the R1 institution.

Table 4.15: Trends and Summary Statistics for Items Measuring Academic Program Leadership and Faculty Colleagues

Academic program leadership and faculty colleagues	Answer (trend)	Mean (SD)
	Agree	3.13 (0.46)
The academic program leadership in my college/department views my program coordination role as vital for the department	Strongly Agree	3.40 (0.64)
The academic program leadership in my college/department views my program coordination role as vital for serving current and prospective students	Strongly Agree	3.34 (0.66)
Faculty colleagues view my program coordination role as vital for the department	Agree	3.09 (0.68)
Faculty colleagues view my program coordination role as vital for serving current and prospective students	Agree	3.13 (0.61)
I receive support and timely response from faculty on program related issues	Agree	2.68 (0.75)

The table below (Table 4.16) shows the trend and summary statistics for evaluation and rewards. It is clear that program coordinators are in agreement that they felt that their program coordination work was evaluated and rewarded fairly during the 2020-2021 academic year.

Table 4.16: Trends and Summary Statistics for Items Measuring Evaluation and Rewards

Evaluation and rewards	Answer (trend)	Mean (SD)
	Agree	2.73 (0.81)
I feel that my program coordination work is evaluated fairly	Agree	2.98 (0.84)
I feel that my program coordination work is rewarded fairly	Agree	2.49 (1.01)

The table below (Table 4.17) shows the trend and summary statistics for internal and external forces. It is clear that budget cuts and COVID-19 impacted program coordination work that program coordinators performed during the 2020-2021 academic year. However, increase in student enrollment did not impact the program coordination roles and activities for program coordinators. Thus, budget cuts and COVID-19 appear to cause role strain among academic program coordinators at the R1 institution.

Table 4.17: Trends and Summary Statistics for Items Measuring Internal and External Forces

Internal and external forces	Answer (trend)	Mean (SD)
	Agree	2.77 (0.72)
Budget cuts impacted my role and the activities I perform as a program coordinator	Agree	2.81 (1.01)
Increase in student enrollment impacted my role and activities as a program coordinator	Disagree	2.40 (0.99)
Covid-19 changed my program coordination role expectations and requirements	Agree	3.11 (1.00)

Therefore, in order to answer the second research question (to what extent do program coordinators at the R1 institution experience role strain?), it could be argued that during the 2020-2021 academic year, program coordinators at the R1 institution did experience role strain. The three main causes of role strain that participants identified during the 2020-2021 academic year were work overload, budget cuts and COVID-19.

To address the third research question (to what extent are program coordinators at the R1 institution satisfied with their program coordination roles?), the answer trend was used, as shown in the following tables 4.18 to 4.22:

The table below (Table 4.18) shows the trend and summary statistics for personal attributes. It is clear that personal attributes were a main source of satisfaction for program coordinators in performing their program coordination roles during the 2020-2021 academic year. For example, there was agreement among program coordinators that their commitment towards their department/college and serving students and fellow faculty all acted as sources of personal satisfaction.

Table 4.18: Trends and Summary Statistics for Items Measuring Personal Attributes

Personal attributes	Answer (trend)	Mean (SD)
	Agree	3.04 (0.51)
A personal commitment towards my department/college	Strongly Agree	3.49 (0.50)
Serving the needs of students	Strongly Agree	3.72 (0.45)
Serving my colleagues	Agree	2.93 (0.74)
Increasing the prestige and reputation of this particular program	Agree	3.19 (0.68)
Growing professionally in my department/college	Agree	2.89 (0.98)
Developing new knowledge/competencies	Agree	2.87 (0.87)
Expanding my current capacities/capabilities beyond research and teaching	Agree	2.83 (1.02)
Aligning and integrating my current research and teaching with program coordination work	Disagree	2.45 (0.99)

The table below (Table 4.19) shows the trend and summary statistics for institutional recognition and rewards. It is clear that the work program coordinators performed during the 2020-2021 academic year lacks institutional recognition and rewards as the majority of program coordinators disagreed that program coordination work offered them the opportunity to earn institutional- level recognition for program coordination work as well as receiving reduction in teaching/research loads. The table also shows that gaining institutional recognition and building one's promotion and tenure portfolio barely marked

the agreement level among program coordinators, it is no surprise that the overall mean

of institutional recognition and rewards is 2.36 placing the entire group in disagreement

level among program coordinators.

Table 4.19: Trends and Summary Statistics for Items Measuring Institutional Recognition
and Rewards

Institutional recognition and rewards	Answer (trend)	Mean (SD)
	Disagree	2.36 (0.88)
Gaining institutional recognition	Agree	2.57 (1.02)
Building my promotion and tenure portfolio	Agree	2.52 (1.20)
Having a reduction in teaching/research loads	Disagree	2.37 (1.16)
Earning departmental- level stipend for the program coordination work	Disagree	2.39 (1.25)
Earning institutional- level awards for program coordination work	Disagree	1.96 (1.03)

The table below (Table 4.20) shows the trend and summary statistics for working with

others. It is clear that there is agreement among program coordinators at the R1 institution

that working and interacting with diverse people and different stakeholders was a source

of satisfaction for them during the 2020-2021 academic year.

Table 4.20: Trends and Summary Statistics for Items Measuring Working with Others

Working with others	Answer (trend)	Mean (SD)
	Agree	3.00 (0.63)
Working with diverse people and stakeholders	Agree	3.17 (0.70)
Socially interacting with others	Agree	2.83 (0.76)

The table below (Table 4.21) shows the trend and summary statistics for compliance. It is clear that program coordinators agree that helping the program to remain in compliance with internal and external regulation is a source of satisfaction for them during the 2020-2021 academic year.

Table 4.21: Trends and Summary Statistics for Items Measuring Compliance

Compliance	Answer (trend)	Mean (SD)
	Agree	3.02 (0.95)
Helping the program remain compliant with internal regulations	Agree	2.98 (0.92)
Helping the program remain compliant with external regulations	Agree	3.07 (1.09)

The table below (Table 4.22) shows the trend and summary statistics for benefits. It is clear that program coordinators largely disagreed that they received benefits such as increasing their pay as a result of undertaking program coordination work. They also disagreed that

they increased their job security as a result of performing program coordination work during the 2020-2021 academic year. Program coordinators also disagreed that they were able to increase their autonomy by undertaking program coordination. The autonomy and the freedom offered in higher education has long been a factor encouraging many to join universities and start a career as a faculty member. When it comes to agreement among program coordinators, program coordinators agreed that they increased their professional, academic growth and self-efficacy by undertaking additional program coordination work and activities.

Table 4.22: Trends and Summary Statistics for Items Measuring Benefits

Benefits	Answer (trend)	Mean (SD)
	Disagree	2.37 (0.58)
I felt a sense of privilege by undertaking additional program coordination work and activities	Agree	2.60 (0.86)
I was able to increase my job security by undertaking additional program coordination work and activities	Disagree	2.09 (1.06)
I increased my self- efficacy as part of undertaking additional program coordination work and activities	Agree	2.60 (0.86)
I increased my professional and academic growth by undertaking additional program coordination work and activities	Agree	2.76 (0.93)
I increased my work autonomy by undertaking additional program coordination work and activities	Disagree	2.27 (0.80)
I received departmental/college recognition by undertaking additional program coordination work and activities	Disagree	2.22 (0.82)
I increased my pay by undertaking additional program coordination work and activities	Disagree	2.09 (0.94)

Therefore, it seems that program coordinators are somewhat satisfied with their work despite the limited opportunities to increase their pay and monetary compensation as a result of undertaking program coordination work. Personal and intrinsic factors appear to play an important role in their overall satisfaction with their program coordination roles.

To address the fourth research question (what are the main challenges that program coordinators at the R1 institution faced as part of their program coordination roles during the 2020-2021 academic year?), the answer trend was used, as shown in table 4.23.

The table below (Table 4.23) shows the trend and summary statistics for challenges facing program coordinators during the 2020-2021 academic year. It is clear that all program coordinators are in agreement that they are facing several challenges as part of their roles. These challenges include the increase in internal and external program-level requirements in addition to the decline in the number of full-time faculty capable of carrying out program coordination work at the R1 institution. Another challenge facing program coordinators is the lack of rewards, compensation and recognition.

Table 4.23: Trends and Summary Statistics for Items Measuring Challenges Facing Program Coordinators

Challenges facing program coordinators	Answer (trend)	Mean (SD)
	Agree	2.83 (0.68)
The increase in the number of programs offered by our department/college	Agree	2.53 (1.21)
The increase in internal or/and external program- level requirements (such as assessment/accreditation)	Agree	2.95 (1.07)
The decline in the number of full-time faculty capable of carrying out some of the program coordination roles	Agree	3.07 (0.98)
The lack of institutional level rewards for program coordination work and activities	Agree	3.04 (0.90)
Departmental/institutional stigma among faculty and administrators regarding academic program coordination work (e.g. less important)	Agree	2.56 (1.01)

4.4 Ranking of program coordination activities by their level of importance:

The two tables below (Table 4.24a & Table 4.24b) show the coordination activities that program coordinators viewed as highly important and least important during the 2020-2021 academic year. The data shows that ensuring the effective functioning of the program 46.81% and mentoring students 21.28% were both ranked as the most important activities, while avoiding program restructuring/closure 46.81% and securing additional program funding 17.02% were viewed as the least important activities.

Table 4.24.a: Ranking of program coordination activities by importance

	SACSCOC, specialized accreditation	Compliance with federal/state requirements	Securing additional funding for the program	Support the diversity efforts of the program	Effective functioning of the program
10 Least important	4.26	12.77	17.02	2.13	0.00
9	4.26	23.40	12.77	4.26	0.00
8	8.51	12.77	23.40	6.38	2.13
7	17.02	17.02	12.77	10.64	0.00
6	14.89	0.00	10.64	12.77	4.26
5	10.64	8.51	4.26	23.40	2.13
4	8.51	6.38	6.38	12.77	14.89
3	2.13	4.26	4.26	12.77	14.89
2	10.64	10.64	0.00	10.64	10.64
1 Most important	14.89	0.00	4.26	0.00	46.81
Missing	4.26	4.26	4.26	4.26	4.26
Total (%)	100.00	100.00	100.00	100.00	100.00

Table 4.24.b: Ranking of program coordination activities by importance

	Mentoring students	Growing program student enrollment	Addressing student conduct	Student retention/completion rates	Avoiding program restructuring/ closure
10 Least important	0.00	0.00	10.64	2.13	46.81
9	2.13	8.51	25.53	4.26	10.64
8	6.38	4.26	17.02	6.38	8.51
7	8.51	4.26	8.51	12.77	4.26
6	6.38	23.40	12.77	6.38	4.26
5	8.51	8.51	6.38	17.02	6.38
4	2.13	4.26	10.64	19.15	10.64
3	12.77	21.28	4.26	14.89	4.26
2	27.66	14.89	0.00	10.64	0.00
1 Most important	21.28	6.38	0.00	2.13	0.00
Missing	4.26	4.26	4.26	4.26	4.26
Total (%)	100.00	100.00	100.00	100.00	100.00

4.5 Qualitative Analysis: A different perspective

The quantitative closed ended questions revealed interesting findings, summarizing collectively the views of program coordinators on role strain, role satisfaction, and the various challenges program coordinators faced during the 2020-2021 academic year. When examining closely the research qualitative open-ended responses, we can see both supporting and somewhat contradicting views from what was collectively gathered from the closed-ended survey items.

