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Communities of transformation: an example from the museum field

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ABSTRACT

Museums are seeking to be more relevant to their communities and help foster social change, which requires museum professionals to reconceive the role of their organization, develop new relationships, and change their practices. In this article, we discuss the Sustainability Fellowship that engaged museum professionals from nearly 200 organizations in learning about the UN Sustainable Development Goals and implementing a whole-institution approach to social, economic, and environmental sustainability. Using grounded theory, we consider the program's fit with a *community of transformation*, which is 'a community that creates and fosters innovative spaces that envision and embody a new paradigm of practice' (Kezar, Gehrke, and Bernstein-Sierra 2018). We conclude that the program can be considered a community of transformation and that viewing it from this perspective provides useful insights that can inform other fieldwide efforts to effect change in museum practices.

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Introduction

Museums are seeking to transform their role and have greater societal impact, both as organizations that are embedded in their local communities and as members of a field that is collectively committed to critical issues. Museum professionals seek to create engaging learning experiences that empower people and communities to work towards a more just and equitable society and address global challenges such as climate change. At the same time, they seek to transform their own organizations to model these goals and values. Museum networks and professional associations recognize that this work requires growth and change: committing to ethical and equitable principles; improving professional knowledge, skills, and practices; learning from other fields and perspectives; and strengthening relationships among museums and other organizations (American Alliance of Museums 2021; Association of Children's Museums 2023; Association of Science and Technology Centers 2022; Ecsite 2021; Institute for Museum and Library Services 2022; Museums Association 2022).

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Making progress toward this vision requires changes in who does museum work, what they do, and how they go about it – in short, *transformational* rather than incremental change. Rather than making small improvements over time, transformational change ‘requires examining assumptions and practices and can result in changes to an organization’s structure, processes, and culture’ (Garibay and Migus 2020, 2). Organization-wide change can be difficult for museums and staff to accomplish (see Bienkowski and McGowan 2021, 2025; Sandell and Janes 2006; Taylor and Kagan 2017). Recent studies have found that even for efforts such as diversity, equity, accessibility, and inclusion (DEAI) where museums have a stated intention and dedicated resources to make change, existing practices and structures can be hard to change (Garibay and Olson 2020; Haupt et al. 2022).

In this paper, we share an approach called *community of transformation* that supports transformational change by helping its members to identify, develop, adopt, and sustain new practices that represent a paradigm shift. Identified by Kezar, Gehrke, and Bernstein-Sierra (2018), a community of transformation is a variation of a community of practice that is intentionally created to effect change. In following sections, we examine the ways in which a museum-focused Sustainability Fellowship program exhibits the specific characteristics of a community of transformation; describe how the program’s features supported individual and organizational change among participants; and suggest considerations for others seeking to establish a community of transformation among museum professionals.

Sustainability science and practice

Sustainability is a broad area of science and practice that develops solutions to meet ‘the needs of the present without compromising the ability of future generations to meet their needs’ (Brundtland 1987). In 2015, the United Nations (UN) member states agreed on 17 Sustainable Development Goals (SDGs) that address human rights, societal and economic development, and environmental protection. These goals focus on issues that are important to all communities, including addressing poverty and hunger; improving health and well-being; providing quality education; reducing inequalities among people; creating economic growth; building sustainable cities and communities; and protecting life on land and in the water (UN 2015).

A commitment to sustainability brings many benefits to museums – and vice versa. The Sustainable Development Goals are explicitly aligned with important museum priorities such as efforts to increase diversity, equity, access, and inclusion, so working on sustainability advances these other key goals as well. Sustainability can create a thematic connection among otherwise disparate activities, programs, and exhibits that focus on the natural environment and societal issues. Facilities and operational changes to increase sustainability can reduce waste, conserve water and energy, and ultimately save money. Sustainability projects can build partnerships with other organizations, allowing museums to engage broader audiences, make a difference in the communities they serve, and advance action on local challenges. Sustainability also provides individual museums with an opportunity to join a global conversation, learn from other organizations, and demonstrate their relevance now and into the future (Garthe 2023; NISE Network 2019; UNESCO 2014, 2017; Weller and Ostman 2021; Zivcovic 2017).

