

# Towards a Participatory Action Research Model for Extending Programmatic Assessment with Industry Advisory Boards

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**Abstract.** As a commentary on how professional, technical, and scientific communication programs might extend traditional approaches to programmatic assessment, this article details a conceptual model for participatory action research (PAR) that draws on a combination of data sources: an industry advisory board and reflective portfolios. We also offer “proof of concept” reflections on that framework and our own intentional advisory board engagement by describing both the process and our results from PAR at the University of Wisconsin-Stout. We further describe ways that the iterative process of PAR can and has proved instrumental in informing program development and revision that leads to student industry employment.

**Keywords.** advisory boards, program assessment, participatory action research, external stakeholders, industry, curriculum

Typically, investigation into important professional, technical, and scientific communication programmatic subjects like curriculum design, course development, and various institutional, administrative, and faculty issues takes the form of program assessment (Allen, 2004; Cargile Cook and Zachary, 2010; Coppola & Elliot, 2010; St. Amant & Nahrwold, 2007; Thomas & McShane, 2007). This assessment, while often data-rich, only provides faculty members and administrators with evidence about their students, courses, programs, and institutions as they are or have been (Gardiner, et al., 1997; Banta & Palomba, 1999), reflecting on that which has already occurred internal to the academic setting.

This reflective assessment certainly provides valuable data for programs and institutions, but frequently such assessment occurs without deliberative feedback from external stakeholders or careful consideration of current (and emerging) industry needs; often, these standard assessment approaches—which provide limited robust real-world understandings of the import and value of program objectives—leave administrators and faculty without requisite, fine-grained, up-to-date, and industry-focused knowledge regarding the skills students cultivate in realizing program outcomes. As Barbara E. Walvoord (2010) explains, “outcomes should primarily support programmatic goals and be governed by primary stakeholders” (qtd. in Say, 2015), which stands to assist in ameliorating the situation identified by Greg Wilson and Julie Dyke Ford (2003): technical communicators emerging from education or training programs in the field are experiencing a disconnect between expectations and the reality of the workplace. Due to the rapid evolution of our field, additional, complementary assessment approaches are needed to investigate not only what has occurred and is currently happening inside our programs (i.e., reflective assessment), but also what is and will be happening in the workplace, in industry beyond our institutional walls. Ultimately, program administrators and faculty need supplemental assessment methods that engage external industry stakeholders. Moreover, the field of professional, technical, and scientific communication would benefit from a framework for preparing for and carrying out this enriched assessment.

Responding to these needs, several scholars have engaged external stakeholders—including practitioners, managers, and alumni in professional, technical, and scientific communication—and reported the results of empirical research about their desires (Brumberger, 2007; Hart & Conklin, 2006; Kim & Tolley, 2004; Rainey, Turner, & Dayton, 2005; Whiteside, 2003). While the general state of the field(s) identified through these efforts is certainly helpful for program administrators and faculty, this work alone doesn’t provide the most current or burgeoning trends, needs, and competencies represented by local and regional businesses that hire and employ a program’s graduates.

Recently, the field has responded to the need for complementary programmatic assessment models that move toward intentional and systematic external stakeholder engagement. Describing ways we might make our assessment practices more comprehensive, a handful of scholars explicate “participatory program assessment,” (Brady, Hayenga, & Ren, 2012; Salvo & Ren, 2007), and Kyle P. Vealey and Charlotte Hyde (2015) extend this model by including external stakeholders in the

process. These advances resonate with Paul Anderson's (1995) contention that "a multiperspectival, multivoiced evaluation process...[enables] practicing professionals and educators to work together in a way that respects the validity of each stakeholder group's perspective" (p. 633). As Vealy and Hyde explain, "our engagement with stakeholders, whoever they are, requires us to cautiously and carefully reflect on our decision-making processes and the impact such actions will have on all those involved" (p. 6), which includes internal stakeholders like students, faculty, and administrators. While these extended participatory program assessment approaches are unquestionably a step in the right direction, the ad hoc and potentially haphazard nature of assembling and engaging stakeholders for assessment creates issues in regularly, systematically, and recursively conducting and applying the results of this programmatic research.

As such, the field would benefit from a robust, organized, and efficient model that generates data from both traditional assessment methods (internal, reflective) and external stakeholder engagement through an industry advisory board. Drawing on a framework for action-research (Lewin, 1951), specifically Participatory Action Research (PAR), we develop here a model that facilitates this data triangulation through an "assessment research" process as a necessary extension to standard assessment practices. Because PAR includes tested, systematic methods and codified frameworks and research approaches, it holds much potential for planning (e.g., assessment research questions, methods, analysis, action items, etc.) and can yield robust results. By evaluating program outcomes and curricula from varied perspectives (e.g., administrators, faculty, students, and advisory board members) through differentiated means (e.g., portfolio assessment and advisory board engagement), programs can intentionally and informedly amend their curricula and associated components to align with industry trends, needs, and desires.

