

---

## University Research Centers: Heuristic Categories, Issues, and Administrative Strategies

**Kelly Hall, PhD**

Pathology Faculties International, LLC

830 Xenia Avenue

Yellow Springs, OH 45387

Tel: (937) 269-3028

Email: kellyhallphd@pathologyfaculties.com

### Author's Note

This paper includes research that was originally published as the author's doctoral dissertation, *Profile and Distinguishing Characteristics of Educational Centers in the United States* (Hall, 2005).

### Abstract

University-based research centers can bring prestige and revenue to the institutions of higher education with which they are affiliated. Collaborating with corporations, units of government, and foundations, centers provide services to organizational leaders, policy makers, and communities. University research centers continue to increase in number and influence. Despite these increases and unique attributes of centers, center leaders are subject to cultural norms, political moves, and traditional flows of resources within their institutions. Survey and secondary data analyses of 176 educational centers confirmed and provided a ranking for characteristics associated with Ikenberry and Friedman's standard, adaptive, and shadow heuristic introduced in 1972. Interviews with 12 center directors yielded a list of center administrative issues and strategies to address issues of planning, leadership, institutional relations, funding, and management. Center and university leaders can use findings to categorize and better understand the organizational behavior of centers to improve effectiveness.

*Keywords:* university research center, research center administration, research center strategy, research center planning, research center funding, research center management, research center assessment, research center evaluation

### Introduction

University-based research centers can bring prestige and revenue to the institutions with which they are affiliated (Brint, 2005; Feller, 2002). Collaborating with corporations, governments, and foundations, centers provide services to organizational leaders, policy makers, and communities. Growth in the number of centers since the 1950s reflects their increased presence in the university setting. There are 17,000 research centers in the US and Canada, an increase of 1,500 since 2009, when there were 15,500 (Miskelly, 2011; Wood, 2009). Growth is estimated at a rate between 5% and 10% a year since 1965, when 3,500

centers were first identified (Palmer & Kruzas, 1965). In the United States, unlike in other nations, most research organizations are housed at institutions of higher education and are not independent (Orlans, 1972).

For the purpose of this study, centers are defined as non-department entities, encompassing a broad range of sub-organizational structures in higher education: bureaus, clinics, institutes, laboratories, programs, and units. Here, the term center is used to connote all forms of organized units that may exist beyond and between academic departments (Ikenberry & Friedman, 1972). Beyond research and training as their primary services, centers vary across a number of dimensions: size of support and research staff; the position of faculty versus professional staff researchers; level of separation from academic departments; degree of integration with the university; funding mix; extent of inter- or multidisciplinary focus; and relative emphasis on applied research (Vest, 2005; Klein, 1996; Stahler & Tash, 1994). Universities considering creating or evaluating research centers are urged to plan carefully before launching or maintaining them. A number of inter-related issues affect center success. This article presents survey and interview data to illuminate center types, issues, and strategies used to address issues. Center stakeholders can use findings to create policy regarding center start-up and maintenance. Center type categories provide a frame in which to place different types of centers to serve different functions within a university system. Resources could be allocated based on the promise and purpose of the center as aligned with the university's mission. University and center policies and priorities could be informed by research findings presented.

### Heuristic Categories

Ikenberry and Friedman (1972) proposed a heuristic to categorize university-based centers into three types: standard, adaptive, and shadow. Types were distinguished by four characteristics: (a) the ability to store resources; (b) the degree to which procedures are specified; (c) stability in goals and tasks; and (d) stability of resources to achieve goals and tasks. For this study, these and characteristics available from *The Research Centers Directory* (2002) were operationalized into survey questions to confirm and rank heuristic characteristics. Survey responses were received from 176 of 296 (60%) educational research center directors to whom the survey was sent. Cramer's V was used to calculate nominal variable coefficients of association based on center type for each characteristic. The result was a rank of characteristics that differentiate between center types. Table 1 presents ranked characteristics. Note that nine heuristic characteristics are better at distinguishing among center types than six directory characteristics. Nine heuristic variables were strongly associated at varying levels of strength based on a moderate interpretation of the Cramer's V. Six other variables, operationalized from *The Research Centers Directory*, were weak to moderately strong as coefficients measuring characteristics among center types. Note that the moderate strength of having a presence on the World Wide Web is a distinguishing characteristic among center types. The Internet is a new phenomenon since Ikenberry and Friedman's heuristic was developed that has affected centers' reach into the external environments they serve. After 40 years, Ikenberry and Friedman's heuristic categories are

still valuable as a way to categorize center types. Standard, adaptive, and shadow designations can be used to categorize different types of center. A description with examples follows.