4.5.1 Faculty rank and tenure status:

The quantitative analysis revealed that the majority of program coordinators were tenured faculty 78.7%, and about 21% of participants were either on the tenure track or were not on a tenure track. The literature suggests that most administrative and service appointments may impact tenure track and non-tenured faculty promotion and pay prospects. The qualitative open-ended responses from a number of participants in the study clearly highlight this issue and the impact of being a non-tenure track on pay and mental health. As one program coordinator states "I would never recommend a non-tenured faculty member take on a DUS role at [the R1 institution]. I would recommend some sort of opportunity for pay equity for admin work -- as a lecturer title series employee I make significantly less than the lowest paid tenure earning faculty member in my college, in essence I'm "cheap" for the admin job …. my mental health has suffered dramatically in this role during the pandemic .... I will not renew my three-year commitment in the role - and it can't come soon enough - though I worry about the repercussions I will face when I step down and I worry about my job security at the university post-admin role". Another program coordinator also held similar concerns about how other tenured faculty viewed

their work along with the limited autonomy they have for managing the program by stating "I am a program director in a non-tenurable line in my college. As such, I am always on a renewable contract - I serve at the pleasure of the Dean (and in reality, the Associate Dean). As such, it is difficult to have any autonomy about what I'd like to do/see with the program - e.g. I may have ideas about curriculum changes but unless the Dean/Assoc Dean like those, I can't move them forward. In a college where lecturer title series faculty are continually reminded of their "status" (e.g. ongoing debate and discussion from the tenured faculty around our role and whether we should be able to vote/sit on committees) while also being asked to lead a program is really hard".

4.5.2 Rewards and compensation:

The quantitative data show that 66% of program coordinators are employed on a nine-month contract and that program coordinators may perceive that their work and efforts are not adequately rewarded. The qualitative open-ended responses further confirm this issue about how few program coordinators feel about their contract length and whether they believe they are rewarded enough for their efforts. One program coordinator highlighted that "although being compensated by my academic unit, the compensation is not adequate for the amount of time and energy required for coordination efforts". Another interesting observation about institutional rewards is that rewards for program coordination work may vary from one department to another within the same college. As one participant stated that "when I became Director of Graduate Studies, I was informed that the compensation involved one annual course release, and no financial compensation. I later learned, completely by chance, that in fact compensation varies from department to department, even within my college, and that some DGS's in other departments in my

college receive significant stipends, along with summer salary". Another finding tied with compensation that emerged from the qualitative responses is linked with the program coordination percentage listed on the DOE form. As one program coordinator stated "my program coordination activities, which were supposed to account for 50% of my DOE, only account for 20%. No other method has made up for this lack of DOE time as originally promised". Another program coordinator highlighted a similar concern by stating that "it is unevenly distributed as far as DOE goes across departments. Some professors get a large amount on their DOE and get course buy-outs or overloads. I do get a stipend in the summer, but it is because I am expected to work during the summer on program related activities". Another program coordinator highlighted the lack of rewards as one of the most challenging aspects of their coordination work by stating "lack of financial and work-load compensation for coordinating work". Another program coordinator stated in regards to rewards that "academic program coordinators should receive a salary stipend for their work, not just DOE time". Another program coordinator stated that program coordination is not listed on their DOE; however, their pay is tied with the number of students enrolled in the program by stating "the college allocated a small dollar amount to the certificate directors based on the number of enrolled students in the program". Indeed, there seems to be variation between colleges and departments within the R1 institution when it comes to compensating and rewarding academic program coordinators.

4.5.3 Program type:

Another finding that emerged from the quantitative data was that 24.1% of programs that program coordinators coordinated during the 2020-2021 academic year were graduate certificates. A qualitative open-ended response showed that professional

certificates are not being perceived well by a few faculty and administrators in some colleges who still seem to hold strong beliefs about the type of programs research universities need to offer. One program coordinator indicated that "there is a feeling that my college is happy there is the certificate but they are not committed to helping keep it viable. The majority of people would not mind if the certificate went away, versus providing additional support to it".

4.5.4 Role expectation and role overload as sources for role strain:

The quantitative data showed that program coordinators had clear job expectations and description(s) set by their departments and colleges, and they knew what was expected from them during the 2020-2021 academic year. However, when examining closer the qualitative open-ended responses a different theme emerged related to the importance of succession planning along with the consequences of not having clear articulation and transition of ownership of program coordination in departments/colleges. One program coordinator indicated that "I inherited my role from a retired faculty member, which meant that my learning happened on the fly. There were few to no materials for me to review". Another source of role strain that the quantitative data revealed is associated with role overload and that program coordination is not fairly distributed between faculty. The qualitative open-ended responses confirm the inequality of distribution of program coordination work as one program coordinator stated that among the most challenging aspects of their program coordination role is the "unequal distribution of administrative and service assignments in my department". Another program coordinator indicated similar concerns during the pandemic by stating "it seemed that more administrative work was expected because we were working from home". Indeed, the unequal distribution of

program coordination work among colleges/departments within the R1 institution is a main factor causing role strain and role overload among program coordinators, who sometimes suffer mentally as a result of taking on greater workloads and responsibilities.

4.5.5 Program coordination support from leadership, fellow faculty, and staff:

The quantitative data showed support from program academic leadership and faculty to the work program coordinators perform. However, when examining the qualitative open-ended responses and how a few program coordinators feel about how the academic program leadership viewed their work, one program coordinator explained that among the most challenging aspects facing them is the "lack of institutional respect for the work". Another explained how COVID-19 and the lack of staff challenged their program coordination efforts by stating that the "lack of consistent staff support due to remote working during the pandemic" have been among the most challenging aspects of their work. A final participant noted the need to improve communication between program coordinators and the university administration especially when the university had to cancel all graduation ceremonies due to COVID-19 and change graduation plans without seeking the consultation of program coordinators by stating "the university canceled all graduation ceremonies due to COVID but asked the departmental directors of undergraduate studies to instead design and host a graduation celebration. We were given no guidance or resources to do this. It was decided without consultation and decreed from above. This is in a year we were asked to switch modality to online teaching two weeks before the semester started". Indeed, such situations may hint to potential role strain and frustration among a few program coordinators during the 2020-2021 academic year.

The other set of qualitative open-ended questions allowed program coordinators to highlight the main challenges they faced and what satisfied them the most in performing their program coordination roles during the 2020-2021 academic year. Program coordinators also had the opportunity to provide additional comments. The following tables summarizes this set of qualitative responses.

The table below (Table 4.25) shows what challenged program coordinators the most in performing their roles during the 2020-2021 academic year. The open-ended responses show that 52.78% of participants stated that COVID-19 and the shift to online instruction/work was the most challenging aspects of their program coordination work, followed by 27.78% of participants indicating that the increase of workload was the most challenging aspects they faced during the 2020-2021 academic year. Another interesting observation was that 25% of participants viewed student wellbeing as the most challenging aspects they faced during the pandemic. One program coordinator viewed accreditation as a challenge they faced during the 2020-2021 academic year by stating "the most challenging and time-consuming aspects of work as a program coordinator are completing annual reports (e.g., accreditation, SACS, program approval for out-of-state students)". It appears that challenges that faced program coordinators during the 2020-2021 academic year are related to internal workload and external forces and requirements.

Table 4.25: Challenges - qualitative responses

What aspects challenged you the most in coordinating academic programs during the 2020-2021 academic year?		
Category	Count	%
COVID-19 shift to online work and instruction	19	52.78
Workload	10	27.78
Student recruitment targets and goals	3	8.33
Budget	2	5.56
Lack of compensation/resources	3	8.33
Institutional support and faculty stigma of non-tenure program coordinators	2	5.56
Accreditation	1	2.78
Student wellbeing	9	25.00
Total	36	100

The table below (Table 4.26) summarizes what satisfied program coordinators the most as they performed their roles during the 2020-2021 academic year. The open-ended responses show that 41.18% of participants viewed supporting students as being the most satisfying aspects of their work, followed by 35.29% of participants indicating that seeing students graduate and become successful were among the most satisfying aspects for them in

performing their program coordination roles during the 2020-2021 academic year. The data show that 17.65% of participants stated that ensuring the smooth operation of the program satisfied them to perform their roles during the 2020-2021 academic year.

Table 4.26: Role satisfaction - qualitative responses

What aspects satisfied you the most in coordinating academic programs during the 2020-2021 academic year?		
Category	Count	%
Supporting students	14	41.18
Seeing students graduate and become successful	12	35.29
Improving quality	1	2.94
Gaining new experience/knowledge	1	2.94
Career development prospects	1	2.94
Smooth operation of the program	6	17.65
Making a difference	1	2.94
Total	34	100

The table below (Table 4.27) summarizes the additional comments from program coordinators. The open-ended responses show that 29.41% of participants viewed the work to be too much and indicated they will resign shortly from their program coordination

responsibilities. Similarly, 29.41% of participants viewed that program coordination is not well rewarded and compensated despite the efforts and time needed for program coordination. The data show that 17.65% of participants highlighted that program coordination work has a negative impact that forces them to shift their efforts and time from other recognized and rewarded work such as publishing during the 2020-2021 academic year.

Table 4.27: Additional comments – qualitative responses

Are there any additional comments you would like to share regarding your role as program coordinator?		
Category	Count	%
Too much work overload, will resign	5	29.41
Quick Shift efforts away from other work that pays off	3	17.65
Improving the program (manuals, policies, capacity building)	4	23.53
Program coordination work is not compensated well despite the time and effort needed	5	29.41
Professional development	1	5.88
Mental health consequences for doing the job	2	11.76
Total	17	100

4.6 Addressing research hypotheses one, two, and three:

The following section will present the results of the study hypotheses:

- Hypothesis 1: There is a statistically significant differences at a significance level less than 0.05 between the mean scores of role strain based on the following variables: gender, race/ethnicity, faculty rank, tenure status, length of contract, program coordination years of experience, number of programs coordinated, number of students in the program, and DOE percent committed to program coordination.

- Hypothesis 2: There is a statistically significant differences at a significance level less than 0.05 between the mean scores of role satisfaction based on the following variables: gender, race/ethnicity, faculty rank, tenure status, length of contract, program coordination years of experience, number of programs coordinated, number of students in the program, and DOE percent committed to program coordination.

- Hypothesis 3: There is a statistically significant differences at a significance level less than 0.05 between the mean scores of challenges to program coordination efforts based on the following variables: gender, race/ethnicity, faculty rank, tenure status, length of contract, program coordination years of experience, number of programs coordinated, number of students in the program, and DOE percent committed to program coordination.

To verify these hypotheses, the following tests have been used:

- Independent Samples T-Test for comparing the mean of two independent

groups such as gender.

- One Way ANOVA for comparing the mean for more than two unrelated groups such as faculty rank and tenure status.

- Least Significant Difference (LSD) test for all statistically significant differences between groups.