Arizona State University's Sustainability Fellowship was an initiative whose purpose was to help museum staff develop the necessary knowledge, skills, attitudes, and relationships to create and implement innovative projects to make a difference in their communities and contribute toward a culture of sustainability across their organizations. It was designed to address three key needs: first, to provide training in sustainability science and practices to support committed professionals in leading sustainability efforts within their museum; second, to provide resources that those individuals could use to engage staff across their organization in planning and implementing sustainable strategies and initiatives; and third, to create an ongoing community of practice to support and foster this work and share emerging models and promising practices across the field.

Sustainability fellowship program

From 2019 to 2022, Arizona State University and the National Informal STEM Education (NISE) Network offered the Sustainability Fellowship program into two phases. Each phase included three cohorts of professionals from approximately 30 participating organizations: Cohorts A, B, and C were implemented in 2019–2020 and Cohorts D, E, and F were implemented in 2021–2022.

A total of 215 individuals from 179 organizations took part in these six cohorts. Participating organizations included: science centers or science museums (44%); children's museums (23%); natural history museums, history museums, or culture museums (15%); botanical gardens, public gardens, or nature centers (10%); and zoos or aquariums (6%). (For convenience, we refer to these organizations collectively as 'museums' throughout.) These organizations were located in 44 states and two US territories, plus four foreign countries. The US organizations characterized their location as: large urban centers (34%), small urban centers (22%), mid-sized urban centers (19%), rural areas (13%), and suburban areas (8%).

Participating museum staff held a variety of roles in their organization, including: education and public programs (67%), leadership and administration (14%), visitor services and operations (8%), and others. Within these categories, there was also a range of experience, with around half of the participants (53%) in the field for seven or fewer years and around half of the participants in the field for eight or more (47%). Regardless of their role, each staff member was required to have the explicit support of leadership for their participation and project work.

Program activities and resources included presentations from sustainability experts and museum professionals to offer insights and new ways of thinking; reflection and discussion among participants to foster peer-to-peer learning, problem-solving, and skill-sharing; guides, tools, and other planning and learning materials; and a modest stipend. The program was designed as a blended online/in-person community of practice convened over a six-month period, although the COVID-19 pandemic prevented some participants from being able to gather in person.

Communities of practice in museums

A community of practice is a group of people who establish shared goals, giving them a sense of joint enterprise. They develop relationships and a sense of common identity

through mutual engagement; and they create a shared repertoire of ideas, practices, and resources (Lave and Wenger 1991; Wenger 1998).

As an organizing structure for professional development, communities of practice have been influential in the museum field. Professionals with similar roles (such as educators or evaluators) interact as working groups or structured associations within or across museums, networks, and professional associations. The concept has been used to guide the design of professional development, participatory research, and other activities intended to share or improve knowledge and practices (e.g., Allen and Crowley 2014; Ampartzaki et al. 2013; Ash and Lombana 2012; Grabman et al. 2019). The concept has also been used to guide and study the impact of museum networks, including the National Informal STEM Education Network (Beyer, Guberman, and Iacovelli 2017) and the National Network for Ocean and Climate Change Interpretation (NNOCCI) (Fraser et al. 2015).

Communities of transformation

Communities of transformation are proposed as a variation of communities of practice by Kezar, Gehrke, and Bernstein-Sierra (2018) in a study focused on higher education. The authors describe this variation 'as communities that create and foster innovative spaces that envision and embody a new paradigm of practice' (2018, 853). They identify three defining features that distinguish a community of transformation from other types of communities of practice and three impactful features that support transformational change.

The *defining features* of a community of transformation are as follows. First, a community of transformation is intentionally organized, rather than emerging organically, and has an explicit purpose. Second, a community of transformation is designed to change, not replicate, existing practices. Finally, a community of transformation is geographically distributed and includes members from multiple organizations, rather than being located in one place (Kezar, Gehrke, and Bernstein-Sierra 2018, 853–854).

Communities of transformation also have three *impactful features*. First, the community has a clear philosophy, which is its most salient feature and defines the activities of the members. Like other communities of practice, members of a community of transformation share information, seek expertise, mentor each other, and solve problems together, but these activities all relate to enacting the community's paradigmatic philosophy. Second, a community of transformation engages in reflecting on and embodying practice, which supports change rather than replication of existing practices. And third, members of the community develop relationships that support their change efforts and allow them to move beyond their local/organizational practices (Kezar, Gehrke, and Bernstein-Sierra 2018, 853–854).

