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## The Power and Peril of Program Reviews: The Resource Paradox of Assessing for Improvement

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**Abstract:** In this essay, we explore program reviews as important sites for the tension Peter Ewell defines at the core of outcomes assessment practices: that is, between assessing for accountability and assessing for improvement. We address this tension through the example of our Industrial Design program on our urban campus in New York City. In exploring Ewell’s tension between accountability and improvement, we develop the concept of the resource paradox. Simply stated, program reviews require institutions to invest time and resources to close the loop on implementing improvements – yet those actions often require resources many institutions lack. Using our case study and reviewing the scholarship on program reviews, we address the resource paradox by describing how we’ve tried to address it, and how other institutions might also do so.

**Keywords:** *program review, institutional effectiveness, assessing for improvement, accreditation, resource paradox*

## Introduction

Assessment issues frequently arise during accreditation self-studies. During our recent self-study for the Middle States Commission on Higher Education (MSCHE), several of our working groups discovered issues related to academic program reviews, or periodic program reviews. They noted our two-year college lacked uniform communication within departments about program reviews, and agreed program reviews could be better integrated into the college’s strategic planning and resource allocation decisions. Perhaps most importantly, they found that we addressed resource requests and investment decisions that arose from program review action plans to be ad-hoc and lacking in transparency. While these challenges might not be surprising to those with experience in assessment, they speak to critical issues at our institution, LaGuardia Community College in Queens, New York. We believe they also speak to issues of broader significance to assessment practitioners.

In this article, we argue that our issues with program reviews and resource allocation signal urgent questions for national leaders in outcomes assessment. These issues are rooted in decades-old challenges that appeared at the start of the assessment movement. More than three decades ago, Peter Ewell (2009) identified the key contradiction in assessment as one between assessing for accountability (externally imposed norms to verify quality) and assessing for improvement (more

commonly known as assessing for learning). From his vantage, Ewell identified several reasons why this tension continues into the twenty-first century. For one, many institutions lacked the will to “close the loop” on actionable data (Ewell, 2009, p. 16). For another, Ewell found most assessment evidence was “not fine grained enough to yield actionable information” at the level of pedagogy and curriculum (Ewell, 2009, p. 16). Such charges echo Suskie’s remark that “some program reviews simply end up on a shelf” (2014, p. 235). Yet over the past decade, the revolution in assessing general education skills and competencies, driven by the widespread adoption of the American Associations of Colleges & Universities (AAC&U) VALUE rubrics, has transformed the quantity and quality of data available to colleges and universities (see Hutchings et al., 2018; Joselow, 2016; Boehman et al., 2021). In many respects, this transformation addressed both sides of the contradiction Ewell noted: colleges improved their abilities to measure student learning over time, making learning visible to regional accreditors. New data about student learning also gave faculty more insight into how assignment and curriculum revision can advance classroom pedagogy and, over time, the retention and graduation of students. In this respect, “actionable” assessment information became an important way to improve learning and move “beyond compliance” (Kuh et al., 2015, p. 9).

Like general education, program reviews are pivotal to long-term student success because they identify strengths and challenges across a broad spectrum of criteria, including enrollment, retention, graduation, advisement, pedagogy, and learning. A key tension in assessment culture remains visible in program review, however: faculty now are much more accountable, but their suggestions for improvement often require new investments and resources. Further, improvement culture demands resources to sustain engagement: Evans (2012) cites “lack of financial support or other demonstrations of support or assessment by senior institutional leaders” as a key challenge for faculty engagement (p. 45). With this in mind, we propose the concept of “resource paradox” to capture these challenges. The resource paradox defines the ways program reviews lead to actions for improvement, but often cannot account for the cost of those improvements. Reviews are funded for the purpose of accountability, but allocating resources to make programs more competitive, encourage innovation, and employ contemporary technology requires integrating reviews into strategic plans and annual budgets. Historically at our college, this integration has not been fully transparent nor systematic.

Asking ourselves why our institution struggles with these processes reveals a larger landscape. The problem cuts to the public purpose of higher education. Allocating resources for program reviews, like the problem of funding for public colleges, is directly related to the mandate to “deliver significantly more degrees of higher quality” (Wyner, 2014). Investing in program reviews at two-year institutions further corresponds to public investment in marginalized student populations who comprise millions of students, or one-third of all college students (Duffin, 2021). Community colleges “have a broad mission to provide academic programming and skills training to prepare students for jobs or to transfer to four-year colleges and universities” (Aspen Institute, 2021), and frequently remediate students who lack college-ready skills (Community College Research Center). Students are often “older, racially diverse, likely to attend part-time, and likely to have family responsibilities” (Beer, 2018). Public sector investments in higher education generally, and community colleges in particular, must address uneven rates of access, retention, and completion. This is critical because only “20 percent of full-time, first-time degree-seeking students at public two-year colleges earn a degree within three years of

enrollment” (MDRC, 2021). Investing in two-year college program reviews is therefore an investment in marginalized, under-resourced communities. After all, the public needs graduates in high-growth fields such as Industrial Design, especially those from such communities.