*Table 1:*

Center Characteristics Ranked by Association Value for Distinguishing among Center Types

Strength and Characteristic	Heuristic (H) or Directory (D) Variable	V	Rank
<b>Extremely Strong</b>			
Stability of financial resources	H	.504	1
Employment of administrative/professional personnel	H	.496	2
<b>Very Strong</b>			
Employment of clerical personnel	H	.474	3
Employment of faculty personnel	H	.387	4
Policies and procedures in addition to institutional ones	H	.368	5
<b>Strong</b>			
Employment of student personnel	H	.306	6
<b>Moderately Strong</b>			
Permanent allocation of space	H	.298	7
Active advisory committee	H	.297	8
Publication of training materials	D	.297	8
Presence on the World Wide Web	D	.289	10
<b>Moderate</b>			
Locus within institution	D	.242	11
Written mission and goals	H	.234	12
Federal designation	D	.233	13
Institutional financial support	D	.220	14
<b>Weak</b>			
Federal government support	D	.174	15

### *Standard Type*

A standard center or institute has stability in goals and resources to house, equip, and support employment of a full cadre of administrative/professional, clerical, faculty, and student personnel. Financial resources are from diverse streams including institutional and federal funding (Brint, 2005). A standard center holds status similar to other academic or administrative units within an organization of higher education, such as a computing lab or admissions office, occupying permanent allocation of space and sometimes an entire building. A standard center has its own advisory board and its own policies and procedures

that its personnel follow in addition to university governance guidelines. Based on these characteristics, two examples of standard type centers were selected—the National Center for Rural Health Professions and Learning Systems Institute. The Learning Systems Institute was selected as a standard type based on survey data and the National Center for Rural Health Professions was selected based on the author's personal knowledge about its characteristics, having served on its founding national advisory board.

**National Center for Rural Health Professions.** In 1998, the Director of the Rural Medical Education Program, Michael Glasser exclaimed to me from across a small hospital conference room in rural Illinois, “We should start a center!” Dr. Glasser was the faculty champion with the vision needed for center start-up. Today, the National Center for Rural Health Professions (NCRHP) serves as the centerpiece program for University of Illinois College of Medicine Rockford's campus, where Glasser now serves as assistant dean. The campus is undergoing a major building transformation after a campaign that leveraged federal, state, and local dollars to raise capital using the national center as a signature program. NCRHP was granted center status by the Illinois Board of Higher Education in 2003 after three years of holding temporary designation.

Statewide, the purpose of the NCRHP is to meet the health care needs of rural Illinois residents and communities. Nationally, the center serves as a place for research and development of programs effectively training and retaining rural healthcare practitioners. NCRHP is the lynchpin of inter-disciplinary projects involving multiple health professions: dentistry, medicine, nursing, pharmacy, public health, and social work. The center employs 12 staff members and is guided by a 23-member advisory board comprised of the dean; representatives of partner disciplines; state agency and network representatives; outreach, recruitment, and retention specialists; and a hospital administrator. NCRHP houses three programs that focus on five activities: interdisciplinary education, faculty development, community outreach, research and evaluation, and policy.

**Learning Systems Institute.** Florida State University's Learning Systems Institute's History webpage describes an exemplar of a standard center.

Dating back four decades, the Learning Systems Institute (LSI) has evolved over the years to adapt to changes in technology, educational trends and client needs. The institute began as two separate organizations launched in the late 1960s on Florida State University's campus. The Center for Educational Technology helped institutions outside the university with training needs, while the Division of Instructional Research and Service provided similar services to Florida State faculty. In the mid 1970s the two organizations combined to create a more robust LSI.

LSI founder Robert Morgan served as the organization's director for 30 years. Under his leadership, the institute attracted some \$150 million in projects and earned a reputation as an expert manager of international development projects related to education. Among the largest of these was a U.S. Agency for International

Development project to revamp South Korea's public school system, a highly successful multi-year, \$60-million effort.

Morgan drew top talent to the LSI, including renowned educational psychologists Robert Gagne and Robert Branson. As the organization evolved, these and other faculty designed and conducted major training for the U.S. Army, developed educational technology for several foreign countries, and pioneered Florida State's distance learning, among other efforts. In 2001, Laura Lang was named LSI director. Building on Morgan's legacy, she has continued to move the institute forward, expanding the institute's range in K-12 education and the study of expert performance. Between 2000 and 2009, contract and grants funding increased significantly, spurred in part by the creation of two major educational research centers (the Florida Center for Reading Research and the Florida Center for Research in Science, Technology, Engineering and Mathematics) entrusted to LSI by the Florida Legislature.

