Toward institutionalizing successful innovations in the Academy

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Abstract

Due to the “wicked problem” of the Academy’s resistance to innovation, new teaching and learning programs struggle to become integrated into the fabric of the Academy, which slows the uptake of evidence-based practices. This wicked problem is rooted in the lack of slow, intentional mechanisms for cultural change in the Academy. In this article, we analyze the institutionalization journey of the Departmental Action Team (DAT) project, which is a model for slow, intentional change. Over the last four years, partnering with two campus centers for teaching and learning (CTLs) allowed the DAT project to make institutionalization progress.

This analysis is focused on the institutionalization activities of the DAT project team and their co-creation of value with diverse stakeholders across two institutions. Results of the analysis include the definition of seven areas of effort (Team Development, Program Design, Awareness Communication, Program Implementation, Program Assessment, Outcomes Communication, and Financial Stability) that are valuable for the institutionalization of innovative educational programs. Within each area of effort, we describe specific strategies for institutionalization progress. We also analyze the timing of different areas of effort and present a model describing the cycling between areas of effort over time. Throughout the analysis, we provide recommendations for CTL staff working to institutionalize innovations.
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It is a proven truism that most projects are failing because of the lack of an appropriate sustainability plan. (Morfaw, 2014)

A perennial “wicked problem” in the Academy is its resistance to innovation (Blumenstyk, 2020a, 2020b, 2020c; Kezar et al., 2015), which is a fundamental stumbling block in the quest for humans to “get better at being human” (Bass, 2018). Over recent decades, calls to address systemic problems in the Academy have resulted in important movements, including the scholarship of teaching and learning (SoTL) (McConnell, 2012), discipline-based education research (DBER) (Talanquer, 2014), active learning, and inclusive pedagogy (Kezar, 2011). However, many have noted that these movements have failed to engage the majority of instructors (Olson & Riordan, 2012), have engaged instructors only to have them fail to persist with new techniques (Elton, 2003; Henderson et al., 2011; Kombe & Herman, 2017; Seymour, 2002), or have failed to gain sufficient institutional support (Boyce, 2003; Nworie, 2015). Failure to institutionalize innovations is a particular problem for grant-funded efforts, extending far beyond education (Kombe & Herman, 2017).

In his 2020 essay “What’s the Problem Now?” Bass calls for mechanisms for “fast change,” noting that the Academy does “slow change” well. We would respectfully disagree. While the Academy does slow change through passive, reactive mechanisms (what Kezar, 2013, terms evolutionary change), it lacks mechanisms for intentional, deep slow change that has the potential for altering culture, values, and beliefs (what Argyris, 1999, and Schön, 1983, term second-order change).

At the same time, Bass argues that any efforts to enact fast change in the Academy need to be coupled with an understanding of the problem of education as a wicked problem. Instead, “if one understands the problem of student success as a tame problem, it is likely
we will focus only on strategies intended to have direct impact on student learning, persistence, and completion” (Bass, 2020, p. 13). Any fast change strategies that directly target only these metrics will ignore myriad adjacent issues (e.g., faculty culture, institutional structures, societal inequality and oppression) that indirectly impact student success and, as a result, are likely to fail in the long term. In short, we see the Academy as being asleep to the “fierce urgency” of expanding its capacity for change, whether slow or fast, which it must do to address the wicked nature of the problems it faces.

Centers for teaching and learning (CTLs) have a significant role to play in expanding institutional capacity for change. In particular, CTLs are increasingly regarded as units that can drive institutional change in teaching and learning (Schroeder, 2012; Siering et al., 2015). They can do so through prescriptive strategies (e.g., workshops, trainings, change management processes), but because of the siloed nature of academic departments, they must also include structures to nurture emergent departmentally based change processes (Wise et al., 2017). Furthermore, when successful change processes emerge, the Academy must put in place mechanisms for them to become institutionalized, with consistent funding. Unfortunately, professional development providers often struggle to find sufficient local resources to support their programs (Nworie, 2015; Sorcinelli, 2002).

In this article we explore how two CTLs partnered with and supported the institutionalization of an innovative grant-funded program designed to catalyze slow, sustainable department-level change. We focus our analysis on the program’s institutionalization activities and their co-creation of value with CTL partners and other stakeholders. By institutionalize, we mean engaging with institutional stakeholders to generate sustained local support for a program (Curry, 1992; Rogers, 2003). Such support can include physical, managerial, collegial, and fiscal resources allocated to the program as well as widespread participation in the program. A fully institutionalized program is integrated into institutional culture instead of being viewed as separate or special (Nworie, 2015).
The program examined here is the Departmental Action Team (DAT) project. Each of this article’s authors was involved in the management, implementation, research, and/or evaluation of the DAT project. As part of the institutionalization process, DAT project staff were hired from within two CTLs. This provided an insider perspective on institutionalization on our campuses, including conditions that work to constrain institutional change (Wise et al., 2017). We note that many of the recommendations for sustaining CTLs (e.g., Sorcinelli, 2002) resonate with the principles that guide the DAT project (Quan et al., 2019) or the practices that DAT project team members have employed in the pursuit of institutionalization (Ngai, Corbo, Falkenberg et al., 2020). Thus, this example is relevant for exploring methods of institutionalization that matter to CTLs.