At LaGuardia the resource paradox becomes particularly acute when reviews move from the assessment stage to the action stage. The time for action often finds faculty asking for investments to improve programs but lacking power to determine resource allocation. Action becomes further complicated because program directors frequently lack familiarity about how to put their resource requests in context. Further, faculty often lack the skills (or desire) to explain how capital might provide different returns when invested in different programs. The comprehensive tasks of program review also often fall to junior faculty with little assessment experience, which occurs routinely at LaGuardia, including with our recent Industrial Design review. At the same time, we offer robust professional development to educate and collaborate with faculty who lack experience.

As a case study, we believe our recent Industrial Design program review captures the tensions of the resource paradox. Industrial Design is particularly well-suited as an example for thinking about resource constraints because its curriculum requires intensive investments in space and equipment. Further, our Industrial Design program faces the challenge of managing growth due to increasing enrollment, which, as with many programs in similar situations, triggers the need for additional labor in the form of full- and part-time faculty. To achieve an effective review (and perhaps win new resources), a network of faculty, staff, and administrators came together to solve short- and long-term issues we’ll describe.

In the sections below, we will point to how successful program reviews require a network of assessment professionals to succeed, and how we tried to address challenges in real time; the co-authors of this essay include the Industrial Design program director, an academic affairs associate director of assessment, and a (former) faculty Co-Director of Assessment. We will provide scholarly context, describe the challenges of program review for Industrial Design, detail our approach to addressing the resource paradox, and conclude by reflecting on the continuing importance of program reviews in an era of transformation and uncertainty.

## Background Context

On the homepage of the AAC&U (n.d.), a cursory search for program review yields few results of practical value. On the other hand, a similar search for general education assessment reveals a 2023 Institute on the subject, recent national conferences, and various pages tied to curriculum reform, innovations in pedagogy, and high-impact practices. This gap is suggestive for the ways program review scholarship receives less attention from scholars of teaching and learning, and less overall attention in representative assessment journals. This is probably due to the difficulty in translating disciplinary-specific curriculum reviews, course data, field scans, and specialized issues into subjects of greater interest to a general audience.

Whatever the reasons, the challenges of the resource paradox described in this essay represent gaps in assessment culture and scholarship. In part, such gaps reflect trends in the assessment of student

learning during the past two decades; for one, general education core competencies focus on transferable skills and higher-order cognitive competencies across the curriculum (Banta & Polomba, 2014, p. 146; Ewell, 2011a, p. 4). We might also explain the difference in attention between general education and program assessment through the economics of grant-driven higher education: general education assessment offers donors and awardees the opportunity to change learning dynamics for large numbers of students, and to prove learning over time at scale. By comparison, program assessment typically concerns far fewer students, and investments from external donors cannot be leveraged in the same way. In addition, programs potentially are subject to different scrutiny, and some are accountable to discipline-specific accreditors.

Despite such gaps, much useful literature exists. In recent years scholars have addressed various aspects of program review, such as engaging faculty (Ewell, Paulson, and Kinzie, 2011; Haviland and Turley, 2011; Bruch and Reynolds, 2012; Zubrow, 2012; Mccullough and Jones, 2014), the roles of assessment practitioners (Jankowski and Slotnik, 2015), and case studies of the assessment cycle (Crowell and Calamidas, 2015; Moore and Kaplan, 2015; Deardorff, 2016). Historically, many of the major discussions about program review derive from handbooks and guides to practicing it (Allen, 2003; Hatfield, 2009; Maki, 2010; Banta & Palomba, 2014; Suskie, 2014; Eggleston, 2020). Resource allocation is sometimes implied: in the indispensable *Assessment Essentials* (Banta & Polomba, 2014), for example, there are meaningful sections on “Findings,” “Action Plans,” and “Follow Up” (p. 223). To an extent, some guides touch more directly on accountability, value, and resource allocation (Shambaugh, 2017). It seems likely that any gaps in instruction about resource requests stem from assumptions about the ad-hoc, individuated, and localized nature of those conversations.

Resources are not only about capital spending or faculty lines. In the National Institute for Learning Outcomes Assessment (NILOA) policy statement on program assessment (2016), Pat Hutchings writes that assessment can help a college “think harder about where and how the scarce resource of faculty time and talent can be best deployed” (Hutchings 2010, p. 13). More specifically, among the three classic criteria for program review (Shirley and Volkwein, 1978) adopted by Suskie (2014), we find “cost and cost-effectiveness” (p. 230), which emphasizes accountability more than resource allocation: “how much the program costs and how efficiently it uses its resources” (p. 230). Similarly, Banta and Palomba (2014) cite the importance of using assessment results in “annual processes such as strategic planning, budgeting, and program review” (p. 220). A more recent NILOA occasional paper by Singer-Freeman and Robinson (2020) entitled “Grand Challenges in Assessment” restates the continuing necessity of having assessment findings “inform budget decisions” (p. 5). Importantly, Suskie argues that program reviews share basic premises with grant proposals and start-up businesses; others might call it a form of performance funding (Burke, 1997; Ewell 1999). Like grants and businesses, programs make “an evidence-informed case for investment through systemic evidence” (Suskie, 2014, p. 233). Suskie argues that college leaders should utilize program reviews to “inform decisions regarding the program’s vision, plans, and support” (p. 235). She even insists that on requiring program chairs, deans, and vice presidents to review and endorse findings and commit “to provide needed support” (p. 236). Some faculty might also add governance leaders to that list.

