

**Reflections on Challenge, Change and Transition: How Relationship Building
Supported Change Management, Transitions and the Unexpected in a Multi
Institutional AGEP Alliance for Faculty Diversity**

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Abstract

The AGEF New York PUI Alliance project experienced considerable change and transition to its leadership team across all levels, and at all Alliance institutions, including the death of the Alliance Principal Investigator. The ongoing nature of these changes has placed the Alliance in a constant state of transition as the team, model, project, interventions and dissemination plans adapt to new team members and new, remote methods of engagement. During its first three years, the speed and frequency of unanticipated change experienced by the AGEF New York PUI Alliance presented an opportunity for the project team to look at the team itself as a model component to be studied. Understanding how the team, and specific team members have coped with and adapted to unexpected change is providing greater insight into what can best support team cohesiveness, sense of commitment to a project and enthusiasm for the work. This reflection piece aims to present the personal perspectives of five team members: two Principal Investigators, one Co-Principal Investigator, and two program managers. The narrative presents an opportunity to discuss the importance of building strong team relationships and cohesiveness to ensure project advancement during periods of change and transition.

Keywords: broadening participation in stem, alliance projects, AGEF

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This work is part of a self-study being conducted by a multi-institution project seeking to examine how teams are built and what they learn in pursuit of project goals. The piece presents a series of self-reflection statements written by leadership team members of a regional, federally funded, multi-institutional AGEP alliance, a project supporting historically marginalized and racialized STEM scholars seeking a specific career pathway onto faculty positions at Primarily Undergraduate institutions (PUIs). Introspective statements are shared by five project team members: two Principal Investigators, one Co-Principal Investigator, and two program managers. Part of the National Science Foundation's Alliances for Graduate Education and the Professoriate (AGEP), the project, entitled the New York PUI Alliance, is part of a national set of efforts working to broaden the participation of AGEP population scholars in the STEM professoriate. AGEP population scholars are referred to in congressional language as a "historically underrepresented minority" and sometimes referred to by narrative contributors to this piece as historically marginalized and racialized populations.

The New York-PUI Alliance project experienced considerable change and transition to its leadership team across all levels, and at all Alliance institutions, including the death of the Alliance Principal Investigator (PI). The ongoing nature of these changes placed the Alliance in a constant state of transition as the team, model, project, interventions, and dissemination plans needed to adapt to new team members and new, remote methods of engagement. From 2018-2021 the speed and frequency of unanticipated change experienced by the New York-PUI Alliance, including the COVID19 pandemic, presented an opportunity for the project team to look at the team itself as a model component to be

studied. Understanding how the team, and specific team members have coped with and adapted to unexpected change is providing greater insight into supporting team cohesiveness, sense of commitment to a project, and enthusiasm for the work. The narrative presents an opportunity to discuss the impacts that change, transition, leadership and team building can have on the success of broadening participation projects and provide peer efforts with insight into literature being used by the New York-PUI Alliance project to understand theories and research into the science of leadership and team building.

Project Goal and Alliance Team

The New York-PUI Alliance, or “the Alliance” brings together three different institutions with the goal of developing, implementing, studying, institutionalizing, evaluating, and disseminating a model focusing on career development for AGEP populations. For this Alliance, that population is historically racialized, marginalized and excluded doctoral degree students in STEM seeking tenure-track faculty positions at Primarily Undergraduate Institutions (PUIs). Working through partnerships between three State University of New York (SUNY) institutions: Stony Brook University, a research-intensive institution, Suffolk County Community College, a community college , and Farmingdale State College, a college of applied science and technology, The Alliance, led by Stony Brook University works with project-eligible doctoral degree students, postdoctoral scholars, and early career faculty to provide them with mentoring, professional development training, and the teaching pedagogy skills necessary to succeed in tenure track PUI faculty positions. The Alliance is partnered with Brookhaven National Laboratory, a Federally Funded Research and Development Center, to give participants and their mentoring teams access to and an understanding of the ways in which their research endeavors post-doctoral degree, including the advancement of undergraduate

research at their PUI institution, can be supported by use of federal research facilities and funding opportunities.

New York-PUI Alliance Changes and Transitions: A timeline of events

In the spring of 2018, the Alliance began award negotiations with the National Science Foundation. During negotiations, the first Alliance Principal Investigator (PI) accepted a position at another institution and transitioned out of the lead institution the coming summer. Being a regional, institution-specific Alliance, the project remained at the lead institution. The Alliance then identified a new Alliance Principal Investigator, Dr. David L. Ferguson, who was a senior faculty member at Stony Brook University with extensive experience from prior AGEF efforts. This new PI was originally selected to serve as a Co-Principal Investigator (Co-PI) on the project. The project was awarded and began its first year of activity in October 2018.

