Connecting vocabularies: Designing humanizing approaches to resource curation

Collegare i vocabolari: progettare approcci umanizzanti nella cura delle risorse

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HOW TO CITE Buckley-Marudas, M. F., & Rose, S. E. (2022). Connecting vocabularies: Designing humanizing approaches to resource curation. *Italian Journal of Educational Technology, 30*(1), 49-64. doi: 10.17471/2499-4324/1244

ABSTRACT In May 2020, the Cleveland Teaching Collaborative (CTC) was created as a digital hub for educators to come together to both reflect on and learn from their individual and collective experiences as instructors during the COVID-19 pandemic. One of the three core components of this hub is the CTC Resource Referatory. The creators of the CTC saw the curation of educational resources as a way to contextualize educator experiences and respond to instructor needs from a place of collective care during the COVID-19 pandemic. Given the CTC's focus on pedagogies of care and humanizing instructional practice, the curation of the growing number of educational resources that emerged from the CTC's efforts reveals the limits of longstanding library cataloguing practices that are grounded in controlled vocabularies. The constraints of some of the most commonly used cataloguing practices became a productive tension for the CTC designers and collaborators who were committed to developing a referatory centered around humanizing pedagogies and collective knowledge generation.

KEYWORDS Educational Technologies; Pedagogies of Care; Resource Curation; Digital Literacies; Teacher Education.

SOMMARIO Nel maggio 2020, il Cleveland Teaching Collaborative (CTC) è stato creato come hub digitale per gli educatori che si incontrano per riflettere e imparare dalle loro esperienze individuali e collettive di formatori maturate durante la pandemia di COVID-19. Uno dei tre componenti principali di questo hub è il CTC Resource Referatory. I creatori del CTC hanno guardato alla cura delle risorse educative come a un modo per contestualizzare le esperienze degli educatori e rispondere durante la pandemia di COVID-19 ai bisogni dei formatori da un luogo di cura collettiva. Data l'attenzione del CTC sulle pedagogie della cura e sull'umanizzazione della pratica educativa, la cura del crescente numero di risorse educative emerse dagli sforzi del CTC rivela i limiti delle pratiche di catalogazione delle biblioteche di vecchia data che si basano su vocabolari rigidi. I vincoli imposti da alcune delle pratiche di catalogazione più comunemente utilizzate hanno costituito uno stimolo creativo per i progettisti e i collaboratori del CTC, che si sono impegnati a sviluppare un riferimento incentrato su pedagogie umanizzanti e sulla generazione di conoscenza collettiva.

PAROLE CHIAVE Tecnologie Didattiche; Pedagogie della Cura; Cura delle Risorse; Alfabetizzazione Digitale; Formazione degli Insegnanti.

1. INTRODUCTION

In March 2020, in the face of the COVID-19 pandemic, educators from pre-kindergarten to higher education stood at the intersection of building closures, emergency shifts to remote instruction, and compressed timelines for course redesign. Like educators around the globe, Cleveland-area instructors were learning how to navigate teaching and learning in a pandemic (Bozkurt & Sharma, 2020). Given the immediate nature of this instructional transition, educators needed to work with their existing technology tools and training. In a matter of weeks, teachers encountered a deluge of information on remote teaching and learning (THE Journal, 2020; Teräs, M., Suoranta, Teräs, H., & Curcher, 2020). Instructors at all levels of the educational continuum sought out and developed new and innovative ways to teach and learn during this historic moment. At the same time, teachers, students, and community members faced significant physical, social, and/or emotional challenges including illness, death, unemployment, social isolation, and depression. As two university-based educators and teacher educators in Cleveland, we (Buckley-Marudas & Rose) noticed the intense challenges and stress that educators faced, and we wanted to be responsive to this unique moment. Inspired by the *Digital Teaching Toolkit* that was created by Research and Instructional Technology Services at NYU-Shanghai (2020), our response to the pandemic was to imagine, design, and launch the digitally-based Cleveland Teaching Collaborative[1]. As co-founders of this collaborative hub, we imagined the CTC as a space to reflect on, evaluate, and develop remote learning opportunities and pandemic pedagogies. Officially launched in May 2020, the CTC would have three core components:

1. educator-authored case studies;
2. a crowdsourced educational resource database; and,
3. peer-to-peer learning opportunities.

We imagined all three of these collaborative digital spaces as a way to provide meaningful and timely support as well as tools for critical, accessible, high-quality learning opportunities for students living and learning in a highly imperfect time. As evident in the title of the project, we also aimed to honour and leverage the collection and distribution of local knowledge.

We hoped that the CTC would provide educators at all levels within and across different institutional contexts space and time to reflect as a community and to make recommendations and suggestions for future teaching and learning. We also hoped it would be a place for support and connection in a time of social isolation, grief, and loss. Operating with a pedagogy of care (Bali, 2015, 2020; Noddings, 2005; Rose & Adams, 2014) and a belief in collective knowledge generation, we reached out to instructors from pre-kindergarten through higher education in summer 2020 to participate in the CTC. Specifically, we asked instructors to share case studies of their experiences with remote teaching and learning. Although we drew heavily on existing professional connections and relationships, we also shared the call for proposals for the CTC publicly on Twitter.