Thus, as a supplemental locus of programmatic assessment research, industry advisory boards can provide complementary data on what should, could, or will be for programs, looking forward and outward at current and up-and-coming industry trends and opportunities. Further, advisory boards meet regularly and consist of deliberately selected/invited members from local and regional industries in which program graduates seek and find employment. As an intentional, consistent, and strategic component of professional, technical, and scientific communication programs—and because of their programmatic, institutional, and industry affiliations and understandings—advisory

boards are poised to provide supplemental data administrators and faculty can deploy in best preparing students for the workforce.

As a commentary on how professional, technical, and scientific communication programs might extend traditional assessment, we detail here a conceptual model for PAR that draws on a combination of data sources: an industry advisory board and reflective portfolios. We also provide some “proof of concept” reflections on that framework and our own intentional advisory board engagement by describing some results from PAR in an undergraduate professional communication program. Ultimately, we describe ways the iterative process of PAR can and has proved instrumental in program development and revision leading to student industry employment.

## **Advisory Boards in Professional, Technical, and Scientific Communication**

In order to best understand how we might engage and capitalize on industry advisory boards for conducting assessment research in professional, technical, and scientific communication, it is important to contextualize the field’s relevant academy-industry relationships and interactions with these types of stakeholders. Nearly twenty years ago in *Technical Communication*, George Hayhoe (1998) asserted the value of industry advisory boards in the field, arguing that “more academic programs in technical communication need to involve their colleagues in industry on advisory boards that help them plan curricula, place their graduates, fund hardware and software purchases, and set agendas for research” (p. 19). These boards, typically comprised of members from outside academia, meet regularly in order to advise and assist academic programs, administrators, and faculty in assessing a program’s relative ability to prepare students for their future careers (Brockman, 1982). Further, when it is determined (through assessment research) that programs are underperforming, these factions can assist in making those programs and their associated curricula more robust and relevant for current and burgeoning workplace practices.

But, finding ways to strategically and systematically leverage an advisory board’s contributions has not been a clear-cut process in our fields. The decade or so surrounding Hayhoe’s call offered a host of articles with case studies of advisory boards in specific academic programs. These articles collectively deem advisory boards beneficial—especially in the functions of reviewing and (re)envisioning curricula, keeping programs apprised of industry needs and burgeoning trends, and

creating real-world opportunities for students and faculty. However, the field has produced limited advisory board scholarship as of late, and no recently published study has detailed approaches to forming a board, nor have they described best practices for leveraging these invaluable resources, especially in a programmatic assessment context (for this type of discussion, see Söderlund, Spartz, and Weber, forthcoming in *IEEE Transactions on Professional Communication*). However, studies from several related fields help contextualize and provide insight on the academic use of advisory boards, describing them as both valuable and successful. Regardless of the fields in which the boards are used, they perform similar functions: advising on curriculum, providing insight on professional trends and practices, and assisting with administrative and public relations (Defatta, Smith, & Holcomb, 1988; Genheimer & Shehab, 2009; Kilcrease, 2011; Rooney & Puerzer, 2002; Schwartz & Fogg, 1989).

Several academics (Dillon, 1997; Dorazio, 1996; Penrose, 2002) report using their advisory boards to help assess student portfolios and/or program outcomes. In addition to this assessment assistance, these boards might also provide a host of valuable pedagogical and scholarly resources: guest speakers, adjunct faculty, mentors for students, equipment or software donations and grants, and research opportunities for faculty and students (Dillon, 1997; Dorazio, 1996; Yee, 1994). As might be expected, some studies report that programs also find that boards assist in facilitating student internships and providing employment opportunities (Dillon, 1997; Penrose, 2002; Yee, 1994), which often evolve through increased interaction between industry stakeholders and program students.

While several case studies can be found in the literature, only one published study on advisory boards in technical communication prior to Lars Söderlund, John M. Spartz, and Ryan P. Weber's forthcoming piece employs empirical methods. Distributing a survey to five technical communication programs with advisory boards, R. John Brockman (1982) hoped to determine some best practices and benefits of those boards. According to the data, boards function in a strictly advisory capacity. That is, boards hold no power in official policy making. Further, all survey respondents discussed their boards as valuable and integral to the program's success, and one respondent argued that boards are "very important, maybe critical to the success of any courses or programs in technical communication," (p. 138) especially as it relates to assessing the skills, competencies, and knowledge-sets of program graduates.

