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Article title

Strategies for an Interdisciplinary Critical Service Learning Engaging Social Sciences and Design

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Abstract

Critical approaches to community engagement and social change reposition the public university in a more dialogic and reciprocal relationship with its publics against

instrumentalist, expert-oriented knowledge economy paradigms. With a pluralistic outlook to ‘futuring’ societies in the face of ‘wicked problems’ (Fry, 2010) we present a framework for service learning as a public pedagogy within the disciplines of design and sociology. Philosophically and pedagogically grounded on a Deweyan perspective and critical reflexivity, our disciplines inter- and transact in border work with the community (McMillan, 2011). The experimental project ‘Stoa Malakopi’ allowed design and social science students from two American universities in the US and Greece to experience service learning as a situational, collaborative and necessity-driven ‘field of inquiry’. This was a pilot exploration of community issues for local entrepreneurs at a commercial arcade in Thessaloniki, Greece. Our educational and engagement experiences involved openness to our disciplinarian practices and the community stakeholders, emerging as an intersection of different knowledges through the process of learning. We argue that this openness should inform practices through open / online forums for sharing education tools across disciplines that have a commitment to public interest and social change.

Keywords

Interdisciplinary service learning; community engagement; critical service learning; John Dewey; design; social sciences; open education

Introduction

Critiques of the university and the public role it plays center on participation policies, protocols and power dynamics in community-university partnerships that may work against the publics that scholars and students are working in (Wright and Shore, 2017). Within a neoliberal context that foregrounds simplistic “narratives of success” (Porfilio and Hickman, 2011: xviii), many authors have questioned how “effectiveness” is measured.

In service learning, discussion centers on whether students can free themselves from deficit-driven conceptions of the “served” communities, identify opportunities for self-reflection and learning and recognize the need to co-create shared narratives and solutions to social problems with community stakeholders thus empowering the latter (Bauer et al., 2015; Mitchell, 2008; Porfilio and Hickman, 2011). More harshly, service learning has been viewed as “gimmicky and faddish, more concerned with technique and process than content and substance and often appearing too thoroughly pragmatic for the academic mind, dangerously associated with the disturbing anti-intellectual and vocation list trends” (Packo, 2015: 12).

Service learning research on how interconnections and transactions between the university and the community might occur is limited, or under-represented in relevant literature. There are still questions on what kind of social participation ought to take place, one that can leverage social capital, available or under-recognized resources and local knowledge while enabling learning, agency and change for students and community stakeholders alike. Drawing on Sigmon's (1979: 10) conviction that "proper emphasis in service learning is not on the link between the two, but in the distinctiveness of a service situation as a learning setting", more insights need to be developed into interactions occurring within the service situation.

What kind of changes ought to occur has been discussed by Fry as speculative and plural "futuring" against the structured unsustainability of modernity, i.e. "defuturing" (Fry, 2010). Complex and intractable "wicked problems" can be seen as structurally and historically embedded to a large extent, tracing back to the "unsustainability of modernity" (Escobar, 2017).

In distinction to this, critical theories have highlighted the need for reciprocal university–community interactions and transactions between service and learning that enable new perspectives of the world by valuing both specialized academic knowledge and local tacit knowledge (Ramaley, 2014). Ramaley has called for a variety of knowledges and skills that university engagement with communities can bring to the table (Ramaley, 2014). Interdisciplinary collaboration is driven by a focus on external wicked problems in which all players have a common goal. This involves collaborative inquiry, supporting ongoing learning, and emergent practices, concepts and frameworks, rather than pre-set fixed approaches to change. This involves developing both interdisciplinary and

transdisciplinary knowledge, integrating diverse disciplines and local perspectives as a result of collaborative partnerships into intellectually rich and holistic knowledge leading to innovative solutions.