Table 4.28: Hypothesis 1 (Role strain)

	Variable	Sig.
Gender (Independent Samples T-Test)	Role expectation	.703
	Role overload	.402
	Academic program leadership & faculty colleagues	.665
	Evaluation and rewards	.104
	Internal and external forces	.624
Race or ethnicity (One Way ANOVA)	Role expectation	.771
	Role overload	.765
	Academic program leadership & faculty colleagues	.322
	Evaluation and rewards	.830
	Internal and external forces	.991

	Variable	Sig.
Faculty rank (One Way ANOVA)	Role expectation	.462
	Role overload	.647
	Academic program leadership & faculty colleagues	.380
	Evaluation and rewards	.129
	Internal and external forces	.311
Tenure status (One Way ANOVA)	Role expectation	.946
	Role overload	.105
	Academic program leadership & faculty colleagues	.258
	Evaluation and rewards	.807
	Internal and external forces	.269
Length of contract (One Way ANOVA)	Role expectation	.348
	Role overload	.051
	Academic program leadership & faculty colleagues	.738
	Evaluation and rewards	.196
	Internal and external forces	.584

	Variable	Sig.
Program coordination years of experience (One Way ANOVA)	Role expectation	.493
	Role overload	.287
	Academic program leadership & faculty colleagues	.988
	Evaluation and rewards	.938
	Internal and external forces	.908
Number of programs coordinated (One Way ANOVA)	Role expectation	.083
	Role overload	.091
	Academic program leadership & faculty colleagues	.346
	Evaluation and rewards	.015*
	Internal and external forces	.890

*$p < .05$.

Table 4.29: LSD test to identify the statistically significant differences between evaluation and rewards based on number of programs coordinated

Item	Number of programs coordinated	Mean	1	2-3	4-5
Evaluation and rewards	1				.93750
	2-3				1.25000
	4-5				

It is clear from table 4.29: the differences that emerged in evaluation and rewards based on number of programs coordinated were as follows:

- Between (1) and (4-5) to (4-5).

- Between (2-3) and (4-5) to (4-5).

Table 4.30: Hypothesis 1 (Role strain continued)

	Variable	Sig.
Number of students in the program (One Way ANOVA)	Role expectation	.349
	Role overload	.153
	Academic program leadership & faculty colleagues	.568
	Evaluation and rewards	.153
	Internal and external forces	.436
DOE percent committed to program coordination (One Way ANOVA)	Role expectation	.212
	Role overload	.056
	Academic program leadership & faculty colleagues	.028*
	Evaluation and rewards	.176
	Internal and external forces	.405

*p<.05.

Table 4.31: LSD test to identify the statistically significant differences between academic program leadership and faculty colleagues based on DOE percent committed to program coordination

DOE percent committed to program coordination	Mean	1-5 %	6-10%	11-15%	16-20 %	More Than 20%
1-5 %	2.97					
6-10%	2.85			.55000	.45000	.50000
11-15%	3.40					
16-20 %	3.30					
More Than 20%	3.35					

It is clear from table 4.31: the differences that emerged in academic program leadership and faculty colleagues based on DOE percent committed to program coordination were as follows

- Between (6-10%) and (11-15%) to (11-15%).

- Between (6-10%) and (16-20%) to (16-20%).

- Between (6-10%) and (More Than 20%) to (More Than 20%).

Table 4.32: Hypothesis 2 (Role satisfaction)

	Variable	Sig.
Gender (Independent Samples T-Test)	Personal attributes	.483
	Institutional recognition and rewards	.986
	Working with others	.467
	Compliance	.426
	Benefits	.846
Faculty race or ethnicity (One Way ANOVA)	Personal attributes	.149
	Institutional recognition and rewards	.632
	Working with others	.642
	Compliance	.567
	Benefits	.511
Faculty rank (One Way ANOVA)	Personal attributes	.064
	Institutional recognition and rewards	.650
	Working with others	.836
	Compliance	.549
	Benefits	.187

	Variable	Sig.
Tenure status (One Way ANOVA)	Personal attributes	.020*
	Institutional recognition and rewards	.514
	Working with others	.569
	Compliance	.194
	Benefits	.299

*$p<.05$.

Table 4.33: LSD test to identify the statistically significant differences between personal attributes based on tenure status

Tenure status	Mean	Tenured	Tenure-track but not yet tenured	Non-tenure-track
Tenured	2.95			.67905
Tenure-track but not yet tenured	3.25			
Non-tenure-track	3.63			

It is clear from table 4.33: the differences that emerged in personal attributes based on tenure status were as follows:

- Between (Tenured) and (Non-tenure-track) to (Non-tenure-track).

Table 4.34: Hypothesis 2 (Role satisfaction continued)

	Variable	Sig.
Annual contract length (One Way ANOVA)	Personal attributes	.946
	Institutional recognition and rewards	.602
	Working with others	.247
	Compliance	.095
	Benefits	.400
Program coordination years of experience (One Way ANOVA)	Personal attributes	.480
	Institutional recognition and rewards	.569
	Working with others	.578
	Compliance	.577
	Benefits	.043*

*p<.05.

Table 4.35: LSD test to identify the statistically significant differences between benefits based on program coordination years of experience

Years of experience	Mean	1 year	2-3 Years	4-5 Years	More than 5 Years
1 year	2.21				
2-3 Years	2.23			.51256	
4-5 Years	2.75				.57842
More than 5 Years	2.17				

It is clear from table 4.35: the differences that emerged in benefits based on program coordination years of experience were as follows:

- Between (2-3 Years) and (4-5 Years) to (4-5 Years).

- Between (More than 5 Years) and (4-5 Years) to (4-5 Years).

Table 4.36: Hypothesis 2 (Role satisfaction continued)

	Variable	Sig.
Number of programs coordinated (One Way ANOVA)	Personal attributes	.814
	Institutional recognition and rewards	.040*
	Working with others	.860
	Compliance	.704
	Benefits	.611

*p<.05.

Table 4.37: LSD test to identify the statistically significant differences between institutional recognition and rewards based on number of programs coordinated

No. of programs coordinated	Mean	1	2-3	4-5
1	2.14			
2-3	2.74			.88684
4-5	1.85			

It is clear from table 4.37: the differences that emerged in institutional recognition and rewards based on number of programs coordinated were as follows:

- Between (2-3) and (4-5) to (2-3).

Table 4.38: Hypothesis 2 (Role satisfaction continued)

	Variable	Sig.
Number of students in the program (One Way ANOVA)	Personal attributes	.751
	Institutional recognition and rewards	.344
	Working with others	.553
	Compliance	.766
	Benefits	.208
DOE percent committed to program coordination (One Way ANOVA)	Personal attributes	.756
	Institutional recognition and rewards	.613
	Working with others	.831
	Compliance	.543
	Benefits	.391

Table: 4.39: Hypothesis 3 (Challenges to program coordination efforts)

	Variable	Sig.
Challenges to program coordination efforts	Gender (Independent Samples T test)	.277
	Race or ethnicity (One Way ANOVA)	.945
	Faculty rank (One Way ANOVA)	.937
	Tenure status (One Way ANOVA)	.362
	Length of contract (One Way ANOVA)	.605
	Program coordination years of experience (One Way ANOVA)	.678
	Number of programs coordinated (One Way ANOVA)	.109
	Number of students in the program (One Way ANOVA)	.052
	DOE percent committed to program coordination (One Way ANOVA)	.523

4.7 Chapter 4 summary:

Chapter four presented the key analysis and findings from the self-administered survey. A total of *N=47* academic program coordinators at a southern R1 institution participated in the dissertation survey. The chapter addressed the four research questions along with addressing the research hypotheses. It is clear that role strain does exist among academic program coordinators at the R1 institution due to role overload and different internal and external requirements. In particular, COVID-19 significantly impacted the role overload and role strain of program coordinators and placed greater challenges on them during the 2020-2021 academic year. Despite the role strain caused by role overload and external forces such as COVID-19, program coordinators remained committed during the 2020-2021 academic year to ensuring student success and completion of their studies. Ensuring student success and program completion acted as a key satisfying factor for program coordinators. Program coordinators also value the opportunity to serve their institution and wider higher education community through program coordination activities and roles. The intrinsic personal factors such as developing skills and knowledge and growing professionally by undertaking program coordination also satisfied program coordinators to perform their roles during the 2020-2021 academic year.

CHAPTER 5. CONCLUSION

Academic programs continue to evolve in US higher education especially among public R1 institutions. The changes in demographics, student needs, and market competition remain factors contributing to academic program modification and changes. New and revised undergraduate, graduate, and certificate academic programs are also consistently being offered in various forms: full-time, part-time, asynchronous, and hybrid by public R1 universities to further compete in a competitive higher education business environment and appeal to larger student populations. Most public R1 institutions in US higher education offer between 250-500 programs in various fields and majors.

The increase in the number of programs offered by research universities, and the fact that these programs require coordination and management primarily by tenured and tenure-track faculty who also have other work obligations as part of their contractual agreements, all appear to cause potential role strain to academic program coordinators at public R1 institutions.

In addition to the national increase in the number of academic programs offered by R1 institutions, external and internal forces also place further challenges on faculty appointed to coordinate academic programs. The 2020-2021 academic year posed several challenges to program coordinators at US universities and colleges. The global health pandemic (COVID-19) is one example showing how higher education can be disrupted by global forces, thereby impacting the roles and responsibilities of faculty in general and academic program coordinators in particular. As a result of the global pandemic, program coordinators at the selected R1 institution had to shift their programs' instruction to online

formats. Moreover, the workload of program coordinators increased as they tried to maintain the effective function of the programs they coordinated during the 2020-2021 academic year, while also ensuring student success and student welfare during unprecedented higher education times caused by COVID-19. Some program coordinators were assigned responsibilities they never worked on before such as being requested by university leadership to organize a virtual graduation ceremony for graduating students for the program cohort without being given any guidance or resources to organize such an event. Indeed, all these different changes caused by the global health pandemic created additional role strain among academic program coordinators.

This dissertation aimed to explore the program-level administrative and service roles and activities that program coordinators at a US southern R1 institution performed during the 2020-2021 academic year, along with better understanding potential internal and external forces that may cause role strain among those carrying out academic program coordination activities and roles during the 2020-2021 academic year. Several observations and findings emerged from the research and a number of recommendations could be drawn to support both senior leadership at the R1 institution and faculty members appointed as academic program coordinators or those interested in program coordination roles.

5.1 Key findings:

The analysis of the research quantitative and qualitative data revealed interesting findings about program coordinators, including their perceptions of role strain and role satisfaction during the 2020-2021 academic year. First, academic program coordinators at the R1 institution perform both program-level administrative and service activities. Among

the program-level administrative activities program coordinators performed during the 2020-2021 academic year included: managing student enrollment for the program, carrying out program improvements, program planning, program scheduling, program budgeting and program accreditation/assessment work. On the other hand, program-level service activities that program coordinators at the R1 institution performed included: curriculum committee work, student monitoring, and reviewing/approving credit transfer equivalency requests submitted by current and prospective students. Second, program coordinators at the R1 institution suffered during the 2020-2021 academic year from role strain caused by role overload, COVID-19, and the limited rewards provided for program coordination work. Third, program coordinators find satisfaction in their roles by seeing students complete their studies and grow academically. Witnessing students growing professionally and developing new knowledge and skills intrinsically satisfied academic program coordinators as they performed their program coordination roles and activities during the 2020-2021 academic year.