## Institutional Profile

LaGuardia Community College offers more than 60 majors, certificates, and programs, and 70 continuing education programs. Our mission is to “educate and graduate one of the most diverse student populations in the country to become critical thinkers and socially responsible citizens who help shape a rapidly evolving society” (LaGuardia Community College, n.d.). The 13,064 students represent 130 countries and speak 54 different native languages. Nearly all LaGuardia students reside in New York City. LaGuardia's URM (under-represented minorities) in Fall 2021 was 62% of the student body, while according to the National Center for Education Statistics (NCES, n.d.), the URM for all 2-year public institutions in Fall 2021 was 39% of the total student population. Additionally, 5% of LaGuardia students are international. Seventy-three percent of annual degree students were awarded some form of grant, scholarship, or financial aid in 2022-23. Among full-time students, 82% were awarded financial aid. The average 2021-22 graduate finished about seven calendar semesters after first enrolling. Graduates from the last five years averaged 7.6 calendar semesters, or a little over three and a half years, to obtain their degrees. Sixty-nine percent of the 2020-21 LaGuardia A.A. and A.S. graduates transferred to four-year colleges within two years of graduation. Most graduates who continued their education transferred to a four-year-college within the City University of New York system (86%). Six months after graduation, almost 67% of 2021-22 graduates surveyed were working. Among those employed, 45% worked in a job related to their program of study at LaGuardia (LaGuardia Community College, 2023).

## The Program Review Cycle and Its Challenges

We have a faculty-driven culture of assessment that was recently acknowledged with six special commendations by Middle States, our regional accreditor. Program reviews and their faculty leaders are essential for coordinating many initiatives that affect student success, such as our first-year seminar, curriculum mapping, and the integration of core competencies into disciplinary assignments. Cumulatively, the effects of this culture have contributed to considerable overall improvement: together with innovations in our advisement plans, first-year experience, peer tutoring, and Accelerated Study in Associate Programs (ASAP), we have effectively doubled our graduation rates in the last decade. Furthermore, Stanford University's Mobility Report Card ranked us in the top five community colleges nationwide in moving low-income students into the middle class (Chronicle List, 2017).

Program reviews are essential practices of our cyclical culture of assessment. Unlike our annual assessment of general education and program learning outcomes, our program review occurs on a flexible eight-year cycle, and involves one year of planning, one year of active review, two implementation years, and typically two break years. Our fundamental loop of inquiry, feedback, data collection, and evidence-based action should be familiar to readers. Like other colleges, we describe, explain, and model this cycle in a handbook. Our guidelines do not address resource allocation, however, and prior administrative leaders specifically excluded resource requests from program review reports.

In terms of supporting the review cycle, our college devotes valuable resources to ensure comprehensive reviews. These resources include awarding course release, rewarding junior faculty

with college contributions for promotion and tenure, funding stipends for external reviewers, and providing program leaders with faculty and staff support. More support comes from faculty and staff assessment practitioners, many of whom are associated with professional development and the college's Center for Teaching and Learning (CTL) and our Assessment Leadership Team (ALT). During implementation years, the CTL and ALT would periodically offer 'mini-grants' to some programs engaged in actions supported by grant funding, especially general education assessment.

The core team driving program reviews includes one of our two faculty assessment co-directors and an associate director of assessment in academic affairs; both also work closely with the executive committee of the college's assessment leadership, including the other faculty co-director of assessment and the associate dean for academic affairs. The two program review leaders orient faculty to program reviews (and together with the industrial design program director, co-authored this essay). They met regularly with program teams to explain the program review guidelines, troubleshoot the process and preparations, and guide interactions with chairs, administrators, and other faculty. The intention is to make program review legible and realistic to the program director and/or review leader. Meetings during the planning year prepare program directors for the active review year; meetings during the second year include consultations on activities and feedback on the draft report. During both years, the core network of program director, program teams, and faculty and staff assessment directors discuss the program review process and guidelines, identify key issues to be addressed and studied, and seek input from the department chair and other faculty. Typically, we do not discuss resource allocation requests directly, but we do explain how assessment data might be useful for those requests.

The planning year culminates in a large conversation involving the provost, the dean of academic affairs, the dean of institutional effectiveness and research, the department chair, the program director and program review team, and the faculty and staff assessment directors. During the discussion, the program director explains the plans for the active year. More importantly, the entire group thinks broadly about the role of the program at the college and in the future. During the third and fourth years of program review, programs try to implement the actions they prioritized during the review and in the report. Resource allocation is not typically an agenda item.

For all that we invest in the review process, we have not historically matched investments in the action plans and corresponding resource requests during implementation years. This gap between our planning and implementation processes mirrors those found in assessment handbooks and scholarship, which contain less detailed information regarding implementing actions and corresponding resource allocations. Since there is no systematic process for raising the issues of resource allocation at our college, nor guidelines in our handbook, resource requests arise informally and sometimes awkwardly.

In addition to having a less integrated system for addressing review actions plans, our college has historically been challenged by developing systematic communications about program review with faculty and administrative leaders. For example, department chairs play no formal role in program reviews (we only recently began systematically copying them on emails). Chair participation in



meetings is not mandated and remains infrequent. Their absence is significant because chairs have formal and informal relationships to the provost and other administrators who make decisions about resources. As we discuss later, one of the key recommendations from our recent self-study concerns formalizing the role of the chair in program reviews. The lack of chair involvement contributes to faculty perceptions that resource decisions lack transparency.