Working in and with communities and multiple stakeholders and acknowledging expert and insider knowledge suggests the necessity of transaction spaces and “boundary” or “border” work. Border pedagogies focus on those transaction or boundary zones where the practices, knowledges, contradictions and assumptions of community members, students and scholars confront, meet and cross-fertilize ^(McMillan, 2011). In this conceptual frame we, therefore, argue that an interdisciplinary outlook to community engagement is both necessary in principle and conducive to innovative perspectives to service learning experiences for students and communities. Rather than viewing service learning solely as a mechanism to create better places and services, or better learning experiences for students, we believe that an understanding of service learning as social participation and learning, as a transactional space of joint inquiry, bears transformational potential for a more democratic world, for more publicly engaged universities and for more socially-engaged students.

Public Sociology, Service Learning and Design Approaches: A Short Interdisciplinary Perspective

Service learning has been identified as a pedagogy of public sociology, introducing students to different ways of seeing the world and exposing them to different expertise, acknowledging the active role and tacit knowledge of public stakeholders in their community lives ^(Burawoy, 2005). As a socially-engaged pedagogy, service learning arguably then addresses issues of epistemology—knowledge by whom, for whom and to what end as outcome —plus the commensurate issues of methodology concerning the

context, opportunity, spaces and engagement tools for bringing different publics together and engaging in dialogue.

In short form, design in Western culture is defined as a praxis, shaping built environments, communication and informational systems, urban planning, service design interaction design, and experience design. Metaphorically this environment is less about a stand-alone artifact and more properly characterized increasingly as a “service ecology” of participants and designed environments. What was more or less a vocational practice has led to a significant critical rethinking of positioning and social role.

Design research by its nature is interdisciplinary, driven in the West primarily by designing for the current global economic paradigm. Notions of “how to design” in a systems approach to context and users requires contribution from other disciplines. The social sciences especially are recognized as important contributors to design research as evidenced by the backgrounds of many key design researchers from psychology, anthropology, and many more. The importance of participation in public sociology is reminiscent of the values ascribed to participatory design, originally developed and promoted by Scandinavian business management and design ^(Sanders and Stappers, 2013), and the presence of academic journals such as *Co-Design*, *International Journal of Co-creation*.

In an enlarged field of research and practice, designers often examine multiple “touchpoints” of a designed system reflecting this complexity, transcending the older definition of visual communication to include sound (for example, user interfaces for the visually impaired), time (through branding and extensive contact with users through services with multiple touchpoints), behavior and social perception (for example, co-designing methods and tools and working with and changing the perception of people

with disabilities in the public sphere) (Hendren, 2018). In other words, designers now use a multimodal approach, which suggests that they, too, have to understand things from an interdisciplinary perspective, what were previously specialized practice-based fields of sound design, motion and animation, architecture and environmental design. Design education can be seen as “experiential learning”, where educators respond somewhat intuitively to these conditions or, more recently, as an asset and approach that can be (and is) capitalized on by design educators (Hally, McMullin, Spilka and Davis, 1993).

Newer design influences are therefore not necessarily uncritical nor wholly instrumentalized, sharing with (at times) sociology the need to examine epistemologies and “ontological design” (Willis, 2006). Specifically, our interest in design is in shared similarities with the general positioning of public sociology, where “design as social innovation” (Manzini, 2015) posits design’s role as a catalyst for communities working with local expertise and resources in long term change, and in various notions of “transition design” that are positioned to help lead to long term change and sustainable practices (Escobar 2018; Irwin, 2015). Critical positions in design and culture have also developed, especially in so-called design philosophies that are connected to feminist, neocolonialist and marxist inquiry.

Determining what kind of participation and outcome is necessary / desirable is a high priority. Much like the critical turn in public social sciences has been grounded on the premise of “reflexivity and multiple conversations with diverse publics” (Burawoy, 2005: 321), critical positions for design research and practice also include the idea of reflexivity writ large. Dourish (2006) and Irwin (2018) have commented on the role of what Irwin has specifically called “mindset and posture”. This is a significant contribution to what we

propose. Such reflexivity is developed through experiential learning and is significant in a critical appreciation of design research (Townsend, 2016a, 2016b). Notions of ontological design and intersubjectivity suggest that “we design our world, while our world acts back on us and designs us” (Willis, 2006: 80) further eroding the notion of design as objective control acting on a closed off “design problem”.