In July 2019, just hours after returning from the project's first site visit, the Alliance was notified of Dr. Ferguson's unexpected death and faced the difficult decision of naming a replacement. Structurally, the team felt the strongest faculty member to replace Dr. Ferguson would be the new Vice Provost for Graduate Education at Stony Brook University. The Alliance PI prior to Dr. Ferguson, who had left before the project was funded, had served in that role and was selected because of their personal and positional alignment with the project's goals and student population it served, alignment that was shared by the new Vice Provost. But at the time of Ferguson's passing, the Vice Provost had not yet started in the role at the lead institution. Desiring stability and consistency during an emotionally difficult time for the New York-PUI Alliance team, the project leadership selected Toni Sperzel, an existing Co-PI on the project from the lead institution to serve as an interim PI until the new Vice Provost began their appointment at Stony Brook. In spring of 2020, after the Vice Provost settled in their role, the role of

Alliance PI was assigned to them, and the interim PI was returned to a Co-I role.

In March 2020, SUNY implemented statewide shutdowns of in-person instruction and research across the SUNY system to limit transmission of the Coronavirus, which had already begun to devastate communities across New York and Long Island. The project team, like many in higher education, was forced to transition all project components into remote modalities- from project team interactions to participant trainings, workshops and practicums. During this time, the team was notified that the PI at Suffolk County Community College planned to retire. Once again, the Alliance team began the process of leadership transition.

Results

In this section, we share narrative reflections written by several members of the Alliance Team: Two Principal Investigators and Program Coordinators from Alliance PUIs, and a Co-Principal Investigator from the lead institution.

Co-Principal Investigator, Stony Brook University: Making Space and Time

For me, the story of how we have endured all the obstacles doesn't start when our first PI left. It started two years earlier, in 2016, when we submitted our first version of this project to the National Science Foundation, entered negotiations, and did not get funded. For that initial project, we gathered the Alliance members quickly (about three months before the proposal submission deadline), albeit intentionally. Three of the institutions' principal investigators and program managers had previously worked together on several projects aiming to broaden participation in STEM. Farmingdale State College was a newcomer; the now New York-PUI PI, Dr. Cabrera and their then director were building something exciting to advance research engagement for undergraduates, and we believed that the work we sought to do with Farmingdale State College could be mutually beneficial to our institutions. We had eight weeks to write that first iteration. I

was the lead writer at Stony Brook - and that was five days after I returned from leave after the birth of my first child and started in my first leadership level role at the institution. Reading that proposal in retrospect, it was very clearly not ready for prime time. We made it pretty far in the review process but realized there were some glaring issues in mission alignment, clarity of plans, etc. that we needed to resolve. We collectively agreed that we needed to go back to the drawing board and think through the project more deeply. Negotiations ended, and we spent the next seven months preparing for a resubmission.

By the spring of 2018 when we again entered negotiations with the National Science Foundation, this Alliance had been working together on concept development for two years. We had already experienced a collaborative failure, and encouraged one another through evaluation of our missteps, concept redevelopment, and submission of that second proposal iteration. As someone new to a leadership role, watching our original PI team engage with one another and working with them through that first decision making and subsequent retrying process gave me a considerable amount of courage, and faith in the power of collaborative decision making. I can't speak on behalf of the entire Alliance, or even all of the Stony Brook team, but in retrospect that courage I saw in our Alliance leadership was something I go back to regularly to "fill my cup," when I feel insecure in the face of obstacles.

When our first PI left, we had a robust Alliance team already assembled and a clear project plan- including contingency plans for PI transitions. And because we *knew* one another, this departure didn't feel unsurmountable. And we had no doubt the project would remain at Stony Brook for the original alliance to carry out under new leadership. We intentionally built into our project plan a "development year" to think more deeply about inter-institutional engagement and obstacles we might encounter and build intra-

institutional momentum- this also made us able to adjust plans and processes in the face of changing PIs in the early stages of the project.

