

“Communities Don’t Want Us to Roll In and Roll Out”: Beyond the Baseline to Sustainable and Mutually Beneficial University-Community Partnerships for Societal Impacts

Joy Pendley and Maleeha Shahid

Abstract

This article features a case study conducted by University of Oklahoma’s Center for Faculty Excellence (CFE) of faculty National Science Foundation CAREER research grant proposals. Specifically, of interest to us is how the Broader Impacts sections of our faculty’s applications might be strengthened with the help of the Advancing Research in Society (ARIS) rubric. We are also concerned with key principles of community engagement and how the ARIS rubric can lead faculty to develop mutually beneficial collaborations that increase community capacity and science literacy. Our study is described in the larger context of our mission and work at CFE and the nationwide imperative to orient higher education and research toward a larger societal good.

The mission of the University of Oklahoma is to provide the best possible educational experience for our students through excellence in teaching, research and creative activity, and service to state and society. (University of Oklahoma, n.d.)

One mission of higher education in the United States has been to link learning with the greater good of American society (Boyer, 1996). However, faced with the rising costs of postsecondary education for students and faculty promotion policies that increasingly value publications and research funding, this mission has come under threat (Giroux, 2019).

In the last 20 years, trends in higher education have supported a return to the mission to serve society (Saltmarsh & Hartley, 2016). As a result, new organizations and resources have begun to implement professional development to support faculty in successful university-community collaboration. In 1985, a coalition of university presidents, sharing a concern for civic life in the United States, created Campus Compact (CC) to “advance the public purpose of higher education” (Compact, n.d.). CC supports member

institutions by offering professional development opportunities for faculty and community engagement professionals, convening national communities of practice and conferences, and supporting community-engaged scholarship. In 2007, TRUCEN (The Research University Civic Engagement Network) was established to “advance civic engagement and engaged scholarship among research universities” (CC, n.d.). Academic journals have also been established to increase knowledge of university-community engagement, and many discipline-specific engagement journals now spotlight research in health care, public policy, and community development (Forester & Sims Bartel, 2022).

Research-funding organizations have also come to recognize the importance of university-community collaboration. The National Science Foundation (NSF) was founded “to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense; and for other purposes” (NSF, 2024). The American government and public recognized the role science had played in World War I and committed to invest in higher education institutions to support the research necessary to

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drive discovery and innovation. Though concern for societal impact was embedded in the formation of NSF, the Committee on Equal Opportunities in Science and Engineering recommended further emphasizing societal impact by expanding the merit review criteria for proposals submitted to the agency for funding to include intellectual merit (IM) and broader impacts (BI). BI can be defined as “the potential of the proposed activity to benefit society and contribute to the achievement of specific, desired societal outcomes” and “may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project” (NSF, 2024).

Given recent trends in support of community engagement as well as the increase in anti-intellectualism in the United States (Merkley, 2020; Motta, 2017), higher education institutions would do well to take stock of their role in supporting public science literacy and communicating with the public about the important impacts of faculty teaching and research (Teague, 2015). Research and community-university collaborations have the potential to provide national security, improve health outcomes, connect communities, and build economic prosperity. It is important to integrate key principles of community engagement in the planning stages of these collaborations to ensure that they meet goals related to community capacity building, sustainability, societal impact, and professional development and institutional support.

With these imperatives in mind, this paper will begin by describing the activities of our own Center for Faculty Excellence (CFE) at the University of Oklahoma (OU). We then present the results of a research project whose purpose was to assess the BI proposals of a number of OU faculty members and provide future applicants with effective tools for applying for NSF grants using key principles of community engagement. The Advancing Research Impact in Society (ARIS) rubric, which is part of the ARIS Toolkit (Hotaling et al., 2024), was used to assess proposals and to guide discussion with research staff about effective practices for faculty development. This rubric was developed by ARIS to be a “tool of high utility that both BI professionals and researchers could use to strengthen BI plans” (Iverson et al., 2024, p. 2).

This case study posed three key research questions: Does the ARIS rubric provide adequate support for designing more substantial BI plans?

Do those plans integrate key principles of ethical community engagement? And in using the ARIS rubric to assess faculty proposals, can we help faculty get “beyond the baseline”? In this study, we use the ARIS rubric to establish a baseline of previous patterns of faculty community engagement and to think about how that engagement might be supported through faculty development.

Background

The CFE at OU was established in 2020 to support faculty success and well-being at all stages of faculty growth and development. The CFE provides support and skill development to help faculty enhance teaching, extend research and creative activities, engage in their communities, and foster leadership in an environment that encourages a culture of collegial support, inclusiveness, and excellence. (Center for Faculty Excellence, n.d.)