Standard centers are easily recognized and are perceived not only as part of the institutions with which they are affiliated but also as separate organization entities. Adaptive centers are less easily recognized as viable organizational units beyond the universities with which they are affiliated.

### *Adaptive Type*

"Adaptive institutes undergo a continuous process of redefining their goals, initiating and terminating projects, securing and releasing staff: in short, adapting to a persistent instability" (Ikenberry & Friedman, 1972, p. 36). Using resources not *owned* by the center, faculty and other personnel can be configured to meet the needs of a specific contracted project or service provision: for example, to respond to a state or federal request for research or to provide educational psychology or curriculum development services. Given their resource dependence (Pfeffer & Salancik, 1978), adaptive centers might lay dormant from time to time, thus becoming shadow centers. With the advent of the World Wide Web, adaptive centers can appear bigger and more stable than they truly are. The Center for the Study of Education Policy and Fitz Center for Leadership in Community are two examples of adaptive centers. The Center for the Study of Education Policy was selected as an adaptive type based on survey data and the Fitz Center for Leadership in Community was selected based on the author's personal knowledge about its characteristics.

**Center for the Study of Education Policy.** The Center for the Study of Education Policy at Illinois State University is an example of how a departmental unit can use an adaptive center "umbrella" to house and showcase research, professional development, service, publication, and database products and services. Established in 1960 to study public school financing, the center now houses activities related not only to finance but to current and emerging policy issues affecting the whole education continuum: pre-kindergarten through grade 16 and beyond. Attributes such as the publication of several journals, organization of regular conferences within the center, and the number of people associated with the center—

two co-directors, several research associates, and 31 faculty or staff affiliates—create the look and feel of a standard center. The Center for the Study of Education Policy is not a separate entity with its own personnel structure. Rather, the center serves as a place to house ongoing faculty and independent center projects, expanding and contracting to meet departmental and client needs.

**Fitz Center for Leadership in Community.** The Fitz Center for Leadership in Community at the University of Dayton initiates and sustains partnerships for community building and leadership opportunities for students. Directed by Dick Ferguson, the center is named for Brother Ray Fitz, who serves as Ferree Professor of Social Justice after having served 23 years in the presidential post. Based in the College of Arts and Sciences, the Fitz Center offers six civic leadership development opportunities that move students along a service-learning leadership continuum. These six programs were developed over a number of years as the Fitz Center responded to community and university opportunities and needs. The Fitz Center is an example of how centers sometimes serve as a unit to coordinate multi-disciplinary student learning outcomes that require formal collaboration with external stakeholders.

Both adaptive center examples presented—the Fitz Center and Center for the Study of Education Policy—operate as extensions for academic functions coordinating research and student learning opportunities across departments. Adaptive centers function at the periphery between academic departments and external organizations. Shadow centers, presented next, are less likely to have this coordinating feature.

### *Shadow Type*

Shadow centers have no staff, space, budget, or current observable accomplishments. Sometimes called *paper centers* or institutes, shadow centers might exist to provide a forum in which teams of faculty from different disciplines can work or to monitor a cross-departmental function. Shadow centers might also exist to provide less commendable functions:

. . . the provision of comfortable sinecures for faculty members and administrators the institution wishes to move out of the mainstream; the satisfaction of private and solely personal faculty ambitions; the luxury of faculty fantasy; and a means for institutional and self deception. (Ikenberry & Friedman, 1972, p. 39)

The Applied Social Research Unit and Smart Communities are examples of shadow center types. Smart Communities was categorized as a shadow center through response to the study survey and the Applied Social Research Unit, a center in which the author worked for a decade, and is categorized as a shadow center based on its current characteristics.

**Applied Social Research Unit.** The Applied Social Research Unit of Illinois State University is an example of how centers can move between center types over a number of years based on inter-related internal and external factors influencing center operations. Once a standard center with multiple revenue streams, permanent office space for 10, and

employment of full-time administrative and graduate assistant personnel, the Applied Social Research Unit became an adaptive center as revenue streams dried up. Personnel changes resulted. A flooding and then demolition of the professional office building the unit occupied forced the relocation to one of the residential properties the university had purchased. These factors, combined with internal competition for resources support from other centers, led to the Applied Social Research Unit turning into a shadow center. Core staff complete a couple of ongoing projects annually. With a cadre of professional faculty and staff who could be readily engaged, the Applied Social Research Unit is poised to adapt and fulfill project consultancies and contracts for external agencies that are consistent with its mission.