The following section will include recommendations for the R1 institution, program coordinators, and those planning to start program coordination roles and activities in the near future. These recommendations have largely been drawn from the literature, the qualitative responses, and the key findings that emerged from the study. The pilot study and the opportunity to discuss program coordination issues and challenges with program coordinators at the R1 institution was another source for forming the following recommendations. I also relied on my own experience working closely with higher education faculty and academic program coordinators in presenting these recommendations. I believe that a number of program coordinators at the R1 institution

will value the implementation of these recommendations at R1 institutions and higher education in general.

5.2 Recommendation for the R1 institution:

- Although budget cuts impacted a number of higher education institutions and some are no longer able to offer summer stipend or additional pay for faculty entrusted to carry out academic program coordination roles and activities, there should be an institutional-level policy in place that grants department chairs the ability to offer one course reduction per semester to faculty appointed to coordinate academic programs upon the approval of the college dean. A course reduction could save the faculty member about 6 hours a week (lecture and preparation time) to carry out program coordination activities during working hours, thus minimizing the role overload and time faculty need to spend outside normal weekly working hours to deal with program related activities and work. Also, since many institutions are relying on part-time faculty to teach a number of classes, there seems to be a potential possibility to offer those appointed to coordinate programs with one course release per semester without causing disruption in teaching.

- Senior leadership need to work with college representatives and consider revising the DOE criteria for program coordination roles. Negotiating with faculty at the college and department levels to establish an institutional policy that sets clear percentages for program coordination on DOE forms is needed if one is currently not available. It does not appear to be equitable on a departmental level when two faculty members doing the same work get compensated differently when it comes

to program coordination work especially when both programs are comparable when it comes to the number of student enrollment. Moreover, it does not seem appropriate when a program coordinator gets promised a course release or a stipend prior to undertaking the role and then upon assuming the role they realize that the department/college is unable to provide what they initially promised. These two issues were raised by two program coordinators in their qualitative open-ended responses. It is understandable that one reason that departments or colleges were unable to keep their promise could result from consequences of unforeseen changes and challenges facing higher education such as COVID-19 during the 2020-2021 academic year. However, there should be a way that colleges/departments are able to find alternatives to those affected by the unforeseen consequences of COVID-19 and senior leadership of the R1 institution should think about other alternatives to appreciate the additional efforts program coordinators performed during the 2020-2021 academic years. The recognition does not necessarily need to be financial; one example could be awards or letter of appreciation. Intrinsic recognition could also be a motivating factor for faculty to continue to participate in program coordination roles and activities at the R1 institution.

- The R1 institution may consider increasing its program coordination diversity efforts. The findings show that nearly 94% of program coordinators were White, non-Hispanic. Increasing the program coordination representation of other race and ethnicity groups may support the R1 institution ongoing efforts to increase diversity among students and faculty.

- The R1 institution may consider making program coordination a prerequisite for faculty prior to appointing them as department chairs. Program coordination roles and activities could prepare faculty to undertake the department chair position.

- Colleges and departments within the R1 institution should consider implementing a succession plan for their program coordinators if such plans do not currently exist. Colleges and departments may already know the program directors/coordinators that have been carrying out the coordination efforts and when their term (appointment) will end. Having a succession plan in place will ensure smooth transition of program coordination if a faculty member retires, leaves higher education or completes his or her term of program coordination that will normally end after 3-4 years. A qualitative open-ended response by one program coordinator hinted to the role strain they faced when inheriting the program coordination responsibility and role from a retired faculty without being given any materials to review and build upon.

- The R1 institution may consider investing in a program coordination system (electronic portal) that offers program coordinators throughout the institution key tools to assist them in program scheduling, program planning, and program improvement. This electronic system/portal may also help synergize efforts within the same department or colleges when it comes to program coordination. The system/portal may also help newly appointed program coordinators in performing their roles effectively and efficiently as they will find valuable resources and guidelines within the program coordination system.

- The R1 institution should consider investing in training and professional development especially for newly appointed program coordinators. Providing training and awareness of program coordination strategies and techniques may minimize the effort and sometimes struggles academic program coordinators at the R1 institution face when trying to meet different internal and external program requirements, thereby reducing potential role strain among academic program coordinators. There is empirical evidence suggesting that professional development may also strengthen faculty ability to perform different service and administrative roles efficiently and effectively (Pfeifer, 2016).

- The R1 institution may consider offering a President or Provost award for the top distinguished academic program coordinators each academic year. The award should have specific standards and criteria that are published and made available for all program coordinators and program directors at the R1 institution. The award could intrinsically motivate a number of program coordinators at the R1 institution, especially since the majority of program coordinators stated in their survey responses that such an award is not currently available at the R1 institution. A number of research studies have already shown the importance of intrinsic factors for motivating faculty (Pfeifer, 2016; O'Meara, 2003).

5.3 Recommendation for faculty:

- Program coordination is a time and labor-intensive activity that requires close attention to detail in addition to working with various stakeholders inside and outside the institution (Ingle, et al. 2020). Program coordination may impact faculty

ability to carry out other work such as research and publications in a pace they hoped to achieve. The work will also require faculty to free up time away from other faculty responsibilities to be able to address current and prospective student questions, program needs, and problems. As a consequence, faculty members that are on the tenure track system but not yet tenured are frequently advised not to engage in program coordination activities as this may impact their research and publication ability needed to attain tenure status, especially if they work in a R1 institution that prioritizes and values quality research, publication, and teaching over other administrative and supportive service faculty work. The emphasis on quality research and teaching is clearly articulated in the vision and mission of the R1 institution. Faculty members who are on the tenure track system but not yet tenured and are still keen to participate in program coordination may consider starting their program coordination engagement in the final year as they go up for tenure. However, program coordinators will still need to carefully think about the potential derail program coordination may cause in their efforts to successfully achieve the full professor status once they attain tenure.

- Tenured and those about to attain tenure are advised to engage in program coordination if they are interested in progressing into a higher administrative role such as becoming department chair since program coordination can provide a strong foundation in building the knowledge and skills of institutional level policies and procedures vital for department chair positions. Moreover, the program coordination roles will enable faculty members to build their skills in negotiation and their ability to work with various stakeholders inside and outside the institution

which are indeed a key part of the roles and responsibilities of department chairs at R1 institutions.

- Coordinating programs that tie with faculty member's teaching and research interest is also highly recommended and advisable. For example, if the College of Education at the R1 institution is considering in the future launching a graduate certificate in higher education, then perhaps appointing a faculty member with teaching and research interests in higher education could provide personal attainment, motivation, and satisfaction to that particular faculty member and minimize the time he or she needs to navigate around territories unrelated to their teaching and research expertise. For instance, this faculty may be in a better position in determining the type of classes that this graduate certificate should include and what are the admission and assessment criteria for the certificate. This faculty member will also be in a better position conducting benchmarking studies of similar graduate certificates offered at other research universities and perhaps justifying and making academic sense on the reasons why that particular institution and certificate program is focusing on certain areas in higher education while focusing less on others. Indeed, it is not surprising that there is empirical evidence arguing the importance of personal attainment and attributes as a source of motivation and satisfaction for university faculty (Hurber, 2001; Harris, 2008; O'Meara, 2003).

5.4 Future research:

Research is still needed in the area of academic program coordination given the significant increase in the number of academic programs offered in US higher education. The research dissertation was based on one US R1 institution. It would be externally useful

to apply the research on more than one institutional type or between a number of research universities within the same Carnegie classification. Comparing the findings and results would help better understand potential role strain among academic program coordinators. Also, applying the research in a different geographical context may also provide interesting results especially since COVID-19 did not only impact the work of academic program coordinators in US higher education, but also impacted higher education and arguably academic program coordinators in many parts of the world.

APPENDICES

APPENDIX 1. Survey Instrument

Cover letter

Study title: Academic Program Coordinators' Role Strain and Role Satisfaction

We are asking you to choose whether or not to volunteer for a research study about academic program coordinators' role strain and role satisfaction. The study looks at faculty carrying out academic program coordination activities at a US research intensive research university and how they view their academic program coordination work. We are asking you because as part of your work during the 2020-2021 academic year you have carried out certain academic program coordination activities for your college/department. This page is to give you key information to help you decide whether to participate. If you have questions later, the contact information for the research investigator in charge of the study is below.

What is the study about and how long will it last?
The study is part of an Ed.D. doctoral dissertation. The study examines through a survey potential role strain and challenges that academic program coordinators face as part of their work responsibilities and whether different forces may have impacted in any way their job expectations. Completing the survey will require 10-15 minutes.

Who will see the information you provide?
Your response to the survey is anonymous which means no names, IP addresses, email addresses, or any other identifiable information will be collected with the survey responses. We will not know which responses are yours if you choose to participate. Moreover, no personal or sensitive information will be collected and all survey results will be reported in aggregate form. Also, we will make every effort to safeguard your data, but as with anything online, we cannot guarantee the security of data obtained via the Internet. Third-party applications used in this study may have Terms of Service and Privacy policies outside of the control of the University of Kentucky. Also, all data transferred online will be retained for six years following the end of the IRB approval, after that all information collected will be deleted. We have also disabled Qualtrics ability to collect IP addresses from all participants and their location through the Anonymize Responses setting. This will further ensure that no transferrable online data could be traced to identify individuals that voluntary agreed to participate in the survey.

What are the foreseeable risks for participating in the study?
In terms of foreseeable risks, to the best of our knowledge, there are no risks associated with participation in this study.

What are key reasons/benefits for choosing to volunteer for this study?
Respondents who complete the survey will help bridge a gap in the higher education literature. Not a lot of published information is available about the experience of academic program coordinators and how they view their program coordination roles and activities. Your participation in the study will help highlight what could be done to further improve academic program coordinators' role experience. Respondents will also have a chance to win a $50 Amazon gift card; if we get full enrollment your odds of winning the gift card are 1 in 200. I will also share a summary of the findings upon request with any respondent that indicated at the end of the survey their interest in receiving the summary findings.

What are Key reasons you might choose not to volunteer for this study?
A participant may choose not to volunteer in the study because they do not have 10-15 minutes to spare or they did not engage in any academic program coordination activity during the 2020-2021 academic year.

Do you have to take part in the study?
If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any services, benefits, or rights you would normally have if you choose not to volunteer. There will not be any penalties for deciding not to take part in the study. Participants are free to skip any questions they do not wish to answer or discuss in the survey.

What if you have questions, suggestions or concerns?
If you have questions, suggestions, or concerns regarding this study or you want to withdraw from the study you may contact Samer Jan, Principal Investigator, University of Kentucky, Department of Educational Policy Study and Evaluation at (srja227@g.uky.edu) or the dissertation advisor and Study Personnel, Dr. Jeffery Bieber (jpbieb01@uky.edu).

If you have any concerns or questions about your rights as a volunteer in this research, contact staff in the University of Kentucky (UK) Office of Research Integrity (ORI) between the business hours of 8am and 5pm EST, Monday-Friday at 859-257-9428 or toll free at 1-866-400-9428.

By clicking the next button, I consent to participate in the study.