This article externalizes some of the lessons that we learned through the institutionalization process of the DAT project on our pilot campuses. While our analysis is based on data from our own ongoing institutionalization efforts, the lessons that we extracted from our experiences are relevant to members of CTLs seeking ongoing institutional support for their initiatives.

**Departmental Action Team Project Context**

The DAT project was founded in 2014 to support sustainable educational innovation. A DAT is a team of faculty, students, and staff from the same department working to enact a consensus vision of undergraduate education. DATs are guided over one to two years by a pair of external facilitators through a process of member recruitment; visioning, goal setting, and prioritization; project design, implementation, and assessment; and stakeholder engagement (Ngai, Corbo, Falkenberg et al., 2020). The DAT project has had two cycles of grant funding. Major programmatic budget categories included staff salaries, student stipends, and facilitation materials. Each half-time facilitator supported three to four DATs at a time.
In the first funding cycle, from 2014 to 2016, the DAT model was developed as an emergent component of a larger project. Five DATs were formed on one R1 campus, serving as a pilot for future DAT model development. The second cycle, from 2016 to 2020, was focused on expanding the DAT model to another institution and the pursuit of institutionalization at both campuses. In this cycle, seven additional DATs were formed on the original campus and five on a second nearby R1 campus. The principal investigator (PI) team for the second cycle hired four part-time DAT facilitators, a graduate student researcher, three postdoctoral researcher-facilitators, and two external evaluators. The PIs guided the project, mentored the staff, and administered the grant.

During the second finding cycle, the project formally defined partnerships with two campus CTLs through memorandums of understanding. Several CTL managers were involved with providing five DAT facilitators with CTL offices and integrating them into the collegial life of the CTL. At one campus, the CTL was the central hub for teaching and learning support (a “traditional” CTL), and at the other campus, it was a teaching support group within a larger academic technology unit that does not refer to itself as a CTL. We worked with the latter group because that campus did not have a single, centralized CTL; nevertheless, we will still refer to that group as a CTL for simplicity in this article. One important goal for these partnerships was to support institutionalization on both campuses.

Across the project, DATs were formed in 14 STEM departments, two social science departments, and one humanities department. DAT projects were focused on undergraduate education but spanned a wide variety of topics related to programmatic, instructional, curricular, and cultural change, often including changes promoting equity and inclusion (Reinholz et al., 2019). In about 70% of cases, DATs continued to catalyze change after external facilitation ended.

One example of a DAT that we consider to be an exemplar of the model is the Divination DAT (a pseudonym). This group consisted of three faculty, three staff, and three students, along with facilitators.
The Divination DAT’s overall goal was to prepare their students better for careers in their major. They focused their attention on revising their programmatic student learning outcomes and developing an accompanying assessment plan to provide data on students’ progress. The facilitators supported the Divination DAT by guiding their conversations with structured prompts or activities; developing a collaborative team culture; modeling and teaching skills in project management, change management, stakeholder communication, and facilitation; and contributing education expertise. Student perspectives significantly shaped the final set of learning outcomes, and students on the DAT felt valued. After two years of support, two DAT members trained with the external facilitators to continue facilitating the group’s work.

DAT Project Institutionalization History

In the first cycle of funding, the DAT project was piloting and defining the model and so did not explicitly pursue institutionalization. However, the early accomplishments of DATs led the project team to propose collaborating with the two CTLs described above, which led to a second round of grant funding. In that proposal, the project team posed the following research question: “What is required for a CTL to adopt the DAT model?” In other words, what does it take to institutionalize an innovation that is a mechanism for intentional slow change, such as DATs? However, the proposal did not specify a detailed institutionalization plan.

In the second funding cycle, project institutionalization subteams informally emerged on each campus, largely consisting of CTL managers, grant PIs, and facilitators. Each subteam engaged in a number of activities and strategies to promote institutionalization on their respective campuses.

Institutionalization is affected by contextual and environmental factors in addition to the activities engaged in by a project team (Kombe & Herman, 2017). A number of relevant campus-wide initiatives occurred
during the second funding cycle, including major efforts to (a) directly boost student learning; (b) rebalance budgets; (c) initiate new programming to enhance student retention; (d) engage the community in envisioning and setting strategic priorities for institutional change; (e) engage instructors with frameworks for teaching quality and effectiveness; and (f) revitalize plans to implement equity, diversity, and inclusion initiatives across campus. These initiatives involved intense community discussion and resulted in changes, including the founding of a new CTL on one campus. Among administrators, the initiatives also generated a period of significant budgetary and organizational uncertainty. While these contextual factors were important to institutionalization outcomes on each campus, we focus this article on factors that the DAT project team could influence.

**Methodology**

As we are describing our own experiences, as well as studying them, our methods draw from action research (Kemmis, 2001), specifically, the collaborative action research model, as our methods involve multiple stakeholders as co-researchers (e.g., researchers, facilitators, CTL manager, program evaluator) (Mitchell et al., 2009). In line with this model, we sought to make meaning of our experiences by connecting theory and practice.