Similarly in critical service learning, King (2004) has maintained that a process of “defamiliarization” is necessary to rupture inequalities, dominant knowledge patterns, and ignorance of communities’ needs, echoed by Bruce and Brown’s (2010: 10, citing Andreotti and de Souza, 2008) reference to “the concept of unlearning privilege (learning to unlearn)” —a reminder of Dewey’s action-reflection (1909/1989) and urging to break habits and routine ways of thinking. Complexity of this kind is a response to wicked problems and the need to seed and catalyze transitions to more sustainable and desirable futures shared with a critically engaged service learning environment.

Design, Critical Service Learning And Social Sciences Through A Deweyan Framework

These epistemological and pedagogical positions can trace connections to John Dewey’s theories of education and democracy and the concept of experience (Giles and Eyer, 1994).

According to Dewey, connecting learning institutions—here the university—with the public creates space for diverse community stakeholders, researchers, scholars and students to identify areas of joint inquiry, build common experiences and develop critical social consciousness. The experiential quality of the learning process makes scholarly knowledge both socially relevant and responsible, and potentially also transformational in light of a communal democratic endeavor (Dewey, 1916/2011; see also Packo, 2015).

Dewey's emphasis on the uncertainty, unpredictability and ambiguity of community workings and the perplexity of social problems as components of the learning process demands a reflective stance to both experience and the intellectualization of experience (Packo, 2015), which has been conceptualized in his action-reflection theory of experiential learning (Dewey, 1909/1989). To achieve this it is necessary to break routinized ways of seeing and doing things in everyday life activity and to challenge the habits that enforce non-reflective experiences (Miettinen, 2000: 61), what is in other words a critical perspective to addressing wicked problems.

Dewey's theory of democracy also urges a reflexive mindset and posture of scholars, practitioners and community stakeholders, building conviction for a communal, shared responsibility engagement with problem solving. Dewey has highlighted joint inquiry and experimentation, however one that will lead to the cross-fertilization, as opposed to mere juxtaposition, of experiences and knowledge manifesting in more intelligent and holistic solutions to social problems (Honneth and Farrell, 1998).

The unfinishedness of learning, the discomfort and deviation from our own experiences and assumptions and our interdependence as members of academia and our communities are echoed in the metaphor of "border crossing" (King, 2004; after Giroux, 1988), i.e. the intersections between disciplines, sense-making and learning that create new knowledge and innovation. These border zones and transactional spaces are places where dynamic forms of knowledge are shaped and where power relations among different stakeholders, publics and experts are challenged, creating new learning opportunities (McMillan et al., 2016). To Carrington (2011: 3; after Deleuze and Guattari, 1987), this is a "rhizomatic" vision

of service learning, “more fluid and flexible, where learning occurs through disruption and sets new directions that are not linearly learnt.”

Case Study: Stoa Malakopi

The “Stoa Malakopi” case study (“stoa” means “arcade” in Greek) took place between June 2017 through January 2018 as a collaboration between graphic design and social science students from two American Universities, i.e. North Carolina State University (USA) and the American College of Thessaloniki (Greece) and was a pilot exploration of the community issues and problems for local entrepreneurs who run their businesses at a commercial arcade in the center of Thessaloniki. We see this as an initial step to refine our approach for long term collaboration between the social sciences, design as social innovation and the creation of an interdisciplinary service learning framework.