In professional, technical, and scientific communication, a handful of scholars have written about their individual and program-specific

experiences in effectively starting and maintaining advisory boards. For example Patricia Dorazio (1996) discusses the formation of her program's advisory board, which grew from a hope that "members would provide advice on everything from course offerings to recruiting strategies and lend credibility to the new degree program" (p. 99). Perhaps the chief function of advisory boards discussed across the relevant scholarship is curriculum evaluation (Dillon, 1997; Dorazio, 1996; Penrose, 2002; Yee, 1994). In this process, advisory members confer with academic programs on possible curricular amendments, often including changes to course content or projects and the addition of new courses. Ideally, this curriculum review is a collaborative process. As Carole Yee (1994) explains, academics and industry representatives "should be able to keep a technical communication program's curriculum current and each other informed about important new industry and academic trends and concerns" (p. 206). Still, the literature represents various approaches to this collaborative curricular assessment and revision.

## **Action Research in Professional, Technical, and Scientific Communication**

The conceptual strategy we propose to extend traditional programmatic assessment research engages these industry advisory boards through action research. Unfortunately, attempting to categorically define action research is fairly difficult: The method itself employs varied techniques in distinctive contexts (McKernan, 2008; Wood & Butt, 2014). Regardless, the basic foundation of all action research is reflective practice linked to action within a particular social setting (Carr & Kemmis, 1986; Elliot, 1991; McNiff, 1993). According to Bridget Somekh's (2006) *Action Research: A Methodology for Change and Development*:

Action research integrates research and action in a series of flexible cycles involving, holistically rather than as separate steps: the collection of data about the topic of investigation; analysis and interpretation of those data; the planning and introduction of action strategies to bring about positive changes; and evaluation of those changes through further data collection, analysis and interpretation . . . and so forth (p. 6).

As David Coghlan and Teresa Brannick (2010) explain, there are several important characteristics that help us understand the scope of action research. Most importantly, action research is "both a sequence of events and an approach to problem solving" and a robust and collaborative methodology where "action researchers and members of

the organizational system” endeavor to unearth and cultivate “not just solutions to the immediate problems but . . . [also] important learning from outcomes both intended and unintended, and a contribution to scientific knowledge and theory” (p. 4). While faculty and administrators conduct action research in a host of fields (e.g., education, information systems studies, nursing), for professional, technical, and scientific communication programs, working in partnership with participants from outside the site of practice (i.e., advisory board members), action research can serve as an invaluable approach—a way in which assessment research can become systematic and move beyond reflective description, analysis, and theorizing (Somekh, 2006).

Stephen Toulmin (1996) further emphasizes the distinctive nature of action research for academicians: Those engaged in action research reject the idea that scholars should only conduct research “to produce more, or better generalized knowledge” (p. 54). Rather, it is an investigative method that requires and rewards intentional and cooperative approaches to studying phenomena involving various stakeholders with pragmatic requirements. As Stuart Blythe, Jeffrey T. Grabill, and Kirk Riley (2008) clarify, “action research is contextual, local, and requires intervention, not simply description” (p. 273), and those conducting it mustn’t view or approach people as a means to their own scholarly ends (Sullivan & Porter, 1997); rather, we need to approach all stakeholders in the research process collaboratively, providing them agency in the shared focus of the investigation (i.e., assessment research).

While we find much value in action research for the field—and especially as it relates to program assessment (detailed below)—few professional, technical, and scientific communication scholars have engaged its methods, and none have employed action research approaches in program assessment. In fact, according to Ned Kock (2003), “published examples of action research . . . are hard to find” (p. 105). Recently, Brian McNely, Clay Spinuzzi, and Christa Teston (2015) discuss innovations in qualitative approaches to research that have shaped methodologies in technical communication and help broaden the scope of social and rhetorical aspects of the field. In their *Technical Communication Quarterly* (TCQ) article, they describe Blythe, Grabill, and Riley’s (2008) three-year action research project, which argues that “the primary goal of action research . . . should be to identify and support the strategies used by community members rather than to educate the public” (p. 272). McNely et al (2015) further note that action research has “adapted and extended traditional qualitative approaches for nuances of contemporary technical communication,” representing the field’s

“methodological and theoretical pluralism [that] reveals the rich and diverse tapestry of opportunities for research and practice” (p. 7). While Dave Clark (2004) has suggested that action research [proper] can sometimes be difficult to carry out in our fields, Patricia Sullivan and James Porter (1997) describe it as extremely valuable when used in processes surrounding the “the mechanisms of policy and decisionmaking” (p. 115). Based on these methodological developments, our field appears to be distinctively positioned to conduct action research in a host of contexts--including, if not specifically, for program assessment.