This unique approach to faculty development has led to important collaborative support for faculty, especially in the development of long-term research and community engagement projects and equitable university-community collaboration.

Faculty Development

Universities are increasingly investing in programming to support and incentivize faculty development (Cruz, 2018; Sorcinelli & Yun, 2007). Best-practices research on the development of faculty teaching and pedagogy is well documented and useful in planning for institutional faculty development programming (Cruz, 2018; Ellis & Ortquist-Ahrens, 2010). However, research and analysis on how to help faculty develop research agendas is lacking, and faculty development programs often fail to integrate all aspects of faculty members’ jobs. There is a renewed interest in a holistic, integrated approach to faculty development that encompasses faculty career planning and institutional change support as well as all aspects of the faculty career in teaching, research, and service.

An integrated approach to faculty development addresses two concerns in higher education: first, the changing context of the institution (considering evolving student demographics, pressures on faculty for research and scholarship, and the complexity of institutions of higher

education); and second, the need for assessment of faculty development. Faculty development is meant to help faculty develop short- and long-term plans for career success as they apply for tenure and promotion, seek funding for research and scholarship, improve their teaching and mentoring skills, develop curricula vitae to apply for prestigious career awards, and contribute to university missions to impact state and society. As more faculty collaborate with community in service-learning, engaged research, or BI projects, it is even more important to establish strong professional development programs centered on best practices for these efforts:

Service-learning and other forms of engaged scholarship are high-stakes endeavors that can transform individual worldviews and macro-level systems of oppression when done well but can reinforce oppressive ways of thinking and functioning when done poorly. Thus, faculty members, as the fulcrums around which service-learning (or engaged research) move, must be informed in their practice. (Welch & Plaxton-Moore, 2018, p. 55)

Community engagement and BI professionals are

not only provider(s) of faculty development but also ... transformative leader[s] with a moral imperative to engage and develop the skills, knowledge, and values of all community engagement stakeholders while also influencing institutional culture, policies and practices vis-à-vis community. (Welch & Plaxton-Moore, 2018, p. 55).

In today's environment of state-level budget cuts, faculty face pressure to secure funding for research on top of other demands associated with effective teaching, scholarship and publication, and multiple levels of service throughout their career (Sorcinelli & Yun, 2007). The challenges of higher education call for collaboration across the university to address needs for change at the individual, departmental, college, and institutional levels. Faculty development drives the mission of the university (Schroeder, 2011) and creates broader support for strategic goals (Eatman, 2018; Lima, 2017; Saltmarsh & Hartley, 2016; Steinert, 2000).

The Scholarship of Engagement

A troubled universe can no longer afford the luxury of pursuits confined to an ivory tower. ... [S]cholarship has to prove its worth not on its own terms, but by service to the nation and the world. (Oscar Handlin; Boyer, 1996)

Ernest Boyer was concerned about a shift in public confidence in institutions of higher education and called for a return to the origins of postsecondary education—to a mission of “practicality,” “reality,” and “serviceability.” The focus on the greater good of higher education and research funding were born of this idea. Wrote Boyer (1996), “The goals in the creation of the NSF, which led to the Department of Defense and the National Institutes of Health, were not abstract. The goals were rooted in practical reality and aimed toward useful ends” (p. 12). According to Boyer, the solution to the crisis of higher education was to return to a “scholarship of engagement,” a “time when academics were called upon to serve a larger purpose: to participate in the building of a more just society and to make the nation more civil and secure” (Boyer, 1996, p. 13). This scholarship of engagement, of discovery, integration, application, and teaching (and the support of this scholarship by institutions and funding agencies) will bring higher education back to its roots of service to society. Wrote Boyer (1996), “universities, through research, simply must continue to push back the frontiers of human knowledge” (p. 16)—that is, the scholarship of engagement broadens the scope of scholarship (discovery) while facilitating conversations about the larger contexts of these discoveries (integration). In reaction to the increasing individualization of research and faculty work, Boyer called for a return to scholarship as a “communal act” (sharing knowledge). And finally, the scholarship of engagement requires that we avoid irrelevance and embrace praxis (application of knowledge; Boyer, 1996).