## The Industrial Design Program Case Study

The AAS degree in Industrial Design Technology program began around 2013, with course offerings shared from both the Fine Arts and Engineering programs. The degree was meant to graduate students with the necessary skills to engage in industry as an entry-level industrial designer. The Industrial Design program educates students by equipping them with the knowledge, practices, and processes of design technologies, and to manipulate materials and manufacturing towards the development of products. The program accomplishes this by teaching through a studio design process, workshop machining and prototyping, and by using computer aided design and digital fabrication technologies. As with other fields that study innovative product design and prepare students for careers in related fields, the industrial design curriculum must “integrate first-rate technical competence with a thorough understanding of the social and cultural context of technologies and the design processes that shape them” (Gabriele et al., 2001). These essential skills help prepare graduates to enter the workforce and/or transfer to a senior industrial design college. Degrees in Industrial Design can lead to bachelor’s degrees, creative careers, and a relatively high average wage. We are one of less than two dozen two-year colleges that offer the major nationally.

Program enrollment has increased since 2014, and the increase partly reflects the program’s growing reputation and the college’s diverse student population. As of Fall 2022, institutional research data shows an almost 50% enrollment increase in degree-seeking students for the industrial design program between 2014 and 2022. The current student demographic data shows a relatively even mix of male and female students enrolled (no other genders were indicated). Not surprisingly for a Hispanic Serving Institution (HSI), the majority of program students are of Hispanic ethnicity (60%), while the remainder are largely of Asian and African ethnicities; White students comprise the smallest demographic segment. In terms of graduation, the program experienced growth between 2014 and peaked in 2018-19. While it has experienced a drop in graduation since then, the decline follows the trend of most other degree programs in the college.

One key to the program review was developing collaborative relationships. This involved our core team (the authors of this article), program instructors, the chair, and administrators, including the dean of institutional effectiveness. For the review, the core team met regularly during the first two years with the program director; the chair, too, voluntarily played an unusually supportive role. As issues arose, we problem-solved with the deans leading our Center for Teaching and Learning. We also worked with the dean of institutional effectiveness to contextualize the data and key performance indicators. Together with the department chair, we provided extensive feedback on the draft report during the second, active year.

Over the course of the review period (extended due to labor constraints and Covid-19), the program director (and co-author) examined the curriculum and retraced how students progressed through courses. He examined general education assignments and core design courses and became more aware of the assessments necessary to sustain a program, including data-driven evidence, curriculum review, student advisement, and clear learning objectives. He also reviewed the college and program resources, including workshops, studio, and computer facilities, to help determine the capacity for enabling student teaching and training. He studied key performance indicators and the program's human resources to better understand current and program growth and needs; for example, the program grew by 22% from 2016 to 2020, so the review focused on how to manage such growth.

Beyond assessing resource needs, the review provided valuable professional development experience and data. The director researched other college industrial design programs, like the Pratt Institute, to learn from their curriculum, mission statement, and learning outcomes. He invited an external evaluator from Pratt to read the report, which helped him formulate an action plan. The plan developed from data-analysis and from the external evaluation and was meaningful in part because the evaluator was a design expert who read the report, met with students, spoke with the department chair, and offered perspectives on the strengths, weaknesses, and opportunities for the future.

Overall, the review addressed outstanding issues while uncovering others, and developed new goals for student success. It affirmed that the key to graduating and transferring Industrial Design students was to show clear education and career pathways. Further, the program director cited the support and feedback from the core team as crucial for staying focused and motivated. The support and feedback from the core team helped clarify the role of the program director in many areas, including analysis of institutional research, setting realistic program learning outcomes (PLOs), revising curriculum and courses based on data analysis, identifying resources, and outlining resource gaps as actionable items for program improvement. Like many faculty who assess for improvement, the program director concluded the program review feeling that the effort and input was rewarding, especially in providing a comprehensive picture of the program, its growth, and its needs.

## Pricing Action

As with all assessment cycles, the review led to the development of an action plan that posed issues. Indeed, many assessment practitioners recognize that the "final step in the assessment is often the biggest challenge" (Moore and Kaplan, 2015, p. 419). This is because one of "the most important aspects of assessment is the actions or plans that faculty and staff implement based on assessment findings" (Banta and Palomba, 2014, p. 223). The action plan sought to develop new connections with prospective employers, for example. Further, through transfer events and class visits, the program might expand student graduation rates and place them in four-year design programs. The director comprehensively revised the curriculum to address those issues. He also developed new core competency assignments and programmatic learning outcomes to evaluate student learning and communication skills to support the college's mission.

Action plans are where the resource paradox becomes most visible, since new resources are often needed to address issues and challenges. Notably, some new resources did materialize from the



college. The program currently has around 90 students, but only one full-time faculty member, for example. The action plan sought new human resources in the form of a new faculty line. In response, the provost approved an extra line for the program. This decision affirmed the strength of the process and was a source of pride for the program director. The reward of the line, along with a 3-D printer purchase earlier in the process, demonstrates the value of program assessment and the potential benefits from investing faculty time and labor into it. The decision-making process involved reflected the provost's discretion and did not occur through a planned improvement process.