More than static case-studies, however, the CTC embraced the goal of fostering ongoing partnerships between and among PK-university level educators for peer learning and support. A key goal of the collaborative was to build a living, crowdsourced resource database, what we now refer to as the CTC Resource Referatory. Broadly speaking, a referatory is a model for organizing and cataloguing open educational resources. Referatories can include open resources of any type, yet they maintain metadata for resources

1 https://cleteaching.org

that are housed elsewhere which "*can make them more discoverable and enhance their potential impact*" (Salem, 2017, p. 35). Developed as a companion space for the essays hosted on our WordPress blog, the CTC Resource Referatory was a logical platform for the growing body of teaching and learning resources named, shared, and utilized by our collaborators.

Although the CTC has three core components, this article is focused specifically on the Resource Referatory component of the larger CTC hub. Using a social design-based experiment, we examined the Resource Referatory to understand its potential to leverage existing technologies to meet the critical needs of pandemic teachers. We paid specific attention to design features in the architecture of curated collections and educational resource databases as we tailored the Resource Referatory to the needs of its desired contributors and collaborators. At the time of this writing, we are still in an era of pandemic pedagogies. As educators look to a postpandemic future, technology decisions for the next stage of the Resource Referatory continue in the spirit of collective care and are critically grounded in existing frameworks of pedagogies of care. We share five themes that emerged when we examined the CTC's crowdsourced Resource Referatory as a social design-based experiment:

1) Grappling with existing models for content curation:
2) (Re)designing for dynamic platforms;
3) Working the logic of care and logic of choice;
4) Leveraging existing technologies;
5) Connecting educators, connecting vocabularies;
6) Research assistants as collaborators.

2. CONCEPTUAL FRAMEWORK

Informed by humanizing pedagogies (Baker-Bell, Paris, & Jackson, 2017; Freire, 1970; Huerta, 2011; Mehta & Aguilera, 2020; Salazar, 2013) and critical educational technology frameworks (Gleason, 2016; Shelton, Aguilera, Gleason, & Mehta, 2020), this inquiry aimed to identify, examine, and understand how the organization of resources in existing content management systems and educational databases could be leveraged in the context of the CTC as a social design-based experiment. This work builds on existing research and scholarship (Gleason & Heath, 2021; Mehta & Aguilera, 2020; Shelton et al., 2020) that critically examines educational technologies in relationship to their capacity to foster humanizing practices.

To conduct this inquiry, we used a social design-based experiment approach. Cobb and colleagues (2003) explain that design experiments, distinct from other research methodologies, support generative learning processes that are essential for educational improvement. A design-based approach enabled us to engage in an iterative process of invention, evaluation, and revision in relation to the invention and ongoing revision of the CTC Resource Referatory. Beyond design experiments, social design-based experiments are a design-based methodology that offer a way of "*studying and organizing for equity and learning in complex, real-world situations*" (Gutiérrez, Jurow, & Vakil, 2020, p.330). Gutiérrez (2018) argues that social design-based experiments "*advance a method of inquiry that is organized around imagining what is 'not yet,' that is, the proleptic property of learning*" (p. 86). Specifically, a social design-based approach enabled us to examine a commonly used and widely accepted content management system for organizing and curating resources with an eye towards increased access and equity. Specifically, this approach allowed us to examine how the existing features and architecture of cataloguing systems, particularly for open educational resources, may limit user access and decrease equity and inclusivity. In fact, building the CTC Resource Referatory in the "real world situation" of the COVID-19 pandemic yielded important lessons on the role of tacit and codified, or explicit, knowledge in collaborative projects (Jones, 2012, p. 101; von

Krogh, Krogh, Ichijo, & Nonaka, 2000). These insights inform our practice of connecting vocabularies in the Resource Referatory.

3. RESPONDING TO THE MOMENT

3.1. *Implementing a social design experiment*

All things respond to a moment. As emphasized in this special issue's call for proposals, the COVID-19 moment is "riddled with complexity". The global pandemic (re)surfaced several pressing social and educational issues, needs, and inequities, all of which demanded and required attention. For us, this moment precipitated a desire to create a local network of educators, a tool, an archive, and a digital referatory. The tools and collaborations that were sparked by the pandemic were built on knowledge and experiences put into new practice. This new network would be a place to support a local collection of reimagined lessons, redesigned classrooms, and reconceptualized, revised, and/or repurposed tools that had been used or created pre-pandemic. What we knew about good pedagogy would be reconsidered and revised in thoughtful and promising ways in response to exacerbated issues of equity, accessibility, and inclusion. Yet, the efforts to revise instructional practices for care, equity and inclusion were not the only response that we saw in the kinds of tools that were rolled out, purchased, or reimagined to support teaching and learning in the pandemic. For example, like many of our colleagues in education, we saw increased attention to proctoring software, student usage tracking and surveillance, and synchronous classroom camera requirements. The CTC, and specifically the Resource Referatory component of the CTC hub, resisted a focus on technology for surveillance and standardization and, instead, sought to harness the human touch in digital communication and tools.

We conceptualized the Resource Referatory from a place of care and an overarching commitment to pedagogies of care. We considered the tools instructors needed in a moment of crisis. Moreover, we looked ahead at how the resources could be collected, published, and shared and how we could create the conditions for a CTC referatory that emerged from and supported its members. From its inception, the CTC Resource Referatory has decentered technology, framing our platform as a space to foster "collective care" for educators. Drawing on Bali's (2020) writing in the early months of the pandemic, we adopt the belief that "*care can occur on many different levels.*" Whereas Bali tends to the levels of care specifically in relation to one's pedagogical approach, we paid attention to levels of care as they relate to professional belonging, collectivism, professional identity, and professional development. Building on Carson's (2009) notion of collectivism, we aimed for collectivism to be a foundational characteristic not only of the CTC community but also of any products or platforms, including the Resource Referatory, that would be created by the community. Many instructors already understood the implicit role of care in our pedagogies and had the desire to sustain pedagogies of care in and through this collective work. The CTC Resource Referatory makes the language of collective care explicit through our platforms and design decisions.