In articulating the characteristics of a community of transformation, Kezar, Gehrke, and Bernstein-Sierra (2018) drew on Mezirow's transformational-learning theory (1991), which investigates how adult learners adopt new practices and paradigms that challenge the norm in their professional environment. Mezirow identified three steps in the transformative learning process, which Kezar, Gehrke, and Bernstein-Sierra saw in the four case studies they examined: (1) a disorienting experience or dilemma; (2) critical assessment; and (3) a plan of action and support from others to move forward (Kezar, Gehrke, and Bernstein-Sierra 2018, 838).

Kezar, Gehrke, and Bernstein-Sierra (2018) also suggested that communities of transformation are likely to exist among other professional communities. In this study, we applied their definition of a community of transformation to our community of practice program, to see whether and how they aligned.

Materials and methods

Evaluation and research related to the sustainability fellowship

As part of the Sustainability Fellowship, our team investigated how museum professionals integrated sustainability ideas and practices into their work. Integrating data from program evaluation and research on professional learning, we explored the following questions:

- How do museum professionals perceive their experience with the program?
- How do museum professionals go about embracing and implementing sustainability?
- How do museum professionals understand and address challenges associated with sustainability?

Using a reflective practice approach (Martin, Tran, and Ash 2019; Schön 1983), we planned our evaluation and research studies in two phases, in parallel with the program implementation. We looked across our data to investigate our questions after the first phase of the program (i.e., Cohorts A, B, and C, 2019–2020) and again after the second (i.e., Cohorts D, E, and F, 2021–2022). In the first phase of work, our research and evaluation helped us to improve the program and its associated resources. For example, we created a guide for practitioners (Weller and Ostman 2021) and added units to the program focused on organizational change and an evaluative practice called team-based inquiry (see Pattison, Cohn, and Kollmann 2014).

In the second phase of work, presented here, we reflected further on participants' experience in the program as well as their reported outcomes. Many participants described their experience in the fellowship program in terms of a transformational learning experience, one that led to profound changes in how they thought about and approached their work. We recognized that the participants' project work, the way they described their experience in the program, and their future plans related to sustainability went beyond the original learning objectives for the program and the outcomes we had seen in previous communities of practice (Weller 2023).

As a result, we became interested in understanding how the design of the program might have supported transformational change for some or all of the participants. We felt it would be productive to look more closely at the distinction between a general community of practice and the specific variation of a community of transformation, as introduced by Kezar, Gehrke, and Bernstein-Sierra (2018). We felt that if our program aligned with the definition of a community of transformation, then it would provide an important model for the museum field in effecting the kinds of change we seek, including changes in individual practice as well as organizational and systemic change.

Investigating the program as a community of transformation

The exploratory research question guiding the study presented here was: *To what degree does the Sustainability Fellowship exhibit the features and process of a community of transformation?* To investigate this question, we revisited our previous evaluation and research findings to generate new insights beyond the scope of the original studies (see Patton 2015 on the value of retrospective analysis). Our previous studies incorporated data collected through mixed methods, including surveys, interviews, program artifacts, and observations. We did not re-analyze these data but rather took a fresh look at the earlier findings, considering their fit with the characteristics of a community of transformation. We anticipated that as we revisited our prior findings, we would now see evidence of the specific defining and impactful features of a community of transformation (after Kezar, Gehrke, and Bernstein-Sierra 2018), as well as evidence that participants experienced a transformative learning process.

Data sources

We gathered research data to understand the experience of museum professionals as they participated in the fellowship and worked on their projects by observing them as they participated in meetings and workshops, reviewing documents they produced, and conducting a series of semi-structured interviews. At the conclusion of each cohort, we gathered evaluation data through surveys and interviews to help us understand the impact of the fellowship experience on participants. The evaluation and research efforts were coordinated to reduce participant burden and provide diversity of perspectives at different points in the project. Table 1 summarizes the types of data that contributed to the findings we reviewed in this study.

These complementary data sources provide rich information on the program design, as well as participants' activities and perceived outcomes as part of the Sustainability Fellowship. Findings from these data were presented in two evaluation reports (Beyer and Weitzman 2020; UOEEE 2023), preliminary research reports (Ostman and Weller 2020; Weller 2020), and a program summary report (Weller 2023).

