

ABSTRACT

In response to the COVID-19 pandemic, a California public university launched the Pandemic Histories Archive Project (PHAP) in collaboration with the library. This online service-learning opportunity empowered undergraduates to describe and reflect on their pandemic experiences and represent their communities by contributing to the library's digital archive. From 2020-2021, nearly 300 undergraduate students completed PHAP's asynchronous online training modules and documented the COVID-19 pandemic and social justice issues by producing materials such as field notes, interviews, photographs, and reflections. According to open-ended surveys, students responded favorably to this novel project, valuing the creative freedom, knowledge, and skills gained through community archiving. This case study summarizes the literature on online and service-learning, presents the pros and cons of each, and offers recommendations for creating a student-centered learning environment. PHAP's teaching approaches, which emphasized student wellness and strengths, can be applied beyond the pandemic in future online, hybrid, and in-person courses.

SERVING STUDENTS THROUGH SERVICE-LEARNING: A DIGITAL PANDEMIC HISTORIES ARCHIVE

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In 2020, many higher education institutions temporarily halted in-person instruction to prevent the spread of COVID-19, resulting in the sudden, widespread implementation of remote learning, including courses with a strong service-learning component. At the University California, Irvine (UCI), approximately 1,000 undergraduates per year complete quarter-long internships coupled with classroom instruction as a requirement for their bachelor's degrees. There was a risk that changing service-learning from in-person to online would negatively impact students. While online learning can offer convenience and flexibility to working students, the estimated dropout rate for online courses is higher than the rate for traditional, in-person courses (Annetta, 2004; Levy, 2007; Kim et al., 2017). Common reasons for online students to drop out include dissatisfaction with how the course is designed and facilitated, lack of

motivation, and difficulty self-regulating their learning while balancing other commitments, such as work (Barratt & Duran, 2021; de Oliveira et al., 2018; Kim et al., 2017; Lee, 2017; Levy, 2021). Likewise, service-learning, a form of pedagogy that engages students in addressing community issues, has the potential to increase students' sense of belonging and motivation for learning (Miller et al., 2019; Schulzetenberg, 2020; Song et al., 2017; Yen & Carrick, 2021), but may be difficult for students with limited time due to employment or family obligations, or those who lack reliable transportation to an off-campus site (Miller et al., 2019; Owen et al., 2019). UCI's abrupt switch to online service-learning during the pandemic could have posed challenges to its diverse student body, which includes a high proportion of minoritized, low-income, and first-generation students who would be more vulnerable to the issues associated with these approaches. Yet, student feedback revealed that the Pandemic Histories Archive Project (PHAP), which combined service and online learning, was perceived as empowering, healing, and pedagogically valuable. By analyzing data regarding PHAP students' experiences, we explore why this online service-learning approach succeeded and suggest ways that this model can be implemented in other contexts.

To analyze PHAP, we draw on two theoretical frameworks. First, the Community of Inquiry framework (Garrison et al., 2000) describes cognitive, social, and teaching presence as foundational elements of the educational experience, particularly in an online context (Brennan et al., 2022). Garrison, Anderson, and Archer (2000) define cognitive presence as the extent to which participants (students and teachers) can construct meaning through communication, a "vital element in critical thinking" that is "most basic to success in higher education" (p. 89). Social presence, the ability of participants to present themselves authentically, can be fostered through open discussion and reflections (Brennan et al., 2022). The element of social presence is essential for learners to collaboratively understand and create knowledge (Garrison et al., 2000). Teaching presence involves both course design and facilitation of learning activities (Garrison et al., 2000). Typically, instructors are responsible for selecting, organizing, and presenting content, but facilitation may be carried out by either teachers or learners, in the form of initiating discussion or sharing personal meaning (Garrison et al., 2000). Student feedback regarding PHAP suggests that the elements of the Community of Inquiry framework are present in core parts of PHAP, as students applied their training to real-life problem solving, practiced communication skills, and reflected on their experiences through assignments and guided discussions.

Second, we draw on Yosso's (2005) Community Cultural Wealth model, which was designed to acknowledge the various strengths that students of color bring to their college environment. Yosso (2005) argues that universities should highlight the cultural knowledge, skills, abilities and contacts of students, rather than focusing on the deficits experienced by marginalized students. The Community Cultural Wealth model includes six forms of cultural capital: aspirational, navigational, resistance, linguistic, familial, and social (Yosso, 2005). Student feedback regarding PHAP suggests that this remote service-learning opportunity gave them the opportunities to reflect on and preserve their

families' and communities' experiences, thus validating the cultural wealth that they brought to the classroom. Though PHAP served as an emergency alternative to in-person service-learning, it also empowered undergraduate participants (who were primarily minority and first-generation students) to conduct research on topics of their own interest, independently select the format of their project, and feature underrepresented voices in their archival materials.