**Smart Communities.** San Diego State University's Smart Communities center is an example of how the Internet has changed the face of centers. An endowed faculty member, John Eger, is not only passionate about building creative and innovative communities, but is also a media communications expert. Eger uses Internet and other media to promote an idea he champions and to offer his expertise in service to communities. He has no interest in hiring permanent staff or acquiring university office space. Eger's interest lies in the long-term engagement of communities to effect positive change. Smart Communities is an example of how a center structure can be used to "shadow" a concept and consultancy services of a faculty member.

### *Advantages and Disadvantages of Center Types*

Each center type operates with structural and functional advantages and disadvantages. Standard centers function as institutionalized departments with loyal personnel and recognition as viable units. Compared to the bureaucratic inflexibility of standard centers, adaptive centers have the advantage of being flexible organizational units. Their survival depends on being responsive and changing to meet societal or market needs. Adaptive centers however, lack access to permanent personnel and resources. Shadow centers have no permanent resources or staff but may be better positioned than a department to marshal resources for special projects. Understanding advantages and disadvantages across the center type continuum, combined with an understanding of issues and strategies used to address issues, presented next, will help stakeholders designate and evaluate center functions and structures to meet client and affiliated institutional needs.

### **Administrative Issues and Strategies**

Interviews with 12 directors of education-focused centers were held to gather information about issues and strategies to address issues of center administration. Selection criteria for formal interviewees included directors' willingness to be interviewed as indicated on their returned survey, having 5 or more years of experience as center director, and directors who were one of the first 60 respondents to the survey described above. Hence, selection criteria included principles of both purposeful and convenience sampling methods (Maykut & Morehouse, 1998). Of the 12 center directors interviewed, 2 were directors of shadow centers, 4 represented adaptive centers, and 6 were from standard centers. Those

# Articles

directors interviewed had been affiliated with their centers for an average of 13 years. Table 2 presents 5 issues and 23 related strategies coded from interviews. As with survey data, Cramer's V was calculated for each strategy as a way to rank strategies.

Issues that emerged fell into these categories: planning, leadership, institutional, funding, and center management.

*Table 2: Categories and Ranks of Administrative Issues and Strategies*

<b>Issue Categories and Related Strategies</b>	<b>V</b>	<b>Rank</b>
<b>Planning Strategies</b>		
Concentrating on the center's mission	.85	1
Holding conferencing events	.64	6
Doing applied work	.61	7
Meeting requirements and standards of university approval and review	.56	18
<b>Leadership Strategies</b>		
Holding a broad spectrum vision of what could be	.71	2
Making leadership transition within center	.58	8
Balancing multiple roles	.56	18
Being a founding director	.55	21
<b>Institutional Strategies</b>		
Working beyond traditional faculty roles	.71	2
Limiting commitments to university committee activities	.56	18
Garnering support from higher administration	.53	23
<b>Funding Strategies</b>		
Being involved with federal funders	.69	4
Maintaining operations during times of dwindling funding	.58	8
Being self-supporting	.58	8
Relationship building	.58	8
Writing grants	.54	22
<b>Management Strategies</b>		
Using or promoting available technology	.64	5
Managing projects: accountability, deadlines, priorities	.58	8
Employing a core staff	.58	8
Creating a cooperative work environment	.58	8
Delegating work within the center	.58	8
Hiring quality people	.58	8
Mentoring student workers	.58	8

## *Planning*

Planning is the most important topic of center administration. The longevity of centers is directly related to their ability to adapt, and so plans must be flexible and must allow a center to change. At the same time, centers should remain true to their vision. A dynamic mission statement helps keep centers actively focused on their identified niche.

Concentrating on mission, successful center directors are able to build capacity through niche specialization as recommended by Leslie and Fretwell (1996). Focusing on a center's mission rather than on creating a formalized planning document coincides with the "soft" planning approach (Tornatzky, Gray, & Geisler, 1998) that is part of an embedded "smart structure" (Clark, 1998, p. 77). This serves to monitor needs and to adapt to university-based entrepreneurial units such as research centers. A director of an adaptive center observed, "We spend our time surviving and recreating ourselves." External and internal constituents must be addressed at all points of the planning process.

By finding a niche and continually assessing client needs, the center is better able to make a place for itself within institutional guidelines. Directors report directing evaluation primarily toward their external environments and clients by conducting regular needs assessments. Defining the appropriate niche can guide marketing plans and attract faculty as well as clients. Conferences and training workshops are also a way for a center to brand itself relevant its affiliate institution of higher education.