Table 1. Summary of data included in cited evaluation and research reports

Type of data	Cohorts (years)	Description
Evaluation surveys	A, B (2019–2020) D, E, F (2021–2022)	Retrospective pre-/post-program survey with closed- and open-ended questions (N = 115)
Evaluation interviews	A, B (2019–2020) D, E, F (2021–2022)	Post-program semi-structured interviews (N = 23)
Research observations	A, B (2019–2020)	Field notes of activities and utterances during program
Research interviews	A, B (2019–2020)	Mid- and post-program interviews (N = 12)
Program artifacts	A, B, C (2019–2020) D, E, F (2021–2022)	Planning materials (e.g., grant proposals, recruiting materials); implementation materials (e.g., presentation slides, activity guides and worksheets); and participant products (e.g., poster presentations, written plans)

Data collection methods and procedures were approved by the Institutional Review Board at Arizona State University (Research for Cohorts A, B, C: #STUDY00010619; evaluation for Cohorts D, E, F: #STUDY00014052) and the Museum of Science, Boston (Evaluation for Cohorts A, B, C: #2019.05). Prior to each type of data collection, researchers and evaluators ensured informed consent of participants by explaining: the purpose of the study; how the data would be gathered and used; how their identity would be protected; how the data would be secured; that their participation was voluntary and not a requirement of the program; and how they could learn more about the study and/or withdraw consent at any time. Before data collection proceeded, researchers and evaluators confirmed the consent or non-consent of each participant.

Analysis

To understand whether the Sustainability Fellowship can be considered an example of a community of transformation, we first developed a matrix that specified the characteristics we would expect to see for a community of practice generally and a community of transformation specifically, based on the defining and impactful features in Kezar, Gehrke, and Bernstein-Sierra's work (2018). Using the matrix, we then reviewed our previous findings and reports and considered, for each feature, whether our findings better fit a general community of practice or the variation of a community of transformation. Next, we considered whether participants' description of their experience in the program fit the three steps of the transformative learning process, again following the characteristics in Kezar, Gehrke, and Bernstein-Sierra (2018): (1) a disorienting experience or dilemma; (2) critical assessment; and (3) a plan of action and support from others to move forward (Kezar, Gehrke, and Bernstein-Sierra 2018; after Mezirow 1991).

While we examined each feature and step independently for the Sustainability Fellowship, in the following discussion we pair related defining and impactful features together and then consider how they relate to the steps of the transformative learning process, as follows:

1. Domain and philosophy together with the process of resolving a dilemma
2. Community and interactions together with the process of critical assessment
3. Practice and relationships together with the process of creating a plan of action

We organized our discussion this way to avoid repetition of similar concepts and information and to make the connections among the features and the steps of the process more evident.

Results

Domain, philosophy, and the process of resolving a dilemma

A traditional community of practice has a domain or area of common interest, while a community of transformation also has an explicit, guiding philosophy that articulates the transformation it seeks (Kezar, Gehrke, and Bernstein-Sierra 2018, 843). While all communities of practice create change, a community of transformation explicitly seeks greater

alteration of existing practices and uses intentional strategies to achieve it (Kezar, Gehrke, and Bernstein-Sierra 2018, 834).

The domain of the Sustainability Fellowship was museum practice (broadly defined), while the desired transformation was for museums to integrate sustainability into all aspects of their work. As described above, sustainability science and practices analyze and address global systems; and building a sustainable future requires transformational rather than incremental change. Therefore, fully realizing the goal to integrate sustainability into museums requires transformational change, although incremental progress is also valuable and can be part of the process. Understanding this distinction between transformational and incremental change was an explicit part of the Sustainability Fellowship curriculum, and the cohorts explicitly considered where their proposed projects fell on a continuum of incremental to transformational change.

The UN Sustainable Development Goals were used as an explicit framework articulating the vision for the community (2015) and served the function of the program philosophy (Figure 1). Program artifacts demonstrate that the SDGs were consistently presented as a way of thinking and tool for understanding sustainability during all stages of the program, from initial planning through implementation and evaluation (NISE Network 2022a, 2022b; Ostman and Weller 2019). The SDGs worked well as a program philosophy because they are comprehensive and action-oriented.

Additionally, the UNESCO 'whole institution' approach (2017) to implementing the SDGs helped members determine how sustainability relates to different areas of museum practice (Figure 2), including practices related to their own role in their organization. Thus, the whole institution approach supported participating professionals in implementing the philosophy of the SDGs in the context of their own work and institution.