I didn't feel the same sense of confidence when Dr. Ferguson died. That shook me at the core. Dr. Ferguson was the heart and soul of AGEF at Stony Brook for 20 years. They led the original institutional efforts in 1999 to compete for the first AGEF project, oversaw that project, and all the projects that came afterward. Dr. Ferguson was a mission builder. They served as the PI and/or Co-PI on almost every project I worked on here at Stony Brook. And for me, they were a mentor and leader whose perspectives and opinions I valued to the highest degree. Their death left an empty space in my heart, and the hearts of many campus projects- on which several New York-PUI Alliance team members also collaborated. So, the loss was amplified and ongoing. The future felt a bit less certain for quite some time. Logistically, it happened so quickly after our original PI left that we didn't have as deep of a bench, or set of preparations in place, to carry the weight of leadership right away. But the New York-PUI Alliance team knew this because they knew "us", and they carried us through this dark place, taking on much more work and responsibility even while they mourned Dr. Ferguson's passing alongside us.

The way Dr. Ferguson led, the way they supervised, was so different from so many other faculty I interact with. Dr. Ferguson was the PI on the project. But they did not feel that they needed to be authoritative in their decision making, or the processes of developing and implementing the project. They were a conduit and a connector. Whenever we would meet, they would want to know where the obstacles were, but Dr. Ferguson never solved them. They were the person from whom I learned the reflective questions, "What do you think you could do to solve this problem? What resources do you think would be helpful to get over this bump?"

That's when Dr. Ferguson would spring into action. "You need an evaluator? I know just the person." But their way of connecting and team building wasn't focused solely on expertise, it was about cultural contribution and work style and ethic. It was as if everyone Dr. Ferguson introduced you to was intentional, like they knew you could find in one another a shared calling, belief, or love for the work at hand. I believe our New York-PUI Alliance team reflects this. We come from many different personal and institutional backgrounds and perspectives, but our familial approach to engaging one another has allowed us to develop trust, a sense of support and commitment to having everyone's voices heard.

I think how we spend time together as an Alliance has played a major role in why our setbacks have not resulted in our feeling jaded in this work. We have intentionally taken time both inside and outside of formal project meetings to get to know one another's histories and dreams for the future. There is always a personal check in before we start official business. I know the names of our project staff's family members, what they do, where they come from, and they know mine. We talk not only about the project, but our other work and roles at our institutions. We've celebrated marriages, having children, buying homes, winning grants. We've walked alongside each other when leaving homes, raising children, losing children, facing health issues, losing grants, losing leaders. Birth, death, change, are the core of being human, and thinking it is possible to conduct teamwork in a bubble or vacuum devoid of the influences of humanity is a recipe for failure. Knowing one another beyond what's set forth in a bio sketch and making time both inside and outside of formal project work creates a deep sense of caring for one another. It doesn't have to be a *lot* of time, but it does have to be just enough to feel connected. During COVID-19 for many of us it has taken the form of text messaging. I do feel the time gathering at conferences outside of formal events is a lost opportunity for

projects like this- it's those dinners, breaks, walks to and from the conference arenas where a lot of this happened in the early days. I look forward to a time when the world is again safe, and stable enough for us to have the margin to engage in this type of in-person connection.

Shared mission and approaches to community building also bind us together. I have been reading recently about a style of leadership called "servant leadership,"- the core concepts as I understand them is that a leader approaches their work from the philosophical perspective of wanting to enrich other people's lives, and create better, not bigger, or more powerful organizations (Blanchard & Broadwell, 2018). I feel that every member of this team practices servant leadership, even if they don't know what to call it. They practice it with their students, our participants, their colleagues, their supervisors, their campus leadership, it is at the core of everything they build; they hold it in their hearts as a philosophy they wish to live by. Sharing this philosophy places greater emphasis for us on consensus, and less on winning disagreements.

Collaboration and conversation are given ample space and time -our evaluator would probably say, too much time. They are correct on that- resolution and decision-making take time for this group- but I think it offers some protection against muting voices and perspectives, which I have seen happen on other teams. We are starting to come to a place where we are transitioning to a project structure where individuals and individual teams are moving forward, more independently, in accomplishing project work. I think little by little, we will reach a place where we find a better balance between what requires everyone's insight and what can be done, one-by-one. But having that trust, that shared sense of service, and that belief in one another and commitment to each other's success both inside and outside of this project, that is the foundation on which this new ability to branch off is being built.

Program Coordinator, Suffolk County Community College: Collective Processes

Serving on the New York-PUI Alliance team has been unlike any other project team with which I have been affiliated over the past 25 years. It is beyond collegial and collaborative, the team is contemplative and familial, consistently displaying support, affection, and a degree of caring like no other. However, the constant collaborative nature of the group as it builds consensus and makes decisions takes a great deal of time, time that we do not always have when attempting to develop, implement and reflect upon the model we are creating. Timelines for deliverables are often shifted, resulting in crushing deadlines, or pushing deliverables further away.