We first reviewed artifacts that resulted from documenting DAT project institutionalization efforts. We used our definition of institutionalization, as provided earlier in this article, to guide our identification of relevant data, including data that we perceived to be related to institutionalization both when it was collected and in hindsight. Artifacts we consulted include meeting agendas and minutes, emails and calendars, and reports and resources produced by the DAT project team. They also include transcripts and a thematic summary from ten semi-structured interviews of campus administrators and DAT staff, written by our evaluator.
We next organized a timeline of internal- and external-facing institutionalization activities from these data sources and held a series of reflective analytic discussions comparing the timeline to a thematic summary of the institutionalization interviews. In these discussions, we first asked “What are key strategies we used, or might have better used, in working to institutionalize the DAT project?” and then asked “Can institutionalization activities or strategies be categorized in useful ways?”

The result of these analytic discussions was a set of seven key areas of effort that overlap significantly with aspects of sustainability analysis (Morfaw, 2014) and sustainability strategies for CTLs (Sorcinelli, 2002). We then associated each of the strategies we had initially identified with an area of effort. The areas of effort and selected strategies are described in detail below.

Lastly, we worked to connect theory with practice by reviewing the data through the lens of co-creation of value (CCV), a theoretical construct defined as “value as derived from a constantly creative and reinforced collaborative effort” (Schumann et al., 2013). We find that CCV is aligned with the practices of both the DAT project and the CTLs within which DAT staff were embedded. Schumann and colleagues argue that CCV is a particularly salient concept for CTLs because they are positioned at the nexus of multiple stakeholder groups. CTLs that co-create value with stakeholders can develop a greater variety of creative solutions aligned with stakeholders’ needs. Critically, the process of CCV elevates the value of both groups in each other’s perception. Their jointly ideated activities have “stronger value than any one group could create alone” (Schumann et al., 2013).

Thus, CCV processes may be important to successful program institutionalization, as they can support an innovation in adapting to meet local institutional needs. In our analysis below, which includes blended examples from both institutions, we identify specific institutionalization activities that contributed to CCV for our project, which we believe may be profitably applied to institutionalization efforts of CTLs and across the Academy.
Reflection and Critique of DAT Institutionalization

In this section, we define the key areas of institutionalization effort identified in our analysis. We describe specific strategies within each area that our team engaged in (or might have benefited from) and which may support institutionalization of innovative programs.

Areas of Effort

We associated each of the DAT project’s institutionalization activities with a key area of effort. Four areas (Team Development, Program Design, Program Implementation, and Program Assessment) are largely internal to a program, whereas three (Awareness Communication, Outcomes Communication, and Financial Stability) are external facing. The areas are not presented in chronological order—our team placed varying levels of attention on different areas over time.

Although we describe the seven areas separately below, we acknowledge that in practice they can overlap and mutually reinforce one another. For example, while we discuss champions in the context of Awareness Communication, champions were also a critical factor in processes promoting Financial Stability. Moreover, we discuss the importance of flexibly co-creating program structures (and therefore co-creating value) with stakeholders in Program Implementation, but this factor is also important for integrating the program into campus structures in the pursuit of Financial Stability.

In the next seven sections, we define each area of effort and describe our team’s experiences within each area that lead us to recommend specific institutionalization strategies.

Team Development

Team Development encompasses processes of professional development, at the individual and team levels, that support a team’s effectiveness. These processes help teams develop skills as the needs of
a project change. They can also help team members collaboratively develop shared governance processes (involving all team members in decision-making and the co-creation of value), allowing the project to be implemented both as envisioned and in ways exceeding initial expectations.

**Strategy #1: Engage in team and individual professional development and address gaps in team strengths**

After our team was expanded in the project’s third year, we engaged in a StrengthsQuest exploration (Clifton et al., 2016). This resulted in a matrix showing how strengths across four domains—executing, influencing, strategic thinking, and relationship building—were distributed across the team. The analysis revealed that our team had a dearth of strengths in the influencing domain (which helps a team promote its work and persuade others).

We used StrengthsQuest insights to better understand our team’s capacities, needs, and dynamics. However, we didn’t seek training to develop skills that would allow us to meet the project’s needs around marketing and publicity. It is possible that a small investment in this area (e.g., collaborating with a campus communications staff on a publicity plan and a press release) would have led team members to engage in earlier and more extensive Awareness Communication and Outcomes Communication.

**Program Design**

Program Design is the process by which a novel program is conceptualized, budgeted, staffed, and tested. For us, this process included identifying the DAT project’s principles (Quan et al., 2019) and a theory of change (Ngai, Corbo, Quan et al., 2020). Strong design supports team members in implementing the program with fidelity, which supports the program’s reputation. Program Design works best when teams engage in CCV processes, allowing team members and program
participants to meaningfully influence the design by contributing their experience and expertise.