Further, the review found needs with space and equipment. For instance, the program uses a design studio, computer laboratories, and machine shop to teach and train students. The program only has one small classroom to teach most of its core design classes, with little storage space and poor natural lighting. Storage is important for organizing studio materials and exhibiting projects, and natural light is important for exhibiting the forms and values in design drawings, models, and student design exhibitions. Student learning would be more effective with access to studio space, materials, and resources, and provide an opportunity for students to socially engage and collaborate.

Further, the program shares computer laboratories with various other programs, but the labs needed to be locked outside of class times for security reasons. Lack of access prevented student work on design projects. Further, the program courses for woodworking, manufacturing process, and modelmaking require the use of a machine shop. The program shares its machine shop, however, with the business incubator NY Designs, who manages and runs it. This leads to scheduling issues, storage issues, and classroom issues. The need for a digital fabrication laboratory became more acute as NY Designs signaled it no longer wanted to share space.

The report also described the need for a design studio overhaul and new investments in equipment, including an updated high-resolution projector, a new computer aided design workstation, and workshop machines. New equipment would provide students with modern technologies currently used in design jobs and other industrial design colleges. Obviously, equipment and space require perhaps the most precious resource available: new capital. Critically, of course, finding new space and equipment required further significant investment of resources.

The program director (and co-author) joined with the faculty and staff assessment directors to brainstorm approaches for resource requests. None of the core team, however, had the authority to make those decisions, nor deep experience successfully advocating for additional resources. Indeed, successfully acquiring new resources often depends on productive collaborations with college leaders and administrators who may not work closely with program assessment. Yet as Neal Shambaugh writes, the success of programs can depend on collaboration with those individuals, particularly during program reviews when faculty "jointly face...ever-changing realities" (2017, p. 141). Such collaboration implies that faculty must develop professional skills well beyond teaching and learning, including diplomacy and negotiation. Banta and Palomba (2014, p. 145) explain how faculty must "take on several interrelated roles" beyond teaching during assessment. Jankowski and Slotnick further indicate how the roles of "assessment practitioners" require faculty to "know how to navigate the formal and informal organization" (2015, p. 96). They emphasize how those in assessment roles are "blended

professionals” who navigate “multiple realities” within an institution (2015, p. 94). The five main roles they attribute to such practitioners – visionary/believer, political navigator, facilitator guide, narrator/translator, and method expert –represent potential roles that program directors must assume during program reviews. The skills these roles require to negotiate resource allocation with college leadership are not taught, nor frequently introduced in professional development.

The role of ‘political navigator’ seems most relevant here. During reviews, faculty must “navigate the campus’s political terrain” and possess the “inherent courage to point out possible assessment inefficiencies or problematic data results with solutions in hand at the same time” (Jankowski and Slotnick, 2015, p. 93). Such navigation implies roles with knowledge about both strategic planning and annual budgets. Yet these roles and their challenges are rarely stated in program review guidelines, even if successfully navigating such roles might determine whether and how resource allocation occurs. In our case, the program director was the only full-time faculty member in the program, but he was also junior faculty. The difficulty in adapting to new roles helps explain why systematically integrating program reviews into strategic planning, resource decisions, and even collegewide governance is rational and necessary.

## Addressing the Resource Paradox

Integrating program reviews into strategic planning and resource decisions means empowering faculty to understand the needs and trends of the whole institution. Further, it requires institutions to be intentional about the scope and focus of professional development related to program reviews. Once faculty experience how evidence of learning can affirm and improve pedagogy and student success, the challenge of assessment often shifts from one of inexperience and resistance to one of labor, resources, and rewards. This is especially urgent at community colleges, but also especially fraught because two-year colleges mostly receive (increasingly volatile) public revenues tied to enrollment.

The volatility of public resources awarded to community colleges conflicts with their national civic, social, and economic purposes. This is ironic, given their capacity to innovate and intervene in vulnerable community populations. As Terry O’Banion contends, community colleges are innovators because they place “learning first” and are less wedded to the “traditional architecture of education” (1997, p. 8). Since program reviews are crucial periods when assessments can make learning visible, the importance of program reviews and resource allocation should be self-evident. Such investments are not just about improvement, but also equity: resources reward innovations that primarily benefit working-class students and communities of color. These same students constitute the majority of Industrial Design students at LaGuardia, as we described earlier.

Before addressing how we are attempting to address the resource paradox, we want to emphasize the challenges to creating sustainable investment patterns at our college:

- Our college budget depends on variable and often volatile student enrollment, especially since COVID-19.
- Our budget and fiscal appropriations depend on a central university that apportions funds differently to four-year and two-year colleges.

- Our long-term revenues depend on a shrinking regional student population.
- Our budget reflects our five-year strategic plan priorities, but those priorities have not historically incorporated program review findings.

Having said this, we emphasize below how we are reconceiving the review process to make institutional investments in action plans more feasible and transparent. In the conclusion section, we address the challenges we still face.