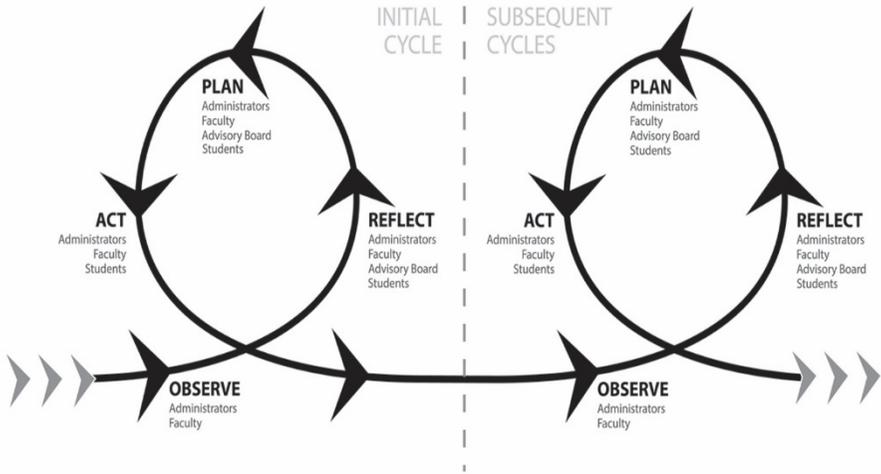
A handful of scholars have linked action research to service learning in professional and technical communication (Clark, 2004; Crabtree & Sapp, 2005), representing its import for creating meaningful relationships—cross cultural, international, interdisciplinary, and in the workplace— noting that this work can afford our field “a new level of cultural capital” and a “path to relevance” (Clark, p. 308). Most recently, Guiseppa Getto (2015), draws together the fields of technical communication, UX design, and action research—specifically participatory action research (PAR)—describing how PAR aligns with service-learning initiatives in higher education. In his discussion, Getto (2015) describes technical communicators and UX professionals as being “committed to serving stakeholder needs, fostering participation, and including stakeholders in core knowledge-making practices” (“What Technical Communicators”). He further argues that PAR is a natural and useful extension of more traditional qualitative research methods: It ensures that stakeholders are represented in the research, that the focus of the research is on solving long-term stakeholder needs, and that stakeholders are invited into the process as contributing members, not simply passive recipients of the results.

Further, in his “confessional tale” of employing action research methods to investigate group computer-mediated communication, Kock (2003) aligns action research with industry in a way that resonates with our advisory board engagement, describing the method as one with a specific “focus on real world problems,” that “allows the researcher access to ‘rich’ context-specific data that would be difficult to collect through other, more traditional, research approaches” (p. 106). Ultimately, he determines that an action research approach is well-suited for stakeholders “who want to do research related to the solution of complex problems in settings they are familiar with” (p. 120), which aligns nicely with the context expertise that administrators, faculty, students, and advisory board members bring to the PAR cycle of assessment research we outline here.

Taken together, these scholars lay the groundwork for an action research model for conducting programmatic assessment research. While action research in the field's literature focuses on issues in local communities in a more "traditional" research paradigm, we find it an invaluable model for conducting the combined outcomes-based and needs-assessment programmatic research; as an approach, PAR is particularly well suited to minimize gaps between academic programs and industry needs because, as Xunaxi Cruz Velasco (2013) explains, "in this cooperative relation between participants and researcher there is a permanent respect for knowledge of the members and for their ability to understand and address the issues" ("Participatory Action Research (PAR) for Sustainable Community Development"). This is especially true because PAR allows for data collection and deployment from a variety of sources, including program industry advisory boards.

## **Participatory Action Research as Method: A Model for Programmatic Assessment**

At its heart, Participatory Action Research (PAR) is about changing or improving a social situation and intentionally involving those most affected by that process. For our purposes, the educational context in which we develop curriculum to best prepare students for gainful employment in professional, technical, and scientific communication constitutes the social situation in which we deploy these methods. PAR, then, is both a systematic and cyclical process that includes four elements described by Stephen Kemmis and Robin McTaggart (1982): *Observe, Reflect, Plan, and Act* (See Figure 1). During each phase, stakeholders work collaboratively to achieve mutually determined goals to move a program in the desired direction. In this section, we'll not only sketch the stages of PAR, but also provide an extended anecdote—a commentary—from our own journey in engaging PAR to illustrate its relevance and import for professional, technical, and scientific communication programs.