Figure 1. The United Nations global goals for sustainability.



Figure 2. Whole institution approach to sustainability. Adapted from UNESCO (2017, Fig. 1).

For both phases of the program (i.e., Cohorts A, B, C and Cohorts D, E, F), the program evaluations found that the Sustainability Fellowship positively impacted participants' thinking about sustainability in relation to their work in a museum. Participants described the change as broadening their understanding of sustainability, allowing them to reflect on their work from a sustainability perspective, and helping them to understand how to adopt new, sustainable practices (Beyer and Weitzman 2020, 14; UOEEE 2023, 5).

In other words, the program helped practitioners to think about their work differently, as part of the transformative learning process. For example, one participant explained that the program 'defined the scope of what sustainability is and allowed me to see the entire effort of ecological, economic, and human equality as one thing so I can pursue sustainability and education about it with much more clarity' (Beyer and Weitzman 2020, 60).

Another gave a similar response, adding that ‘This was a big framework shift for me and I appreciate the holistic approach’ (Beyer and Weitzman 2020, 14). The Sustainable Development Goals were mentioned in particular as supporting this new conceptualization of museum work around sustainability. For example, a participant explained that the program ‘allow[ed] me to think about the broader context of sustainability using the UN SDGs’ (Beyer and Weitzman 2020, 62).

Community, interactions, and the process of critical assessment

Both a community of practice and a community of transformation are characterized by members that identify as a group that has distinct expertise and practice. The difference between them lies in the way the community is formed, the way it interacts, and possibly in the way the members meet. In the traditional definition of a community of practice, the community develops organically, meets in the course of participants’ ongoing work, and is usually co-located in an organization or geographic area. In contrast, in a community of transformation, the community is deliberately organized in order to transform the domain, members meet intentionally to participate in activities that support change, and members are distributed geographically and across organizations (Kezar, Gehrke, and Bernstein-Sierra 2018, 843).

Our evaluations found that participants in both phases of the Sustainability Fellowship felt that it greatly increased their identification with a community of museum professionals helping to create a sustainable future (Beyer and Weitzman 2020, 8; UOEEE 2023, 6). Additionally, the evaluations found that the program greatly increased participants’ awareness of practices and resources related to sustainability in museums and increased their comfort in planning, developing, and/or implementing sustainability-related programming (Beyer and Weitzman 2020, 8–9; UOEEE 2023, 10–11).

Program artifacts show how the program design supported a cycle of reflection, planning, and implementation of new ideas and practices. Early in the program, participants learned about sustainability and its application in museums (Figure 3). Then, they developed a plan for a sustainability project at their own museum, with opportunities to meet with others at their institution, the program organizers, and the other participants to get feedback and improve their idea. Some were able to implement their project within the timeframe of the program, while others had projects that required a longer timeline.

The evaluations also show that participants felt this process of critical reflection helped them to develop new practices, consistent with a transformative learning process. One participant explained that the process of reflecting on practice and applying new ideas ‘has made me far more conscious of how I conduct my own work within the museum. In terms of programming I have become more aware of resources used and content related to sustainability’ (Beyer and Weitzman 2020, 19). Another said:

It has really helped me get a better grasp of how deep sustainability can go in a museum setting. I’ve found myself thinking every day about the little decisions that we can make, or the small things we can tweak, to be a more sustainable institution. (Beyer and Weitzman 2020, 20)

Finally, a participant explained how participating in an external program helped them to promote change across their organization:



Figure 3. Program participants at an in-person workshop. Arizona State University.

We were ripe for a little push in the right direction and this provided it. Even before the trip to Tempe, my involvement brought together a team, and provided knowledge to reframe our efforts. Throughout the program, I brought back to my team ideas and tools from the program and feedback from other organizations working toward the same goals. I think it was just the push and structure we needed to really launch our sustainability efforts. (Beyer and Weitzman 2020, 49)

Practice, relationships, and the process of creating a plan of action

The third and final pair of defining and impactful features of a community of transformation involves the role of participant relationships in supporting changes in practice. In a traditional community of practice, relationships among the community members facilitate sharing and learning of existing practices, while the relationships in a community of transformation support the transformation of practices.

Our previous evaluations found that participants particularly valued the cohort experience (UOEEE 2023, 13–14) and explicitly attributed their sustainability learnings and progress to the new relationships and support that the Sustainability Fellowship provided them (Beyer and Weitzman 2020, 24–27, 36–38). Specifically, the program evaluations found that the relationships among participants supported them in developing their plan of action and efforts for change, again consistent with a process of transformative learning.