## Revised Program Review Guidelines

While most colleges and universities offer faculty guidelines for program review (including ours), these detailed instructions usually don't address the process for securing new resources. For example, one of the top results in a search for academic program review guidelines is the Program Assessment Handbook from the University of Central Florida (2008). This accessible and helpful handbook contains a concluding section about developing recommendations for change based on data collected during program review. The guidelines reasonably suggest that faculty determine whether "available resources" (p. 51) exist to continue collecting data on implemented changes, and even offer "improvements of technology" (p.50) as a possible area for a proposed recommendation. The handbook, however, does not articulate what happens when recommendations require resource investments (much less those that may not exist), nor how to approach the institution's administrators about how to formalize such requests. Likewise, the "Program-Based Review and Assessment" handbook (Stassen, Doherty, and Poe, 2001) at the University of Massachusetts Amherst offers faculty comprehensive context, guidelines, and models for program review. In the final chapter "Using Results," the handbook provides exceptional templates and strategies for communicating results across the college, but there is no material describing whether results necessitated new resources and investments, nor how to begin those conversations with department and campus leaders.

As **Table 1** shows, we revised the review guidelines by aligning the action plans in the reports to our college's strategic plans, including goals and objectives. Since department chairs authorize reports, we believe this strategy will allow chairs to have more conversations with the college provost, which could implicate resource decisions. To encourage conversations about equity and diversity within programs, we added sections of the report to cover those areas. Programs are encouraged to think carefully about the relationship between equitable resources and their diverse student populations. Programs could use data to make recommendations that would lead to improvements that would ensure equity for all students. Further, requiring student surveys will help programs gather feedback, assess needs, and determine resource priorities.

**Table 1:** Summary of Changes to the PPR Report Guidelines and Process

Changes to PPR Report Guidelines	Changes to PPR Process
<ul style="list-style-type: none"><li>Align PPR action plan with college's strategic goals and objectives.</li></ul>	<ul style="list-style-type: none"><li>Change the meeting with the Provost from the end of Planning Year to the end of Report Year to discuss action plan and resources.</li></ul>
<ul style="list-style-type: none"><li>Include additional sections on faculty professional development and scholarship, diversity, equity, and inclusion efforts, student support and resources, and cross-divisional collaborations.</li></ul>	<ul style="list-style-type: none"><li>Summarize PPR action plans and share community-wide.</li></ul>
<ul style="list-style-type: none"><li>Gather feedback from students in the program through surveys or focus groups.</li></ul>	<ul style="list-style-type: none"><li>Hold a PPR event at the end of the implementation years to enhance collaboration between programs, departments, and divisions.</li></ul>

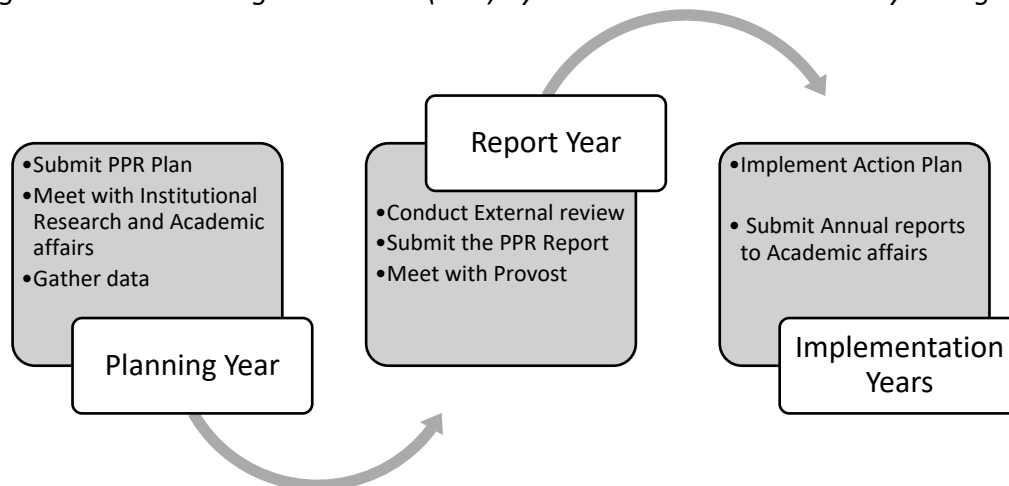
## Revised Program Review Process

With our self-study recommendations in mind, the college's assessment leaders have changed how program reviews are shared and understood by key individuals in the process. For there to be new investment from the college in programs, there needs to be more awareness about program needs at the provost- and cabinet-level. In the past, there was uneven support for the program in the implementation years of the action plan in part because resource requests were not systematically and transparently reviewed by college leadership.

To address this, the associate director of assessment (and co-author) started holding check-in meetings for implementation year program teams in the fall semesters as implementation actions begin (years three and four). The meetings provide an opportunity for programs from different departments to collaborate and share strategies and resources. The meeting includes the associate dean for academic affairs, the dean for institutional effectiveness, and the various programs initiating implementation actions. During a recent meeting between the Creative Writing and Theater programs, for example, faculty spoke about a screen-writing course. Although it didn't lead to a resource request, faculty combined their time and labor to improve the course and connect students to it. Eventually, we would like these meetings to include representatives from other divisions than academic affairs, since many items require collaboration with other divisions such as student affairs and institutional advancement.

