Acceptance and Refusal: Examining Conflicting Goals Within Co-Design

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Abstract: This case study examines a small co-design team within a larger multi-year design-based implementation research (DBIR) project. During the 2015-2016 school year, a group of teachers and researchers collaboratively designed and piloted four English language arts (ELA) project-based learning (PBL) curricular units. Teachers and researchers split into four teams, one of which was tasked with designing a project that examined relationships between humans and technology. Throughout this team's design process, co-designers encountered moments of tension that led to increased productivity; however, these tensions also pointed to the ways that participants struggled to navigate multiple roles and goals in agentic ways. This study uses Wertsch's (1991) notion of mediated action to examine the ways that designed curricular objects mediate co-designers' multiple roles (Penuel et al., 2015) and connected goals.

Keywords: Co-design, Curriculum Design, English Language Arts, Project-Based Learning

Introduction

Collaborative design (co-design) has roots in participatory design, a process through which researchers and designers team with users to develop products that solve specific problems, giving attention to details with an intention of promoting change (Latour, 2008; Voogt et al., 2015). Education researchers have adopted participatory design tenets to promote the inclusion of practitioners in the development of research and curriculum (Penuel et al., 2007). While educational research often points to the ways that co-design can empower teachers by shifting practice and offering space for acknowledged agency (Leary et al., 2016; Severance et al., 2016), more research is needed to establish understandings of the roles co-designers perform, the multiple goals attached to each of those roles, and the ways that acceptance and refusal of designed objects can demonstrate agency.

During the 2015-2016 school year, nearly 25 teachers and researchers began a project to collaboratively design a 9th grade English language arts (ELA) project-based learning (PBL) curriculum. In this paper, I examine the ways that curricular objects mediated co-designers' multiple roles (Penuel et al., 2015) and goals, sometimes leading to tensions around the acceptance or refusal of prototypes during the iterative design process. Analyzing data from a small team of co-designers, I explore the ways that these tensions may hold implications for the development of co-designed projects. I ask the following research questions:

- How do individual designers illustrate and articulate their roles within a small co-design team?
- In what ways do designers' acceptance or refusal of designed objects reflect agency in navigating their roles and connected goals within co-design?

Related works

This paper draws upon sociocultural approaches to learning and goal setting as mediated action (Wertsch, 1991), as well as conceptions of co-design that center collaborators as agentic actors within communities of practice (Lave & Wenger, 1991). In co-design teams, members play multiple roles in order to navigate the complexities of iterative design (Design-Based Research Collective, 2003).

In this study, co-designers described playing a number of simultaneous roles (e.g., teacher, parent, designer, researcher, coach), each of which intersected with multiple goals that were determined by different stakeholders (e.g., individual co-designers, districts and administrators, researcher agendas, and project funders). Designed curricular objects served as artifacts that mediated action (Wertsch, 1991) around participants' roles and goals. Co-designers' creation, adoption, adaptation, and refusal of artifacts, both within design meetings and during classroom-based implementation, uncovered some of the ways that individual designers navigated between their many roles to pursue oft-contradictory project, district, and individual goals. Tensions appeared to arise when these multiple goals intersected with co-design practices that thrust participants into boundary practices (Penuel et al., 2015) and led them to accept or refuse the co-designed objects and activities.

Research context and methods

In the summer of 2015, primary investigators met with funders to develop goals for creating a 9th grade ELA curriculum that would incorporate social-emotional learning (SEL) and universal design for learning (UDL) principles into a project-based learning (PBL) context. In August of that year, a team of 14 teachers and 11 researchers held a design institute to create shared understandings of PBL, SEL, and UDL and to develop initial ideas around four curricular themes. These themes were situated under the umbrella concept "Composing Our World," and included heroism, change, place-based literacy, and technology. From this initial meeting, small design teams formed around each of the four project themes, though the larger project team continued to meet every other month to offer professional development and refine shared goals.

Teachers chose the theme they were most interested in pursuing. Four 9th grade teachers from three schools in two districts collaborated with three university-based researchers (two graduate research assistants and one primary investigator) to co-design the Singularity project. We began with Kurzweil's (2005) technological Singularity—when technology outpaces human intelligence—and designed toward goals of humanizing students within classroom spaces, while incorporating design criteria and ELA objectives developed by other stakeholders.