Collectively and personally the low point of the last few years was the passing of Dr. Ferguson. The loss of a leader and mentor (to many of us) translated to my inability to imagine how we/I could continue; they were irreplaceable. But move on we did, supporting each other, with a Co-PI at the lead institution taking the helm until future PI at the lead institution could be appointed as PI. It was a difficult transition, but we knew we had to move forward for the success of this important AGEF project.

We emerged from our leadership transition to confront the COVID-19 pandemic and the physical closure of our campuses. This time, stronger than we were before, we quickly collaborated and pivoted to a virtual/remote structure for communicating with each other. In this new environment, we are providing a full complement of interventions for New York-PUI Alliance participants and have succeeded in building, implementing, and studying our emerging model. Our uniqueness and cohesiveness have made this success possible. If we were not who we are, individually and collectively, this would not be the case.

Principal Investigator, Suffolk County Community College: Leadership Process

As a new PI for the New York-PUI Alliance, I often find myself reflecting on different stages of my career asking, “have we made considerable change for historically marginalized scholars / Underrepresented Minorities in STEM?” I thought about this when I graduated from college, worked in industry, government and finally academia. What I have learned throughout my career is that to make long-term change, it is important to be part of the decision-making groups and to “have a seat at the table.” There are opportunities to be part of committees, a board and of course on a grant that focuses on the importance of faculty diversity. I was delighted to take on this opportunity because I have benefited from state and federal programs since I was in middle school that have helped crystallize my pursuit of a STEM career. From my experience, the core leadership team is the catalyst to a transformative STEM program. What connections do they have to the program? How invested are they to the future success of the students?

I have come to appreciate from my time in graduate school that research as in learning is constantly evolving. I also believe that programs such as AGEP must also evolve to meet the needs of the next generation of researchers and faculty. Part of that evolution process is sustaining key components that were deemed successful. As a former AGEP scholar at Stony Brook University, I have been fortunate to be a part of a transformative program that as I reflect encouraged: (a) a strong support network, (b) peer mentoring within the [Program] community, and (c) a true sense of belonging- more importantly, sharing of struggles and success. The core of the success was the strong leadership of the PI and their team leading to the programmatic success of the scholars.

As a first generation American, the guidance of programs such as AGEP were instrumental to my success. Navigating towards a career in STEM is challenging and particularly filled with challenges for minorities. Although difficult, the roadmap for an

undergraduate degree is defined by the curriculum and courses. However, graduate school is filled with its own challenges that are unique - picking a research advisor, choosing a research project, choosing course electives, finding committee members, qualifying exams to dissertation. The list is ongoing.

For me personally, completing the doctoral degree would not have been possible without the support network that includes the AGEP program. After working in industry followed by higher education, I have ascertained that institutional changes are the precursor to developing a strong enrichment program. The stakeholders that make up the committee/team should include the views of the students (current and prior), the college administrators, faculty, and staff. I was very fortunate to be part of joining Suffolk County Community College's New York-PUI Alliance team as a PI. As an alliance, our strength is the diversity of our group and the experience of the members in grassroots STEM outreach.

One of my goals is to help preserve some of the core components that made my own AGEP cohort successful and build upon its foundation. Mentoring/leadership comes in many forms. I was very fortunate that one of my first (indirect) mentors was Dr. Ferguson. I first met Dr. Ferguson as a ninth grader while they ran a summer engineering workshop. Within our first interaction, Dr. Ferguson discussed their background and journey to their mathematics doctoral degree. At the time I was delighted to see someone that looked like me teaching a program to underrepresented minorities in junior high school. More importantly, I saw myself and imagined for the first time that I too could pursue an advanced degree in STEM. That summer program and meeting Dr. Ferguson are two of the main reasons why I pursued a career in engineering. They instilled in me with the confidence even as a ninth grader that I could become successful in the sciences. Dr. Ferguson and I never shared any direct conversations about career goals. In fact, we

only spoke about the summer project, however, seeing Dr. Ferguson at the time raised my confidence and at least for a moment made the idea of obtaining a degree in STEM possible.

I believe that outreach is something that you do if only you are passionate about it. Our alliance is filled with passionate members. What makes us unique? (a) Our team consists of members with different professional backgrounds, (b) We are focused on social interaction, (c) Our team is willing to shift and change, (d) We are willing to seek a knowledge base outside of STEM for input, (e) We have a long history and AGEP Alumni pool focused on creating equity among the team, and (f) We spend a lot of time on team development.