To demonstrate how our experience with PHAP suggests ways that the benefits of online service-learning can be maximized, particularly for first generation and underrepresented youth, we first review literature on digital instruction and service-learning. Our literature review identifies the strengths and weakness of each of these forms of pedagogy and discusses how the Community of Inquiry and Cultural Wealth frameworks help to make sense of these potential strengths and weaknesses. We then present PHAP as a case study of a successful digital service-learning opportunity. We analyze student demographics, exit survey data, and course materials, focusing on the alignment between instructional goals, student feedback, and Community of Inquiry and Cultural Wealth theoretical frameworks. Our analysis concludes by suggesting ways that the model used in PHAP could be adapted for other courses and institutions. Throughout our analysis, we are attentive to ways structuring digital service-learning to build communities of inquiry and recognize students' cultural wealth can overcome disadvantages of online instruction and service-learning while maximizing the instructional value of such opportunities.

Benefits and Challenges of Distance and Service-Learning

Studies of distance and service-learning have suggested that while these approaches expand accessibility and improve students' motivations and problem-solving skills, such approaches may pose challenges for certain disadvantaged students. Distance learning programs have existed for over a century, aiding farmers, blue-collar workers, military personnel, and marginalized groups in pursuing higher education (Lee, 2017). In 1858, the University of London launched correspondence study programs for "women and racial minorities" (Haughey, 2010, p. 48) who were not always permitted or welcomed in classrooms (Lee, 2017). Like these early distance education programs, online learning can potentially increase accessibility by offering students the flexibility to complete courses at their own pace, from nearly any geographic location, and without the need for face-to-face interaction (Ali, 2020; Barratt & Duran, 2021; Cung & Xu, 2018; Swanson et al., 2015; Wong, 2020). Online learning, also known as e-learning, enables teachers and learners to share and access information via the Internet and digital technologies such as computers and smartphones (Arkorful & Abaidoo, 2015; Fry, 2001). As a form of distance education, it allows students to learn without attending scheduled face-to-face classes (Arkorful & Abaidoo, 2015; Cung & Xu, 2018; de Oliveira et al., 2018). Universities may also favor online education as it allows for higher enrollment beyond the limits of physical classrooms (Arkorful & Abaidoo, 2015; de Oliveira et al., 2018).

Yet, as seen in Table 1, each benefit of online learning corresponds to a related challenge. For example, online classes may appeal to students intending to learn on their own schedule, but such courses also demand higher self-regulation and time-management skills (Arkorful & Abaidoo, 2015; Barratt & Duran, 2021; de Oliveira et al., 2018; Lee, 2017; Zhou et al., 2020). Instructors can potentially use online classes to offer ease of access to information and higher student engagement through multimedia content, but this is dependent on their level of online teaching experience and technical support (Annetta, 2004; de Oliveira et al. 2018; Juniu, 2005; Zhou et al., 2020). For institutions, potential profit gains from online enrollment may be outweighed by higher dropout rates, training costs for instructors, and the expense of building the infrastructure and support systems necessary for remote learning (Arkorful & Abaidoo, 2015; Ali, 2020). Although online learning can potentially increase access to education, Lee (2017, p. 16) argues that “authentic accessibility” goes beyond increasing student enrollment, and that institutions need to recognize and accommodate the needs of disadvantaged students. Online courses pose several challenges for underserved populations, particularly for students with limited access to the Internet and technology, and those who struggle with feelings of isolation and lack of support (Ali, 2020; Arkorful & Abaidoo; Adnan & Anwar, 2020; Aristovnik et al., 2020; Barratt & Duran, 2021; de Oliveira et al., 2018; Juniu, 2005; Händel et al., 2020; Swanson et al., 2015; Warschauer et al., 2004).

Table 1
Benefits and Challenges of Online Learning for Students, Instructors, and Institutions

Benefits	Challenges
<i>For Students</i>	
<ul style="list-style-type: none"> ● Flexibility for students to choose when and where to study¹⁻⁴ ● Opportunity for non-traditional students, such as those who work full-time or student parents^{1,3} ● Ease of online communication for those comfortable with technology or struggle communicating in-person¹ ● Online recorded materials (such as lectures) can be replayed as often as needed^{7,8} ● Potentially lower cost, depending on tuition and expenses related to commuting or living on-campus^{1,3} 	<ul style="list-style-type: none"> ● Inaccessible or less accessible to those who lack adequate technology and Internet connection⁴⁻⁸ ● No in-person communication, which can reduce students’ ability to engage with instructor and peers^{3,4} ● Higher chance of dropout compared to in-person learning^{3,4} ● Perceived higher workload as learning is self-directed⁹ ● Feelings of isolation due to lack of peer socialization^{3,4} ● More difficult for students who struggle with time management, motivation, and computer skills^{1-4,10}