Aligning center activities with university expectations is recommended not only by center directors interviewed but by authors who have addressed center functions (Perlman, Gueths, & Weber, 1988; Friedman et al., 1982). Holding conferencing events and doing applied work are direct services (Veres, 1988) that not only maximize institutional prestige but also support scholarly activities (Matkin, 2001; Slaughter & Leslie, 1997; Lindlof, 1995). Support of the scholarly core is recommended by center directors interviewed and by seminal authors on research centers, R. S. and R. C. Friedman (1984). Planning such conferences and seeking out cutting edge projects—applied research projects and projects that promote technology—are essential to the life of a center. Advisory boards are useful for testing project ideas. Standard centers have standing advisory boards, but boards can be informally established to help adaptive and shadow centers plan their work and work their plan.

## *Leadership*

Centers need an entrepreneurial champion with vision and passion for their purpose (Clark, 1998; Friedman & Friedman, 1977; Kerr, 1998; Perlman, Gueths, & Weber, 1988). Center leaders balance multiple roles, carefully navigating their work within the institution by dealing with director employment issues, and by collaborating with higher administration, their affiliated departments, other departments, faculty, and institutional systems. Connected to the core of their center, these individuals are often the founders of the centers they lead. "This is my baby!" exclaimed one interviewee. Promoting the mission of

the center requires four skill sets in communication, academic expertise, time management, and administration.

Center leaders come from a variety of backgrounds, but agree that individual vision and passion drives their entrepreneurial behavior and ability to use skills to administer their centers. Center leaders must be able to delegate, provide a strong sense of direction, and focus on the task at hand while still being willing to shift gears.

Flexibility is especially crucial in adaptive and shadow centers for which survival of the center is the focus. Role strain is common in center work (Boardman & Bozeman, 2007), but is more likely present in adaptive and shadow centers, in which directors consider themselves first as faculty members with teaching and research responsibilities, and second as center leaders. This leads to a situation in which leaders in shadow and adaptive centers have shorter tenure in their center position than directors of standard centers who are founders and keepers of their institutionalized center roles.

### *Institutional Support*

Centers need university support in terms of mission, money, and space (Fink, 2004). The definition of support varies between center types. Standard center directors define support more in terms of mission and money, while adaptive centers define support more in terms of people power and other tangible resources such as space. The politics of garnering support from higher administration to work beyond faculty roles involves compromise, e.g., between centers' ability to offer "additional visibility to a defined area of study important to the university" (Friedman & Friedman, 1984, p. 27) and academic traditions that support discipline-based faculty publication and funding (Clark, 1998). Interactions between centers and their affiliated departments and/or institutions can be challenging and, at times, strained (Boardman & Bozeman, 2007). Faculty ignorance about a center's purpose and role in the larger context of an institution is detrimental to the center. It is important that departments understand centers to avoid competition. Center directors must make a concerted effort to work within the institution's boundaries and guidelines to mitigate tensions (Friedman & Friedman, 1984; McCarthy, 1990; McCarthy, Jones, & St. John, 2000; Veres, 1988).

"Centers are do-tanks rather than think-tanks," as described by one director interviewed. Dealing with the culture of the traditional academy and misconception of center roles, directors had recommendations about how center leaders can navigate within their institution at different levels. These levels include higher administration, faculty, their affiliated departments, other departments, and institutional administrative systems. Directors typically serve as the key point person for the center, broadening the center's sphere of influence among institutional constituents. Incorporating institutional representatives in center activities, coordinating activities with the center's department, promoting affiliated departments, supporting departmental faculty with professional development opportunities and other means of funding, and partnering with disciplines are among the variety of successful methods center directors employ to tackle institutional issues or tensions. To make

room for these activities, directors of standard centers limit their involvement in university committee activities.

Other potential bridges between centers and departments include joint appointments and negotiation of space allocation (Sa, 2007). Space allocation as a means of negotiation surfaced as both a point of tension and a point for gaining leverage at an institution. In general, the health of a center in relation to the institution is evident in its space allocation. The advice of center directors in regard to working with institutional administrative support systems can be boiled down to: (a) utilization, (b) delegation, (c) structural alignment, and (d) acquisition of space.

Directors interviewed and previous authors suggest the sharing of equipment, staff, funds, and employment opportunities for faculty as ways to build relations within the institution (Friedman & Friedman, 1984; McCarthy, 1990; McCarthy, Jones, & St. John, 2000). Despite the need to clarify career paths in center work 25 years ago (Friedman et al., 1982), directors interviewed suggest that institutions have not changed in this regard. A change in established reward systems within higher education is needed for entrepreneurial endeavors such as centers' success (Clark, 1998).