Strategy #2: Create opportunities for program staff to work closely with or temporarily become embedded in campus units that share interests with the program

As the founders of the DAT project developed a proposal for their second cycle of funding, they worked with CTL managers to embed DAT project staff in their groups. This design decision had enormous impacts on our institutionalization process. Embedding staff in established CTL units furnished us with substantial institutional knowledge and social capital. CTL managers brokered or suggested meetings with over 30 individuals and groups whose interests aligned with the DAT project. They also guided DAT project staff in engaging with several major campus-wide initiatives. Every potential avenue that the DAT project explored regarding funding was suggested or reviewed by CTL colleagues, along with every publicity endeavor.

The CCV and learning sparked by these partnerships were mutually beneficial; CTL colleagues grew in their understanding of department-level approaches to change and group facilitation, while the project team learned about change management, teaching effectiveness, and analyzing group strengths by working within the CTLs.

What should CTLs do when considering embedding programs or staff? It is logical to look to programs that are highly respected or that have existing relationships with a CTL. However, late in our project, we were surprised to learn that two units we had not yet interacted with were interested in adopting our project’s methods: an organizational development team within human resources, and an office of equity and diversity. Therefore, we agree with Sorcinelli (2002), who recommends partnering with units with well-aligned missions and working processes. Ultimately, two of our campus CTLs determined that the DAT project was not aligned strongly enough with their mission for a long-term fit.
Strategy #3: Define project timelines, tasks, and team roles to include institutionalization efforts from the start of the project

Roles and tasks relating to institutionalization were first explicitly defined in our project’s fourth year, in one of the CTL-embedded facilitators’ performance plans. Shortly after that, facilitators began meeting with administrators affiliated with that CTL and later with college- and campus-level administrators.

Internal meetings dedicated to developing institutionalization strategies and timelines were not convened until the project’s fifth year. Around that time, meeting notes indicate that a facilitator began to express unease around the volume and the nature of their institutionalization work, which was beginning to involve discussions of budgeting. Our evaluator recommended that the team “lay out clearer structure for institutionalization responsibilities,” suggesting that we needed persons in greater positions of power to manage institutionalization. These roles were subsequently adopted by several PIs and CTL managers.

In a project in which institutionalization is integrated from the start, defining institutionalization timelines and roles could occur within the first months of project design, ensuring institutionalization activities are not delayed in any area of effort. A biannual team discussion of roles across the project would facilitate adjustments needed to ensure program work proceeds steadily, including institutionalization.

Strategy #4: Start with a small pilot, building a strong reputation and documenting outcomes, before partnering to support another initiative

In the project’s fourth year, we garnered attention from some administrators in positions of power. They quickly expressed interest in applying the DAT project to an existing campus initiative, which appeared to be a good fit.
We were concerned, however, about scaling the project beyond what was originally proposed, given limited facilitator resources and the fact that the team was still working to establish consistency between the two pilot campuses. Ultimately, higher administration allocated funding to implement DATs at a larger scale and began to contact departments about the opportunity. This left our team scrambling to communicate which components of the project were essential and which were flexible and to develop resources for supporting DATs that aligned with the campus initiative.

The majority of the DATs initiated by this campus initiative had more difficulty than others in working effectively together and with facilitators, resulting in fewer impacts to their departments. Their struggles impacted how administrators viewed the DAT project, hindering institutionalization. In retrospect, while the visibility and resources gained from partnering with administrators around this initiative was an attractive path toward institutionalization, the timing forced decisions about Project Implementation before adaptations could be fully explored. Therefore, we recommend that programs in the early stages of implementation resist pressure to scale up or adapt to other contexts and focus instead on building a strong foundation.

**Awareness Communication**

Awareness Communication is initiated to spread information campus-wide about the program’s team, design, and potential impacts and can serve to build relationships with a wide variety of people and offices. Some of these may become future champions, homes, and/or institutional funders of the project. Awareness Communication serves as an important forum for co-creating value with stakeholders by exploring their needs, which can provide useful feedback for Program Assessment and surface campus opportunities for Financial Stability.
Strategy #5: Meet with administrators of all offices that have interests intersecting with the program

We began to propose meetings intended to raise awareness of the project in our fourth year and eventually met with administrators from offices of undergraduate education, student affairs, academic technology, organizational development, ombuds, social change, equity and diversity, and institutional research. With CTL colleagues, we also attended and organized teaching, education research, and professional development events at which we discussed the DAT project with wider audiences. In total, we attended over 40 meetings and events over three years.

In these meetings, we emphasized DAT project goals, our methods of facilitating shared governance, and the co-creation of value and relayed accounts of what different DATs had accomplished or were working on. We asked how the DAT project might synergize with their mission and activities to identify their needs and support the co-creation of value. Reactions in these meetings were overwhelmingly positive and benefited our institutionalization efforts by leading us to identify many potential champions along with seven different opportunities to pursue Financial Stability.

We believe we could have begun systematic work on Awareness Communication once our first year of Program Implementation was complete. This would have provided more time to engage our champions in communication activities and engage in Financial Stability efforts.