The researchers on this team each had experience teaching 9th grade ELA and had worked in teacher education. The teachers had varying degrees of experience in the classroom. Lisa (all participant names are pseudonyms), beginning her second year of teaching at a new Core Knowledge charter school, identified as a novice teacher, "entering the project to learn from others." Maria, who taught at West High School, had been teaching for six years and frequently referred to her own expertise in the classroom, as did James, who was a third-year teacher at Ridgeview High School. Though Elizabeth had ten years of ELA classroom experience at West High School and was the most experienced teacher on our team, she never claimed expertise, instead referring to herself as practicing.

The Singularity team met monthly during the fall 2015 semester to plan the project that teachers would pilot in the spring of 2016. As designers collaborated and began to define roles, individual, district, and project goals emerged, causing tensions common within the co-design process (Potvin et al., in press; Penuel et al., 2015).

Data sources

This study draws from design-based research (Cobb et al., 2003) to examine the ways that participants understood their role within co-design during the first year of a long-term co-design project. The data used for this analysis was primarily from the Singularity team meetings, classroom observations, and interviews; however, interviews with PIs and field notes from whole-project meetings were also included as data sources. For nine months, researchers conducted eight individual interviews with teachers, and collected field notes and audio recordings during more than 20 classroom visits and 16 design meetings. Additionally, the author conducted interviews with teachers and four researcher co-designers from the larger team to better understand participants' views of their individual roles and connected goals within the co-design process.

As a member of the co-design team, my role was that of participant observer (Spradley, 1980). I analyzed data sources using first-cycle and deductive coding to identify data that revealed the ways that participants approached co-design, and inductive coding to remain open to emerging analysis of participants ideas of roles and goals (Miles, Huberman, & Saldana, 2014). During second and third-cycle coding, I sought out patterns, writing analytic memos to make sense of critical moments and grouping representative examples into themes.

Findings

In this study, co-designers entered the design process with multiple goals that were determined by their roles within districts, outside of school in personal contexts, and as designers for the Compose Our World project. For example, teacher co-designers were at once expected to play the role of designer with the goal of piloting tenets of PBL in their classrooms, while also adhering to district expectations for teaching ELA skills in traditional ways. Drawing upon research that acknowledges the inherent tensions in co-design when designers attempt to navigate multiple roles (Potvin et al., in press; Penuel et al., 2015), this study sought to understand how individuals navigate various roles and goals through the refusal or acceptance of curriculum.

Understanding intersecting roles and goals in a small co-design team

Co-designers worked to acknowledge that establishing community can be tenuous because participants enter with varying backgrounds (Penuel et al., 2015). Researchers made efforts to position teachers as agentic experts by providing opportunities for choice in small design teams and by collaboratively developing design norms. Within the Singularity team, participants initially discussed co-design as a democratic process.

Despite the expectations of researchers that teachers would take the lead as designers in developing flexible projects that could be supported in a variety of contexts and with a variety of content and standards, the four teachers on the Singularity team each established different goals for themselves as co-designers. Lisa and

Maria consistently returned to district mandates during the design process, often expressing frustration that the project was "not focused on standards." At different points, they each refused the co-designed curriculum rather than adapting it to meet their classroom needs. In contrast, Elizabeth stated that she was comfortable piloting new ideas in her classroom. She self-identified as a "social justice educator" and wrote that she joined the co-design project because she was interested in providing students with "opportunities to build relationships." Elizabeth consistently adapted and changed the co-designed curriculum to use ELA content that she felt would best "reflect students." James explained that his goal was to "dive into something new" with his students. In an interview, he described seeing himself as a "leader within the [co-design] group," as well as the person "most comfortable with chaos" in implementing something "not quite finished." While James taught very little traditional content in our observations, he implemented the Singularity project with the most fidelity.

Team meetings illustrated the ways that both project and individual goals were expected to be met when teachers shared the role of designer. While the researchers attempted to recruit teachers to lead portions of these meetings, teachers frequently expressed hesitation. Analysis of audio recordings showed that though teachers were willing to guide meetings toward classroom problems of practice, most expressed reticence to take on roles that would require time spent designing or collaborating outside of monthly meetings. In an interview, Lisa explained that though her initial goal in joining the project had been to participate in "develop[ing] stronger curriculum," she hesitated to lead design because she was concerned about "burnout." Lisa also reflected that while she appreciated the activities presented in meetings, she needed "to reinstate more self-care" rather than taking on additional responsibilities. The goals Lisa had as a teacher, a co-designer, and a person outside of school conflicted and caused her to feel tension in choosing between herself and her work.