Stoa Malakopi, built in the late 19th century is a listed building and urban heritage landmark in Thessaloniki. Since the early 2000s entrepreneurial development has been gravely affected by multiple social and economic challenges in a society under austerity. Some businesses within the arcade have endured the crisis; others have closed, while recently new entrepreneurs have moved in, giving the Stoa Malakopi community a multicultural and intergenerational character. While this process of change has been sharp for many Greek business people, professionals and residents in urban centers, to others it represents an entrepreneurial opening, notwithstanding the broader social and economic challenges. Change is, therefore, perceived and experienced differently by the people who inhabit them and may have implications for their sense of identity and belonging. Bailey et al. ^(2004: 63) have pointed out that “what may be ‘culture’ to one group may be

‘repression’ to another’”, thus bringing about a clash of values and understandings of identity.

Our project thus attempted to examine place identity, the memories, entrepreneurial practices and trajectories of stakeholders working in Stoa Malakopi, of a broad range of ages (approximately 30 to 80 years old) and in different business areas.

These included: a fashion atelier, a law firm, a fashion photography studio, a textile business, a hair salon, a sandwich shop and a pub. The challenge was to capture and comprehend the diverse meanings and values, histories and identities that the built environment is endowed with by its local people and, at the same time, communicate these back to the local stakeholders in ways that would help to engage them in dialogue about community issues. Given the diverse make up of the Stoa Malakopi stakeholders and the communal, historical importance of space as a “stakeholder” of its own, a dialogical and inclusive approach was required, in terms of (inter)disciplinary input, visualization and sharing of different perspectives.

Methodology

To this end, social science and design students from our partner American universities, the American College of Thessaloniki (henceforth ACT) and North Carolina State University, College of Design (henceforth NCSU), worked together as part of their common Service Learning course. Our student cohorts worked together in three phases—field research (June-July 2017), data analysis, and the creation of design assets and programming of an event hosted at the Stoa (August-December 2017). The two faculty leads, three local ACT students (one sophomore / 2nd year student, and two senior / final year students) and one senior NCSU student engaged in the field research stage; while

fourteen sophomore NCSU Graphic Design students joined the project in the second and third phase online. This was an experimental collaborative partnership for both of us and our student cohorts, which partly explains the small participation of students. ACT more specifically comprises a small student community (approximately 800 students per academic year), which accounts for the handful of ACT students who took part in the project. While it is difficult to make extrapolations, we are encouraged by this preliminary effort, our students' and participants' feedback, to explore opportunities for future collaboration.

Service learning was institutionalized as a distinct course at ACT in 2015, as an addition to the Humanities and Social Sciences Division. The course is offered as an open elective to students across departments and thus caters to a variety of disciplinary needs and learning applications. Courses start with a series of classroom lectures where students are introduced to community participation principles and practices, methodologies and ethical considerations. Students preferences in placement are followed by interviews with their prospective mentors, usually staff from local not-for-profit organizations or the public sector (for example, refugee and migrant shelters, libraries, museums, children's homes). The remainder of the course involves students' site research; identification of an area of interest or concern shared with the mentor and a needs assessment; data collection and analysis, and; students' final assessment / proposal / plan. Regular meetings between the course lead and the student address ongoing issues, while group meetings aim to share insights and collectively intellectualize the issues identified in each placement context.

Problematically students often lack direct engagement with the community site, working predominately through abstract scenarios rather than more observational and participatory engagement with here-and-now demands in situ. Additionally, their commitment is short and finite based on a three-month academic term. This lack of hands-on participation diminishes opportunities for actual and ongoing engagement with problem identification and problem solving, critical reflection, reasoning and evaluation of their activities. Students have consistently noted their lack of insight into the local community needs and desires and limited opportunities for collaboration with stakeholders. Coupled with the uncertainty as to whether students' assessments and proposals would be followed-through, students have often reported a diminished sense of contribution and agency at odds with their sense of personal motivation. The short-term, one-off nature of service learning projects so far has meant that the effectiveness of the learning process is heavily contingent on individual students' will and personal qualities, their mentors' pedagogical competences and the particular local circumstances that may or may not enable the interweaving of intellectual, empirical and collaborative work.