Program Coordinator, Farmingdale State College: Whole Person Recognition

Enduring significant personal challenges amidst historically unprecedented times represents a defining element of our Alliance's working dynamic. As an Alliance and project, the struggles that stand out to me most are Dr. Ferguson's death, the COVID-19 pandemic and working through the social justice uprising and movement leading up to the 2021 Presidential elections. However, and this cannot be overlooked in terms of its effect on the project, individuals in this Alliance have also experienced significant life events, losses and challenges at a notable (and perhaps extraordinary) frequency. This has affected timelines, workloads, progress, how we communicate with one another and most importantly, how we view and treat one another as colleagues. In such challenging times and with so many people going through so much, the group homed in on creating the same "safe" environment for ourselves as a staff and project as we have for our faculty and student participants.

Our dynamic is firmly rooted in the shared value of confronting and dismantling institutional racism in our professional and personal lives; many of us formed close bonds

in a short time because of that. However, as the challenges have mounted, what makes this group truly unorthodox is that almost without exception, from the start, each member of the Alliance has both regarded others and presented themselves as a *whole person*. We view one another not simply as professionals whose identities begin and end with our job titles and professional goals, but as parents, grandparents, siblings, musicians, dancers, cancer survivors, reverends, dog parents, travelers and more. With our professional and personal identities intertwined and on full display, we became a family, sharing our struggles and joys with one another as we encountered challenges as individuals, as a group and to our project.

Although I never personally felt that things fell apart, there were moments following Dr. Ferguson's passing, once the pandemic began and during the summer's social justice movement that things became quiet. Amid compounding challenges, it was clear that the team was collectively overtaxed, struggling, hurting and tired. It was understandably difficult for so many of us to cope and regroup following these compounding events. As that happened, from a programmatic standpoint, we felt the best thing to do was reach out to colleagues individually to offer support (both emotional and logistical) and continue to meet, plan and drive momentum at the individual institutional level. We felt comfortable and confident doing that with the relationship that we had already built with Stony Brook and the foundation of the project they had helped us establish at Farmingdale.

Especially during the start of the pandemic, and then again not long after during the summer's social justice movement, when everyone was dealing with trauma, extreme isolation, grieving the loss of "normal" life, learning to cope with unimaginable stress and fear as well as adapting to the new work from home model, it became even more important to acknowledge Alliance members' whole lives as part of project responsibilities, roles and

progress in meetings. All of the lines between work, home and life had already been forcibly blurred by the circumstances surrounding the pandemic. During this traumatic, transitional time, it only made sense to embrace and acknowledge this new reality and our new roles candidly with one another in a group setting. To ignore it and try to proceed with “business as usual” would have been to invalidate and dismiss the experiences of almost every member of the Alliance, causing morale to plummet, and would have posed a significant challenge to adapting and bouncing back. Personally, it has been this acceptance and acknowledgement of me as a whole person that has kept me afloat, sane, and wholly invested during the most challenging three years of my life. We are doing good work in hard times, and that seems to be what our Alliance was made for.

Principal Investigator, Farmingdale State College: Family and Taking Care

As cliché as it sounds, the New York PUI Alliance “family” is at the root of our success and the reason why we were able to get through such rough transitions together. As an Alliance, through our self-study process we were able to reflect upon what made these transitions easier. Going through the departure of a PI, the death of another PI and the COVID-19 pandemic presented hurdles for sure but because of how we communicate and the bond we share, we were able to persevere.

As the “new kids on the block” our institution came into the already formed Alliance. The other Alliance members have all partnered with one another and have created a climate for our campus to come into. The Alliance partners not only welcomed us into the AGEF family but allowed our voice to be heard. Our Institution took pride in our grassroots approach to community building as creating foundational structure to programming. This approach was celebrated by our colleagues but adapted into the model for our development of the project. We often say it is the people, and not the project, that creates success. Without the support of participants and those doing the work, nothing can

be learned or accomplished.

It is important to understand that the lens in which academia and programs that broaden the participation of historically minoritized students were originally formed under the context of the Eurocentric approach to learning. The Eurocentric approach regards the European or “Western” perspectives on traditional subjects taught as preeminent and widely accepted and excludes the experiences of non-Western cultures or offers them as “alternative” subjects, minimizing and invalidating the realities of those groups. In higher education programs that broaden participation of historically minoritized students, the Eurocentric approach can manifest itself in program models and structures being developed by white project leadership and administration, without centering, and in many cases, even considering, the voices of the historically minoritized groups they are being developed to advance. In these cases, programs developed through this lens can reinforce harmful structural belief systems and roles and result in even further marginalization.