Community Engagement and Collaborative Research

Higher education serves multiple purposes, but its “service to society” mission is best illustrated by evolving approaches to community-based research (CBR), teaching, and collaboration over the last 20 years. The old model of imparting expertise on communities or extracting data or information without returning to communities has been replaced by a new paradigm of partnership

based on relationship building and the recognition that community-engaged work takes time. Key principles of community engagement and CBR include reciprocity, co-design, asset-based approaches, participatory and community capacity, dissemination, and sustainability. University-community collaborations must be based on mutually beneficial and reciprocal relationships (Arrazattee et al., 2013; Matthews, 2008). The principle of co-design ensures that communities have a role in developing projects and programs so that their needs are integrated into the partnership (Balls-Berry & Acosta-Pérez, 2017; McCloskey et al., 2011). Strong collaborations recognize the assets that communities bring to projects and do not solely focus on their challenges. This recognition of assets, of what is going well in a community, helps the team work together to build on existing strengths and support cultural competence (Jacoby, 2017). Strong university-community collaborations call for participatory approaches that increase knowledge between partners and help make the project multidisciplinary (De Weger et al., 2018).

The co-design and participatory nature of community collaboration increases community capacity. As projects evolve, members of the community develop new skills, organizations make new connections, and leaders work to build infrastructure to support change. This capacity can also create new connections between community members and institutions of higher education, creating bridges for first-generation students (McBride & Mlyn, 2020; Scobey, 2020). Many communities, particularly Indigenous peoples and other minoritized communities in the United States, have experienced one-off instances of extractive research described above. CBR should include a plan cocreated with the community to share data and disseminate information in a manner that can be used by the community; such a plan should include deliverables and agreements on the sharing of knowledge (Chavez & Gavin, 2018). Likewise, one-off research in communities can lead to distrust, whereas impactful community engagement can and should lead to a sustainable partnership (Curwood et al. 2011; Shore, 2006). Sustainability in a collaboration can be measured by the capacity of researchers and community members to make decisions together to sustain current projects, build new projects, and/or connect new researchers/institutional resources with community-identified needs. This type of

collaboration is often more time consuming and is known as slow research.

Slow research is a response, addition, and possible alternative to the newest normative trends. It entails working with an ethic or set of values and strategies that valorize different things from the emergent norms. Slow research calls for a deliberate shift in the way we do our work and the ways in which that work and its products are valorized. (Adams et al., 2014)

Given the importance of these community engagement principles in developing BI, it is useful to understand the infrastructure of faculty development in our institutions and assess how well existing programs support community engagement; we must be cognizant of the values we support based on faculty development infrastructure.

Our Project

The two foci of this case study were to assess the range of BI proposals developed by OU faculty members and to evaluate how well the ARIS rubric assessed the implementation of key principles of community engagement.

Context

The CFE Research and Creative Activity team annually hosts a series of workshops for faculty developing NSF CAREER proposals. In the first workshop, participants discuss key principles of community engagement and the BI section of their proposal. In this first contact with faculty, we emphasize the importance of developing collaborations early in the process of designing the project and how long it takes to build ethical partnerships.

In addition to this introduction in the CAREER series, we host a *Designing Broader Impacts* workshop. During the workshop, we define BI and why it matters to our research, identify the six essential elements of a successful BI plan, and introduce participants to key resources and consultation services through CFE.

Research and Creative Activity and Community Engagement staff (within CFE) had previously assessed faculty BI by quickly ranking previous proposals on their “potential to impact,” “connection with community or organization,” “alignment with research agenda,” and “complexity

of project” using a scale ranging from *minimal*, to *more than minimal*, *less than intricate*, and *intricate*. We created these criteria based on our experience working with faculty on designing BI and community-engaged research. From this quick assessment, we knew that faculty had trouble designing concrete, wide-ranging plans to connect their research with NSF desired outcomes. Often, BI statements seemed tacked on at the end of proposals. Statements were often vague, such as “I will work with women” or “I will work with tribes.” And we knew from experience that faculty waited until late in the proposal process to develop their BI plans. From a community engagement perspective, this is problematic, as partners had not been consulted during the design process.

After we were introduced to the ARIS Toolkit, we wondered if the rubric could help faculty transform their BI projects into more concrete, community-engaged, highly impactful programs that would be responsive to community needs and desires.

In our Spring 2023 workshop, participants were introduced to the ARIS Toolkit and encouraged to explore the BI Wizard, including the project planning guide and planning tool. Participants used the planning guide to discuss and share: What are the research/science questions in your proposal? What elements of the scientific questions do you want to highlight in your BI project? Why does this information matter to your audience? What are the potential benefits of sharing this information with your audience? Participants were encouraged to continue to design their projects using the BI Wizard project planning tool.

We offered individual consultation times and offered to read and provide feedback on proposals before submission. During feedback sessions, we used the ARIS rubric to assess the BI narrative and provide concrete feedback to faculty.