Strategy #6: Internally designate project spokespersons and consistently direct interest to those individuals

Our external evaluator brought to our attention that several stakeholders she interviewed expressed confusion about whom to contact about the project. Some individuals had interacted with several different members of our project team, and it was unclear which of us was the designated “face” of the project. The lack of a highly visible
project spokesperson is likely why some of our proposals to meet with provost-level campus officials were ignored. Our evaluator suggested “identifying an individual on each campus who will be recognized and respected” to support clearer communication.

The spokesperson for a program will ideally have social capital on campus and the capability to leverage and expand their network of professional relationships to support the program. In addition to engaging in Awareness Communication, the spokesperson would also ideally occupy a position of power, enabling them to draw the attention of campus-level administrators to the program’s Outcomes Communication. An established spokesperson would further contribute to institutionalization by leveraging their position to bring potential funders to the table as the program pursues Financial Stability.

*Strategy #7: Invite individuals that are enthusiastic about the project’s potential to act as “champions” to further raise awareness and bolster the project’s reputation*

We define a champion as an individual who publicly endorses a program. As our project progressed, a large number of individuals expressed their enthusiasm about the DAT project. One of our CTL directors would regularly endorse our project in meetings with other directors, contrasting his confidence in the DAT’s departmental change work with the admission “I have been doing individual change for a decade or more and have not much to show for it.” However, we rarely asked enthusiastic individuals to champion for us in this way.

In the project’s fifth year, one of our staff facilitators was sponsored by their CTL to receive training in change management. They learned about actively managing champions, including coaching champions about messages to include in their endorsements (Hiatt & Creasey, 2012). Subsequently, we would sometimes ask enthusiastic individuals to “spread the word” and invite them to distribute materials we shared with them. However, we did not systematically follow up with these individuals or designate them publicly as our champions.
In the words of one of our potential funders, we needed to “find influencers and get them to tell [our] story.” It is possible that better leveraging our champions might have balanced out negative messages expressed by a minority of DAT members and given potential funders more confidence in the program. Therefore, we recommend that programs dedicate time to identifying and coordinating the activities of champions. Acknowledging champions publicly and establishing regular check-ins with them can serve to co-create value and provide feedback about how their messaging is being received.

**Program Implementation**

Program Implementation is the work of running the program, including participant recruitment and communication, program management, and materials development. It also involves ongoing internal team reflection and communication processes.

**Strategy #8: Work with college and departmental leaders to ensure program participation is voluntary**

Voluntary department chair and DAT member participation is essential for the success of every DAT, and this fact was emphasized by our facilitators. Nevertheless, enthusiastic chairs or administrators sometimes told a department that a DAT would be formed, rather than engaging in open conversations with departmental stakeholders and facilitators about whether a DAT would be a good fit. Department chairs also sometimes assigned department members to be DAT participants. These actions worked against the co-creation of value between department members and the DAT project. When DATs formed in these ways, they sometimes struggled to succeed, which in turn hurt institutionalization.

Conversely, when departments were invited to submit applications to form a DAT, groups of motivated department members tended to
take the lead, which supported the co-creation of value. The resulting DATs stayed together longer and were better able to create change than were DATs formed primarily by department chairs. Thus, we recommend that programs secure support from leadership but place equal importance on engaging in a voluntary process of co-creating value with prospective program participants.

**Strategy #9: Flexibly experiment with aspects of the program, tailoring it to participants’ contexts**

Although each program has essential features, tailoring aspects of programs to different contexts is an important CCV process. We discovered through a feedback survey and interviews with DAT members that some thought that activities suggested by DAT facilitators took up too much meeting time and slowed team progress, and they requested more flexibility around them. We concluded that particular components of the project were not adapted to their departmental context and thus felt like a hindrance rather than a support. At the time, we were focused on implementing the project with fidelity to our plan and did not provide adequate rationale for that plan or seek out other areas of flexibility that could be leveraged to tailor the project for each context. This contributed to a decline in some administrators’ interest in institutionalizing the project.

Ultimately, we became more skilled at communicating why certain components are essential and which components are flexible. We also began to immediately implement changes to our facilitation in response to participant feedback and found that this strengthened relationships between facilitators and DATs. Providing flexibility within the essential elements of the DAT project supported the co-creation of value and helped participants assume some ownership. These processes can support the program’s reputation and help generate momentum for the program on campus.
Program Assessment

Program Assessment comprises all activities designed to assess and continuously improve the program, including informal and formal qualitative and quantitative data collection, processes for adjusting the program in light of feedback, and the documentation of program efficacy and impact (McDavid et al., 2018). Program Assessment efforts support creative and effective adjustments to the program to meet local needs and can be conducted by program participants, grant project team members, CTL managers, and external evaluators.

Strategy #10: Engage participants in semesterly informal program assessment and in annual formal program evaluation

As we supported DATs, we encouraged each of them to develop a plan for collecting data regarding progress toward their goals. This type of informal evaluation helped DAT members to chart a path forward and gave them something concrete to share with their departments. We were also able to use some DAT documentation of change in their departments to describe impacts of the DAT program overall. Surveying and interviewing DAT participants also helped us assess DAT progress and often led us to adjust aspects of our implementation. We did not, however, have a systematic way to collect evaluation data from each DAT and participant.