**Figure 1: PAR Cycle for Engaging an Advisory Board in Programmatic Assessment**

Where to begin PAR's iterative cycle depends largely upon the status of programmatic assessment research, planning, and revision processes. The model we describe herein assumes preliminary, outcomes-based assessment, and we'll discuss the use of portfolios for this purpose—although, other forms provide equally appropriate data for beginning PAR.

## Observe

As such, we enter the PAR model at the *observe* stage because the activities conducted at this phase can help programs consider something that is or is not happening (e.g., students achieving program outcomes), requires the use of available information or data, leads to uncovering new information, and involves various stakeholders in describing what they think is occurring (Crane & O'Regan, 2010). During the *observe* stage, program administrators and faculty ask themselves "what is happening in our program?" with a focus on current outcomes, curriculum, resources, faculty, and related components (e.g., projects, internships, research, and volunteer opportunities, etc.). Further, at this stage, these participants engage gathered portfolio data from the most recent academic year/term. These data, coupled with complementary formative and summative data gleaned through less systematic or structured means—an exit survey in our capstone course, discussions during our student-organization meetings and our dedicated advisement day gala, and feedback from

students at our advisory board meetings—facilitate an understanding of the trends in students' success in realizing previously established program outcomes. Here, the focus is on looking at what is happening, describing what has happened, and recording the results of those collective observations for discussion during the *reflect* stage of the PAR cycle. Ultimately, the purpose of observation is to provide a sound base—some specific data points—for reflection by producing a widely accepted understanding of what actually happened (Quixley, 1997) in the academic setting and its relationship to other metrics of program success, including job placement, reactions from alumni, and engagement with regional employers.

For example, at the University of Wisconsin-Stout, faculty teaching in the Bachelor of Science in Technical Communication (BSTC) program first engaged PAR and began moving through the *observe* stage in 2004-2005, when some of the first intentional and systematic (re)visioning commenced. At that time, the BSTC was a program in its infancy: In 2000, the BSTC became the first undergraduate writing major in the institution's history, and like all programs at our institution, the BSTC was administratively housed at the college level, with the intention of drawing upon faculty and resources across departments and disciplines. However, the majority of faculty teaching courses in the program hold appointments in the Department of English and Philosophy, which offers no other "traditional" degree in English. That is, most faculty (outside those in the program) teach courses in the general education sequence. During the 2004-2005 academic year, four faculty and one senior lecturer comprised the core staff, and those faculty members were instrumental in the assessment of sophomore and senior student portfolios, an annual program assessment process which began in 2002. During the first observation of program data in 2003, 23 portfolios (out of 75 BSTC students) were reviewed by three program faculty. The findings were favorable: "The results indicate that, on the whole, the courses in the technical communication curriculum are providing the instruction that leads to students' strong fulfillment of the learning outcomes" (*Program Review*, 2003, p. 6-7). While this came as welcomed news for the program, the data were incomplete; they represented past experiences of students in the academic setting, and didn't capture the relationship(s) between those outcomes and industry needs. While the guidelines for portfolio assessment were discussed with the advisory board, these external stakeholders were not specifically engaged in the portfolio assessment process. To best serve the needs of the students at our "career-focused, comprehensive polytechnic university," we endeavored to more

deliberately collaborate with members of local and regional industries on curricular issues.

## **Reflect**

The second phase of the PAR cycle requires intentional engagement with an industry advisory board. During the *reflect* stage, program faculty and administrators—along with a select group of students—involve members in actively discussing the status of the program based on data gleaned during the *observe* phase: “This is the stage in the cycle where you need to spend time thinking about the findings of the observations, negotiating meaning with stakeholders and building a shared understanding” (Crane & O’Regan, 2010, p. 12). Here the focus is on a seemingly simple question: “Why did we get these results and what do they mean?” By involving and listening to advisory board members’ different perspectives and interpretations, along with the interactions between those members and our students, complementary data are cultivated. These data provide administrators and faculty with a more robust approach to assessing the current state of the program. Because of their industry affiliations, advisory board members are uniquely positioned to brainstorm ideas or theories about what happened or should be happening by talking it over, sharing insights, and piecing together data points.