The conceptualization of the Resource Referatory also builds on "ethics of care" (Noddings, 1982, 2002) traditions. Specifically, our work is informed by the following ideas: caring relations are the foundation of pedagogical activity, that caring is a reciprocal process, and that care is context specific. In the beginning of the pandemic, these ideas and traditions guided us as we began making project decisions with the intention to support collective care in the face of personal and institutional upheaval. As our project evolved, we came to frame collective care as "*1) caring for one another (e.g., as professionals, educators, humans) by being engaged in the writing, talking, thinking of this group, 2) a group that supports and works to develop pedagogies of care, and 3) a group that believes educators and educational institutions are better off*

when we do this work together" (Buckley- Marudas & Rose, 2021). In short, collective care for the CTC is a combination of listening, reflecting, and restoring agency to educators and students unmoored by the abrupt transition to emergency remote learning. Further, our digital spaces provide a type of archive of these negotiations of collective care, codifying knowledge that has previously been implicit.

3.2. *Context: Core elements of the cleveland teaching collaborative*

3.2.1. *Case studies*

WordPress was selected as our anchor platform for its intuitive digital publishing tools and, importantly, the ability to accommodate multiple contributing authors. The first cohort of case study authors in summer 2020 included 23 educators, a second cohort in fall 2020 included 11 educators, and a third cohort in spring 2021 yielded 10 additional case studies. Our fourth cohort in summer 2021 included 18 educators who shared live-recorded presentations during a two-week institute. The collaborators within and across all four cohorts included a combination of elementary, secondary, and university instructors and reflected a wide range of disciplines. Each cohort included educators who teach in public, private, and parochial institutions and in a mix of urban, suburban, and rural contexts. The case studies and presentations focus on educators' experiences with pandemic-era teaching and learning, centering on the pedagogical approaches, tools, and principles they used to make their decisions, the challenges they experienced, and what lessons they learned for the future. All the case studies were reviewed by the CTC leadership team and then published to CTC's site[2] and all recorded presentations were published to the CTC's YouTube channel[3].

3.2.2. *Crowdsourced educational resource database*

The second component of the CTC is the crowdsourced Resource Referatory[4]. Conceptually, the Resource Referatory is a central place for educators of all levels & disciplines to explore emerging technology and resources for instructional design, connecting the Cleveland network to the broader digital pedagogy community. Educators are able search and sort the entries according to application or institution. The Resource Referatory is the CTC's effort to increase findability of the growing number of born-digital instructional design and instructional support materials created or hosted by institutions in Northeast Ohio and around the globe. The referatory is open access and includes over 1,200 crowdsourced entries of educational resources.

3.2.3. *Peer-to-peer learning opportunities*

The third component of the CTC is peer-to-peer professional development and learning. This component includes monthly discussions, drop-in "Assignment Design Café" sessions with multiple university offices and a collaborator-generated "Peering In" visitation program. The CTC has hosted over a dozen monthly video discussions. The video format brings together instructors and instructional support personnel from across Cleveland State University and local PK-12 schools to provide space for brainstorming and instructional design questions, breaking down institutional silos and encouraging dialogue between campus partners as well as collaborative participants.

3.3. *Collaborator-driven innovation and design*

We think about our work with the Resource Referatory as a method for designing spaces that both serve

[2] https://www.cleteaching.org

[3] https://www.youtube.com/channel/UCERtCm-x8pB7bFG9AHTOIOw/playlists

[4] https://referatory.cleteaching.org/

collaborators' needs and preserve the collaborative's collective knowledge. Making instructor knowledge explicit through sharing reflections and resources extends the collaborative's capacities as educators. This stance allows us to conceptualize our audience as collaborators, as opposed to users. This also allows us to use technology in a way that makes us more human and more connected. In the CTC collective, PK-university educators are all seen and recognized as equal collaborators in this work. The intent is to break down the traditional barriers between PK-12 and university educators and position all educators as peers who can benefit from the diversity of knowledge and expertise across the collaborators. This has surfaced as a generative tension in the work designing and revising the Resource Referatory, finding a way to design this platform in a way that is intuitive and well-organized, responsive to the current moment, and flexible enough for future moments.

The imagination and flexibility that came with the pandemic created a distinct context for this social design experiment. We are experiencing many of the tensions that are reflected in some of the research and literature in educational technology and remote labor. These tensions rose to the forefront, particularly regarding the systems used to organize, curate, and distribute resources, as the number of entries in the referatory multiplied. We remain committed to our vision and mission of building a humanizing Resource Referatory and a collection that remains crowdsourced and open access. We also recognize that the database will ultimately reflect our research teams' own human beliefs, choices, and experiences. In short, their tacit knowledge.