It is interesting to note in passing that there is no precedent for service learning as educational practice in the higher education sector in Greece, with university outreach and student participation typically involving volunteerism or internship practices. Partnering with NCSU College of Design was thus seen as an opportunity to both learn from their service learning offerings and good practice as well as design and try out a more critical, interdisciplinary and research-based pedagogy and methodology.

The US based graphic design curriculum at NCSU is founded on extrinsically focused (i.e. context-oriented) exploratory "problem seeking". Early course work

introduces qualitative research methods with an emphasis on direct observation, photo documentation, touchstone tours and semi-structured video interview. Interpretive ideas start with creating a simple matrix of the explicit user experience leading to more subjective reflection on the tacit knowledge of a subject or group, through shadowing and interviewing. This instruction is based on lecture and applied lab in social contexts, such as museums and university commons.

Later on design students often view user research as a “black box”. Working in sponsored studios for example, students might be provided with a project brief drawing on quantitative and qualitative research on users conducted by the sponsoring body. These briefs present undergraduate students with various typologies and scenarios to design for. In a design education context, such “cardboard personas and scenarios” tend to be reductive and do not qualitatively engage the life of the community that the design student is attempting to understand and to design for. The imposed linear cause and effect / simple outcomes model for university teaching and research is indicted in this. This, in turn, creates a kind of educational wicked problem regarding the culture, mindset and posture of scholars and practitioners who may struggle to make a case for effective outcomes in multi-agent, situational and contingent community research settings and the subsequent market-driven solutions identified to otherwise complex social problems.

Further, while this form of supplied research provides context, it lacks “situatedness” (Townsend, 2011, 2016). It does not engage or convey relationships between multiple stakeholders and community, where more interconnected relationships may suggest leverage points for resolution. The problem of presenting users as highly abstracted personas through traditional instruction takes away from any real context-

based practice of learning in an unpredictable environment destabilized by technology, global economics and other factors, in a similar manner as the ACT service learning pedagogy.

Redesigned Experience

Figure 1. Experimental service learning course redesign 2017, revised as situational focus on “field of inquiry”. Authors’ own.

The Stoa Malakopi project enabled our service learning students and ourselves as educators to experience a kind of social participation different from the aforementioned practices that typically take place as part of our institutional community engagement activity. A focused ethnographic approach ^(Knoblauch, 2005; Wall, 2015) allowed a relatively short-term but intensive multi-method data collection to inform our understandings of entrepreneurial activity at Stoa Malakopi, including audio-visual methods in conjunction with ethnography-based methods, such as observation and open interviews. This suited the particular interdisciplinary and at-a-distance circumstances of the research collaboration but also enabled an open exploration of stakeholders’ diverse perspectives and histories, everyday routines and problems in the shared arcade space. Our approach recognized the merits of dialogue as a “differentiating exchange” ^(Sennett, 2012: 79), one that acknowledges the complex workings of social groups, and was also complemented by oral history principles and practices in view of enabling the participants to reflect on contemporary realities with a diachronic perspective ^(Seedat, 2014).

In this context the local ACT students initially worked with historical and archival materials giving background information to the topic specifically in relation to the history of the listed building; helped to design and participated in in-depth, individual and group, open interviews with thirteen stakeholders at Stoa Malakopi; engaged in observation and

touch-stone tours led by the stakeholders, and; recorded their reflections in their researcher diaries. Students also helped to transcribe part of the collected material and, after a thematic reading of the interview transcripts, identified their own areas of interest and scope for analyzing the data. Their areas of focus were a historical review of the commercial arcades in Thessaloniki, including a detailed account of the Stoa (senior student); an exploration of community values through Hofstede's cultural dimensions framework (Hofstede and Bond, 1984) (senior student); and the writing of short stories drawing on a historical narrative approach (sophomore student). Throughout the second and final phase (creation of design assets and event preparation) there was ongoing exchange of materials with the NCSU students and closer collaboration with the US-based student who had joined the group in the in-situ research.