To explain why their awareness of practices and resources increased, most participants talked about learning from other members of the cohort. For example, one participant said:

Working in groups with other people to learn more about their plans, their resources, and their practices allowed me to think about my museum's own in new ways. Just hearing about the programs and practices available, from beginning stages of planning to complete and finished products, really helped me brainstorm for my own museum. (Beyer and Weitzman 2020, 13)

Participants also found discussion and input from others very helpful in making progress on their projects. For example, one person said, 'It was the most important part. I had so many ideas in my head for my project but getting to focus with other professionals helped me narrow down my idea and give it the life that it has' (Beyer and Weitzman 2020, 36). In a final example, a participant shared how the community would continue to be helpful after the program:

It was an uplifting experience to meet other professionals that share similar work backgrounds and concerns about not only our work, but the bigger picture as well. It's fantastic to know that I can reach out to various people across the United States with questions and concerns regarding sustainability within my own museum. (Beyer and Weitzman 2020, 10)

Discussion

In sum, our previous evaluation and research work provides substantial data to suggest that the Sustainability Fellowship can be considered a community of transformation. In revisiting our previous findings, we find that the Sustainability Fellowship fits the defining and impactful features of a community of transformation, as defined by Kezar, Gehrke, and Bernstein-Sierra (2018). The program had an explicit and impactful philosophy representing a transformation of the domain; in the community interactions, participants reflected on and adopted new practices; and the relationships among members supported learning and actions for change. Table 2 summarizes our findings for the Sustainability Fellowship in terms of defining and impactful features of a community of transformation.

Kezar, Gehrke, and Bernstein-Sierra identified the community of transformation variant through a study focused on case studies in higher education settings, noting that it is likely found in other sectors and non-organizational settings such as networks (2018, 855–856). Based on our study of the Sustainability Fellowship, we suggest that communities of transformation are also present in the informal education sector. In the following section, we consider the implications of our findings and related potential areas for future study.

Contextualizing the findings

Our research on participants' projects (Weller 2020, 2023) further underscored the transformative nature of the program. While projects were diverse in type and scope, many were strategically chosen to catalyze larger efforts to achieve SDG-related outcomes across their organizations. For example, one project at a medium-sized science center focused on bringing together local environmental stakeholders, planners, community leaders, and a local art college to design a new outdoor space at their organization. This project ultimately included public-facing educational components and demonstration infrastructure that addressed local water quality issues. More importantly, the

Table 2. Comparison of the features of communities of practice, communities of transformation, and the Sustainability Fellowship.

Feature	Communities of Practice ¹	Communities of Transformation ²	Sustainability Fellowship
<i>Defining features</i>			
General description	A group of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly	A community that creates and fosters innovative spaces that envision and enact a new paradigm of practice	A professional development program whose purpose was to encourage sustainability in museums through new practices and projects
Domain	A shared domain of interest	The domain is an innovation that does not yet exist in practice in a substantial way	The domain was sustainability, including its social, environmental, and economic dimensions, which is not yet fully established in museum practice
Community	A community that emerges organically, usually within a given location or organization Members interact as part of their ongoing work	The community is intentionally organized and distributed across locations and organizations Members interact in spaces outside of their regular work environment	The community was intentionally organized through a national network and included participants from many organizations Participants interacted through in-person and online meetings outside of their regular work environment
Practice	A practice that is shared among the community	The practice is a new paradigm rather than the status quo	Sustainability encourages change throughout all aspects of museum culture and practice
<i>Impactful features</i>			
Philosophy	Not necessary	A guiding philosophy, which is important to the community and innovative in their domain	The UN Sustainable Development Goals (SDGs) served as an explicit guiding philosophy, while the UNESCO Whole Institution approach served as a guide to implementing the Goals Participants recognized the SDGs as important to the program and innovative in the museum field
Interaction	Members learn and improve existing practices by solving problems, sharing information, developing experience, and seeking expertise	Members learn and use new practices reflecting on the philosophy, holding signature events, and developing leaders that embody the paradigm shift	Participants learned and used new practices by reflecting on SDGs, planning and implementing sustainability projects, and developing leadership capabilities to support sustainability at their organizations
Relationships	Members develop relationships that enable them to learn from each other	Members develop relationships that enable them to undergo transformational learning together	Participants developed relationships that enabled them to undergo transformational learning about sustainability together

project was intended to develop community-wide partnerships and organizational capacity to continue to integrate sustainability into the museum's program moving forward. Another project at a large science center focused on building a sustainability framework to guide their organization's decision-making and goal-setting related to sustainability. This effort was done in concert with museum leadership to ensure it responded to both the organization's goals and operations and the SDG framework. The framework continues to guide public, staff, and community engagement practices at that organization.