Methods and Process

Baseline Study Using the ARIS Rubric to Assess Previous Proposals. Inspired by what we had learned working with faculty, we developed a baseline study to understand the range of BI projects developed by OU faculty for NSF CAREER awards, using the ARIS rubric to assess previous proposals. We reached out to faculty that had submitted proposals over the last 10 years for permission to read and assess their BI project narratives. We assured participants that their work would be deidentified. We heard back from 39 faculty members, with 32 giving us permission to work with their proposals. Proposals were from a wide range of disciplines and represented four colleges (Engineering, Arts and Science, Meteorology, and Earth and Energy). We used the ARIS rubric to assess each proposal, with one graduate student and one BI professional reading each proposal and assigning rubric numbers. The rubric is built around five key questions used by NSF reviewers to evaluate the BI statement (Table 1; NSF, n.d.). We also kept track of comments on each assessment if there were issues using the rubric, and we discussed our assessments to reach a final “score” for each BI narrative. These scores allowed us to develop a baseline for understanding how OU faculty have developed BI previously, especially in how collaborative faculty were with community partners. During this part of the study,

Table 1. Grant Reviewers Evaluate BI Statement Based on Five Criteria

Question	
Q1	What is the potential for the proposed activity to benefit society or advance desired societal outcomes?
Q2	To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
Q3	Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
Q4	How well qualified is the individual, team, or organization to conduct the proposed activities?
Q5	Are there adequate resources available to the PI either at the home organization or through collaborations to carry out the proposed activities?

we became skilled at using the rubric to assess BI plans, came to better understand how faculty had approached BI plans in the past, and began to consider how we might develop resources to better support faculty development of more substantial BI programs.

Focus Group Study. We also wanted to work with colleagues in other University of Oklahoma centers and departments that support faculty proposal development. We hosted two focus groups to gather information on how researchers and proposal support staff responded to the rubric. We engaged 20 participants, including three researchers and 17 support staff working in faculty development or research institutes/centers. Before the focus group, participants completed a presurvey about their knowledge of BI, read two sample proposals, and used the ARIS rubric to assess them. In addition, they answered questions about their knowledge of community-engaged research and partnerships. During the focus group, we reviewed and discussed the assessment of the two proposals. The focus group discussion centered on the utility of the ARIS rubric, challenges using the rubric, recommendations to the ARIS team, and the alignment between the ARIS rubric and key principles of community-engaged research and collaboration. We recorded the sessions and took notes, and participants shared their written assessments. We collected the pre- and post-surveys (OU IRB # 16528).

Results and Impact (Data)

This case study addressed two large questions: Can faculty development specialists use the ARIS rubric to assess previous faculty proposals to better understand the “baseline” of institutional BI projects? Does the ARIS rubric account for key principles of community engagement that signify mutually beneficial and reciprocal collaboration?

Baseline Study Using the ARIS Rubric to Assess Previous Proposals. In the baseline project, we were able to see patterns emerge in faculty BI plans. As we used the ARIS rubric to assess BI plans, we were also thinking about key principles of community engagement and how faculty integrate these practices into partnerships. Taking the time to assess proposals previously developed at our institution allowed us to think deeply about how the ARIS rubric might serve faculty and staff preparing proposals and how reviewers might use the ARIS rubric to assess the capacity of a BI plan to connect with community and make important outreach and societal impacts. In general, the 32

proposals we assessed ranked in the middle of the ARIS rubric, with most sections receiving a *very good* or *good* rank. The ARIS rubric expands upon the five NSF criteria listed in Table 1.

Societal Benefit and Impact. The first set of criteria in the ARIS rubric (Q1) addresses the “potential for the proposal activity to benefit society or advance desired societal outcomes.” The rubric divides this endeavor into key criteria related to the target audience:

- Criterion 1a: Target audience characteristics: The characteristics of the target audience, including who they are, where they are located, and how many will be engaged are clearly described. The rationale for selecting the target audience is well-aligned with project objectives.
- Criterion 1b: Target audience engagement: The mechanisms for engaging the target audience are clearly described and well-aligned with project objectives.
- Criterion 1c: Target audience alignment: The plan ensures the needs and interests of the audience can be met.

These criteria most directly align with the community engagement concepts of reciprocity and the co-design of projects. Answers to these questions are an opportunity for faculty to show that they have thought about the needs of the relevant community (as they define it).

In 16 of the 32 proposals, it was evident that faculty had made connections with community organizations or leaders prior to developing their project. Plans included working with museums, K–12 institutions, vocational centers, and 2-year higher education institutions. In the best of these proposals, the faculty and community partner organization had developed projects previously and continued to build new collaborations based on partner needs. Strong projects also focused on 2–3 activities and were thoughtful in the pedagogical approach to the project.