When serving and uplifting historically underserved populations we must reflect upon the approach and baseline principles of not only our programmatic activities and participants but how the leadership and those running the project interact. This means not only thinking of our participants as a family, but supporting members as well, our participating faculty, teaching mentors and program administration. I believe that community and family are the cornerstones to the development and learning of historically underserved populations. For me personally, my community and those around me got me through the toughest of times. This ideal is woven into the fabric of many communities, and it is for sure reflected in the way our team interacts and carries on our objectives. The cohort model not only applies to the project but of our team. Sense of identity, sense of belonging and quantitative and qualitative measures used on our participants could also be considered when forming and keeping the New York-PUI Alliance family together.

Due to the Eurocentric approach to education, oftentimes project leadership takes a “boardroom approach” to their meetings. This is not the case for our Alliance. Before meetings begin, we talk amongst ourselves, update the group on life outside the project and things within our homes. Beyond the meetings, we text one another, and are engaged in each other’s lives. We know about one another’s families, personal lives and truly are integrated. Whether it happens by design, or this happens organically, I believe this is the crux of how alliances and multi-institutional projects can get through these daunting transitionary periods. We frequently joke within the group of how to quantify “love” for our self-study, but that’s really the “secret sauce” in this all. It is the familial love for one another and the capacity to understand when a team member needs help or assistance. Not being afraid to hurt someone’s feelings or “step on toes” when a certain institution or team member needs assistance with the project. The overall love we have for the work, and mission of the New York-PUI Alliance kept us together.

Discussion

Change is an event that triggers the critical process of transition, which is the space in which people “unplug” from an old world and plug into a new one (Bridges & Bridges, 2016). All research projects experience change and transition. It is expected that new findings may alter (change) the originally planned direction of research, methods of investigation, or approaches to evaluation and assessment, and the team must manage the process of transitioning from the old ways to the new. But when change outpaces the team’s ability to regroup, reframe, and recover, as it did for the New York-PUI Alliance, it can present considerable challenges to project progress and establish a feeling of crisis.

It is quite common during the lifetime of a proposal for institutional leaders such as presidents, provosts, and deans to cycle into and out of roles. Through the development of advisory boards, leadership boards, and multiple PI project teams, the

proposal development process provides opportunities to plan for this type of expected change. And while the proposal development process offers early opportunities for new project teams to build foundational communication and relationships and plan collaboratively for potential organizational changes, it is impossible to plan for every possible crisis. Not all change is expected. Sometimes, unplanned, unpredictable, and unexpected things happen, like the departure of a PI for a new institution, or the death of a PI, both of which this project experiences that have the potential to derail a project or force it into unforeseen directions in the pursuit of the “new world”. Shaw (2017) defines this type of unplanned change as “Organizational changes that are not foreseen prior to the need to change, often made necessary by shifts in the organizational environment” (p.1).

In these moments of unplanned change, leaders are challenged to both define the “new world” and develop effective transition strategies. Often, the response to unplanned change is intuitive, fast paced, and dependent on available resources (Shaw, 2017). This type of response is visible in the narrative above when the New York-PUI Alliance needed to select an interim Alliance PI following the death of Dr. Ferguson. When change outpaces the team’s ability to regroup, reframe and recover, such as happened for this project when it saw three PI changes in under two years, it can present considerable challenges to project progress and establish a feeling of crisis as described by the Co-Principal Investigator from Stony Brook University. Teams must be open to rethinking and revising project strategies and activities when change happens. Once again, having an established foundation of resources can help to mitigate anxiety and fear. Focusing on relationship building amongst participant groups and fostering conversation between those groups can advance project goals despite unplanned change.

It is in the space of making transitions where changes succeed or fail. Bridges and

Bridges (2016) presents three stages of the transition process: The losing or letting go of the old; the neutral zone; and the new beginning. For any change to lead to a successful outcome, Bridges and Bridges argue that leadership must think through, plan for, and guide an organization's members through each of these transition stages. Each leadership change experienced by the Alliance was an example of unplanned change, as was the arrival of the COVID-19 pandemic and its impact on higher education, teaching, research, and learning. The extent of the changes to Alliance team leadership, institutional leadership and the world at large created a situation in which transition overlapped and change felt like a constant state of ongoing crisis. Bridges and Bridges (2016) argue that transitions, particularly when they overlap, are simultaneous, or lacking space for recovery from one transition to the next can leave teams exhausted, overwhelmed, and uncertain of mission or purpose.