The associate director of assessment further revised the review process for the second, active year. The crucial transformation ensured that action plans from reports were communicated to academic affairs senior administration, especially the provost. Now at the end of the active year, the program review team, departmental chair, assessment leaders, and provost meet to discuss the program's action plans and resource requests. The provost then becomes aware of program requests so that the cabinet can make informed budgeted decisions. This meeting is reflected in the revised program review cycle (**Figure 1**).

*Figure 1: Periodic Program Review (PPR) Cycle at LaGuardia Community College*



Coming out of the self-study, the associate director also implemented a new process. She now annually summarizes and organizes program action plans from all reports according to themes (enrollment, transfer, curriculum, etc.), and then submits that summary to the associate dean for academic affairs and the provost. She also made plans to share those summaries on the website. Crucially, the summaries highlight how the actions advance the strategic initiatives of academic departments and academic support units across the college.

## Chair-level Strategizing

In the past, resource requests mostly originated from program directors to department chairs and then to the provost. They were not systematically shared across departments or via college-level strategizing within academic affairs. Instead, different chairs had varying methods for sharing, or not sharing, program review findings and actions. Ad-hoc methods of dealing with resource requests might or might not lead to new investments. The lack of systematic process made some faculty feel frustration after program reviews.

In our recent self-study, we explicitly mentioned the need for academic assessment, and program reviews specifically, to be integrated more into the college's strategic planning. The self-study recommended we assess governance bodies differently, especially academic chairs, to create more uniform standards for sharing information about program reviews within departments, and to set expectations with chairs about equitable advocacy for programs in their departments.

Within this context, academic affairs made changes to the guidelines involving the chair and program reviews. In contrast to prior practices, chairs now submit program review actions plans (aligned to college strategic plans) as part of annual goals. These plans are now the subject of annual conversations with the provost. Previously, departmental strategic plans were not connected to program review action plans. We hope the college implements the full recommendations of the self-study.

## External Grants

While decisions to make investments are beyond the authority of the program directors and even departments, there are other avenues for securing funds. For instance, the Industrial Design program director is working to fund equipment purchases through external grants. The program completed a comprehensive local needs assessment in March 2020, as part of a New York State mandate for Career and Technical Education programs (C.T.E.). Its purpose was to determine equity, access, and performance gaps along with workforce alignment needs. As an AAS program, the program also applies for a Perkins grant every year, which helps provide federal funding to improve technical education programs in states. The Perkins grant assists school districts and public two-year colleges in improving secondary and postsecondary-level career and technical education programs. The grant application highlights the need for greater student access to studios, laboratories, and workshops, as well as the need for more equipment, training for staff, and relationships with local industry. The program director has recently begun exploring N.S.F. (National Science Foundation) grant opportunities, too, including ‘Experiential Learning for Emerging and Novel Technologies’ (ExLENT), which aims to support and connect students in two-year technical college programs with industry partners in additive manufacturing, helping to reduce equity gaps in the manufacturing workforce. In the private sector, major firms like Makerbot and Shapeways have 3-D printing and local offices in New York, and they occasionally support education programs with small grants to develop design projects.

LaGuardia has a grants office with personnel dedicated to guiding and completing external grant applications. Considering the lack of capital funding for program resources, the office represents a significant potential source of value. Assessment leaders have begun to encourage other programs to apply for grants, and will begin introducing program faculty to the grant’s office during the second, active year. Assessment leaders wonder whether the grants office could generate a list of program-based grants that could help with resource requests, and attend meetings during the implementation years of program review. The grants office could also spark cross-divisional collaborations that could lead to grant applications.

## Conclusion

The revisions to our program review process discussed above should address many issues related to Industrial Design’s resource paradox. Nonetheless, challenges remain, both at our college and in higher education at large. To some extent, an institution’s will to fund programs is constrained by challenges related to budget shortfalls, choices about prioritization, and quality of data. Such challenges subtend an important element of program reviews that go unstated in most review guidelines: they are



occasions to make strategic choices about program futures. Poignantly, too, reviews are opportunities to incorporate faculty into important, data-driven conversations about how missions and outcomes affect those futures.

Looking beyond LaGuardia, it appears that the economic realities that have long beset higher education not only remain, but have become acute, especially in regions with structural declines in student populations. For two-year colleges like ours, calculations must always include the “prominent expectation” that we should “address state workforce needs” (Ewell 2011a, p. 25). From the vantage of an “owner-operator” of higher education, the use of taxpayer funds to fund public goods will demand transparency and efficiency (Ewell and Jones, 2006, p. 15). Yet with secular declines in enrollment already here, the conundrum will not simply involve balancing and managing growth for state economic needs. Indeed, earlier this century Leveille (2006) edged toward the resource paradox when claiming that the “pressure for improved performance is escalated at the same time that resources are decreasing” (p. 115). This contradiction strikes at heart of the polycrisis facing higher education’s intertwined accountability and affordability crises; when calling for a new compact linking state funding to reforms and budget transparency, for instance, Kallison Jr. and Cohen (2009) said it was “difficult to cut costs and increase productivity at the same time” (p. 47).

In this respect, higher education generally and programs specifically are subject to the same resource allocation constraints as other public services, such as urban county governments (Scheps 2000). As Fannin and Saran imply for the resource paradox described here, reviews might want to illuminate “what contribution each program makes to the institution’s fiscal health and the accomplishing of its mission. The result would be decisions as to whether the institution should invest for the growth of the program, spend enough to keep a program strong but not look for it to grow, or end the program” (2017, p. 24). From the perspective of administrators facing difficult budget decisions, program reviews become an occasion to make complex choices about priorities. Unlike with other difficult budget choices, however, program reviews are exceptional precisely because faculty might exert some leverage over resource decisions.