The layers of complexity for the local students were manifold, first of all their inexperience in field research and application of research methods otherwise taught in theory in real-life settings. To one of the senior students this seemed to be “the most challenging but also most fulfilling” part of their service learning. It presented them with an opportunity to understand the research process more fully and “connect the dots”, as one of the senior students said, “between theory and practice”—or, between reflection and experience, to revisit Dewey's framework.

The added layer of interdisciplinary collaboration with NCSU students allowed the ACT students a more practical and reflective insight into community research. Besides reading and interpreting the data as part of their written assessment, students also saw the representation of their interpretations in banners created by the NCSU design students that would be displayed at the public event. This led to developing a more acute

sense of agency and heightened their reflexivity; a senior student, in particular, was constantly cognizant of her choice of particular voices to accompany her narrative and the extent to which her interpretations would represent accurately stakeholders' voices. The issue of diverse (cultural) interpretations of the data among the Greek and US-based students was often discussed in our meetings as part of a broader reflection on cultural relativism and intercultural understanding. More practical considerations came into play, such as managing workload and deadlines or preparing materials for the NCSU students in time and their own presentations for the public event.

Our course redesign thus resulted in a situational focus on an external field of inquiry, in which course units are designed as more "random access" online. Digital material, such as relevant literature, students' own researcher diaries and working documents were shared on Google Drive, thus allowing asynchronous access of course material to students across cohorts. The classroom dynamic in turn became more dialogical through collaborative teams and in feedback from the ACT students.

Collaboration was essential in motivating beginning design students to integrate more advanced formal design processes and synthesis of those processes into their final solutions. The tension of designing to create successful storytelling that the original interviewee and the community can identify and participate in and with, could only be dealt with through continual feedback where all parties were committed to the field of inquiry regarding the entrepreneurial conditions of the Stoa. Rather than designing appropriately to fit a project brief, the student designers had to facilitate the presentation of perspectives in another culture that they were not a part of, with the final designed outcome in a language they do not speak.

Prior to the service-learning project in the United States, preparatory projects emphasized concept map, experience mapping techniques and task analysis, through a simplified observation of users. These techniques are an accepted method in service design (Penin, 2018).

Beginning the actual project and after a brief introduction to the region's history and contemporary issues, US students "shadowed" the research findings of the social science students' interpretation of data (beginning with translations from Greek to English). The primary data collected by the social science students consisted of tangible design assets such as text and image (site surveys, panorama / individual sites within and around neighborhoods) tied to stakeholder interviews. Essentially any typology of a user in bibliographic research was replaced with living actors. The very act of translation also foregrounded how the story of each interview unfolded, where pauses, lapses and real experiences could only be approximated. Finally, the form that each interview took, including image narration and writing, had to be developed and designed through a process of feedback offered by the sociology students and instructor as participants with the original stakeholders (collaboration, communication and reflection).

This reflexive condition meant that the conceptual and methodological approaches were introduced non-sequentially discarding the notion of "beginning, intermediate and advanced", to become more necessity-driven in tasks that the collaboration raised. This was inherently multi-modal through asset collection and through examining particular sensory experiences and contributed to the eventual interpretation of the Stoa Malakopi data collated through sound photo panorama and interview, along with clarifications from the ACT student researchers.

From this brief introduction, students were then asked to design a standard format poster. Design courses like this tend to rely upon structured critique. At the inception of the project, students expressed personal goals of self-expression and unique style. During the project a different set of expectations began to be substituted in peer-to-peer interaction and in formal presentations. The poster was understood to function as an interface between the positions of stakeholders and local historical perspectives, while imagery and visual hierarchy was discussed as way to convey the experiences of the stakeholders.