Twelve of the proposals did not describe the audience or partner for the project. At times, these proposals made vague mention of groups in the NSF target outcomes, but they did not demonstrate prior engagement with groups, organizations, or leaders that would help them connect with an audience. For instance, one proposal would “target” community colleges and engineering programs and undergraduate researchers, but faculty had not connected with a community college previously to talk about the needs of the institution and how their

research program might support the external institution's plans for student development. Some proposals listed groups to connect with, such as rural students, Native American students, underrepresented students, and girls in STEM, but did not have concrete plans to work with members of those groups to build programming.

Four of the proposals in this assessment were plans that seemed to include too many groups or outreach programs. In these proposals, there were plans to start new courses, mentor graduate and undergraduate students, develop curriculum with K–12 teachers, talk at libraries, create exhibits at museums, and increase the number of Native Americans, women, and underrepresented students interested in STEM. In these proposals, there was no evidence of previous collaborations or a relationship between the PI and these groups. And the breadth of potential projects and partnerships diluted the potential of any one of the collaborations impacting the audience significantly. The lack of concrete plan seems to imply a desire to answer the question for review, without putting forethought into the development of collaborations.

Research-Based, Evidence-Based, or Innovative Approaches. The second set of criteria (associated with Criterion 2) is concerned with how the BI plan adheres to research-based, evidence-based, or innovative approaches to implementing programs. These questions can help a researcher think about partners' needs of partners. Criterion 2b assesses the PI's use of evidence-based practices around working with partners ("The project strongly leveraged documented effective practices and relevant knowledge."). Does the proposal include information about how the PI has gone about developing a relationship with partners and how they will implement effective practices and relevant knowledge? Likewise, Criterion 2c addresses the use of innovation in developing an "original and creative BI plan to align with the proposed research and partner needs." Faculty developing effective community engagement must consider the needs of their partners while co-designing collaborations that are mutually beneficial, are reciprocal, and build community capacity. The very best of the proposals reviewed in this exercise were those that indicated knowledge of and strong relationships with organizations, institutions, or groups. There also seemed to be a correlation between PIs who had developed research- or evidence-based

pedagogical approaches to their programs and previous collaborations. These proposed projects would build on successes in previous projects.

Well Reasoned, Well Organized, Based on Sound Rationale. The third set of criteria (associated with Criterion 3) is less connected to principles of community engagement, instead dealing with whether the projects are well planned and measurable and whether they have included NSF target outcomes. The baseline proposals in general answered at least one of these questions, though many of the plans were vague in describing plans to implement, assessment mechanisms, and ways of connecting with partners. The very best proposals were able to discuss previous projects and how they would build on those connections and outcomes to further the collaboration.

Personnel Qualifications. The criteria associated with Criterion 4 offer several opportunities to better understand the relationship between the PI and community. In Criterion 4b, the PI must "[describe] external partners or [provide] a rationale for why external partners are not needed." The assessment of this question could potentially lead to a better understanding of the PI's external partners, especially if the PI has previous interactions or collaborations to build on. The scores on this question, in general, were lower for the baseline proposals. As mentioned previously, the best proposals had developed projects before designing the CAREER proposal but did not provide a lot of information about the partners.

Criterion 4c—"Partnership needs: For plans with external partners, there is a clear description of the roles, needs, and contributions of the partners. There is a clear description of the budget allocation among partners"—gives the reviewer a great opportunity to assess the key principles of engagement. For an *excellent* rating in this question, the PI should provide

a very well-articulated description of the roles and needs of partners. There is strong evidence of mutual understanding of the roles in the partnership. There is clear evidence of equitable and fair planning and budgeting of the partnership. It is very clear how the partners will contribute to the proposed outcomes and the partnership is mutually beneficial. (ARIS, n.d.)

This is the strongest criterion for assessment of a BI plan that considers the role of outcomes and how the project is mutually beneficial.

Adequate Budget. Finally, Criterion 5 addresses whether the budget is adequate to carry out the plan. Criterion 5a evaluates a plan's institutional and/or partner infrastructure: "The infrastructure is appropriate for supporting the proposed BI activities." Our assessment of this question in the proposals led to a surprising finding that may have implications as we build resources. As mentioned, about half of the proposals were vague about partnerships, whether within the university or in the community. But the other half of proposals, which were building their BI projects with partners from previous collaborations, scored higher on this criterion. PIs were better acquainted with the infrastructure of their institution and partner institutions/programs and so were able to connect with those infrastructures in concrete ways. Faculty with vague ideas about partnerships made no connections to existing infrastructure, programs, or partnerships. And we learned that those faculty scoring *good* and *very good* were aware of the existing programs and infrastructure on our campus and were making those connections in ways that increase the impact of community engagement.