During our own programmatic reflection in early fall 2004, BSTC industry advisory board members recommended conducting a “large-scale revamping of the curriculum, not only to update it but to set it apart from competing programs in the region and worldwide” (*Program Review*, 2005, p. 7). To present its recommendations to faculty stakeholders, the chair of the advisory board worked with the BSTC program director to convene a “day-long program faculty retreat involving faculty and staff members” from a range of departments supporting BSTC courses (p. 7), which helped constitute the PAR *reflect* stage for our BSTC program. This collaborative event was attended by 20 faculty and staff from across the university who were teaching in the BSTC program. At the retreat, representing the collective advice of the advisory board, the chair served as keynote speaker and retreat facilitator, laying out the advisory board’s ideas for the program’s direction. During the keynote, faculty were prompted to help students consider themselves as “directors of user experience” in that the “technical communicator is no longer seen as a wordsmith making documents look ‘pretty,’ but more as a movie director coordinating many aspects of any communication situation into effective wholes” (*Program Review*, 2005, p. 2). Following the address, faculty and staff assembled in small group “ideation sessions” to reflect on the

existing program assessment data and “generate ideas for qualities, characteristics, and skills the prototypical Technical Communicator of the future will need” (p. 6).

Knowledge sharing among faculty, staff, students, and advisory board participants represents a hallmark of PAR’s *reflect* stage, where stakeholders collaboratively generate supplemental data to implement in subsequent stages. Board members are especially adept at sharing ideas about the relationship(s) between the portfolio results, outcomes, curriculum, resources, and the current or burgeoning trends in their respective fields. For example, our own board members discussed and outlined the need for a first-year, three-credit foundations of technical communication course that would give students “early exposure to the theoretical foundations as well as the technical needs of being a technical communicator” (*Program Review, 2005*). Prior to this, our program curriculum didn’t include such a course; students were introduced to the major and field through a one-credit offering, which we (through reflection with the advisory board) determined did not provide a sufficient introduction and grounding. This type of idea-sharing allows for a range of interpretations and meanings to be considered because various stakeholders with disparate experiences can work together to make informed suppositions based on the information generated through the discussions. Further, all involved parties can compare their observations about any competing evidence or perceived disconnects between the academic and industry contexts and consider alternative explanations that might emerge during those discussions. One disconnect industry advisory board members observed upon reflection was a lack of focus on user experience (UX) in the program objectives and curriculum; citing an uptick in UX needs, approaches, and positions in the field, board members encouraged faculty and administrators to (re)envision ways to integrate UX in the program. Propelled by these recommendations, faculty worked to revise the program objectives into three new “core areas” or student program goals: “envision the users,” “create the concept,” and “produce an integrated experience in a professional setting” (*Program Review, 2005*, p. 2-3). In response to that reorganization, courses were slotted in and added to each respective area to help students more aptly realize program and career objectives. Ultimately, as we experienced first-hand, a combination of internal (academic) and external (industry) voices can precipitate a more fine-grained and relevant understanding of what has occurred in an academic program in direct correlation to industry needs.

Our first foray into PAR taught us much about the value of collaborating with advisory boards: In this case, advisory board members

did not participate in the ideation sessions or small group work. Even though advisory board recommendations had been synthesized by its chair in the retreat's keynote address, full participation from board members during the event would have made the intentional engagement of all participants, a key characteristic of the *reflect* stage, even more effective.

## **Plan**

During the third PAR phase, *plan*, participants collaboratively prioritize actions based on portfolio and supplemental data, advisory board members' insights, available resources (e.g., faculty, infrastructure, technologies, etc.), and expertise. Then, a stepwise and scaffolded approach to resolving identified issues, gaps, or needs is developed. The planning process progressively extends the scope of contribution from advisory board members: Through the intentional, systematic, and regular interaction with program stakeholders, their role evolves at the *plan* phase from being strictly reflective (advisory) to one where they play an integral part in helping determine action items for curricular and programmatic change with an eye toward pre-established goals. For some, this shift might generate a certain amount of apprehension, and several scholars have expressed their own concerns that advisory boards, if given the opportunity, may attempt to establish and exploit unbalanced power relationships by issuing mandates that stand to threaten the academic integrity of those programs (Carter et al, 2003; Johnson-Eilola & Selber, 2001; Gilbertson, 1987). But, as Michel Foucault (1980) explains, power results from interactions between people, from practices of institutions, and from the exercise of different forms of knowledge. Thus, while all stages of PAR should be both participatory and collaborative, in order to assuage these concerns, it is extremely important at the *plan* phase to directly involve those affected by the programmatic outcomes—program students and advisory board members who best understand the skills, competencies, and abilities necessary for success in their industries. Doing so allows each member of the group undertaking the PAR itself to “make active contributions to the plan and work collaboratively with one another” (Crane & O'Regan, 2010, p. 12), balancing the power and facilitating an optimal approach to enacting necessary curricular change.