Finally, the Stoa Malakopi project culminated in a “celebration” of students’ work and collaboration with the Stoa stakeholders. The event launched an exhibition of the posters created by the design students inside the Stoa space, which stayed open to the public for two months. The event also included students’ presentations of their individual projects and a video compilation of our encounters with the stakeholders in their own space, including extracts from their stories of the Stoa space over the years. Anecdotally, and here expressed in our own words, the overall feedback we received from the stakeholders was positive: they applauded the student work, accompanied as it was with some public speaking anxiety; enjoyed the communal “ritual” organized around the Stoa, an occasion, even, to some of them to meet outside of their everyday work routines and share memories of the space, and; appreciated that the posters were created for each one of them (i.e. each business) individually to then be offered to them as a token of thanks. From our own observations on the day of the event we noted that the stakeholders and other visitors would linger over the posters and the video projection making comments and addressing us questions. Peer academics from different disciplines, both from ACT

and other higher education institutions, took particular note of the “moments” within the lives of the Stoa stakeholders that we managed to capture, a focus that, according to an ACT colleague, animated the research process prioritizing the community perspective over disciplinary interpretations in the representation of findings.

The situational, collaborative and necessity-driven context of both ACT and NCSU students’ service learning engagement overall necessitated a more flexible approach to the teaching and learning process. The interconnectedness and dynamics of students’ own research activity and the activity observed at Stoa Malakopi illustrated in practice Dewey’s understanding of experiential learning as experimental and, we may want to add, social activity ^(Miettinen, 2000: 62).

Conclusion of Educational Experience of Project

The service learning aspect reframed students’ understanding of both qualitative social science research and design intervention. Working across two different and distanced social environments created the necessity of beginning US design students to question their role in message creation and, ultimately, its meaning and uses, rather than in self-referential issues of personal style, which is often at odds with ideas of integrating audience research. The feedback process of communication quickly established a series of responsive roles they had to fulfill with their student colleagues at ACT, as well as audience considerations of message reception. The ability to respond successfully within this dynamic and somewhat unpredictable social learning modality established the idea that the US students have social agency as designers.

US students were initially confused about how to function within a collaborative setting and had to re-examine the self-referential qualities of individual performance and their own motivations for learning. What they identified as developing a personal style in

their work evolved quickly into “What are the qualities of the reception of the message for the intended audience?” Several of the students identified differences between their perception of introductory methods of so-called user or social research and their exposure to it as first year students in a “design thinking” course: the former presented material through lecture while the service learning course replaced this with dialogic, experiential learning. Design students emphasized many of the same practice issues found in design and social innovation in—

[...] bridging structural holes, given that social settings often suffer from severe information asymmetries...Second, valuing tacit knowledge...information individuals and communities develop and share through habits and customs...Third, nurturing heterarchies. Whereas researchers have focused on social hierarchies and structural asymmetries, little attention has been paid to heterarchies—the lateral forms of collaboration through which social life is constructed. (Parsons DESIS Lab, 2018)

The direct experiential learning context placed Greek students in the position of leading the US students in engaged discussion, while affording them with opportunities for social learning, as delineated by Wildemeersch et al. ⁽¹⁹⁹⁸⁾, i.e. as revolving around “action, reflection, cooperation and communication”. The diversity of perspectives in the social context of the arcade highlighted the need for a dialogical and reflexive approach, one that is sustained by recognition of difference and irregularity ^(Sennett, 2012). The “in-situ” students’ direct experience of such tensions offered many opportunities for critical discussion: Students often had to suspend their perceptions and judgments, self-evaluate their own meaning making processes and reconcile with the emerging contradictions informing their analysis. Their heightened engagement in the project and identification of areas of personal interest has meant that the Greek students assumed an active, critical learner role, crucial to experiential learning ^(Wurdinger and Carlson, 2010). Questions around values and what is right and just as part of local community politics were raised,

interweaving “issues of social responsibility with problem solving and learning activities”

(Wildemeersch et al., 1998: 265)

The intersection between our discipline specific practices and the arcade stakeholders included the notion of “place making” in which they shared their vision for sustainable development ^(Manzini, 2015). Connecting to the community thus emerged as a pedagogical process of inclusion and interdependency. Follow-up reflective discussion with the US and Greek students suggested that the original aim of establishing the Deweyan framework of reflective thought and action may have been successfully understood and applied. Most interestingly students defined their work as practical (in design this is often a code word for projects looking and acting like already existing industry solutions) in attempting to change the social conditions of the Stoa as a “real life problem”. This neatly excised the inevitable polarity between “theory and practice” that practice- or theory-based disciplines often must contend with in student perceptions.