The Sustainability Fellowship program was intentional about providing tools and peer-coaching opportunities for participants to identify needed organizational change to accomplish their goals and to think through viable strategies from their position within the institution. From participant interviews and reports, we learned that transformative actions engendered by participants' projects were not necessarily dependent on their roles within their institutions. Professionals employed a variety of strategies to enable action, including: (1) choosing projects within their area of responsibility that would allow them to make meaningful change at their organization; (2) securing buy-in from leadership and across other parts of their organization; and (3) integrating organizational change-making activities as a core part of their project.

Implications

The community of transformation model appears promising for the museum field for several reasons. First, as a variation of a community of practice, a community of transformation aligns with preferred models for professional development in the field (Allen and Crowley 2014). Second, a community of transformation addresses both individual and organizational change, which are both essential to the articulated vision for museums (see Garibay and Olson 2020). And finally, the Sustainability Fellowship experience suggests that a community of transformation can catalyze change in one area or aspect of a museum's work, providing a 'leading edge' that has the potential to inform and support other simultaneous processes of change that may be incremental or adaptive. Thus, deliberately organizing and cultivating communities of transformation may help advance the museum field, particularly related to priorities where transformative – rather than incremental or adaptive change – are necessary.

For those interested in exploring communities of transformation as a way of effecting change in museums, it is worth revisiting some of their distinguishing characteristics and considering how they fit with professional development goals, structure, and activities:

- *Innovation*: Most importantly, a community of transformation intends to create change. For museums and professionals who seek to do their work differently, a community of transformation could be a powerful option.
- *Intentionality*: Communities of practice can develop organically, but a community of transformation is intentionally organized and has an explicit purpose. It also requires deliberate structure to bring practitioners together and create the conditions for change. In other words, a community of transformation is an initiative that requires leadership.
- *Diversity*: The power of a community of transformation comes from the interactions among its participants, who bring complementary expertise, experience, and perspectives to their common purpose. It is particularly powerful for members to come from different organizations and connect with new people. This means that the initiative and its leadership need to be able to connect and convene people from different places and with different backgrounds.
- *Resources*: In addition to leadership, a community of transformation requires a variety of intellectual and material resources. These include a guiding philosophy, techniques for fostering community and facilitating idea exchange, and incentive or motivation to

help the community prioritize change while balancing day-to-day responsibilities. Funding and/or in-kind support may be necessary to support the community's leadership and members.

In light of these practical considerations, we suggest the following implications of this study for the field. We propose to funders that supporting cross-organizational and cross-functional communities of transformation may be an impactful way to create change. Intentionally organized to accomplish fieldwide priorities, a community of practice may encourage new ways of thinking and practices that intramural initiatives cannot. Similarly, we recommend that policy and advocacy organizations recognize the importance of fieldwide professional learning in transforming and sustaining new practices and organizational change. We encourage researchers and evaluators to investigate the community of transformation model to better understand how individual professionals, organizations, and communities can catalyze change.

For museum leaders, we suggest that developing and/or participating in sustained multi-organization projects and professional development initiatives can support transformative learning for staff and support positive organizational change. Finally, this study suggests that museum professionals at all levels and in all roles of an organization can effect change. Regular interactions with a like-minded (yet diverse) group of colleagues can provide essential guidance and support.

Directions for future work

Now that one community of transformation has been identified in the museum field, one priority for future work is to survey other possible programs that fit the profile and do a comparative study of their origins, design, activities, and outcomes – similar to the study that Kezar, Gehrke, and Bernstein-Sierra (2018) conducted in a higher education context. While we make no claims about their status as a community of transformation, we are familiar with other programs that could potentially fit the definition. For example, the Cambio program was a cohort-based, national program designed to help museums shift their internal organizational practice to create authentic science, technology, engineering, and math (STEM) experiences with and for Latinx communities (Exploratorium [n.d.](#)) and the IDEAL Center offers professional development for individuals or organizations around Inclusion, Diversity, Equity, Access, and Leadership (Science Museum of Minnesota [n.d.](#)). Examining a group of such programs could yield important information for the museum field and the education field more broadly.