4. LEARNINGS: TENSIONS IN HUMANIZING RESOURCE DATABASES AND RESOURCE CURATION

4.1. *Grappling with existing models for content curation: (re)designing for dynamic platforms*

Stories are data with a soul and the CTC story cannot be understood apart from the pandemic. Our project history[5] reflects just how intertwined our story is with local, national, and global contexts. As described earlier, we were drawn to the logics and pedagogies of care and collectivism from the start and our intent was to design a platform that would speak to and include all of our collaborators. The existing database structures, including metadata schema and content management systems, for organizing the referatory remained grounded in existing models for content curation. The CTC team drew on these models, crafting a referatory in Omeka[6] that would serve as a "gateway" to educational resources during the pandemic moment while preserving an archive of these resources and their digital locations for later analysis and reflection (Salem, 2017, p. 35; Hart & Albrecht, 2004). We selected Omeka as the platform because it is an open-source web publishing platform explicitly created for sharing digital collections and creating online exhibits. We built our content management system on Dublin Core metadata schema[7], a project of the Association for Information Science and Technology, to increase findability of born-digital and open educational resources. Dublin Core was useful to the CTC's project because it draws on multiple vocabularies and can accommodate digital resources or physical resources.

As co-founders of the collaborative, it was our hope that the referatory would support our vision of an open-access, crowdsourced space with high levels of what is understood as "findability" or "discoverability". By this, we mean the likelihood that a collaborator would be able to find relevant, applicable, and help-

[5] https://cleteaching.org/history/

[6] https://omeka.com

[7] https://dublincore.org/

ful resources based on the search terms that are used. The referatory format allowed for a certain content stability in each individual entry based on local version control (Salem) and consistent findability grounded in project-specific controlled vocabularies, that is metadata fields established and curated by the CTC team. Based on our learnings to date from this social design-based experiment, we now have a more nuanced understanding and awareness of the stories that the Resource Referatory might project to an outside audience and potential collaborator. Thanks to our attention to findability and collaborator experiences, we also have a clearer framework of how controlled vocabularies function within the platform as well as in our CTC community as a result of both tacit and codified knowledge.

We recognize the interplay between an actual platform and its users/collaborators as a dynamic process. Narrative scientist Angus Fletcher (2021) resists the idea of literature as an argument and instead positions literature and stories as technological innovations that are created to improve our lives and human existence. For Fletcher, the success of a story acting in this kind of meaningful, human-centered way depends on the author's use of what he refers to as inventions and they do not happen automatically. Although stories are born out of certain socio-historical moments, the technologies at work behind innovations allow for stories to be flexible and relevant in a wide range of contexts and time periods. This idea is useful to us in thinking about how our decisions as designers, or authors, of the referatory platform might be understood as technological innovations that shape the narrative of the space and, we hope, engage collaborators and enhance their professional lives. Narratives are also a key format of tacit knowledge, made explicit here in the Resource Referatory. Thinking of the data of the Resource Referatory as a story of our collective experience of the COVID-19 pandemic and pandemic pedagogies, we are attentive to and critical of the story/stories that are projected by our content.

The CTC design experiment revealed that the existing systems conveyed a troubling and inaccurate narrative for our project. Instead of finding one controlled vocabulary that we could use to organize, categorize and curate the crowd-sourced resources, we found at least two controlled vocabularies. The two sets of terms reflected a narrative that divided PK-12 educators from university educators, working in direct conflict with our work to create a community that brought these two groups together. We saw the reciprocal learning between and among the two groups and we saw a need to break down the typical barriers between the two groups. This tension created a need for reimagining and revision because of how the story may be perceived or "act on" current and future collaborators.

4.2. *Working the logic of care and the logic of choice*

Digital humanists *Ruckstein and Turunen* (2020) call for "*technological innovation that celebrates the strengths and merits of humans in relation to machines*" (p. 1040). They highlight the frustration of discussion moderators required to act like a machine in order to use learning management system discussion boards. Rehumanizing educational technology platforms, Ruckstein and Turunen argue, requires creators to recognize the differences between the "*logic of care*" and the "*logic of choice*". According to them, the logic of choice, the dominant logic for content management systems, forces moderators to operate like machines thereby diminishing their skills and vision. The logic of choice creates a closed-ended process with clearly demarcated options. On the contrary, the logic of care is described as central to content moderators' productive and more human governance of online cultures and platforms. According to Mol (2008), the logic of care is more capable than the logic of choice to handle unpredictabilities and uncertainties. These terms were developed in the context of healthcare but are no less useful in understanding the relationship between platform designers and their audiences, especially in unpredictable or uncertain circumstances (Mol, 2008; Ruckstein & Turunen, 2019, 2020). The COVID-19 pandemic has certainly created such circumstances for educational instructors in Cleveland and around the globe. The first finding that emerged

in our design-based experiment was the need to tend closely to the logic of care and not to allow the more dominant logic of choice drive the decisions in the moderation of the Resource Referatory. We found a tension between our intent as designers, educators, and researchers to design for care, collaboration, and community and our intent as content management moderators to design for organization, searchability, and findability. We agree with Ruckstein and Turunen that the "logic of care is not intrinsically better than the logic of choice," yet the logic of care ensures that humans, and not machines or artificial intelligence, are positioned as the key actors in how content and platforms are arranged and, in turn, the type of online culture that is created.

Rehumanizing educational technology platforms from a position of care emphasizes "*making visible the human forces and ideals that the logic efficiently conceals*" (Ruckstein & Turunen, 2020, p. 1027). At the start of the COVID-19 pandemic, the Resource Referatory was a creation of logic and metadata schema; in other words, explicit knowledge about content management. Its structure reflected codified knowledge on findability and the utilitarian framework of a digital library catalog. At the time, this was intentional. The Omeka theme used to launch the original referatory was originally developed by Rose to teach historical thinking and metadata curation to students[8]. As a catalogue, the referatory functions successfully. Yet, as Alder (2017) articulates, the systemic limitations of the cataloging practice and the controlled vocabularies it draws on will always impact the experience of using the platform. In a time of uncertainty created by the pandemic, we turned briefly to the logic of choice as an anchor in unprecedented upheaval to process the flood of resources created, adapted, and shared by educators. At the time, this action felt empowering for curators and collaborators alike. As the pandemic continued, the conceptual tensions grew between our technical choices for the referatory and the platforms of care we developed in the case studies and peer-to-peer support aspects of the Cleveland Teaching Collaborative.