Focus Group to Understand Capacity of ARIS Rubric to Assess Key Principles of Community Engagement

The outcomes of the focus group with Research and Creative Activity support staff and researchers were useful in understanding the utility of the ARIS rubric in helping faculty develop BI plans. We had 14 participants in person and six online participants. In general, the focus groups were excited to learn about the ARIS rubric. Participants reviewed two proposals before the focus group and began the discussion by talking about what worked well. Participants felt that the organization of the questions and categories was strong and that the ARIS rubric would be helpful in reviewing proposals in different contexts. Several of the participants are both researchers and administrators of research centers, so they could see the ARIS rubric helping in their own work and also in supporting colleagues. Two participants were new to the research proposal development profession and were excited to have tools they could work with; they said the ARIS rubric "gives us a way to understand" and made reviewing proposals "accessible now." A participant remarked:

The ARIS Toolkit is great for a new staff member like me. I think I will start with the checklist, as that helped me to understand the important elements of a BI plan. ... The ARIS rubric would be good to check a proposal, but it would be really nice if NSF would have reviewers use it, so they [faculty] know what they are looking for.

Next, the group discussed any challenges they had using the ARIS rubric to assess the proposals. They felt that there were so many criteria "lumped" together that it was often hard to choose between the five scores. They wanted more definitions of terms and project roles; in particular, the difference between participants, audience, and partners was often unclear, both in the proposals and in the ARIS rubric. Participants also commented on the fact that different RFPs will require different approaches to BI. Several participants thought the five-level score was too confusing, and it would be better to establish a Likert scale or a binary score (e.g., "The proposal has these elements, or it doesn't"). There was concern about the space limit for the BI statement and whether it was possible to address every question and category.

We posed the question, "Given the key principles of community engagement, does the ARIS rubric account for ethical engagement, and can it be used to push/pull the PI to embrace these principles?" Participants felt the ARIS rubric was weak on assessment of the initial collaboration and of how faculty are engaging with community, co-developing projects, and sharing understanding as to how the project will impact the partners/community. Participants pointed out that a researcher cannot drop projects in a community and expect them to be successful. Each community is different, with its own set of strengths, needs, and nuances. One participant commented:

You cannot just drop a project into a community, there is gatekeeping, you have to know someone, collaborate, partner with them, gain access, understanding. You can do things to educate yourself. It is time consuming, and it can hold up or derail research.

There was also concern about sustainability. One participant noted that the ARIS rubric does not ask about the "sustainability piece, communities don't want you to roll in and roll out,

that’s why matching the needs of the community with the research is important, sustainability is often something that has to be in conjunction with the partner.” Another participant commented:

It’s not our job to volunteer in the community, there must be mutual benefit that is long going, if done right, across different researchers. Someone can continue the work (with the next project), they need the information and the results.

These comments point to the key community engagement principles around dissemination of research and sustainability. The group did not feel as though these principles were addressed in the ARIS rubric. In general, the group felt that the ARIS rubric had the potential to review the key principles of community engagement within the BI plan, but that there must be clear definitions and questions about sustainability. They also wanted to know more about the review process and whether NSF includes community engagement professionals on review panels to ensure adequate BI.

Discussion: Reflections and Outcomes

Beyond the Baseline

The key questions posed by this case study have to do with two major questions about faculty development professionals’ potential to help

faculty develop BI in research. First, does the ARIS Toolkit provide support for faculty to design more substantial BI plans? Second, will those plans integrate key principles of ethical community engagement? Can we help faculty get “beyond the baseline” of previous patterns of engagement at this institution?

Given the outcome of the baseline study and the general trends we uncovered using the ARIS rubric, we believe the ARIS Toolkit could potentially help us guide faculty to develop more wide-ranging and more significant BI plans. We can see from the baseline study that faculty have struggled to create concrete, impactful BI plans in collaboration with groups or organizations and that BI plans can seem tacked on at the end of proposals. Assessing older proposals with the ARIS rubric gave us a set of examples that reinforced our concerns about a lack of project co-design and sustainability. However, we also saw and were surprised by the number of long-term collaborations built on existing relationships with community partners. The strongest proposals demonstrated a pattern of building projects with partners and continuing to work together to deliver programming or curriculum to their audience.