General Information:

Please mark the appropriate answer:

Gender
○ Male

○ Female
○ Prefer not to respond
○ Not listed

Race or ethnicity

☐ American Indian/Alaskan Native, non-Hispanic

☐ Asian, non-Hispanic

☐ Black or African American, non-Hispanic

☐ Hispanic or Latino, any race

☐ Native Hawaiian/Other Pacific Islander, non-Hispanic

☐ Two or More Races, non-Hispanic

☐ White, non-Hispanic

Faculty rank during the 2020-2021 academic year

○ Professor
○ Associate Professor
○ Assistant Professor
○ Instructor
○ Senior Lecturer
○ Lecturer
○ [   ] Other, please specify

Tenure Status during the 2020-2021 academic year:

○ Tenured
○ Tenure-track but not yet tenured
○ Non tenure-track

Length of annual faculty contract during the 2020 – 2021 academic year:

○ 9 months
○ 10 months
○ 11 months
○ 12 months

What best describes your program coordination appointment in your college/department during the 2020-2021 academic year?

○ A faculty member and the Director of Undergraduate Studies

○ A faculty member and the Director of Graduate Studies

○ A faculty member and the Director of Undergraduate and Graduate Studies

○ A faculty member with an official academic program (s) coordination designation

○ A faculty member without an official academic program (s) coordination designation

○ An academic program coordinator

○ [   ] Other, please specify

Have you been responsible for any academic program coordination for your college/department during the 2020-2021 academic year? (academic programs may include undergraduate, graduate, certificate, major, minor or special track/specialization programs that count as a stand-alone program in your college/department)

○ Yes

○ No

What field best describes the academic program (s) you coordinated during the 2020-2021 academic year?

○ Humanities (e.g. History, Languages and Literature, Linguistics, Philosophy, Religion, Visual Arts)

○ Social Sciences (e.g. Anthropology, Economics, Geography, Political Science, Psychology, Sociology)

○ Natural Sciences (e.g. Biology, Chemistry, Earth Sciences, Physics, Space Sciences)

○ Formal Sciences (e.g. Computing Sciences, Mathematics, Statistics, Systems Science)

○ Professions and Applied Sciences (e.g. Agriculture, Business, Education, Engineering, Health, Medicine, Nursing, Social Work)

Please mark the type of academic program (s) you are responsible for coordinating for your college/department during the 2020-2021 academic year (Select all that apply):

☐ Undergraduate program (s)

☐ Graduate program (s)

☐ Undergraduate certificate program (s)

☐ Graduate certificate program (s)

How many programs during the 2020-2021 academic year did you coordinate?

○ 1
○ 2-3
○ 4-5
○ More than 5

As of the 2020 - 2021 academic year, how long have you been coordinating academic programs for your college/department?

○ 1 year
○ 2-3 years
○ 4-5 years
○ More than 5 years

Indicate the number of students enrolled in the academic program (s) you coordinated during the 2020-2021 academic year.

○ 1 - 49 students
○ 50 - 99 students
○ 100 - 199 students
○ 200 - 500 students
○ More than 500 students

Please mark the type of academic program coordination activities in which you engaged during the 2020-2021 academic year (Select all that apply):

☐ Budget
☐ Student recruitment
☐ Student mentoring
☐ Program scheduling/planning
☐ Interviewing/hiring instructors
☐ Coordinating the clinical/practical component for students
☐ Addressing student problems/conduct
☐ Curriculum committee

☐ Student enrollment
☐ Accreditation/assessment
☐ Student retention
☐ Program fundraising
☐ Training/supervising instructors
☐ Program improvements
☐ Credit transfer equivalency approval
☐ Other, please specify
[   ]

Were your program coordination activities included in your distribution of effort (DOE) during the 2020-2021 academic year?

O Yes
O No

What percent of your DOE was committed to program coordination activities?

[   ]

Were you compensated in some other way for your program coordination activities? If you were compensated in some other way, how were you compensated?

[   ]

Under which category on your DOE during the 2020-2021 academic year has the percentage of program coordination work and activities been listed? (Select all that apply):

☐ Administration

☐ Service

☐ [   ] Other, please specify

Potential factors impacting your program coordination role and activities
Please rate your level of agreement with the following statements during the 2020-2021 academic year

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
2.1 Role expectations					
My department/college has clear job expectations and description(s) for a program coordinator(s).	O	O	O	O	O
I am aware of what it is expected from me as a program coordinator.	O	O	O	O	O

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
The expectations for my work as a program coordinator have been clearly articulated to me by the academic program leadership in my college/department.	O	O	O	O	O
I have the opportunity to attend professional development (e.g. training workshops, professional conferences) in order to carry out my responsibilities as a program coordinator.	O	O	O	O	O

Please rate your level of agreement with the following statements during the 2020-2021 academic year

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
2.2 Role workload					
I am able to balance my program coordination workload with other teaching and research expectations.	O	O	O	O	O
I have enough time to complete my program coordination responsibilities during the academic year.	O	O	O	O	O
I do not need to spend extensive time outside normal weekly working hours to complete the program coordination responsibilities.	O	O	O	O	O
Program coordination is distributed equally among faculty in our department.	O	O	O	O	O

Please rate your level of agreement with the following statements during the 2020-2021 academic year

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
2.3 Academic program leadership and faculty colleagues					
The academic program leadership in my college/department views my program coordination role as vital for the department.	O	O	O	O	O
The academic program leadership in my college/department views my program coordination role as vital for serving current and prospective students.	O	O	O	O	O

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
Faculty colleagues view my program coordination role as vital for the department.	O	O	O	O	O
Faculty colleagues view my program coordination role as vital for serving current and prospective students.	O	O	O	O	O
I receive support and timely response from faculty on program related issues.	O	O	O	O	O

Please rate your level of agreement with the following statements during the 2020-2021 academic year

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
2.4 Evaluation and rewards					
I feel that my program coordination work is evaluated fairly.	O	O	O	O	O
I feel that my program coordination work is rewarded fairly.	O	O	O	O	O

Please rate your level of agreement with the following statements during the 2020-2021 academic year

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
2.5 Internal and external forces					
Budget cuts impacted my role and the activities I perform as a program coordinator.	O	O	O	O	O
Increase in student enrollment impacted my role and activities as a program coordinator.	O	O	O	O	O
Covid-19 changed my program coordination role expectations and requirements.	O	O	O	O	O

Please rate your level of agreement with the following statements during the 2020-2021 academic year

I actively engaged in program coordination roles for the following reasons/benefits:

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
3.1 Personal attributes					
A personal commitment towards my department/college.	O	O	O	O	O
Serving the needs of students.	O	O	O	O	O
Serving my colleagues.	O	O	O	O	O
	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
Increasing the prestige and reputation of this particular program.	O	O	O	O	O
Growing professionally in my department/college.	O	O	O	O	O
Developing new knowledge/competencies.	O	O	O	O	O
Expanding my current capacities/capabilities beyond research and teaching.	O	O	O	O	O

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
Aligning and integrating my current research and teaching with program coordination work.	O	O	O	O	O

Please rate your level of agreement with the following statements during the 2020-2021 academic year

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
3.2 Institutional recognition and rewards					
Gaining institutional recognition.	O	O	O	O	O
Building my promotion and tenure portfolio.	O	O	O	O	O
Having a reduction in teaching/research loads.	O	O	O	O	O
Earning departmental-level stipend for the program coordination work.	O	O	O	O	O
Earning institutional-level awards for program coordination work.	O	O	O	O	O

Please rate your level of agreement with the following statements during the 2020-2021 academic year

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
3.3 Working with others					
Working with diverse people and stakeholders.	O	O	O	O	O
Socially interacting with others.	O	O	O	O	O

Please rate your level of agreement with the following statements during the 2020-2021 academic year

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
3.4 Compliance					

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
Helping the program remain compliant with internal regulations.	O	O	O	O	O
Helping the program remain compliant with external regulations.	O	O	O	O	O

To what extent do you agree that the following were challenges to your program coordination efforts during the 2020-2021 academic year?

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
The increase in the number of programs offered by our department/college.	O	O	O	O	O
The increase in internal or/and external program-level requirements (such as assessment/accreditation).	O	O	O	O	O
The decline in the number of full-time faculty capable of carrying out some of the program coordination roles.	O	O	O	O	O
	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
The lack of institutional level rewards for program coordination work and activities.	O	O	O	O	O
Departmental/institutional stigma among faculty and administrators regarding academic program coordination work (e.g. less important).	O	O	O	O	O

Program Coordination Roles

During the 2020-2021 academic year, what component of your work as a program coordinator was most important? What was least important? Please rank the following activities from 1 to 10 where (1 is the most important; 10 is the least important). To rank the items in order, please drag and drop each item and the rank numbers will change accordingly.

Compliance with accreditation/assessment measures (SACSCOC, specialized accreditation).

Compliance with federal/state requirements.

Securing additional funding for the program.

Support the diversity efforts of the program.

Effective functioning of the program.

Mentoring students.

Growing program student enrollment.

Addressing student conduct.

Student retention/completion rates.

Avoiding program restructuring/closure

To what extent do you agree with the following statements about your work as a program coordinator during the 2020-2021 academic year?

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
I felt a sense of privilege by undertaking additional program coordination work and activities.	O	O	O	O	O
I was able to increase my job security by undertaking additional program coordination work and activities.	O	O	O	O	O
I increased my self-efficacy as part of undertaking additional program coordination work and activities.	O	O	O	O	O
I increased my professional and academic growth by undertaking additional program coordination work and activities.	O	O	O	O	O

To what extent do you agree with the following statements about your work as a program coordinator during the 2020-2021 academic year?

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	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
I increased my work autonomy by undertaking additional program coordination work and activities.	○	○	○	○	○
I received departmental/college recognition by undertaking additional program coordination work and activities.	○	○	○	○	○
I increased my pay by undertaking additional program coordination work and activities.	○	○	○	○	○

1. What aspects challenged you the most in coordinating academic programs during the 2020-2021 academic year?

2. What aspects satisfied you the most in coordinating academic programs during the 2020-2021 academic year?

3. Are there any additional comments you would like to share regarding your role as program coordinator?

End of Survey

Thank you for your time in participating in the survey. Your response has been recorded.

APPENDIX 2. Survey Pilot

Prior to administering the survey in Fall 2021 semester, I tested and piloted the survey instrument I had developed over the summer semester (May 31st - June, 11th, 2021). The purpose was to ensure the accuracy, validity, and quality of the survey. Moreover, the pilot aimed to collect feedback and input from actual program coordinators who had summer appointments in the selected R1 institution. The feedback collected helped ensure that all questions and items listed in the survey are relevant to the activities and work program coordinators perform.

The Institutional Effectiveness Office at the R1 institution recommended five program coordinators to approach during the summer. Similarly, two committee members kindly suggested inviting two other faculty members, who undertake program coordination work in their colleges, to participate in the pilot phase over the summer semester.

A total of seven program coordinators (6 female and 1 male) representing five colleges in the R1 institution agreed to take part in a one-hour interview and pilot the survey. All program coordinators provided useful feedback while taking the survey during the interview. The process provided an opportunity to get instant thoughts on the questions as well as asking how program coordinators interpret the information presented when reading the question items and taking the survey. All seven interviews were audio recorded and I went back to each recording to ensure that I addressed all the points and feedback received and all the points highlighted during the interview were reflected in the final version of the survey.

Among the feedback I received from program coordinators included thoughts and ideas on

how to improve the survey clarity, language, survey structure, question items, ordering of questions, and survey length. Moreover, a number of program coordinators suggested including additional questions that they believed were important indicators for potential role strain academic program coordinators may face as part of their program coordination responsibilities. These additions included a question on the years of program coordination experience and the total number of students enrolled on the program. In addition, a question on program coordinators employment contract length for the 2020-2021 academic year was added to the survey. The section below highlights the main changes and the decisions that were incorporated in the final version of the fall 2021 administered survey based on the feedback collected during the interviews and survey pilot phase from the seven program coordinators.