It could also be useful to compare communities of transformation with other types of communities of practice, to identify their relative strengths and understand the differences in their design and implementation. Communities of transformation appear particularly well suited to catalyzing change, while communities of practice are important to sustaining and spreading practices.

In [Table 3](#), we share design principles and implementation strategies for communities of transformation, based on our experience with Sustainability Fellowship. These may be helpful in the development of other intentional communities of transformation, and in future studies of this model for professional and fieldwide change.

Table 3. Designing and implementing a community of transformation.

Community of transformation (COT) design principles	Examples from sustainability fellowship
<i>Domain and philosophy: Challenging assumptions and developing new ways of thinking</i>	
Articulate a clear philosophy and explore how it supports fieldwide priorities	Our philosophy was sustainability, which we defined using the UN Sustainable Development Goals (SDGs) and a variety of additional resources We connected the SDGs to priorities across all aspects of museum work through presentations and discussions
Support participants in connecting the philosophy to their organization’s mission and capacity and to their own role	We used the UNESCO ‘whole institution’ model to explore how sustainability relates to all departments of a museum and provides many connections into communities We developed activities and conversation guides for use within the COT and at participants’ home institutions to connect sustainability to their own work and priorities
Provide frameworks and tools that participants can use and adapt	We curated a list of existing resources and also developed new tools; our custom resources were suggested, adapted, and improved with COT members
Help participants prioritize work toward change	Through the application process, participants gained support from their organization’s leadership to participate in the program The program offered modest funding to participants, which helped them prioritize sustainability work and encouraged accountability
<i>Community and interactions: Building relationships and fostering a group identity</i>	
Ensure the community has a clear purpose that participants are committed to	Participants each developed a sustainability project to implement at their museum, giving them a common purpose
Regular meetings among the peer group can help with momentum and motivation	Organizing the program into cohorts helped foster group identity Regular group meetings provided structured opportunities for learning and sharing within the cohort
Provide structured time for participants to share and learn together	Participants appreciated learning from each other, as well as experts from a variety of fields
Bring in experts to spark learning and new ideas	We brought experts in a variety of fields, such as sustainability practice and organizational change, to interact with the cohorts We also brought in museum professionals who had experience with sustainability projects to provide peer mentorship and inspiration
<i>Practice and relationships: Collectively developing new practices</i>	
Provide opportunities for participants to get to know each other as individuals and organizations	Each cohort met regularly over a six-month period Each COT meeting included a variety of activities designed to encourage conversation among participants Participants also regularly shared their in-progress project work with each other and provided constructive feedback
Include a variety of participants who bring different expertise, experience, and perspectives to their common purpose	We learned that participants appreciated connecting with others who had both similar and different roles, organizations, and geographic locations, so we deliberately created diverse cohorts
Provide some structure to help participants apply ideas, reflect on learnings, and problem-solve together	Each cohort gathering offered new information and tools, provided opportunities for interaction among the COT, and helped participants identify next steps to implement at their own organizations

Conclusion

In this paper, we considered the degree to which Sustainability Fellowship exhibits the features and process of a community of transformation, as proposed by Kezar, Gehrke, and Bernstein-Sierra (2018). We systematically revisited and recontextualized our previous

findings from evaluation and research on the Sustainability Fellowship, an initiative of Arizona State University and NISE Network that was implemented with museum professionals between 2019 and 2022. We conclude that the program does fit the definition of a community of transformation. Our analysis also clarifies the distinctions between communities of practice, which support existing practices and ongoing work, and communities of transformation, which can result in transformative change at the individual and institutional levels. Additionally, this study explains and describes the use and benefit of the community transformation approach for program design and evaluation.

Our findings point to communities of transformation as a useful way to bring together museum professionals who seek to transform their own practices and their organizations. From a fieldwide perspective, the community of transformation model provides a pathway for museums to advance community priorities and contribute to systemic and societal change.

Notes

1. After Kezar, Gehrke, and Bernstein-Sierra (2018, Appendix A).
2. After Kezar, Gehrke, and Bernstein-Sierra (2018, Appendix A).

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