Our external evaluators also collected and analyzed data related to our project team’s internal processes and the implementation of the DAT project and conveyed feedback from stakeholders that may not have been communicated to us otherwise. We have used the reports from our evaluators in our Outcomes Communication. Overall, we recommend using a regular schedule of informal and formal program evaluation to guide decision-making and provide a basis for Outcomes Communication.
Outcomes Communication

Outcomes Communication establishes an understanding of the qualitative and quantitative impacts of the program as well as how the results of Program Assessment are being used toward continuous improvement. The efficacy of this communication hinges on the quality of work in the areas of Program Implementation and Program Assessment. Outcomes Communication should include discussions with stakeholders from a variety of campus offices but especially with potential funders. It also includes internal evaluation or research summaries, annual reports, peer-reviewed publications, and media celebrating impacts of participants’ work.

Strategy #11: Use a variety of regular local reporting mechanisms to communicate both qualitative and quantitative outcomes

Once a semester, we met with higher administrators and student affairs representatives to provide a progress report on the DATs on campus and the DAT project as a whole. To prepare for these meetings, we created documents highlighting aspects of the research and implementation of DATs. Some of these documents included results from our surveys, direct quotes from meetings or interviews with DAT members, and summaries of products or changes emerging from DATs. We often subsequently shared these documents with DAT members and potential DAT members.

In hindsight, however, a regular program newsletter and articles in local media outlets may have spread awareness more quickly about the variety of impacts that DATs were having on departments. We published an article in a campus newsletter in our project’s sixth year, after one of our DATs was recognized with a diversity award. However, DATs achieved many other accomplishments, starting in the project’s second year, that could have been highlighted to our stakeholders and the community. In interviews with our evaluator, administrators spoke of having a sense that DATs were doing good work but couldn’t recall specifics about their work. In retrospect, a semesterly cycle
of newsletters and local media about DATs would likely have given administrators memorable stories to recall.

**Strategy #12: Relate the program’s impacts to the fiscal benefits they bring to the institution**

Our conversations with campus-level administrators tended to be more fiscally centered than conversations with those working within colleges and departments. One administrator charged with improving student success asked our team, “Can we develop a strategic [DAT] assessment tool to . . . determine where the institutional investment of dollars and resources is most likely to garner wide impact related to [our campus initiative] goals?” For another campus funding initiative, we were challenged to create a mathematical model predicting how DATs might impact student retention.

The charges we received from these administrators and campus initiatives were valuable in challenging us to demonstrate the DAT project’s potential fiscal impacts if scaled. Prior to these challenges, we had primarily focused on communicating our program’s outcomes with qualitative accounts of DAT accomplishments and quotes from our participants, and discussions about scaling the DAT project were not rooted in our data. While communicating qualitative outcomes is also important, we recommend program implementers work to understand fiscal drivers of innovation at their campus and request support from administrators who have experience with budgeting at the college and campus level. With support, program staff can develop scaled impact estimates that administrators may require when making choices between different programs to fund.

**Strategy #13: Provide opportunities for program participants to share their progress and challenges**

Co-created value is an important outcome of events at which program participants share their progress and challenges. These opportunities
also generate excitement, inspire participants to try new ideas, encourage a greater sense of community, and bolster the program’s reputation. We hosted annual “DAT Parties,” at which DAT participants, those interested in DATs, and DAT champions informally shared food and insights. At one event, we invited members of an established DAT to share their experiences, and what was originally planned to be a 15-minute conversation became a 30-minute one in which unscripted, authentic responses from experienced DAT members appeared to strongly resonate with newer DAT participants. We believe experiences like these conveyed a sense of legitimacy for the program that could not have been established by the DAT project team alone. These events also resulted in some participants expressing interest in serving as champions. In these ways, building a community of program participants can support institutionalization efforts.

**Financial Stability**

Financial Stability refers to processes in which possibilities for the program’s local long-term funding and campus home are explored and negotiated with administrators. Preparing for funding-related meetings often involves combining Outcomes Communication with specific program proposals and budget requests. Campuses may have internal competitions or other formal processes through which projects may be funded. However, we found that our campuses lacked transparency on paths for successful, innovative programs to achieve Financial Stability. While external funding (e.g., grants) may support the acquisition of ongoing internal funding, a program that depends on external funding is not institutionalized.

*Strategy #14: Research the institution’s context of innovation and change*

Institutional processes for the adoption of new programs vary by institution and over institutional history. Once administrators were aware
of our project, we often asked them about their office’s budgetary processes and how those processes intersected with campus change efforts. We also met with one office to better understand how change management principles were being implemented in different parts of campus, and we attended events for major campus initiatives to better understand how our program might fit within them. Gaining an understanding of our local context of change helped us speak to the alignments between our program and the goals of specific offices and campus initiatives and to time our proposals to intersect with the budgetary processes of different groups.