Echoing Fannin & Saran (2017), Swift (2012) reminds us that when assessing the viability of academic programs “academic values must be balanced against market forces” (p. 259; see Massy, 2009), and therefore institutions must contemplate “the costing of academics’ time against each of the functions they perform” (Swift, 2012, p. 263). Crucially, she describes the difficulty of creating valid data for such calculations, and offers a pragmatic approach for balancing funding for research and teaching. For her, it’s especially important to link “financial viability and costs directly to teaching activities” (Swift, 2012, p. 270). Along those lines, Ewell (1999) emphasized the importance of clear purposes and of incentivizing behaviors that lead in specific directions (p. 207).

Whatever the circumstances, difficult conversations about the future are more productive if they are part of a systematic conversation between leadership and faculty, and not initiated by administrators reacting to crisis. Institutions must make accountable, public, and evidence-based decisions resulting from transparent processes and community participation. To make resource decisions around review action plans more transparent and equitable, college leaders should explicitly integrate review findings

and requests into annual resource decisions and budgets. This will also address lingering perceptions that assessment remains “undercapitalized” (Ewell, et al., 2011a, p. 21).

Managing the resource paradox means imagining resources beyond new capital requests. Creating value can arise from re-designing existing allocations of labor and time, and by improving how data informs decisions. Suskie argues that program reviews are “critical to ensuring, advancing, and demonstrating quality because college-wide quality can only go so far” (2014, p. 229). She contends that quality programs depend on both outcomes assessment and “cost and cost-effectiveness: how much the program costs and how efficiently and effectively it uses resources” (Suskie, 2014, p. 230). We know colleges are constrained by “high labor costs, the high costs of physical plants, and high materials costs,” (DeMillo 2013, p. 3), and that institutional effectiveness means assessing programs differently: “To believe that all programs or activities must be supported equally is to have no real priorities” (Farmer, 1988, p. 14). Such insights suggest investments made with different resources in different programs lead to different returns. Increasing budgets won’t automatically solve the disconnect between program needs and college strategic priorities, nor incentivize faculty (or administrators) to estimate and measure the return on investments relative to resource requests.

It’s necessary to think more broadly about resources beyond capital, about where value comes from, and about how strategic decisions are made. There is an expansive need for external grants, but also for program reviews to become more like grant applications, particularly in their action plans. Faculty leading program reviews must become more explicit in explaining why additional resources will lead to measurable outcomes, especially for colleges’ existing strategic priorities, and how piloting and scaling potential actions might produce important data to measure further investments. The actions section of program review reports should answer key questions: what does the action cost in resources? What are the likely results of actions, and how will they be measured? What is the relative value of different actions? Which actions produce the greatest cost-benefit in terms of student learning, retention, and graduation? How do actions align with institutional goals and objectives?

Both faculty and college leaders will need to create new methods of collecting and presenting data to successfully accomplish this. Perhaps we might glance back at the idea of ‘moneyball,’ popularized by Michael Lewis (2011) about the 2002 Oakland Athletics: “if gross miscalculations of a person’s value could occur on a baseball field, before a live audience of thirty thousand, and a television audience of millions more, what did that say about the measurement of performance in other lines of work?” (2011, p. 72). In other words, we can re-imagine different kinds of data to re-calculate the value of programs, but also to calculate what resource allocations create more value.

For instance, Barr and Tagg wrote that a “Learning Paradigm” should define “productivity” as “the cost per unit of learning per student,” not the “cost per hour of instruction per student” (Barr and Tagg, 1995, p. 23). With that in mind, what investments in personnel, space, and equipment would lead to the most new learning in the Industrial Design program? Would investments in space or equipment be more valuable, if we had to choose? What investments would increase program enrollment, retention, and graduation? Is it axiomatic that growing program enrollments necessitate more funding? Can growth be managed by reallocating existing resources better?

We may be just beginning to determine how to integrate learning data with budget plans. At LaGuardia, securing new resources will require program faculty to develop their professional skills, negotiate with their chair and provost, and find more external funding. Faculty will need to re-imagine the review process with an eye on enrollment, retention, and graduation, and by extension disciplinary trends, new technology, and labor markets. To the extent such priorities require professional development, the program review process should address these concerns with honesty and support. Furthermore, program review resource allocation should receive attention at budget presentations to the college senate, and academic chairs should hold regular meetings about resource requests with the provost and budget office. Another step might involve creating dialogue about institutional effectiveness with faculty leaders of assessment, as well as with governance bodies who participate in budget conversations with leadership.

Given the stakes for students and for the programs, not to mention for colleges and their communities, addressing the resource paradox is necessary for college leaders and assessment practitioners, but also program faculty. New professional development should adapt from grant models to better facilitate common understandings about how actions relate to their costs, and how different investments using different resources can return those costs over time in a variety of ways. Faculty can help make inclusive, informed, and data-driven decisions about resource allocations. In turn, college leaders will likely find those decisions to be more legitimate, consequential, and reasonable by the faculty and programs they serve.

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