Planning comes in various forms, some of which are small-scale collaborations among involved parties. The retreat discussed above was a site in which faculty and staff came together to respond to advisory board recommendations specific to the vision for the BSTC program. Ideally, the retreat would have included advisory board members themselves—

beyond their collective recommendations provided by the chair—engaging with faculty and staff participants. Instead, faculty and staff worked with the ideas formulated by the advisory board, which were directly applied during the planning in the reflective “ideation sessions” that spurred a list of needs for students enrolled in our programs: That they have opportunities to develop collaboration and leadership skills, global and cultural awareness and sensitivity, user-centered design and practices, and critical-thinking and interpretation skills (*Program Review, 2005*, p. appendix). Participants subsequently “generated several curriculum ideas to meet these needs” (*Program Review, 2005*, p. 56), and the remainder of the retreat found participants engaged in planning activities in which “small groups chose their two favorite ideas and developed them into concept outlines, which were shared with the larger group” (p. 57). Part of this planning included action items for further research into best practices for curricular or programmatic amendment, including the formation of a steering committee that would undertake that work. The thirteen action items included a variety of concepts meant to help prompt curricular change, including goals related to developing courses focused on “user-centered communication,” “foundations of technical communication,” “applied aesthetics,” “information architecture” and the “literature of technology” (*Program Review, 2005*, p. appendix). Other action items related to providing students with “‘quick load’ technical training,” especially related to tutoring students on using design software and expanding study abroad opportunities.

## **Act**

During the *act* phase of PAR, internal stakeholders (without formal advisory board interaction) embark upon the process of responding to issues and action items identified in the previous three stages. Operating within institutional guidelines, administrators and faculty work together to determine the best course of action for amending program curricula at a variety of levels, including program and course outcomes, course offerings, substantive projects, and employed technologies. To help ensure that all affected parties have a voice, select students (or recent alumni) are often consulted about the proposed amendments at this stage. Once those amendments are agreed upon and in place, program faculty deliver (teach) those revisions through program courses in which students enroll. Then, through established and ongoing needs-based assessment procedures (i.e., portfolio review and the complementary approaches described in the *observe* phase), programs engage students in carrying out an evaluation of the revised program components.

Ultimately, in order to maintain the collaborative atmosphere established through the PAR, in this process it is extremely important to follow through on carrying out the action(s) determined with advisory board members during the *reflect* and *plan* stages. Not only does this engender trust and a partnership for future visioning, but it also holds invested parties accountable in the procedures necessary for programmatic improvement. As such, another essential component of this phase is communication with those stakeholders, keeping them apprised of developments, while recording ongoing observations, reflections, plans, actions, and the effects of those actions in preparation for subsequent PAR cycle iterations (Crane & O'Regan, 2010, p. 31). This communication takes many forms, including (but not limited to) annual or bi-annual advisory board meetings throughout the academic year.

At our institution and in response to the plan put in place at the 2004 all-day retreat, three program faculty formed a steering committee and met weekly over the course of the fall semester. During those meetings, members analyzed and discussed identified industry trends (e.g., the focus on user-centered design and communication), compared the program to undergraduate technical and professional communication curricula nationally, and discussed plans related to program advisory board and retreat feedback. Deriving from the work during the *reflect* and *plan* phases, the committee took action: First, they formed a new program mission statement and drafted new program learning outcomes. Then, the committee leveraged the results of the small group interactions from the retreat to outline new program courses for development, along with existing courses that would need to be revised in order to fit the newly established objectives. Finally, in the fall of 2005, the program revision process was launched in earnest, involving all core program faculty in the process. The program director wrote the program revision documentation and provided the rationale for and synthesis of updates in program objectives and curriculum. Then, program faculty divided up the new and revised course proposal paperwork based on areas of interest and expertise. Finally, the program revision passed all university committees in the spring of 2006, and faculty began teaching the courses in the fall, after which we conducted program assessment in response to those curricular amendments.

## **Conclusions and Recommendations**

While programmatic assessment comes in various forms, we find the collaborative, cyclical nature of participatory action research that involves an industry advisory board an invaluable assessment method: As a

people-centered approach to critical inquiry, PAR allows programs to triangulate data by leveraging the knowledge and workplace expertise of targeted external stakeholders with an annual, outcomes-based portfolio assessment process. One of the greatest advantages of PAR is the way that it encourages the active involvement, collaboration, engagement, and empowerment of all stakeholders in the process of initiating changes in professional, technical, and scientific communication programs based on the experiences, needs, and contexts of those involved. Further, through the intentional and scaffolded discussion and reflection on portfolio data gathered through outcomes-based assessment processes, PAR provides an enriching, intellectual, and pragmatic analysis of that information—especially as it applies to workplace application—and plan for curricular amendment. Ultimately, the combination of reflective assessment and regular, structured engagement with an industry advisory board provides programs with a clear(er) vision for how best to prepare students in our programs.