The wave of changes faced by the Alliance resulted in the team facing a constant state of transitions in crisis management mode. Shaw (2017) defines crisis management as the ability to mitigate, respond to, recover, and learn from an emergency incident. In crisis management, constant and active communication and listening are critical to successful transition from the old to the new. Framing the death of Dr. Ferguson as an emergency incident in which crisis management was needed to support transition allows us to consider how having clear project management plans, timelines, and delineations of responsibilities as part of the project plan builds a foundation of "available resources." Such a foundation can help mitigate some of the confusion and fear that comes with unplanned change and determine clear transition strategies for the group (Shaw, 2018). We can see in the reflections of the Suffolk County Community College and Farmingdale State College PIs several references to how trust and communication were part of building such a foundation for this team. Although time consuming (as noted by Farmingdale's Program Coordinator

and Stony Brook's Co Principal Investigator), in moments of transition, particularly as the result of emergency incidents or unexpected change, making space for team members to acknowledge and express feelings of nervousness, confusion, and uncertainty and opportunities to strengthen intragroup connection, some of which are mentioned by Suffolk's Program Coordinator, can help teams normalize the experience of transition and arrive at new beginnings with a clear sense of vision and purpose (Bridges & Bridges, 2016).

As noted by Coelho (2009), "when scientists die, it can have a powerful emotional and practical effect on those around them" (para 1). The loss of a team leader comes with the mental and emotional work of grieving, but for many members of the team, it also carries practical implications. The impact of Dr. Ferguson's passing hit team members in different ways. While all the narrators describe both a personal and professional impact, those narrators who mention having been mentored by Dr. Ferguson over several years (Suffolk's Principal Investigator and Program Coordinator, PUI 2, as well as Stony Brook's Co-Principal Investigator) describe both a need and struggle in processing their personal sense of loss alongside managing the professional impact of this unexpected change. Therefore, when a team member dies, it is crucial to give teams the opportunity to both privately and collectively grieve and practice necessary self-care to support their grieving and recovery processes (Coelho, 2009). In such moments, it is critical for team members to have a developed sense of empathy and an ability to apply empathetic skills to their leadership and collaborations (Hazen, 2008).

The COVID-19 pandemic brought with it additional unplanned and unexpected changes for which the Alliance needed to rethink, revise, and adapt its efforts. Having as part of the Alliance team faculty and staff experts from multiple institution types and areas of expertise in critical topics such as online learning, team management, project

management, student development and community engagement presented us with the opportunity to think carefully, and from multiple perspectives on how best to sustain a sense of engagement for our participants and ensure training and interventions could continue in a distance format. Continuing the Alliance practice of biweekly all-team meetings, but adding technological capabilities such as recording, transcribing, and asynchronous workflow environments allowed the project to continue to advance in the face of changing availability and schedules.

Conclusion

The New York-PUI project and Alliance team has endured the unthinkable. The team not only overcame challenges but flourished through adversity. The New York-PUI Alliance believes we may be at a place of new beginning where we are able to celebrate successes that took place during our many transitions, reflect on what worked and did not work in our process, and structure our Alliance in such a way that we are better prepared for future unplanned changes and crisis management. This reflection piece is a first step in the direction of that self-discovery and aims to develop a deeper understanding of what makes a team persist in the face of adversity. In recent months, all Alliance institutions have added to both their Alliance leadership teams and to their project management teams, through the addition of more Co-PI's and staff to support project efforts. These additions have resulted in "Deeper benches" at both the leadership and programmatic levels and as such we feel better prepared to reassign and rethink roles and work delegation when future changes occur.

For alliances facing similar situations we advise strengthening your alliances through developing three major core areas: project, alliance, and model. Project and programmatic activities should be strengthened, and a clear vision of operating procedures should be followed. A proper foundation to alliance structure provides a great defense for

difficult situations. Through proper team dynamics, workflow and delegation programmatic activities can continue seamlessly under harsh conditions. The model in which the project is structured upon is the last crucial area of development. This concept, although difficult to separate from programmatic activity and alliance, is a stand-alone core. Development of the model and understanding not only how the project runs but how it can be replicated, will help an alliance create a bird's eye view of the project and fill in any of the gaps that could potentially be created.