Main cover letter:

The survey cover letter included a number of changes based on the feedback I received during the pilot phase. It was recommended by three program coordinators during the interview that I follow the R1 institution consent form guidelines, incorporate the IRB information about confidentiality, voluntary participation, and highlight any potential risks in the cover and welcoming page. I was told during the interview that this information could then serve as the consent form all participants will need to read and agree to prior to undertaking the survey. It was also recommended by two program coordinators to highlight the benefits for those who may consider participating in the study without relying solely on mentioning the gift card. Therefore, based on the feedback I received, I added the possibility of receiving a summary report of the findings and included the opportunity for

those interested in receiving the summary report to provide their email address at the end of the survey. I was told by the two academic program coordinators during the interview that it is likely that program coordinators may wish to participate in my study if they are able to receive a summary of the findings and learn how other academic program coordinators view their work.

General information section:

In the general and demographic section of the survey, it was suggested first that I include under the gender question the option "prefer not to respond" as I was told that keeping only male, female and other as the only three options may not be enough as some program coordinators may not feel comfortable identifying their gender. Second, it was suggested that I follow the R1 institution classification for faculty race and ethnicity that is published on the institution website. The institutional classification of race included for instance American Indian/Alaskan Native, non-Hispanic as well as African American. Both of these two options were not mentioned in the initial draft version of the survey that I prepared. Third, it was recommended that I include "instructor" in the faculty rank question as a number of program coordinators in some colleges at the chosen R1 institution do carry the instructor faculty rank and have not yet attained the Assistant Professor rank status. I was also told to follow the faculty rank classification listed on the institution website because being consistent with what is published on the R1 website could help me draw some comparisons for my study. Fourth, it was suggested to ask about the number of students enrolled in the program (s) the academic coordinator manages and coordinates as this information could provide useful information about the size of the program and the

potential role strain that certain academic program coordinators may face. Fifth, the years of experience in coordinating academic programs was added as one program coordinator mentioned during the interview that they felt great stress, tension, and role strain in the first year of their program coordination appointment. But as they became more experienced in performing program coordination activities, the level of role strain significantly decreased as they became more knowledgeable and experienced in performing their program coordination role. Sixth, a question on program coordinators contract length for the 2020-2021 academic year was added to the survey based on the feedback received. Again, I was told during the interviews that this could help determine potential rewards and possible role strain or role tension program coordinators may face as part of their program coordination activities. Seventh, for the type of program coordinating activity question, it was suggested that I separate student recruitment and enrollment and keep both as two separate options. I was told that in some colleges an academic program coordinator may only perform student enrollment activities, while in other colleges especially on certificate programs, recruiting prospective new students may be a main responsibility for some program coordinators. It was also suggested that I include credit transfer and credit equivalency reviews and approvals as one of the key activities program coordinators perform as part of their work with prospective and current students. A final observation I received from piloting the survey was the need to add a skip question for the distribution of effort section, allowing participants to answer the relevant option of this particular question rather than the need to read through all irrelevant question parts, thereby decreasing the amount of time for program coordinators to read through and complete the survey.

Likert-scale questions:

It was suggested by two out of seven program coordinators to change the layout of the Likert-scale question and keep the statements on the left column and not repeat the Likert-scale ranking bar over each statement, thereby minimizing redundancy. It was also suggested to include more break pages for the Likert-scale section questions so that reading statement items becomes clearer and fits better on most computer screens with less scrolling up or down needed to navigate through pages. The two academic program coordinators also suggested including a "not applicable" option to the Likert-scale ranking bar as some statements, they suggested, are irrelevant to the program coordination work they face. For example, they mentioned that program funding and decline in student enrollment could be relevant in certain colleges but are not issues they face or worry about as part of their program coordination role. Both academic program coordinators indicated during the interview that their colleges have a selective enrollment policy and do not face challenges related to student enrollment, program funding, and potential program restructuring. Therefore, they both recommended including a "not applicable" option so that they do not have to select an answer based on only four irrelevant options. The same is true when talking about the decline in the number of full-time faculty capable of carrying out program coordination roles. I was told during one interview that a number of colleges within the R1 institution did not face challenges related to decline in the number of full-time faculty. A final observation that was collected as part of the Likert-scale questions feedback was the need to change the wording of few statements. For example, "I have the opportunity to attend professional development (e.g. training workshops, professional conferences) in order to carry out my responsibilities as a program coordinator". This

statement was slightly modified and examples for professional development opportunities were included based on the feedback I received. The former statement did not include examples of professional development opportunities. Also, the statements that included Department Chair were replaced by the phrase: "the academic program leadership in my college/department". Some program coordinators indicated during the interview that the programs they coordinate are college level and they do not report to their Department Chair on matters related to these particular academic programs but report to the College Dean or Associate Dean instead. Thus, including the phrase "program leadership" is more inclusive than only mentioning Department Chairs.

Open-ended questions:

It was suggested that I remove the open-ended questions underneath each closed-ended question and place them as three main questions at the end of the survey. Having them in the beginning of the survey may discourage some academic program coordinators from completing the survey as they may feel that the task is overwhelming and too long if the open-ended questions were included in the beginning of the survey. Also, having the open-ended questions at the end of the survey allows the respondents to read through all the closed-ended questions and include any additional observations and comments at the end of the survey that could be useful for the scope and purpose of my study.

APPENDIX 3. IRB Approval

University of Kentucky | Office of Research Integrity
IRB, RDRC

EXEMPTION CERTIFICATION

IRB Number: 70112

TO: Samer Jan
           Educational Policy Studies and Evaluatio
           PI phone #: 4126104419

           PI email: Samer.Jan@uky.edu

FROM: Chairperson/Vice Chairperson
           Nonmedical Institutional Review Board (IRB)

SUBJECT: Approval for Exemption Certification

DATE: 7/16/2021

On 7/16/2021, it was determined that your project entitled "*Role Strain and Role Satisfaction: Academic Program Coordinators at a Southern Research-Intensive Doctoral Granting University*" meets federal criteria to qualify as an exempt study.

Because the study has been certified as exempt, you will not be required to complete continuation or final review reports. However, it is your responsibility to notify the IRB prior to making any changes to the study. Please note that changes made to an exempt protocol may disqualify it from exempt status and may require an expedited or full review.

The Office of Research Integrity will hold your exemption application for six years. Before the end of the sixth year, you will be notified that your file will be closed and the application destroyed. If your project is still ongoing, you will need to contact the Office of Research Integrity upon receipt of that letter and follow the instructions for completing a new exemption application. It is, therefore, important that you keep your address current with the Office of Research Integrity.

For information describing investigator responsibilities after obtaining IRB approval, download and read the document "PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research" available in the online Office of Research Integrity's IRB Survival Handbook. Additional information regarding IRB review, federal regulations, and institutional policies may be found through ORI's web site. If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at 859-257-9428.

see blue.

405 Kinkead Hall | Lexington, KY 40506-0057 | P: 859-257-9428 | F: 859-257-8005 | www.research.uky.edu/ori/

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APPENDIX 4. SPSS tables and additional Excel tables

Role expectations	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
My department/college has clear job expectations and description(s) for a program coordinator(s)	6	12.8	23	48.9	13	27.7	5	10.6	2.64	0.845	Agree
I am aware of what it is expected from me as a program coordinator	11	23.4	24	51.1	6	12.8	4	8.5	2.93	0.863	Agree
The expectations for my work as a program coordinator have been clearly articulated to me by the academic program leadership in my college/department	9	19.1	21	44.7	11	23.4	5	10.6	2.74	0.905	Agree
I have the opportunity to attend professional development	4	8.5	8	17.0	15	31.9	12	25.5	2.74	1.188	Agree

									Mean	SD	Answer (trend)
(e.g. training workshops, professional conferences) in order to carry out my responsibilities as a program coordinator											

Role overload	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
I am able to balance my program coordination workload with other teaching and research expectations	5	10.6	19	40.4	18	38.3	5	10.6	2.51	0.831	Agree
I have enough time to complete my program coordination responsibilities during the academic year	5	10.6	16	34.0	21	44.7	5	10.6	2.45	0.829	Disagree
I do not need to spend extensive time outside normal weekly working hours to complete the program coordination	2	4.3	15	31.9	19	40.4	10	21.3	2.20	0.833	Disagree

responsibilities											
Program coordination is distributed equally among faculty in our department	2	4.3	3	6.4	20	42.6	21	44.7	1.77	0.914	Disagree

Academic program leadership and faculty colleagues	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
The academic program leadership in my college/department views my program coordination role as vital for the department	23	48.9	20	42.6	4	8.5	0	0.0	3.40	0.648	Strongly Agree
The academic program leadership in my college/department views my program coordination role as vital for serving current and prospective students	21	44.7	21	44.7	5	10.6	0	0.0	3.34	0.668	Strongly Agree

	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
Faculty colleagues view my program coordination role as vital for the department	13	27.7	25	53.2	9	19.1	0	0.0	3.09	0.686	Agree
Faculty colleagues view my program coordination role as vital for serving current and prospective students	12	25.5	29	61.7	6	12.8	0	0.0	3.13	0.612	Agree
I receive support and timely response from faculty on program related issues	5	10.6	25	53.2	14	29.8	3	6.4	2.68	0.755	Agree

Evaluation and rewards	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
I feel that my program coordination work is evaluated fairly	13	27.7	23	48.9	8	17.0	3	6.4	2.98	0.847	Agree
I feel that my program coordination work is	7	14.9	14	29.8	17	36.2	8	17.0	2.49	1.019	Agree

rewarded fairly											

Internal and external forces	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
Budget cuts impacted my role and the activities I perform as a program coordinator	13	27.7	13	27.7	16	34.0	4	8.5	2.81	1.014	Agree
Increase in student enrollment impacted my role and activities as a program coordinator	5	10.6	9	19.1	25	53.2	6	12.8	2.40	0.993	Disagree
COVID-19 changed my program coordination role expectations and requirements	18	38.3	12	25.5	13	27.7	2	4.3	3.11	1.005	Agree

	Mean	Std. Deviation	Answer
Role expectations	2.77	0.770	Agree
Role overload	2.23	0.703	Disagree
Academic program leadership and faculty colleagues	3.13	0.467	Agree
Evaluation and rewards	2.73	0.813	Agree
Internal and external forces	2.77	0.723	Agree

Personal attributes	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
A personal commitment towards my department/college	23	48.9	24	51.1	0	0.0	0	0.0	3.49	0.505	Strongly Agree
Serving the needs of students	33	70.2	13	27.7	0	0.0	0	0.0	3.72	0.455	Strongly Agree
Serving my colleagues	10	21.3	24	51.1	11	23.4	1	2.1	2.93	0.742	Agree