The ARIS rubric is helpful for assessing three of the key principles of community engagement: whether partnerships are built to be mutually

Table 2. Comparison of Community Engagement Principles and ARIS Rubric Criteria

Community Engagement Principle	1b	1c	2b	2c	4b	4c	5a
Reciprocity; mutual benefit	*	*	*	*	*	*	
Co-design; community-identified needs		*				*	
Asset-based							
Participatory; builds capacity						*	*
Dissemination; community data							
Sustainability							

Note. * Signifies that the criterion potentially addresses this key community engagement principle. 1b: Mechanisms for engaging participants in the project are very clearly described and well-aligned with project objectives; 1c: Mechanisms for ensuring the needs and interest of participants in the project are very clearly described; 2b: The project strongly leveraged documented effective practices and relevant knowledge; 2c: The project proposes a truly unique and creative BI plan which aligns well with the proposal research and demonstrates strong consideration of partner needs; 4b: A partner or partners are very well described or the reason outside partners are not needed is well described; 4c: There is a very well-articulated description of the roles and needs of partners. There is strong evidence of mutual understanding of the roles in the partnership. There is clear evidence of equitable and fair planning and budgeting of the partnership. It is very clear how the partners will contribute to the proposed outcomes and that the partnership is mutually beneficial; 5a: The PIs institution and/or that of an identified team or partner has strong infrastructure.

beneficial and reciprocal (1b, 1c, 2b, 2c, 3b, 4b, 4c), whether faculty included partners in the co-design of the project or based the project on community-identified needs (1b, 4c), and whether the projects are built to be participatory and to allow for the creation of knowledge between partners (4c, 5a). Several key principles did not seem to be accounted for in the ARIS rubric but should be considered in any review of community-engaged research or outreach. See Table 2 for assessment of what an “excellent” proposal should include.

The principles of reciprocity and mutually beneficial partnerships in university-community collaborations are key to working together to address societal needs. At least seven of the criteria addressed this issue, starting with Criterion 1b, which asks about the “mechanisms for engaging the target audience” and requires the researcher to describe how they will engage with participants. Criterion 1b builds on this description and requires that the plan “ensure the needs and interests of the audience can be met.” These criteria were important in the review and pushed us to think about the manner in which partnerships were designed. Likewise, Criterion 2b and Criterion 2c led us to think about how PIs developed their partnerships, either integrating best practices and relevant knowledge of engagement or building on recognition of partner needs. An *excellent* score under 4b/4c signifies a prior relationship with partners, as the PI has described the partners “very well” and understands the “roles and needs” of partners.

In the past, many university-community collaborations were designed by academics and placed on or in communities without consulting community members or leaders. This lack of co-designing and recognition of the assets community partners bring to the project can limit collaborations’ potential to impact society. Criterion 1c requires the PI to demonstrate consideration of participants’ “needs and interests.” Likewise, Criterion 4c asks for a “description of the roles and needs of partners” and requires that it “is very clear how the partners will contribute to the proposed outcomes and that the partnership is mutually beneficial.” This question, with Criterion 5a, also alludes to the role of participatory co-design and capacity potential of a project.

Though a community engagement professional might be able to finesse the other key principles of community engagement out of a proposal, the ARIS rubric does not concretely address the importance of recognizing the

community partner’s assets (what’s going well in their work and how can one build on that), and it does not consider how data or outcomes will be disseminated to the community or how the PI will assure sustainability. Is it possible to include these in an existing assessment? Criterion 4c asks evaluators to consider “evidence of equitable and fair planning and budgeting of the partnership” (co-design, participatory) and the degree to which the proposal makes “clear how the partners will contribute to the proposed outcomes, and that the partnership is mutually beneficial” (reciprocity, co-design, participatory, community capacity). Could this question be expanded to include the missing elements of asset-based approach, dissemination, sustainability? Could the ARIS Toolkit include resources for faculty members and professional staff to highlight these principles? If the ARIS rubric is adopted, either by funding agencies or BI professionals, it should include all elements of best practice in community engagement.

The baseline exercise was useful for identifying patterns, and the focus group was useful in that it allowed us to learn from research development professionals about how they might use the rubric to support faculty proposal development. The group felt that, in general, the ARIS rubric could be an important part of their work supporting faculty, especially the structure of the questions and how well the rubric helps the professional development staff to understand what is significant in BI design. Participants said “all the parts are there [in the ARIS rubric]. Many parts that people leave out.” They felt the ARIS rubric made supporting BI “accessible.” They also felt the ARIS rubric could be useful in several contexts besides NSF—that the thought process required to assess a project would be good in any research design that included community and societal impact. One participant noted, “This ARIS rubric can be used beyond NSF, it helps to think about the inherent tension, sustainability, timelines of projects. So [projects are] not one-off experiences.” The rubric could be useful in their work and as a tool for faculty.

Staff felt there were still challenges with the ARIS rubric and recommended adding operational definitions, perhaps embedded within the website or on a key. They felt that without these definitions, the “PI is left to define on their own.” They were also concerned about whether the ARIS rubric would be broad enough to work across disciplines and requested that there be some explanation regarding different solicitations. If a solicitation

does not require something listed in the ARIS rubric, would it be possible to include a not-applicable (N/A) option? In the case of the NSF CAREER proposal, can this ARIS rubric be used to assess both the BI plan and the educational plan, or is there a need for clarification or adjustments given different solicitations?