A critical part of our curation work has been to continuously consider the ways in which we could humanize the collection, storage, and curation of educational resources. We paid specific attention to designing a humanizing referatory that also maintained high levels of searchability and findability while acknowledging the often-tacit practice of collective care within our project. Through this inquiry we have come to see two distinct sides to why educational technologists must be critically attentive to and value humanizing a referatory or a similar database or curated content platform. First, it is critical to how resources are identified, collected, organized, and curated. Second, it is essential to imagine how the audience experiences and navigates the content. Although we know that audiences will be drawn to resources that feel more human and resources that allow the user to feel some sort of personal connection, the audience is guided by the terms, choices, and selections that are made available on the platform. These choices are ultimately a product of our interventions and the logics of care.

In their paper, *Education Reimagined: The Future of Learning, Fullan*, and colleagues (2020) remind educators and educational leaders that technology must be used as an accelerator and not as a driver. According to Fullan (February 9, 2021), all those involved in the enterprise of education must: "*use the deep learning process as an integrator and accelerator*". We agree that "*voice, choice and agency are central to deep learning*" (p. 17) and that when learning environments include all participants as contributors, they have a greater sense of agency and efficacy. Although Fullan et al. focus on student learning, the characteristics of deep learning translate to learning more broadly, including educators' professional learning. This idea is important to the work of humanizing a referatory because it supports our belief that the technologies we build and/or use are not discrete tools nor singular drivers of change. In the case of our referatory, instead of building a database that narrowly channels users in one way or guides users along a neat trajectory,

[8] www.gsrdb.org

we sought to build a database that could serve as a space to support and sustain the archiving of material resources and artifacts as well as collaborators' own learning and inquiry. The referatory space should introduce educators to a range and variety of ideas to enhance and extend teaching and learning, yet it needs to be both flexible and adaptable enough to allow participants to chart their own path, have an experience that is tailored to their unique identities, and meet their unique needs. Importantly, the audience should feel like a participant and collaborator and not a passive user.

In less than a year of rapid development and redesign, our examination of the referatory has yielded an important finding. Our CTC audience was always conceived as interdisciplinary instructors from a range of grade levels, including higher education. Through the course of our curation work, the CTC team realized that while the Collaborative created a space that connected PK-12 and higher education instructors in our project vision, the vocabularies we first employed for curating resources in the referatory, and frankly in conversations with each other, continued to accentuate and perpetuate linguistic and disciplinary divides between our professional groups. The project tags intended to increase findability for various audiences and collaborators were actually restricting the pedagogy and culture of care we want to foster. The Resource Referatory amplified the vocabularies educators were using to communicate with each other and understand the requirements of both local and state institutions, yet they are part of the systemic silos we seek to deconstruct.

4.3. *Leveraging existing technologies*

Narratives are at the heart of humanizing technology. As our design experiment surfaced, many of the existing schemas and structural frameworks of a selected technology platform play a significant role in the story that is visible to its users. In order to build a referatory that would narrate as a story of care and collaboration, in other words the implicit knowledge of collective care, we found that we had to find a way to revise, refine, and redesign explicit project knowledge embedded in the platforms. This meant striking a tenuous balance between curating for human connections while maintaining a useful toolkit in terms of findability and archival practice. Within the context of the Resource Referatory, human connection was tied to what we saw as a sense of belonging. By this, we mean that participants, including both content creators and collaborators, would see themselves as part of the community.

While established cataloguing practices enhance findability in any content management system, the rapid growth of the CTC Resource Referatory magnified existing, and deeply rooted, flaws in cataloguing and metadata practices. Our social design-based experiment revealed a significant challenge for CTC participant inclusivity. While the project tacitly included all instructors, the explicit framework of the Resource Referatory platform did not naturally or easily stretch across educational levels. The CTC was deliberately designed to connect educators from PK-university, yet existing cataloguing systems continue to reinforce the divide between PK-12 and university level education.

Indeed, institutional vocabularies such as the Library of Congress' subject headings "*(inhibit) intersectionality and intertextuality*" as Adler argues in *Cruising the Library* (2017, p. xii). These limits, like countless other structural problems in education and educational technology, were exacerbated by the conditions of the COVID-19 pandemic. We paused to examine the development of the Resource Referatory at several points in its evolution. The Resource Referatory had over 800 entries, less than one year after the creation of the CTC and has over 1200 entries, at the time of this writing. What started as a simple, curated list outgrew its framework. Thus, we moved logically to a traditional database using an established metadata schema, Dublin Core, and a user-friendly content management system, Omeka. The Resource Referatory is a product of the many histories of COVID-19 (Peinado, 2021). Our examination of the CTC Resource Referatory and the vocabularies the CTC team has used to organize, connect, and increase findability of content has

its own unique history. This history reflects a commitment to collective care that aims, by design, to break down institutional walls for a better future. Although there are some tensions that are inherent to the process of developing a humanizing approach to resource curation, most especially because of the reliance on the need to organize the material with some content management system, it has become evident that the small choices we made about how that content is managed drive the narrative that the collected data in the Resource Referatory can or might tell.