### ***Funding***

As confirmed by this research, the cyclical and temporary nature of center funding makes it difficult for administrators to plan and for affiliated personnel to remain committed to the organization (Friedman et al., 1982; Geles, Lindecker, Month, & Roche, 2000). Loss of or insufficient center funding is ranked as the number one reason for center closure. "It can make or break a center," according to one center director. A well-endowed center can get lazy, while a center constantly struggling for funds may lose its focus and passion.

Obtaining and stabilizing funding is a crucial role for center administrators, as noted by this study and previous research (Friedman et al., 1982; Geles et al., 2000; Gray & Walters, 1998; Veres, 1988). Centers with diverse financial resources fare better during financial transitions. Building relations and writing grants, especially federal grants, were important strategies to become self-supporting and maintaining operations during times of decreased revenues. Indeed, grants are the main source of funding for centers.

Directors in this study noted that building and maintaining personal relations with personnel representing funding sources is also recommended by authors of other center research (Friedman & Friedman, 1984; Levine, Walters, & Gray, 1998; McCarthy & Hall, 1989; McCarthy, Jones, & St. John, 2000; Veres, 1988). Relationships increase the chance for grant proposal success. With the federal government as the major funder of research centers (Breneman & Finney, 2001; Hauptman, 2001; Slaughter & Leslie, 1997), standard center directors advise center leaders to take advantage of federal technical assistance and program support mechanisms as they build and sustain partnerships.

Outreach into the community is equally important, creating a give-and-take relationship between communities and the institution contingent upon community needs (Boardman, 2010). Shadow and adaptive centers are more likely than standard centers to interact with geographically local or regional communities. Shadow centers rarely have federal funds to expend. Adaptive centers are subject to the ebb and flow of funding.

Whatever the level of revenue, financially independent centers share funds with their institution in exchange for use of institutional facilities, administrative services, and other indirect benefits such as reputation. Establishing relationships is important to most aspects of a center's success, especially in the realm of funding. In some cases endowment funding is used for support, but endowment funding is rare and hard to obtain. The key to successful funding is to build relationships, whether on the federal level, the local level, or the institutional level. Center administrators must understand and attempt to influence local, state, national, and, according to this research, international policy (Ikenberry & Friedman, 1972; McCarthy, Jones, & St. John, 2000). Center directors from both adaptive and standard centers cited international work as important. This new funding source reflects the globalization of centers in the realm of globalization most generally.

### *Management*

The analogy of starting and running a small business is one used by Walters and Gray (1998) to describe center management as relating to a center's culture, environment, and staff management. A cooperative work culture is a characteristic of centers that work (Gray, 1998; Tornatzky, Lovelace, Gray, & Geisler, 1998). Differences between center and departmental work include: teamwork versus individual work, the focus of work (applied versus theoretical focus), technical resources sometimes available in centers compared to those in departments, and comparable or heavier work load of center affiliates.

Strategies for creating a pleasing work environment include office aesthetics, access to office equipment and technology, flexible work scheduling, and a collaborative and cooperative work culture. Centers thrive, particularly in comparison to departments, because they reward teamwork and leverage resources both on and off campus. Ingredients for success include: efficient meetings, use of available technology, employment of a core staff that remains steady, and appropriate delegation of work. Making these things happen, however, can be a challenge. Center directors emphasized the challenge of hiring people who are committed and trained. When successful hires are made, center members tend to fall into two major groups: entrepreneurial and collegial. Staff members—students, academic professionals, clerical staff, and faculty—must be self-managing, and directors must take on the task of training them in this direction.

Research indicates that the ability to hire a quality, self-managing core staff, including graduate and postdoctoral students, is key to center staff management (Friedman & Friedman, 1986; Friedman et al., 1982; McCarthy, Jones, & St. John, 2000). Standard centers are in a better position than adaptive centers to hire professional staff and engage

students. Adaptive centers face problems with staff turnover. Shadow centers rarely have staff beyond a key faculty member. Students are a good personnel resource but must be mentored and managed. Standard center leaders spend more time managing rather than completing projects. Leaders in standard centers must be able to manage projects and to delegate tasks.

Standard centers have the advantage of being able to focus on a singular vision usually originated with their founder/leader, while adaptive and shadow centers struggle to find a balance of responsibilities. Shadow centers are at a particular disadvantage as they are focused more on their faculty responsibilities and less on their role as center leader. Shadow centers, therefore, are unable to move forward and experiment with delegation, funding sources and student mentorship. Center leaders do not have to be the only educators or staff trainers. Mentorship roles are important in centers. Student workers can play an important role in centers. In short, a collaborative and pleasing work environment is essential, as is a core staff, and leaders ready and able to delegate tasks.