	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
Increasing the prestige and reputation of this particular program	15	31.9	27	57.4	4	8.5	1	2.1	3.19	0.680	Agree
Growing professionally in my department/college	16	34.0	14	29.8	13	27.7	4	8.5	2.89	0.983	Agree
Developing new knowledge/competencies	13	27.7	17	36.2	15	31.9	2	4.3	2.87	0.875	Agree
Expanding my current capacities/capabilities beyond research and teaching	13	27.7	15	31.9	13	27.7	5	10.6	2.83	1.028	Agree
Aligning and integrating my current research and teaching with program coordination work	6	12.8	14	29.8	18	38.3	8	17.0	2.45	0.996	Disagree
Institutional recognition and rewards	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
Gaining institutional recognition	6	12.8	14	29.8	18	38.3	6	12.8	2.57	1.025	Agree
Building my promotion	5	10.6	12	25.5	15	31.9	10	21.3	2.52	1.206	Agree

	F	%	F	%	F	%	F	%			
and tenure portfolio											
Having a reduction in teaching/research loads	4	8.5	12	25.5	15	31.9	12	25.5	2.37	1.162	Disagree
Earning departmental-level stipend for the program coordination work	3	6.4	9	19.1	17	36.2	12	25.5	2.39	1.256	Disagree
Earning institutional-level awards for program coordination work	1	2.1	8	17.0	17	36.2	18	38.3	1.96	1.032	Disagree

Working with others	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
Working with diverse people and stakeholders	12	25.5	28	59.6	4	8.5	1	2.1	3.17	0.709	Agree
Socially interacting with others	8	17.0	24	51.1	12	25.5	2	4.3	2.83	0.769	Agree

Compliance	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
Helping the program remain compliant with internal regulations	10	21.3	22	46.8	5	10.6	4	8.5	2.98	0.924	Agree
Helping the program remain compliant with external regulations	10	21.3	17	36.2	7	14.9	4	8.5	3.07	1.091	Agree

Benefits	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
I felt a sense of privilege by undertaking additional program coordination work and activities	6	12.8	20	42.6	14	29.8	5	10.6	2.60	0.863	Agree
I was able to increase my job security by undertaking additional program	2	4.3	9	19.1	17	36.2	15	31.9	2.09	1.062	Disagree

coordination work and activities									
I increased my self-efficacy as part of undertaking additional program coordination work and activities	6	12.8	20	42.6	14	29.8	5	10.6	2.60	0.863	Agree
I increased my professional and academic growth by undertaking additional program coordination work and activities	6	12.8	25	53.2	7	14.9	6	12.8	2.76	0.933	Agree
I increased my work autonomy by undertaking additional program coordination work and activities	3	6.4	13	27.7	22	46.8	7	14.9	2.27	0.809	Disagree
I received departmental/ college recognition by undertaking additional program coordination	2	4.3	15	31.9	19	40.4	9	19.1	2.22	0.823	Disagree

work and activities										
I increased my pay by undertaking additional program coordination work and activities	3	6.4	13	27.7	14	29.8	15	31.9	2.09	0.949	Disagree

Item	Gender	N	Mean	Std. Deviation	Mean Difference	T	Sig
Role expectations	Male	22	2.82	0.838	0.09	.384	.703
	Female	24	2.73	0.733			
Role overload	Male	22	2.33	0.765	0.18	.846	.402
	Female	24	2.16	0.654			
Academic program leadership and faculty colleagues	Male	22	3.08	0.492	0.06	.436	.665
	Female	24	3.14	0.439			
Evaluation and rewards	Male	22	2.95	0.689	0.39	1.662	.104
	Female	24	2.56	0.888			
Internal and external forces	Male	22	2.71	0.685	0.11	.494	.624
	Female	24	2.82	0.780			

	Mean	Std. Deviation	Answer
Personal attributes	3.04	0.513	Agree
Institutional recognition and rewards	2.36	0.881	Disagree
Working with others	3.00	0.632	Agree
Compliance	3.02	0.956	Agree
Benefits	2.37	0.581	Disagree

Challenges facing program coordinator	Strongly Agree		Agree		Disagree		Strongly Disagree		Mean	SD	Answer (trend)
	F	%	F	%	F	%	F	%			
The increase in the number of programs offered by our department /college	3	6.4	6	12.8	24	51.1	6	12.8	2.53	1.217	Agree
The increase in internal or/and external	13	27.7	15	31.9	9	19.1	5	10.6	2.95	1.077	Agree

program-level requireme nts (such as assessment /accreditati on)											
The decline in the number of full-time faculty capable of carrying out some of the program coordinati on roles	17	36.2	14	29.8	10	21.3	3	6.4	3.07	0.986	Agree
The lack of institutiona l level rewards for program coordinati on work and activities	17	36.2	15	31.9	11	23.4	2	4.3	3.04	0.903	Agree

										Agree
Departmental/institutional stigma among faculty and administrators regarding academic program coordination work (e.g. less important)	7	14.9	15	31.9	15	31.9	7	14.9	2.56	1.013	

		Sum of Squares	df	Mean Square	F	Sig.
Role expectations	Between Groups	.052	1	.052	.086	.771
	Within Groups	27.221	45	.605		
	Total	27.273	46			
Role overload	Between Groups	.046	1	.046	.091	.765
	Within Groups	22.693	45	.504		
	Total	22.739	46			
Academic program leadership and faculty colleagues	Between Groups	.218	1	.218	1.001	.322
	Within Groups	9.816	45	.218		

		Sum of Squares	df	Mean Square	F	Sig.
Evaluation and rewards	Between Groups	.032	1	.032	.047	.830
	Within Groups	30.394	45	.675		
	Total	30.426	46			
Internal and external forces	Between Groups	.000	1	.000	.000	.991
	Within Groups	24.024	45	.534		
	Total	24.024	46			

(The first row shown is "Total 10.034 46" continuing from a previous table.)

Item		Sum of Squares	df	Mean Square	F	Sig.
Role expectations	Between Groups	1.566	3	.522	.873	.462
	Within Groups	25.707	43	.598		
	Total	27.273	46			
Role overload	Between Groups	.848	3	.283	.556	.647
	Within Groups	21.891	43	.509		
	Total	22.739	46			
Academic	Between Groups	.685	3	.228	1.050	.380

		Sum of Squares	Df	Mean Square	F	Sig.
program leadership and faculty colleagues	Within Groups	9.349	43	.217		
	Total	10.034	46			
Evaluation and rewards	Between Groups	3.713	3	1.238	1.992	.129
	Within Groups	26.712	43	.621		
	Total	30.426	46			
Internal and external forces	Between Groups	1.897	3	.632	1.229	.311
	Within Groups	22.127	43	.515		
	Total	24.024	46			

Item		Sum of Squares	Df	Mean Square	F	Sig.
Role expectations	Between Groups	.068	2	.034	.055	.946
	Within Groups	27.205	44	.618		
	Total	27.273	46			
Role overload	Between Groups	2.216	2	1.108	2.375	.105

		Sum of Squares	Df	Mean Square	F	Sig.
	Within Groups	20.523	44	.466		
	Total	22.739	46			
Academic program leadership and faculty colleagues	Between Groups	.600	2	.300	1.398	.258
	Within Groups	9.434	44	.214		
	Total	10.034	46			
Evaluation and rewards	Between Groups	.295	2	.147	.215	.807
	Within Groups	30.131	44	.685		
	Total	30.426	46			
Internal and external forces	Between Groups	1.393	2	.697	1.354	.269
	Within Groups	22.631	44	.514		
	Total	24.024	46			

Item		Sum of Squares	Df	Mean Square	F	Sig.
Role expectations	Between Groups	1.279	2	.639	1.082	.348
	Within Groups	25.994	44	.591		

	Total	27.273	46			
Role overload	Between Groups	2.882	2	1.441	3.193	.051
	Within Groups	19.857	44	.451		
	Total	22.739	46			
Academic program leadership and faculty colleagues	Between Groups	.138	2	.069	.306	.738
	Within Groups	9.896	44	.225		
	Total	10.034	46			
Evaluation and rewards	Between Groups	2.172	2	1.086	1.691	.196
	Within Groups	28.253	44	.642		
	Total	30.426	46			
Internal and external forces	Between Groups	.580	2	.290	.544	.584
	Within Groups	23.444	44	.533		
	Total	24.024	46			

Item		Sum of Squares	Df	Mean Square	F	Sig.
Role expectations	Between Groups	1.375	3	.458	.814	.493
	Within Groups	23.647	42	.563		
	Total	25.022	45			
Role overload	Between Groups	1.730	3	.577	1.299	.287
	Within Groups	18.650	42	.444		
	Total	20.380	45			
Academic program leadership and faculty colleagues	Between Groups	.029	3	.010	.042	.988
	Within Groups	9.543	42	.227		
	Total	9.572	45			
Evaluation and rewards	Between Groups	.277	3	.092	.136	.938
	Within Groups	28.511	42	.679		
	Total	28.788	45			
Internal and external forces	Between Groups	.305	3	.102	.182	.908
	Within Groups	23.521	42	.560		

	Total	23.826	45			

Item		Sum of Squares	df	Mean Square	F	Sig.
Role expectations	Between Groups	2.915	2	1.458	2.633	.083
	Within Groups	24.358	44	.554		
	Total	27.273	46			
Role overload	Between Groups	2.344	2	1.172	2.528	.091
	Within Groups	20.395	44	.464		
	Total	22.739	46			
Academic program leadership and faculty colleagues	Between Groups	.473	2	.236	1.088	.346
	Within Groups	9.561	44	.217		
	Total	10.034	46			
Evaluation and rewards	Between Groups	5.269	2	2.635	4.608	.015
	Within Groups	25.156	44	.572		
	Total	30.426	46			

Item		Sum of Squares	df	Mean Square	F	Sig.
Internal and external forces	Between Groups	.127	2	.063	.117	.890
	Within Groups	23.897	44	.543		
	Total	24.024	46			
Item		Sum of Squares	df	Mean Square	F	Sig.
Role expectations	Between Groups	1.987	3	.662	1.126	.349
	Within Groups	25.286	43	.588		
	Total	27.273	46			
Role overload	Between Groups	2.593	3	.864	1.845	.153
	Within Groups	20.146	43	.469		
	Total	22.739	46			
Academic program leadership and faculty colleagues	Between Groups	.456	3	.152	.682	.568
	Within Groups	9.578	43	.223		
	Total	10.034	46			
Evaluation and rewards	Between Groups	3.470	3	1.157	1.845	.153
	Within Groups	26.956	43	.627		

Item		Sum of Squares	df	Mean Square	F	Sig.
	Total	30.426	46			
Internal and external forces	Between Groups	1.458	3	.486	.926	.436
	Within Groups	22.566	43	.525		
	Total	24.024	46			
Item		Sum of Squares	df	Mean Square	F	Sig.
Role Expectations	Between Groups	2.921	4	.730	1.537	.212
	Within Groups	17.577	37	.475		
	Total	20.498	41			
Role overload	Between Groups	4.811	4	1.203	2.544	.056
	Within Groups	17.498	37	.473		
	Total	22.309	41			
Academic program leadership and faculty colleagues	Between Groups	2.360	4	.590	3.064	.028
	Within Groups	7.123	37	.193		
	Total	9.483	41			
Evaluation and	Between Groups	4.316	4	1.079	1.678	.176

Item		Sum of Squares	df	Mean Square	F	Sig.
rewards	Within Groups	23.785	37	.643		
	Total	28.101	41			
Internal and external forces	Between Groups	2.125	4	.531	1.029	.405
	Within Groups	19.094	37	.516		
	Total	21.220	41			
Item		Sum of Squares	df	Mean Square	F	Sig.
Personal Attributes	Between Groups	.554	1	.554	2.159	.149
	Within Groups	11.548	45	.257		
	Total	12.102	46			
Institutional recognition and rewards	Between Groups	.184	1	.184	.232	.632
	Within Groups	34.746	44	.790		
	Total	34.930	45			
Working with others	Between Groups	.089	1	.089	.219	.642
	Within Groups	17.911	44	.407		
	Total	18.000	45			