The CTC Resource Referatory is a product of conscientious choices and the creative adaptation of existing resources. As educators, our own transitions to remote teaching and learning were deeply intertwined with our decisions for the collaborative and the feeling that there was no "blueprint" for the COVID moment (Buckley-Marudas & Rose, 2020). The platforms we chose relied on three criteria: cost, ease of use based on the existing skills on our team, and the need for clear paths to findability for users already feeling unmoored by pandemic conditions.

In terms of startup, we chose a hosting service tailored for educators and institutions, Reclaim Hosting, to purchase our domain name and three years of hosting service. One of us, Rose, had previous experience developing digital projects and set up a WordPress blog for the CTC. Our initial goal included hosting a toolkit of reflective essays and a curated list of resources for instructors on the WordPress platform. Reflection authors received a modest honorarium for their writing according to the model of Contingent Magazine, (2021) a humanizing practice in an increasingly profit-based arena of academic publishing.

The curated list of resources on WordPress, while useful, quickly outgrew the format in terms of findability. A month later, in June 2020, we chose to transition the curated resources to a more robust content management system (CMS). We chose Omeka Classic as the platform for a resource referatory. One of the CTC summer 2020 research assistants had previous experience with Omeka and the whole CTC team gained experience creating metadata entries. We acknowledge that although we led the creation of this referatory, we too were among educators overwhelmed by resources and in need of structure to plan, design, and implement pedagogies adapted to uncertain pandemic teaching and learning environments. In this moment of need, Rose drew on a metadata project developed for her course "Gender and European History." The Omeka theme developed by Erin Bell (Cleveland State University Center for Public History + Digital Humanities) for the Gender Studies Resources referatory became a useful model for the CTC Resource Referatory (Figure 1).

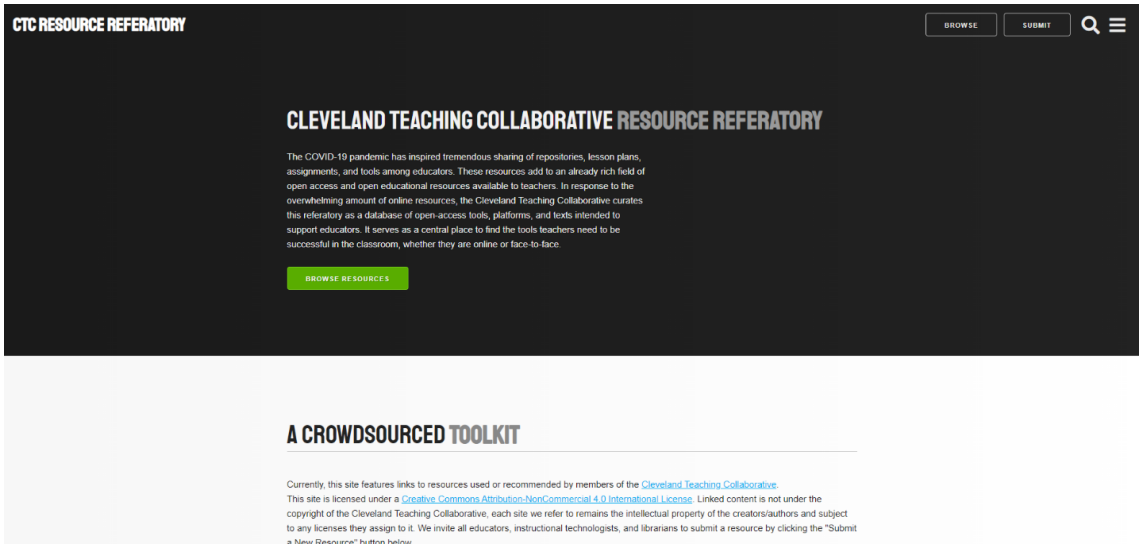

Figure 1. Cleveland Teaching Collaborative Resource Referatory with Gender Studies Resources Theme.

As the Resource Referatory grew exponentially, especially between January and April 2021 with the support of two new research assistants, it became apparent that we needed to adjust the structure to humanize the Resource Referatory to reach our intended audience. In Spring 2021 the CTC team grappled with platform development to meet the needs of our audience such as the need for searchable digital tools but also the emerging need for deeper curation of the individual resources into usable collections or mini toolkits of their own. For instance, CTC Research Assistant Calida O'Brien created a collection of all resources related to "Podcasts" in an effort to meet educators where they are and provide alternative points of interaction for our referatory audience.

These discussions exposed structural limitations of the GSRDB referatory Omeka theme. The CTC Referatory became more than a catalogue. It is a dynamic, crowdsourced, platform that is intertwined with our commitment to fostering collaborative care. When collaborators land on our Referatory homepage, they find a clear digital "*filing cabinet*" of resources, but that space came to feel impersonal compared to the collaborative's interactive community and narrative essays. As a result, we have been working with the GSRDB theme developer to create a homepage that not only reflects the collaborative's sense of community, but also introduces a space where educators can browse and curate the resources in their own "*hyperlink narratives*" or other non-linear journeys (McCullough & Retallack, 2013). The new page includes lists of recently added referatory resources and collections (Figure 2). Research Assistant Cheyenne Florence is working with Bell to develop an "showcase" type format for the theme which will allow deeper engagement with the resources as well as give CTC collaborators the opportunity to create resource toolkits around various pedagogical, social, or content themes.