Conclusions

Critical service learning alongside Dewey’s action-reflection theory introduced and helped frame pedagogically and epistemologically a fundamental complexity and indeterminacy in working with and designing and planning for a community of different stakeholders representing multiple voices, understandings and interests, what Rittel and Weber ⁽¹⁹⁷³⁾ have described as wicked problems. Finding ways to visualize and share interdisciplinary perspectives is essential—in the Stoa Malakopi case, for example, the posters were a catalyst to communicating our findings to different stakeholder groups and enabling discussion on community issues. Communication design can assist in creating a shared “systems perspective” across disciplines and stakeholders—a more complex and

structural understanding of the immediate problem, and a more systemic and transferable, rather than idiosyncratic, response to similar problem areas.

From a student engagement perspective, the dialogue between design and social science students was both a transactional space and a “border learning zone,” offering them multiple views of community issues, enriching their learning and participation experiences and allowing them to explore ideas together creatively—for example, the senior NCSU design student and the sophomore ACT student on their own initiative stepped outside of their disciplinary and curricular borders to experiment with audiovisual methods and collaborate on a video compilation at a distance.

Working in and learning through participatory systems suggests a dialogical and cooperative open education framework that begins to extend network based open community “laboratories” such as the DESIS online network of design and social innovation ^(Manzini, 2015).

Open education tools could help diversify methods and practices across disciplines that have an educational commitment to social change and public interest, and help build an open framework for sharing ideas, (re) thinking pedagogies and experimenting with diverse techniques and “learning tools”.

Our experimental offering suggests the future development of online educational methods and tools that could in turn have a significant effect on service learning in interdisciplinary work between the social sciences and context-based, service learning design education. While acknowledging Wiley’s ⁽²⁰⁰⁰⁾ critique of the role of open online education and the inherent problems of exporting it to multiple cultural contexts, here we are interested in the role that it could potentially play in specific kinds of collaboration,

helping to create learning objectives and outcomes that use digital assets as common reference points that can be shared across different (but allied) disciplines.

Figure 2. Application of experimental service learning course to tentative open education model. Authors' own.

In this model, direct experiential participation is required by at least one student cohort. While learning outcomes are tailored specifically for each discipline, an underlying conceptual framework of examining contemporary practices, behaviors and attitudes, settings and historical practices are shared across both groups, where discipline-specific methods are discussed, compared and contrasted. Online course units are configured as open access units that students can access as needed, along with interdisciplinary interests in comparing and contrasting disciplinary viewpoints across the two student cohorts. Digital assets are shared through online discussion and clarification in the ongoing “field of inquiry.” A digital archive of the project including documentation of outcomes in the service-learning context can also provide an ongoing series of case studies to be shared in further open education efforts. Meta tagging of the open education resources would primarily be through the case studies, rather than the learning objects, where careful consideration of educational and social contexts would be the first step in choosing and constructing a relevant framework by the user.

In light of our continuing service learning collaboration, we see opportunities to leverage open education as a “building process” that other educators may borrow from as an online resource. Rather than being easily reconfigurable and exportable, we see our beginning use of digital assets and what are becoming formalized instructional materials as an integrated process that seeks to connect disciplines at a distance rather than

dispersing components for a more abstracted educational outcome. For social sciences and practice led design research, the strengths of online education are complementary, allowing interpreting and comparing, support reflexivity as well as shared learning outcomes, mainstream openness in education and yet maintain its rich, culture-specific character.

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