Compliance	Between Groups	.310	1	.310	.333	.567
	Within Groups	37.167	40	.929		
	Total	37.476	41			
Benefits	Between Groups	.151	1	.151	.440	.511
	Within Groups	14.718	43	.342		
	Total	14.869	44			

Item	Gender	N	Mean	Std. Deviation	Mean Difference	T	Sig
Personal attributes	Male	22	2.97	0.471	0.11	.707	.483
	Female	24	3.08	0.544			
Institutional recognition and rewards	Male	21	2.37	0.872	0.00	.018	.986
	Female	24	2.37	0.923			
Working with others	Male	21	3.10	0.515	0.14	.734	.467
	Female	24	2.96	0.706			
Compliance	Male	21	2.90	1.091	0.24	.803	.426
	Female	21	3.14	0.808			

Benefits	Male	21	2.40	0.604	0.03	.195	.846
	Female	23	2.37	0.581			

Item		Sum of Squares	Df	Mean Square	F	Sig.
Personal attributes	Between Groups	1.859	3	.620	2.601	.064
	Within Groups	10.244	43	.238		
	Total	12.102	46			
Institutional recognition and rewards	Between Groups	1.324	3	.441	.551	.650
	Within Groups	33.606	42	.800		
	Total	34.930	45			
Working with others	Between Groups	.360	3	.120	.285	.836
	Within Groups	17.640	42	.420		
	Total	18.000	45			
Compliance	Between Groups	2.005	3	.668	.716	.549
	Within Groups	35.471	38	.933		

Item		Sum of Squares	Df	Mean Square	F	Sig.
	Total	37.476	41			
Benefits	Between Groups	1.626	3	.542	1.678	.187
	Within Groups	13.243	41	.323		
	Total	14.869	44			
Role satisfaction	Between Groups	.770	3	.257	1.212	.319
	Within Groups	7.622	36	.212		
	Total	8.392	39			
Item		Sum of Squares	Df	Mean Square	F	Sig.
Personal attributes	Between Groups	1.961	2	.980	4.253	.020
	Within Groups	10.142	44	.230		
	Total	12.102	46			
Institutional recognition and rewards	Between Groups	1.064	2	.532	.676	.514
	Within Groups	33.866	43	.788		
	Total	34.930	45			
Working with	Between Groups	.465	2	.233	.570	.569

others	Within Groups	17.535	43	.408		
	Total	18.000	45			
Compliance	Between Groups	3.026	2	1.513	1.713	.194
	Within Groups	34.450	39	.883		
	Total	37.476	41			
Benefits	Between Groups	.831	2	.415	1.243	.299
	Within Groups	14.038	42	.334		
	Total	14.869	44			

Item		Sum of Squares	Df	Mean Square	F	Sig.
Personal attributes	Between Groups	.030	2	.015	.056	.946
	Within Groups	12.072	44	.274		
	Total	12.102	46			
Institutional recognition and rewards	Between Groups	.814	2	.407	.513	.602
	Within Groups	34.115	43	.793		
	Total	34.930	45			
Working with others	Between Groups	1.133	2	.567	1.445	.247
	Within Groups	16.867	43	.392		
	Total	18.000	45			
Compliance	Between Groups	4.261	2	2.131	2.502	.095
	Within Groups	33.215	39	.852		
	Total	37.476	41			
Benefits	Between Groups	.635	2	.318	.937	.400
	Within Groups	14.234	42	.339		

Item		Sum of Squares	Df	Mean Square	F	Sig.
	Total	14.869	44			
Personal attributes	Between Groups	.672	3	.224	.839	.480
	Within Groups	11.216	42	.267		
	Total	11.889	45			
Institutional recognition and rewards	Between Groups	1.492	3	.497	.680	.569
	Within Groups	29.980	41	.731		
	Total	31.472	44			
Working with others	Between Groups	.788	3	.263	.666	.578
	Within Groups	16.189	41	.395		
	Total	16.978	44			
Compliance	Between Groups	1.876	3	.625	.668	.577
	Within Groups	34.624	37	.936		
	Total	36.500	40			
Benefits	Between Groups	2.697	3	.899	2.983	.043

Item		Sum of Squares	Df	Mean Square	F	Sig.
	Within Groups	12.054	40	.301		
	Total	14.751	43			
Personal attributes	Between Groups	.112	2	.056	.206	.814
	Within Groups	11.990	44	.272		
	Total	12.102	46			
Institutional recognition and rewards	Between Groups	4.861	2	2.430	3.475	.040
	Within Groups	30.069	43	.699		
	Total	34.930	45			
Working with others	Between Groups	.126	2	.063	.152	.860
	Within Groups	17.874	43	.416		
	Total	18.000	45			
Compliance	Between Groups	.669	2	.334	.354	.704
	Within Groups	36.808	39	.944		
	Total	37.476	41			

Item		Sum of Squares	Df	Mean Square	F	Sig.
Benefits	Between Groups	.344	2	.172	.498	.611
	Within Groups	14.525	42	.346		
	Total	14.869	44			
Item		Sum of Squares	Df	Mean Square	F	Sig.
Personal attributes	Between Groups	.332	3	.111	.404	.751
	Within Groups	11.771	43	.274		
	Total	12.102	46			
Institutional recognition and rewards	Between Groups	2.628	3	.876	1.139	.344
	Within Groups	32.302	42	.769		
	Total	34.930	45			
Working with others	Between Groups	.865	3	.288	.707	.553
	Within Groups	17.135	42	.408		
	Total	18.000	45			
Compliance	Between Groups	1.098	3	.366	.382	.766
	Within Groups	36.378	38	.957		

Item		Sum of Squares	Df	Mean Square	F	Sig.
	Total	37.476	41			
Benefits	Between Groups	1.543	3	.514	1.583	.208
	Within Groups	13.326	41	.325		
	Total	14.869	44			
Role satisfaction	Between Groups	.422	3	.141	.635	.597
	Within Groups	7.971	36	.221		
	Total	8.392	39			
Item		Sum of Squares	Df	Mean Square	F	Sig.
Personal attributes	Between Groups	.518	4	.130	.472	.756
	Within Groups	10.168	37	.275		
	Total	10.686	41			
Institutional recognition and rewards	Between Groups	2.097	4	.524	.675	.613
	Within Groups	28.722	37	.776		
	Total	30.819	41			
Working with	Between Groups	.628	4	.157	.367	.831

others	Within Groups	15.848	37	.428			
	Total	16.476	41				
Compliance	Between Groups	3.081	4	.770	.785	.543	
	Within Groups	32.392	33	.982			
	Total	35.474	37				
Benefits	Between Groups	1.348	4	.337	1.060	.391	
	Within Groups	11.121	35	.318			
	Total	12.469	39				
Role satisfaction	Between Groups	.607	4	.152	.682	.610	
	Within Groups	6.905	31	.223			
	Total	7.512	35				

Item	Gender	N	Mean	Std. Deviation	Mean Difference	T	Sig
Challenges to program coordination efforts	Male	21	2.70	0.634	.23	1.101	.277
	Female	23	2.93	0.741			

Item		Sum of Squares	Df	Mean Square	F	Sig.
Challenges to program coordination efforts	Between Groups	.208	3	.069	.138	.937
	Within Groups	20.632	41	.503		
	Total	20.840	44			

Item		Sum of Squares	Df	Mean Square	F	Sig.
Challenges to program coordination efforts	Between Groups	.985	2	.492	1.042	.362
	Within Groups	19.855	42	.473		
	Total	20.840	44			

Item		Sum of Squares	Df	Mean Square	F	Sig.
Challenges to program coordination efforts	Between Groups	.493	2	.247	.509	.605
	Within Groups	20.347	42	.484		
	Total	20.840	44			

Item		Sum of Squares	Df	Mean Square	F	Sig.
Challenges to program coordination efforts	Between Groups	.759	3	.253	.509	.678
	Within Groups	19.889	40	.497		

Item		Sum of Squares	Df	Mean Square	F	Sig.
	Total	20.648	43			
Item		Sum of Squares	Df	Mean Square	F	Sig.
Challenges to program coordination efforts	Between Groups	2.087	2	1.043	2.337	.109
	Within Groups	18.753	42	.447		
	Total	20.840	44			
Item		Sum of Squares	Df	Mean Square	F	Sig.
Challenges to program coordination efforts	Between Groups	3.544	3	1.181	2.800	.052
	Within Groups	17.296	41	.422		
	Total	20.840	44			
Item		Sum of Squares	Df	Mean Square	F	Sig.
Challenges to program coordination efforts	Between Groups	1.709	4	.427	.818	.523
	Within Groups	18.291	35	.523		
	Total	20.000	39			

Additional Excel tables:
Description of program coordination appointment:

Description of program coordination appointment		%
A faculty member and the Director of Undergraduate Studies	16	34.04%
A faculty member and the Director of Graduate Studies	18	38.30%
A faculty member and the Director of Undergraduate and Graduate Studies	0	0.00%
A faculty member with an official academic program (s) coordination designation	10	21.28%
A faculty member without an official academic program (s) coordination designation	1	2.13%
An academic program coordinator	1	2.13%
Other: faculty member and department chair	1	2.13%
	47	100.00%

Program fields that best describes the type of programs participants coordinated during the 2020-2021 academic year:

Program fields		%
Humanities (e.g. History, Languages and Literature, Linguistics, Philosophy, Religion, Visual Arts)	5	10.64%
Social Sciences (e.g. Anthropology, Economics, Geography, Political Science, Psychology, Sociology)	8	17.02%
Natural Sciences (e.g. Biology, Chemistry, Earth Sciences, Physics, Space Sciences)	7	14.89%
Formal Sciences (e.g. Computing Sciences, Mathematics, Statistics, Systems Science)	1	2.13%
Professions and Applied Sciences (e.g. Agriculture, Business, Education, Engineering, Health, Medicine, Nursing, Social Work)	25	53.19%
Missing entry	1	2.13%
	47	100%

APPENDIX 5. CITI Program Completion

Completion Date 07-Oct-2020
Expiration Date 07-Oct-2023
Record ID 38851326

This is to certify that:

Samer Jan

Has completed the following CITI Program course:

Not valid for renewal of certification through CME. Do not use for TransCelerate mutual recognition (see Completion Report).

Human Research (Curriculum Group)
Group 2 Social/Behavioral Investigators and Key Personnel (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

University of Kentucky

Verify at www.citiprogram.org/verify/?wa9e8f91e-b788-4f55-b096-7dd2b4b6c9da-38851326

Completion Date 15-Dec-2021
Expiration Date 15-Dec-2022
Record ID 43519448

This is to certify that:

Samer Jan

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Responsible Conduct of Research
(Curriculum Group)
Responsible Conduct of Research (Basic Course)
(Course Learner Group)
2 - Refresher
(Stage)

Under requirements set by:

University of Kentucky

Verify at www.citiprogram.org/verify/?we726f3e4-6d80-4bfd-b3f4-89c7c5c5e267-43519448

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