**Strategy #15: Start explicitly discussing funding opportunities with office directors as soon as connections can be made between demonstrated outcomes and the goals of the group or institution**

We began to discuss funding with administrators near the end of the project’s fourth year. We first engaged them as strategic partners in developing a path to making proposals, because such paths were not transparently established on our campuses. Our first proposal was made through the annual budgeting process of the CTL unit, involved meetings with the unit director, took about six months, and resulted in temporary part-time funding for one facilitator.

In parallel, we separately asked five associate deans from two colleges if they might support a funding proposal to continue offering DATs in their units. As several assented, we proposed a “funding summit” to bring the associate deans together along with our CTL managers. In this summit, convened in our last year of grant funding, we provided a detailed budget request for continuing DATs in their units. By the end of the summit, a verbal agreement was made for the associate deans to provide half of the needed funding. In the next stage, detailed written budget proposals were submitted to each college, and DAT champions submitted letters of support to their college deans, who ultimately agreed to honor the verbal agreement. In all,
this process took 14 months, and the temporary funding was secured about six months before grant funding expired.

At the suggestion of our champions, we later met with directors of two offices that we previously had not regarded as potential funders. With one office, we determined that a future partnership could be possible with continued grant funding. The other office surprised us by expressing interest in adding our method of effecting department-level change to their portfolio by hiring one of our staff. The proposal was viewed favorably by their unit director, but the hiring process stalled when a campus-wide hiring freeze was imposed.

These experiences led us to realize the benefit of engaging in a variety of funding processes and the reality that these processes could take over a year to resolve. We predict that our project will require at least three grant funding cycles (6–10 budget years) before it succeeds in finding an institutional funding source. Therefore, we recommend programs initiate discussion of specific funding options as soon as they can demonstrate specific outcomes that meet goals of their college or campus. Ideally, discussions around Financial Stability would begin with a funding runway of at least three years.

In Table 1, we pull together all 15 strategies for institutionalization recommended in this article. Further research examining the efficacy of these strategies in other contexts would support our understanding of institutionalization.

**Institutionalization Timeline Analysis**

In the previous sections, we described strategies important for each area of institutionalization effort. It is also important to consider the timing of these efforts. In Figure 1, we present a visualization of how our staff focused on different areas of effort over time.

We note that in order to highlight temporal patterns of change in effort, this visualization method obscures continuous effort. For
Table 1. The seven areas of effort and 15 associated strategies that emerged from the analysis of our institutionalization process

<table>
<thead>
<tr>
<th>Area of effort</th>
<th>Key strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Development</td>
<td>1. Engage in team and individual professional development and address gaps in team strengths.</td>
</tr>
<tr>
<td>Program Design</td>
<td>2. Create opportunities for program staff to work closely with or temporarily become embedded in campus units that share interests with the program.</td>
</tr>
<tr>
<td></td>
<td>3. Define project timelines, tasks, and team roles to include institutionalization efforts from the start of the project.</td>
</tr>
<tr>
<td></td>
<td>4. Start with a small pilot, building a strong reputation and documenting outcomes, before partnering to support another initiative.</td>
</tr>
<tr>
<td>Awareness Communication</td>
<td>5. Meet with administrators of all offices that have interests intersecting with the program.</td>
</tr>
<tr>
<td></td>
<td>6. Internally designate project spokespersons and consistently direct interest to those individuals.</td>
</tr>
<tr>
<td></td>
<td>7. Invite individuals that are enthusiastic about the project’s potential to act as “champions” to further raise awareness and bolster the project’s reputation.</td>
</tr>
<tr>
<td>Program Implementation</td>
<td>8. Work with college and departmental leaders to ensure program participation is voluntary.</td>
</tr>
<tr>
<td></td>
<td>9. Flexibly experiment with aspects of the program, tailoring it to participants’ contexts.</td>
</tr>
<tr>
<td>Program Assessment</td>
<td>10. Engage participants in semesterly informal program assessment and in annual formal program evaluation.</td>
</tr>
<tr>
<td>Outcomes Communication</td>
<td>11. Use a variety of regular local reporting mechanisms to communicate both qualitative and quantitative outcomes.</td>
</tr>
<tr>
<td></td>
<td>12. Relate the program’s impacts to the fiscal benefits they bring to the institution.</td>
</tr>
<tr>
<td></td>
<td>13. Provide opportunities for program participants to share their progress and challenges.</td>
</tr>
<tr>
<td>Financial Stability</td>
<td>14. Research the institution’s context of innovation and change.</td>
</tr>
<tr>
<td></td>
<td>15. Start explicitly discussing funding opportunities with office directors as soon as connections can be made between demonstrated outcomes and the goals of the group or institution.</td>
</tr>
</tbody>
</table>

example, Team Development was ongoing across the entire project as individuals pursued professional development and veteran members mentored new project staff. The visualization also does not
Figure 1. Visualization of areas of DAT project team institutionalization effort, over two grants providing funding, 2014–2020. Each cell represents a 3- to 4-month period of intense effort in one of the key areas. Project years are divided into segments representing fall semester (Fa), spring semester (Sp), and summer (Su).

depict changes in the types of strategies used over time within each effort. For example, efforts related to Financial Stability change over the life of a program. Early in a program’s implementation, program staff may engage only in exploring the funding context of their institution and seek advice on their strategy around funding. Once the campus context is well understood and communication is robust, program staff are in a stronger position to make strategic proposals for Financial Stability.