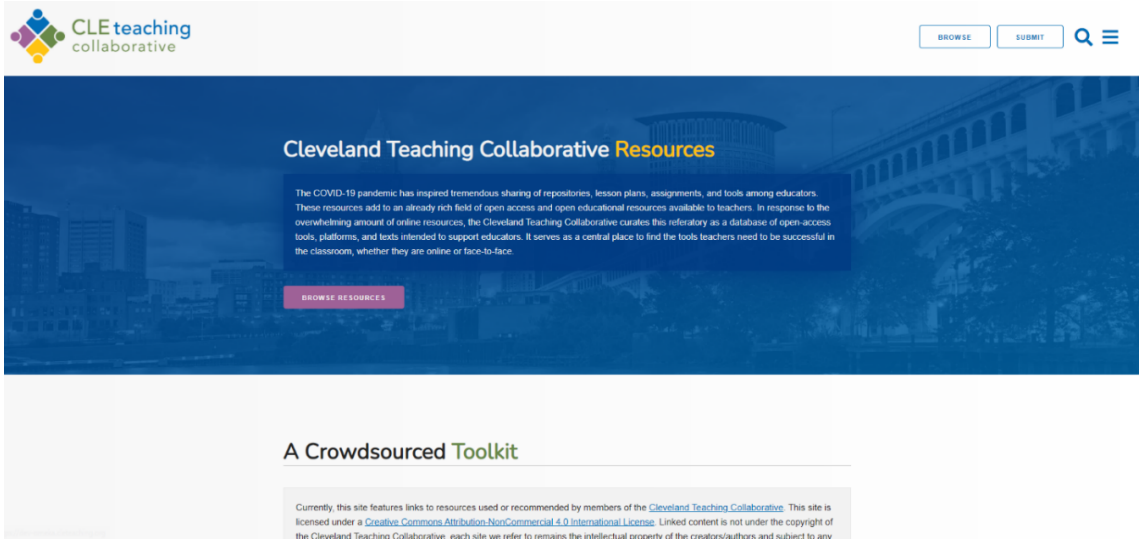

Figure 2. Cleveland Teaching Collaborative Resource Referatory Theme. Credit: Erin Bell.

That culture of care extends to our audience. Terms for project audiences vary. We tried to create a language that aimed to convey care and collaboration for the CTC. As noted by librarians and digital humanists, "users" is a generic and often dehumanizing term. The CTC team conceptualizes the question of audience for our hub of resources, which includes our WordPress blog, referatory, and peer support network. While Bruns introduced the terms "*produser*" and "*produsage*" to help frame the question of audience for blogs and other crowdsourced digital products, that term also seems to fall short for our project mission. *Produsage* is defined as "*the collaborative and continuous building and extending of existing content in pursuit*

of further improvement" (2008). Even with the added understanding of users as producers, produsage still falls short of accurately describing the community of practice the CTC has become.

One of the issues with the produsage definition is production of "content." If we define referatory content as entries, then this seriously limits the range of possibilities for interaction from our audience. It is simply a finding aid, or a path to another place. The CTC as a whole has become more than a conduit for information, it hosts spaces where content is both crowdsourced and curated. This situation brings us back to the founding words of our group: collaborator. Using the term collaborator for our audience not only brings uniformity to the project platforms, but it also disrupts the power dynamic inherent in producer/ user dichotomies. Collaborators curate, they narrate, and they forge their own paths in the born-digital referatory content.

The CTC audience was central to the concept of collaborative care. Each collaborator forges their own path, or narrative through the referatory. In order to preserve findability, the metadata schema for the referatory was and still remains Dublin Core. The tag system curated by our team since the inception of the referatory, has become a controlled vocabulary which links PK-12 and higher education instructors to resources, and to each other.

4.4. *Connecting educators, connecting vocabularies*

Every project with curated or cataloged content relies on controlled vocabularies to foster findability. As opposed to a referatory such as GSRDB and others that were built to teach metadata practices and the use of controlled vocabularies, we built the CTC referatory with a humanized collaborator experience in mind from the start. On one level, the referatory is a catalogue of educational resources. On a second level, the Resource Referatory is a place that invites, welcomes, and honours the contributions of educators from the entire educational continuum of PK-university classrooms. At its core, the Resource Referatory is intended to be inclusive of educators, regardless of institution type or grade level. The pandemic removed many of the barriers to collaboration across educational levels, institutions, and disciplines and the CTC intends to sustain that collaboration and information distribution. For example, with the flexibility of Zoom and the removal of conflicting teaching schedules, we were able to host monthly discussion groups that included university faculty and PK-12 teachers. Our social design experiment revealed that the controlled vocabularies in the existing cataloguing systems perpetuate long-standing divisions between PK-12 and university instructors because the existing catalogue systems use different terms. The assumption of this codified knowledge is that the two professional groups do not use or need similar resources and would not need or want access to similar kinds of information and/or tools. Although this discussion of controlled vocabularies and metadata schema may seem technical, our design experiment revealed the ways in which the explicit structure of many existing technologies and platforms inhibit or at least limit access to the resources and reinforce the silos we seek to deconstruct

In order for the resources to be findable, it is clearly important that they are linked to an existing and defined system such as the Dublin Core. Yet, while the referatory is built on a Dublin Core metadata schema in Omeka, all of the Resource Referatory item tags are the product of an evolving "internal controlled vocabulary" that accommodates the unique needs and goals of the CTC. This internal controlled vocabulary is our response to the limits of existing vocabularies, including Dublin Core. The more dynamic nature of the project's internal controlled vocabulary supports the intent to create a more humanizing space, making implicit or tacit narratives of care more visible in the platform. This design-based experiment revealed that the project has not used many of the existing metadata fields in static ways either. The CTC team relied on some standardized fields, yet many fields, for example "instructional method" and "audience," were not based on any pre-established fields languages but evolved from the fields the team had noticed over time in the tags. What has emerged is a unique product of the development and expansion of the CTC and is

directly connected to our intent to develop a collection that feels personalized and human.