The final question the focus group considered was whether the ARIS rubric could move us beyond a baseline of vague partnership to partnerships based on key principles of community engagement. The group agreed that the ARIS rubric can evaluate much of what is important in engaged research but that key components were missing. They recommended adding criteria about co-design and needs assessment, project sustainability beyond the funding period, handling data generated by the project. “Communities don’t want us to roll in and roll out;” communities want long-term partnerships. The group recommended defining deliverables of the BI plan and who will have access to those outcomes. Its final recommendation was more focused on NSF solicitation:

We should be creating a system or process so that community can sustain, ideally, continue after the timeline is done. Should be long going, if done right, across researchers. ... If it is truly a community engagement effort, someone [from the community] needs to be involved from the get-go, you will have some sense that we are going down the right track, good, shared understanding, mutual respect, reciprocity. NSF should spell those things out in the solicitation; ARIS can add it to the rubric and reviewers will know it is important.

Recommendations

If we accept the idea that the mission of higher education in the United States is to be of “service to society,” and we also accept that higher education is in crisis, then we must develop institutional capacity to collaborate with communities in ways that are mutually beneficial, participatory, co-designed, and sustainable, while supporting communities’ data sovereignty. Most institutions provide professional development for faculty for teaching but offer less centralized support for research/creative activity and community engagement.

Institutional Support for Community Engagement Professional Development

This case study argues for developing institutional capacity so that community engagement professionals and research support professionals can work together with faculty to create equitable BI plans. It has been beneficial in our institution to locate community engagement resources for faculty within the same infrastructure as teaching and research/creative activity support.

The ARIS rubric has the potential to bring together these professionals in a manner that allows for cross-pollination of expertise and better designed BI. The ARIS rubric can be used at all levels of proposal development: The research/community engagement professional can work with faculty to develop projects, and faculty can use the rubric in the design process with partners. Given our experience using the ARIS rubric to assess the baseline of faculty BI plans in our institution, we believe the ARIS Toolkit will increase the development of community-engaged collaborations based on principles of reciprocity and mutual benefit.

Institutions should support and reward efforts to develop equitable community engagement. As mentioned, strong partnerships built on reciprocity, co-design, capacity building, and sustainability take more time than delivering programs as outreach. Institutions can facilitate this with infrastructure, professional development, and a recognition that projects and publications will be different in “slow research.” And will institutions include community engagement professionals in research support infrastructure? As noted,

being an intellectual has come to mean being in the university and holding a faculty appointment, preferably a tenured one, of writing in a certain style understood only by one’s peers, of conforming to an academic rewards system that encourages disengagement and even penalized professors whose work becomes useful to nonacademics. (Boyer, 1996, p. 14)

As evidenced by our baseline study and our experience working with faculty, there is a tendency to see the BI plan as an added project rather than an important part of the overall research endeavor. Given institutional values and incentives for faculty, does the political capital exist to support the development of BI based on key

principles of community engagement? Without these commitments by administrators and leaders at institutions, these tools will not be enough to change community-university collaborations.

ARIS Project

While the ARIS rubric is well suited to assess the principles of reciprocity and mutually beneficial collaboration, there are several important community engagement principles that could stand to be further addressed within the rubric or as a part of the resources embedded within the website. Co-design (1c, 4c) and participatory (4c, 5a) principles are only covered in two questions (see Table 2), while three principles—asset-based approach, dissemination of community data, and sustainability—are not explicitly assessed. Long-term community collaborations must be developed out of strong communication between partners and the building of institutional capacity to make BI that support change. And change, to be equitable and sustainable, must be developed in connection with community leaders and stakeholders. The ARIS rubric could be an important tool for faculty development centers to help faculty learn and enact these principles in BI projects.

Conclusion

The ARIS Toolkit has the potential to impact the work of BI professional staff, researchers, and funding reviewers. Using the ARIS Toolkit to learn more about the patterns in one institution's development of community partnerships and BI plans was instrumental in thinking about the development of faculty support. We now understand the strengths of faculty projects and the importance of working with faculty early in the proposal process to develop community partnerships based on key principles of engagement.

Much of the success of this endeavor relies on the commitment of researchers, institutions, and funding agencies to understand and support the application of key principles of equitable community engagement. This commitment has the potential to address public concerns about the usefulness and impact of higher education by working with communities and the public to build science literacy.

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About the Authors

Both authors are affiliated with the University of Oklahoma. Joy Pendley is an associate director in the Center for Faculty Excellence. Maleeha Shahid is a LEND Fellow and doctoral student in the Department of Communication.