Although researchers were initially perplexed by the perceived hesitancy of teachers to prototype curricular activities—one email correspondence between researchers questioned how to "transfer ownership" of the project—researchers ultimately adopted the role of lead designers, bringing prototypes to the group for feedback. While we expected teachers to embrace leadership roles if explicit attention was given to democratizing the co-design process (Voogt et al., 2015), teachers on this team struggled to navigate between various goals when their multiple roles were at odds with one another. As Lisa's correspondence illustrates, her goals for protecting personal time and space, creating new curricula, and upholding school requirements conflicted.

Acceptance and refusal in co-design

Of the four teachers on the Singularity team, Elizabeth and James actively piloted the project in their classrooms. Maria took up some of the activities, but refused others, and Lisa left the co-design team, explaining that she was feeling "overwhelmed" and could not see how to "make the project work." If curriculum objects are seen as mediating action (Wertsch, 1991), then the acceptance and/or refusal of these objects can help us understand the ways that the co-designers on this team navigated between (and asserted agency within) their multiple roles.

Elizabeth was the only teacher to adapt the curriculum, supplementing activities and content with other resources that better mirrored her students' experiences. In an interview, Elizabeth explained that she actively piloted the curriculum because it allowed her to address "a crisis point in [her] career." She stated, "I don't feel like I'm very effective anymore and I find myself going to these places of 'what's wrong with kids these days?' And then I'm like, did I just say that? Like, what's wrong with *you* these days?" Elizabeth wanted to change her classroom in ways that honored "students' social and emotional well-being" and "better reflected social justice." The curriculum design goals matched her goals as a teacher, and so Elizabeth was able to navigate her roles across these spaces in ways that she and the research team deemed successful.

While James and Elizabeth had very different reasons for co-designing, each was able to create goals for co-designing that fit with the other roles they played. For James, the co-design process felt chaotic, but he repeatedly described the ways that he was "comfortable with chaos in the classroom" and wanted to "embrace chaos because it's how we learn." James said he saw himself as a leader with a lot of district flexibility. He never expressed a tension between project and district goals, and he made few adjustments to the co-designed project during his implementation because he was more concerned with "big concepts than specific standards."

For Maria, implementation of the project was more complicated. While Maria's administration encouraged implementation, she articulated her goals for students as more closely aligned to standards. Maria often argued vehemently in co-design meetings when her proposed activities were changed, and during implementation, researchers observed her refusal of most of the co-designed project materials in favor of the original activities that she had proposed to the rest of the team. While Maria's implementation of the project was initially analyzed by researchers as furthest from the research team's intentions for PBL, Maria's refusal of the co-designed curriculum points to the achievement of a secondary project goal, that of positioning teachers as agentic and capable professionals. While neither Maria nor Lisa were able to reconcile their multiple roles and goals within this project, each of them used refusal as a means of asserting their agency as co-designers.

Significance

For each of the teachers, data analysis showed that the more participants see goals from their multiple roles reflected in the co-design process, the more likely they are to adopt the goals of co-design projects. Wertsch (1991) explained, "human action typically employs 'mediational means' such as tools and language, and that these mediational means shape the action in essential ways" (p. 12). Actions reflect the roles and connected goals with which individuals identify. In this study, co-designers were expected to navigate their multiple roles in ways that would allow them to meet the goals attached to each of those roles by different stakeholders. As tensions arose, the co-designers on this team exhibited agency through the acceptance or refusal of mediating curricular objects, pointing to the ways that these roles and goals intersect. While researchers initially analyzed teacher's refusal of the Singularity project as evidence of some teachers' failure to engage in the co-design process, Wertsch's theory offers a lens through which to see all of these co-designers as agentic actors reaching for disparate goals. By encouraging participants to voice their multiple roles *and* connected goals, the researchers may have found more success in encouraging teachers to lead the design process and/or pilot curriculum. As researchers continue to pursue co-design as a means of educational transformation and empowerment for teachers, we must also take into account not only the multiple roles that co-designers play (Penuel et al., 2015), but also the ways that goals attached to those roles intersect.

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