Finally, the thread between the core development areas and the quintessential “glue” of a project is relationship building, which has been accomplished through communication in, between, and across Alliance teams and institutions. Persuasive and effective communication by the project team to institutional leadership is critical for fostering buy-in and development of strong relationships (Curry, 1992; Eckel & Green al., 1999; Lindquist, 1978). Through our experiences we have learned that the underlying mechanism behind keeping a project together are the relationships. This means strengthening institutional relationships, relationships between team members and homing in on the relationship that project leadership and team have for the project itself.

Incorporating both formal and informal ways of relationship building is integral to the success and strength of a project. It's not only about the moments in which people are in meetings but what happens in the “in between” time. These informal relationships and interactions between all those involved in the project have created an environment of not only inclusivity, but support. It is through these support mechanisms and ties to one another that obstacles can be overcome.

Dedication

The AGEF NY-PUI Alliance team wishes to dedicate this work in loving memory of our mentor and former leader, Dr. David Ferguson. Dr. Ferguson dedicated his life to building initiatives to broaden the participation of underrepresented and disadvantaged persons in science, technology, engineering, and mathematics. The first African American assistant professor in the Department of Technology and Society at Stony Brook University, and later, its first African American Chair, his efforts in support of educational excellence have been recognized at the local and national levels, including receiving the prestigious and highly competitive United States Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. Dr. Ferguson valued above all else the opportunity to educate, engage, and inspire. He saw the potential in every person with whom he came into contact and made it his personal mission to cultivate that potential and open doors to success, lifting up others with grace, caring and kindness and expressing genuine enthusiasm for the ideas and achievements of his mentees, colleagues and collaborators.

Erwin Cabrera, Principal Investigator, Farmingdale State College:

I am a molecular neuroscientist, research faculty and administrator at a four-year predominantly undergraduate college of technology. As a product of various STEM broadening participation programs such as the UMBC Meyerhoff Scholars Program, HHMI EXROP and NIH MARC, I use this lens in my work and build upon my experiences to guide programmatic activity and vision from the perspective of the graduate students and undergraduate students. I want to further push the boundary of work in this field towards a student -entered, community approach. I have come to realize that the programs I have been a part of were created not from the experience of the participants, but from the perceived experience of the participants.

Wesley Francillon, Principal Investigator, Suffolk County Community College

I am a Materials Scientist/Engineer and a Lecturer at Suffolk County Community College Department of Engineering, a predominantly undergraduate institution. I credit much of my success to scholarly enrichment programs that I have been a member of: AGEP Scholar, NIH-MARC Fellow, LSAMP. NY-STEP/C-STEP. I am passionate about teaching and mentoring in STEM. I believe that there are talented students from population groups who are overlooked. My goal is to mentor and help them reach their full potential.

Nina Leonhardt, Program Coordinator, Suffolk County Community College

I come to this AGEP project as a white woman who previously served for over 30 years as an administrator at a community college in New York. My career has focused on STEM equity and inclusion for all, K- professional levels. My research interests include how best to support those who have been marginalized in pursuit of their STEM goals. Of special interest is supporting change agents, e.g., emerging faculty.

Erica LoBello, Program Coordinator, Farmingdale State College

I'm a staff member at a primarily undergraduate state institution of technology. My current role is to facilitate teaching mentorships between visiting historically minoritized STEM doctoral candidates from R1 institutions and faculty mentors at Farmingdale. I have teaching, administrative and research experience at various levels of education and student development in different countries, which has brought my attention to the importance of strong and continued mentorship for aspiring educators. As a white woman adopted into and raised by a Jewish middle-class family, I acknowledge my privilege working in spaces that deconstruct barriers to the advancement of historically marginalized groups, and position myself in a role of support and allyship. Being adopted has made me aware of the critical roles identity, culture and representation play in one's professional and personal development. From this awareness came my desire to advance historically minoritized groups' representation in higher education. I have been particularly attuned to the unique experiences of women in the education pipeline and workplace and often view my work through that lens.

Toni Sperzel, Former Co-Principal Investigator, Stony Brook University

I come to this project as a white, non-Hispanic, heterosexual middle-class woman. I recognize that I come to this work with an amount of distance and privilege that differs from many of my fellow team members, staff, and scholar participants. My interest in this work comes from my own early career when I observed the disparate experiences of marginalized students resulting from institutional policies, procedures and practices that were at their core based in a vision of students as white, male, heterosexual, unmarried, non-parenting, and financially well-off. I have been at the lead institution for 14 years, supervised by the original Alliance PI and mentored by the subsequent PI who passed away in 2019.

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