Strategies for university-based center leaders revolve around planning, leadership, the institution, funding, and management. Planning and center management strategies are different for shadow, adaptive, and standard centers. Leadership and strategies for dealing with institutional issues also differ from center to center but less so. Each center type struggles, with shadow centers being the most vulnerable given their insecure funding and dependence on a lone champion. The applied, contractual nature of center work affects the nature of center administration. Center administrators are advised by successful center directors to use tested strategies: concentrate on the center's mission by working beyond traditional faculty roles to fill a niche for clients within an applied field; hold a broad vision of what could be for the center's future, and share this vision passionately to build relationships with federal and other funders; ensure that technology is part of the center's product and process management mix. Implementing these specific strategies into the daily operations of center life will offer a better chance of center success.

## Conclusion

More than a quarter century ago, Ikenberry and Friedman (1972) devised a heuristic to distinguish center types based on functional and structural attributes. The results of this research revealed that the heuristic is still useful for categorizing centers in terms of finances, and human and physical resources. Research also provided insight into issues center directors face administering their centers. Planning, leadership, institutional support, funding, and management issues are those that distinguish among standard, adaptive, and shadow types. Universities with existing or expanding research center capacity should plan carefully, because it is the most important strategic activity for center success. Planning should not only take into account financial, structural, and functional factors such as those accounted for by the standard, adaptive, and shadow heuristic, but should also consider factors of organizational behavior. Leaders' ability and relations with internal and external constituents, mission alignment with the university's purpose and a market niche, work culture, and technological support for web design and global communication are all important to present-day center success.

## References

- Boardman, C. P. (November, 2010). *Towards a contingency understanding of the organization and management of cross-sector R&D centers: internal and external approaches to organizational capital in NSF university research centers*. Paper presented at the 32<sup>nd</sup> Association for Public Policy Analysis & Management. Boston, Massachusetts.
- Boardman, C., & Bozeman, R. (July/August, 2007). Role strain in university research centers. *Journal of Higher Education*, 78, 430-463.
- Breneman, D., & Finney, J. (2001). The changing landscape: Higher education finance in the 1990s. In *ASHE Reader in Finance in Higher Education*. J. Yeager (Ed.), 1168-1178.
- Brint, S. (2005). Creating the future: New directions in American research universities. *Minerva*, 43(1), 23-50.
- Clark, B. (1998). *Creating entrepreneurial universities: Organization pathways of transformation*. Guildford, Surrey, Great Britain: Pergamon.
- Feller, I. (2002). New organizations, old cultures; Strategy and implementation of interdisciplinary programs. *Research Evaluation*, 11(2), 109-116.
- Fink, I. (2004). Research space: Who needs it, who gets it, who pays for it? *Planning for Higher Education*, 33(1), 5-17.
- Friedman, R. S., & Friedman, R. C. (1977). *The continuing saga of institutes and centers*. University Park, PA: Center for the Study of Higher Education, The Pennsylvania State University.
- Friedman, R. S., & Friedman, R. C. (Winter, 1984). Managing the organized research unit. *Education Record*, 65, 27-30.
- Friedman, R. S., & Friedman, R. C. (1986). *Sponsorship, organization and program change at 100 universities*. University Park, PA: Institute for Policy Research and Evaluation, Center for the Study of Science Policy.
- Friedman, R. S., Friedman, R. C., Mortimer, K. P., Bragg, S. M., & Sherman, F. L. (1982). *The role of university organized research units in academic science*. U.S. Department of Commerce: National Technical Information Service, PB82253394.
- Geles, C., Lindecker, G., Month, M., & Roche, C. (2000). *Managing science: Management for R&D laboratories*. New York: John Wiley & Sons, Inc.