We have learned that educators at all levels, like us, are drawn to resources that feel connected to a human story. Furthermore, they are more likely to pay attention to and explore resources that are tied to or emerge from a local network. Particularly in the context of the overwhelming number of resources that have been shared during the pandemic, resources that come from a local source or conveyed a humanizing spirit seemed more likely to gain traction. After almost a year of guiding this project and working to develop an inclusive referatory vocabulary that supports collective care, we have encountered several challenges and tensions. In this section, we illustrate specific decision points. We believe these decisions highlight some of the tensions we have faced and how our response to and interpretation of the tensions are implicated in the story/stories that the CTC Resource Referatory can or might tell and collaborators' potential experience of and contribution to the story/stories.

One of the most immediate ways we noticed the tensions between the common controlled vocabularies and our vision of a more flexible, humanizing database was with the terms we used to tag and mark the resources in the referatory. Because the CTC connects PK-12 instructors and higher education instructors, tension increased in terms of findability. We began to see what a PK-12 educator may search for is not the same as an instructor in higher education. For instance, individual tags connect disciplines like political science and history with Social Studies; English and literature with English language arts. These individual tags ended up reinforcing the distinct vocabularies of our professional silos.

We found that the vocabularies were reflective of an existing disconnect between PK-12 and higher education. Although there are real distinctions between the contexts, our professional work and pedagogical beliefs are rooted in the belief that the two contexts have much to share with one another and much to learn from one another. We saw this moment of the pandemic as a chance to break down some of the longstanding divisions between educators at different levels and it was critical to our work to develop vocabularies that could support this connectivity. In addition to the distinctions in content areas in secondary versus higher education, the terms we chose reflected different frameworks and traditions. To support findability, terms need to be selected, yet it became clear how the decisions we made on the tags would, inevitably, inform or shape the audience's experience and perception of the collaborative and the resources. In this case, we first made the decision to use multiple tags to reach various collaborators.

In response to this finding, the CTC Team has moved into a deeper discussion of potentially revising the project vocabulary represented by the tags to reflect connection. "Political Science would become Political Science / Social Studies." These combined tags are still keyword searchable, yet they visually and structurally reflect our deliberate choice to connect the PK-12 and Higher Education collaborators and create more professional continuity between PK-12 and Higher Education. We hope that this decision about the vocabularies used to organize and sort referatory data conveys a narrative of inclusivity and, in turn, helps shape a story of a professional learning collaborative that welcomes educators at all grade levels.

4.5. *Research assistants as collaborators*

In addition to the collaborators who have joined and participated with the Cleveland Teaching Collaborative, the Resource Referatory would not have grown into the community of practice it has become without the support and skills of the CTC research assistants. Buckley-Marudas and Rose provided leadership and vision for the original project, yet the now six total research assistants have been critical in fueling structural and conceptual growth. In Summer 2020, the referatory began with a blank slate of tags and an empty spreadsheet. That summer, two research assistants, Jasmine Prezenkowski and Saily Aloni, worked with the authors to sketch out a limited set of tags based on the first cohort of case studies and initial referatory entries. In the uncertain circumstances created by the pandemic, the blank slate proved both daunting and

liberating. The tag lists quickly grew through practice as research assistants and the co-authors entered resources and curated them using tags.

During the Spring and Summer of 2021, the CTC hired two, and then three, research assistants. Two of the research assistants, O'Brien and Florence, had previous experience in Omeka and content curation. They increased the growth rate of the referatory exponentially, leaping from 200- 1200 entries in just a few short months. During this period of rapid growth, the CTC team grappled with the flexibility of the existing tags. As we learned the limitations of many existing tags, specifically in the ways they lead to more exclusivity than inclusivity of educators, this became a key spot for further revision and design iteration. Beginning in Spring 2021, we engaged in weekly team discussions about tagging and the creation of the project's controlled-vocabulary. This discussion time became a space to voice the tensions between professional language, findability, and the humanized referatory visitor. In our efforts to revise and refine the controlled vocabularies to reduce barriers and move towards greater equity for current and future collaborators, the CTC is working to design an internal vocabulary that is controlled, yet flexible. As a result, the team has drawn from established controlled vocabularies such as Library of Congress subject headings, ISO 639-2, and projects like OER Commons as well as our own tag system to create a CTC-specific controlled vocabulary.

5. THOUGHTS MOVING FORWARD

The CTC Resource Referatory has become a vehicle for connecting content management vocabularies and creating a culture of care that defies institutional and systemic silos within the context of the CTC hub. By being flexible in the face of uncertainty during the COVID-19 pandemic, humanizing the curation process for referatory content, and leveraging existing technology to tailor and rewrite controlled vocabularies, we have worked to maintain a culture of collaborative care in the CTC's content moderation. Perhaps the most significant finding from our examination of technology and care is that controlled vocabularies exist in the digital space of our referatory, but also in the professional spaces we foster in everyday life. The attention to connection and discussion between PK-12 and higher education instructors in the context of COVID-19 revealed a path to deeper connection between these two groups as we acknowledge and work through the implicit and explicit literacies employed in our practice. Finally, we demonstrate that technology does not necessarily hinder a culture of care, with mindful application it can be a tool for curation, care, and change

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