In our own experience, while the PAR process helped inform early program revisions, it continues to impact our program's vision and curriculum. For instance, in 2009, declining BSTC program enrollments and pressure from administration to increase those numbers prompted program faculty and staff to engage once again in PAR. Specifically, as we launched into the *observe* stage, the topic of weekly program meetings during the 2009–2010 academic year focused on the impacts that declining BSTC enrollment had on class size, the ability to offer our program's core course offerings each year, and on the program's inability to effectively recruit incoming students to the major. The inability to recruit first-year students seemed to be at the heart of the program's enrollment challenges because the majority of BSTC students were transfer students declaring the major as sophomores or juniors. As a result, our program lacked a consistent group of freshmen students, a regular cohort to move through the program in sequence. This made it difficult to schedule all courses on a regular basis, which brought with it myriad issues for the program and our students.

Through this observation phase, the program director realized that we needed more data about the perceptions incoming students had about the BSTC program in order to unearth the root of our enrollment decline. Program faculty also wondered how attractive the program name "Technical Communication" was to this demographic. Consequently, in engaging PAR as a method for assessment research, the program director distributed a survey to high school English teachers across our state and the nearby metropolitan area, asking them to discuss with their students

their perceptions of the BSTC. The survey revealed that students perceived the “technical communication” label as comprising a curriculum that focused exclusively on technology and the documentation of technical processes, and the vast majority of prospective students found this to be off-putting. Moreover, this perception of the curriculum was shortsighted in that the majority of our BSTC graduates pursued careers not in technical fields but in areas as diverse as marketing, graphic design, web and interactive development, and journalism, among others.

These discussions and the results of the survey prompted program faculty to move into the early stages of a BSTC program revision. While the objective of this revision was to encourage recruitment and to draw from a previously untapped demographic of graduating high school seniors, along the way issues concerning relevancy and currency influenced it as well. Program faculty discussed renaming the major to Professional Communication and Emerging Media (PCEM) and expanding it, offering concentrations in Technical Communication, Applied Journalism, and Digital Humanities. Ideas for a program curriculum structure, as well as new and revised courses, had begun to be formulated. These ideas, along with the collected survey data was the agenda for the May 2009 advisory board meeting, signaling our movement into the *reflect* and *plan* PAR stages.

At that meeting, program faculty and board members discussed program enrollment issues, the data collected, and ideas for the new, revised PCEM major. The outcome of the meeting revealed positive engagement by board members and an enthusiasm for the reconstituted major. In particular, board member reaction to the idea of a Digital Humanities concentration was met with keen interest. Program faculty assumed that this concentration would be perceived by board members as less cogent to industry demands as the other concentrations in Technical Communication and Applied Journalism. However, the opposite was true. The board perceived that students graduating with a Digital Humanities concentration would be “equipped not just to effectively produce communications in existing technologies, but be prepared to help companies determine which new technologies may be exploited in the next five years” (*Revision of the Bachelor of Science in Technical Communication*, 2010, p. 2). Together with faculty, board members brainstormed curriculum for this concentration as well as learning objectives and courses to include in the other concentrations. In addition, board members unanimously advocated for the inclusion of foreign language courses into the revised program curriculum core, believing such experiences to be critical for the success of technical communicators

in a global workplace.

Ultimately, program faculty responded to this advisory board meeting by launching a program revision in 2010, engaging in the *act* phase of PAR. The program revision renamed the major, expanded into a three-concentration model, and updated the courses offered in the core curriculum to accommodate the new concentration model, all in response to plans put in place during the advisory board meeting. The revision carefully considered not only the currency and relevancy of the curriculum but also what the revision meant in terms of identity—for the program and for students. Renaming and restructuring the PCEM program to involve a variety of professional communication activities—technical communication, journalism, digital humanities—while thoughtfully incorporating emerging media in substantive ways has resonated with students, including prospective ones. The PCEM degree has invigorated program enrollment, doubling the number of students in the major since 2009.

In the end, PAR has precipitated intentional assessment by allowing our program to look backward at what we've done through portfolio assessment, vision forward at what we can do better through advisory board interaction, and make appropriate and manageable amendments to our program through collaboration. This cyclical process has proved instrumental in providing program stakeholders—students, faculty, potential employees—with the information, skills, and outcomes to yield a nearly 100% job placement rate of our graduates.

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