- Gray, D. (1998). "Creating win-win partnerships: Background and evolution of industry/university cooperative research centers model." In *Managing the industry/university cooperative research center: A guide for directors and other stakeholders*, D. Gray & S. G. Walters (Eds.), 1-18. Columbus, OH: Batelle Press.
- Gray, D. & Walters, S. G. (1998). "Designing centers: Principles for effective organizational structure." In *Managing the industry/university cooperative research center: A guide for directors and other stakeholders*, D. Gray & S. G. Walters (Eds.), 59-83. Columbus, OH: Batelle Press.
- Hall, K. S., (2005). Profile and distinguishing characteristics of educational centers in the United States. (Doctoral dissertation). Retrieved from UMI ProQuest. 323911.
- Hauptman, A. (2001). Financing American higher education in the 1990s. In *ASHE Reader in Finance in Higher Education*, J. Yeager (Ed.), 115-126.
- Ikenberry, S., & Friedman, R. C. (1972). *Beyond academic departments: The story of institutes and centers*. San Francisco: Jossey-Bass.
- Kerr, C. (January/February, 1998). Clark Kerr's perspective on leadership challenges. *Change*, 30, 10.
- Klein, J. (1996). *Crossing boundaries: Knowledge, disciplinarity, and interdisciplinarity*. Charlottesville, VA: University Press of Virginia.
- Leslie, D., & Fretwell, E. K. (1996). *Wise moves in hard times*. San Francisco: Jossey-Bass.
- Levine, H., Walters, S. G., & Gray, D. (1998). Membership. In *Managing the industry/university cooperative research center: A guide for directors and other stakeholders*, D. Gray, & S. G. Walters (Eds.), 87-103. Columbus, OH: Batelle Press.
- Lindlof, T. (1995). Qualitative communication research methods. *Current communications: An advanced text series*, Vol. 3. Thousand Oaks, CA: Sage.
- Matkin, G. (2001). Organizing university economic development: Lessons from continuing education and technology transfer. In *ASHE Reader in Finance in Higher Education*, J. Yeager (Ed.), 275-285.
- Maykut, P. & Morehouse, R. (1998). *Beginning qualitative research: A philosophic and practical guide*. Washington, DC: The Falmer Press.
- McCarthy, M. (November, 1990). University-based policy centers: New actors in the education policy arena. *Educational Researcher*, 18, 25-29.

## Articles

---

- McCarthy, M., & Hall, G. (1989). *The emergence of university-based education policy centers*. Eugene, OR: ERIC Clearinghouse on Educational Management, ED303878.
- McCarthy, M., Jones, B. A., & St. John, E. P. (2000). University-based education policy centers: Ten years later. *Policy Today*. MO: University of Missouri System Consortium for Education Policy Analysis.
- Miskelly, M. (2010). *Research Centers Directory* (39<sup>th</sup> ed.). Farmington Hills, MI: Gale Group, Cengage Learning, Inc.
- MisKelly, M. (2011). *Research Centers Directory* (40<sup>th</sup> ed.). Farmington Hills, MI: Gale Group, Cengage Learning Inc.
- Orlans, H. *The nonprofit research institute*. New York: McGraw-Hill, 1972.
- Palmer, A., & Kruza, A. (Eds.). (1965). *Research Centers Directory* (2<sup>nd</sup> ed.). Detroit, MI: Gale Research.
- Perlman, B., Gueths, J., & Weber, D. (1988). *The academic intrapreneur: Strategy, innovation, and management in higher education*. New York: Praeger.
- Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. New York: Harper & Row.
- Sa, C. (January-March, 2007). Planning for interdisciplinary research. *Planning for Higher Education*, 35, 18-28.
- Slaughter, S., & Leslie, L. (1997). *Academic capitalism: Politics, policies, and the entrepreneurial university*. Baltimore, MD: The Johns Hopkins University Press.
- Stahler, G., & Tash, W. (1994). Centers and institutes in the research university: Issues, problems, and prospects. *Journal of Higher Education*, 65, 540-554.
- Tornatzky, L., Gray, D., & Geisler, E. (1998). Planning the cooperative research program. In *Managing the industry/university cooperative research center: A guide for directors and other stakeholders*, D. Gray & S. G. Walter (Eds.), 105-128. Columbus, OH: Battelle Press.
- Tornatzky, L., Lovelace, K., Walters, S. G., & Geisler, E. (1998). Center leadership: Putting it all together. In *Managing the industry/university cooperative research center: A guide for directors and other stakeholders*, D. Gray, & S. G. Walter, (Eds.), 105-128. Columbus, OH: Battelle Press.

- Veres, J. (Fall, 1988). Managing a modern university research center. In *Research administration and technology transfer*, J. Kenny (Ed.). New Directions for Higher Education, 63. San Francisco: Jossey-Bass.
- Vest, C. M. (2005). Pursuing the endless frontier: Essays on MIT and the role of research universities. Cambridge, MA: Massachusetts Institute of Technology.
- Walters, S. G., & Gray, D. (1998). Getting started: Planning and initiating a new center. In *Managing the industry/university cooperative research center: A guide for directors and other stakeholders*, D. Gray & S. G. Walter, (Eds.), 21-57. Columbus, OH: Battelle Press.
- Wood, D. (Ed.). (2002). *Research Centers Directory* (29<sup>th</sup> ed.). Detroit, MI: Gale Group.
- Wood, D. (Ed.). (2009). *Research Centers Directory* (38<sup>th</sup> ed.) Farmington Hills, MI: Gale Group, Cengage Learning, Inc.