Examination of this timeline provided us with several insights about our institutionalization efforts. In particular, it illuminated the late start and inconsistency of our Awareness and Outcomes Communication
activities. Engaging these areas earlier in the project would likely have supported our efforts promoting Financial Stability. Therefore, we recommend that programs create an ideal timeline of institutionalization efforts at their start, to support planning and tracking efforts over time.

The timeline also brought attention to the consistent nature of our Program Assessment activities. These activities were supplemented by the research component of the DAT project, which we intentionally integrated with Program Implementation to engage in a cycle of continuous improvement. While we implemented a variety of Program Assessment strategies, our funding for the research component of the DAT project ensured that we could conduct assessment more frequently—perhaps much more frequently than programs without research components.

Our development of this timeline also uncovered differences between our project teams related to timing and frequency of institutionalization efforts. For example, at one institution, Program Assessment strategies were implemented more frequently in preparation for meetings requested by campus administrators, resulting in regular Outcomes Communication. At the other institution, the team concluded that more intense and regular Program Assessment would have improved their Outcomes Communication. However, one of these teams had a steadier experience with Program Implementation, potentially resulting in a better reputation with administrators.

Cycles of Institutionalization Effort

The process of timelining our areas of institutionalization effort (Figure 1) led us to consider relationships between those areas, which are presented in a simplified model in Figure 2. We view Team Development and Program Design as foundational, while the five other
areas of effort make up two cycles connected by Program Assessment efforts. Project staff engage in the cycle on the left first, with Awareness Communication about the project leading to the recruitment of participants, which provides a path for CCV with stakeholders and initiates Program Implementation. When implementation is followed by Program Assessment, a team can engage the cycle on the right and leverage assessment findings for Outcomes Communication. That communication provides support for all conversations exploring Financial Stability, which when situated in ways that promote the co-creating of value, may in turn reveal gaps in Program Assessment that need to be addressed.

Figure 2 presents a generalized overview of the relationships between efforts, one in which different efforts appear to be balanced. We note, however, that different programs and institutions will vary in their institutionalization effort needs, and the impacts of different strategies will likely differ from the experiences related here, depending on context. For example, administrators at one institution may require quantitatively oriented Outcomes Communication before funding can be considered, whereas those at another institution might respond more strongly to testimonials and accounts about how programs effected change.

Institutional differences may ultimately influence timing of efforts as well. Based on our experience, we recommend beginning the cycle on the left side of Figure 2 in the first year of a project. The cycle on the right could begin as soon as Program Assessment findings are available. Although we did not begin the right-hand cycle until the fourth year of our project, it seems feasible to engage in it as soon as the end of the first or second year of implementation. Nevertheless, the timing of specific strategies to promote Outcomes Communication and Financial Stability will need to be contextually determined. Once both cycles are engaged, we believe programs would benefit from annual work within each area of effort. We note that it is possible for a program to operate without the right-hand cycle of effort, but such a program is unlikely to be institutionalized.
Conclusion

Novel, successful programs originate within many different parts of the Academy. They have many origin stories: arising within an existing, funded program; arising through grant funding; championed by senior administrators; and built from grassroots by students and staff. Regardless of origin, such programs face a common struggle to become integrated into the fabric of the institution (Lovett, 1995) due to the Academy’s lack of capacity for, and resulting resistance to, innovation. Understanding the efforts and strategies that further institutionalization is key to preserving processes that are already working to improve the Academy.

Our analysis underscores much of what has been previously reported in sustainability literature, such as the importance of beginning a project with a well-defined plan for institutionalization (Morfaw, 2014). It also has implications specifically relevant for program staff in higher education, such as the value of collaborating closely.
between units and using processes that support the co-creation of value (Schumann et al., 2013) and the fact that paths to institutionalization require researching one’s institutionalization context to become clear.

The DAT project is an innovation that expands institutional capacity for slow, sustainable cultural change. It is valuable as a test case because it may represent a difficult kind of program to institutionalize since administrators increasingly look for innovations that make fast change directly impacting students. Our work provides insight into the kinds of efforts and strategies that may support a program in becoming institutionalized and ideas about how those efforts might be timed over the course of a program. This work can serve as a guide to staff collaborating to work strategically, effectively, and in a timely manner to increase the chances that effective programs will become institutionalized.

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References

Bass, R. (2020). What’s the problem now? To Improve the Academy, 39(1). https://doi.org/10.3998/tia.17063888.0039.102


Olson, S., & Riordan, D. G. (2012). Engage to excel: Producing one million additional college graduates with degrees in science, technology, engineering, and mathematics. PCAST (President’s Council of Advisors on Science and Technology), Executive Office of the President.
Schroeder, C. M. (2012). Coming in from the margins: Faculty development’s emerging organizational development role in institutional change. Stylus Publishing.