<ul style="list-style-type: none"> ● May enhance certain skills, such as critical thinking, independence, and computer proficiency⁷ 	
<i>For Instructors</i>	
<ul style="list-style-type: none"> ● Flexibility for instructors to choose when and where to teach¹⁻⁴ ● Potentially less time to implement, as content can be reused¹ ● Multimedia-enhanced content can engage students and improve understanding of concepts⁸ ● Ease of access to information, such as links to related resources and services¹ ● Remote active and collaborative learning can be achieved through activities such as virtual breakout rooms and discussion threads⁷ 	<ul style="list-style-type: none"> ● Technical difficulties such as computer and Internet issues can disrupt teaching^{5,6,7,8} ● Lack of training to teach and create online courses^{3,11,12} ● No in-person communication reduces potential for learning to be a collaborative process, and makes it difficult to assess if concepts are understood^{1,7} ● Unable to be used effectively by all disciplines, such as scientific and artistic fields requiring hands-on practical skills^{1,8} ● Difficult to prevent cheating as information is easily accessible online¹
<i>For Institutions</i>	
<ul style="list-style-type: none"> ● Potentially higher profit as more students can be enrolled and less physical space is required¹⁻⁴ ● Possible to implement during shortage of academic staff, such as instructors or lab technicians, to lead in-person classes¹ 	<ul style="list-style-type: none"> ● Potentially higher cost to build ICT support infrastructure, provide training, and accommodate for higher dropout rate⁸ ● Perceived lower quality by students, especially in a cultural context where online learning is less accessible³

¹Arkorful & Abaidoo, 2015; ²Barratt & Duran, 2021; ³de Oliveira et al., 2018; ⁴Lee, 2017; ⁵Adnan & Adwar, 2020; ⁶Händel et al., 2005; ⁷Swanson et al., 2015; ⁸Ali, 2020; ⁹Aristovnik et al., 2020; ¹⁰Zhou et al., 2020; ¹¹Annetta, 2004; ¹²Juniu, 2005

There is evidence that service-learning can improve academic outcomes, increase persistence and retention, and enhance students' civic engagement (Schulzetenberg et al., 2020; Song et al., 2017; Yue & Hart, 2017; Heinrich & Green, 2020; Miller et al., 2019; Yen & Carrick, 2021). Service-learning, also referred to as engaged scholarship, motivates students to learn by "active participation in organized services that address community issues and is linked to academic study through structured reflection" (Yue & Hart, 2017, p. 25). For example, Owen et al. (2019)

describes how students in the Research Consultation Project (RCP) provided community partners with research-based information through consultations and a brief of key issues and recommendations. RCP students also met with a faculty/research advisor once every two weeks, attended group meetings with other RCP students, and produced a 20-25-page research paper. Through this service project, students learned how to synthesize, integrate, and apply knowledge, developed their writing skills, and felt greater career preparedness, although students' experiences varied depending on community partners' level of engagement and availability (Owen et al., 2019).

Findings from Owen et al. (2019) align with that of other studies, which suggest that service-learning allows students to practice critical thinking and gain professional skills by applying their studies to community issues (Alexander et al., 2020; ChanLin et al., 2012; Miller et al., 2019; Song et al., 2017; Trolan & Jach, 2020; Yen & Carrick, 2021). Additionally, students engaged in projects serving diverse populations may be able to build new language skills and learn about different cultures (ChanLin et al., 2012; Lavery et al., 2014; Miller et al., 2019; Yomantas, 2021). Several theories offer further explanation for why service-learning is correlated with increased graduation rates (Yue & Hart, 2017). Service-learning allows students to apply their academic knowledge to address community issues (Alexander et al., 2020; Song et al., 2017; Yen & Carrick, 2021). Kolb's (1984) theory of experiential learning suggests that connecting theoretical knowledge to practical, hands-on experience is a key component of the learning process (Trolan & Jach, 2020). According to Kuh's (2003) theory of student engagement, participating in purposeful, high-impact activities enhances learning by increasing student motivation.

Yet, as with distance learning, service-learning's strengths are associated with corresponding weaknesses, as shown in Table 2. Effective service-learning requires time and resources from students, instructors, and institutions (Song et al., 2017; Yen & Carrick, 2021). In addition to instructors' time spent teaching, they may need to fulfill additional roles such as identifying appropriate service-learning projects and coordinating between community partners and students (Heinrich & Green, 2020; Miller et al., 2019). To implement service-learning effectively, it is critical that institutions provide instructors with appropriate training, establish strong relationships with community partners, and maintain clear communication between stakeholders (Alexander et al., 2020; Miller et al., 2019)

Table 2
Benefits and Challenges of Service-learning for Students, Instructors, and Institutions

Benefits	Challenges
<i>For Students</i>	
<ul style="list-style-type: none"> • Enables students to link their studies to real-life problem-solving¹⁻⁷ 	<ul style="list-style-type: none"> • Additional time commitment on top of courses and employment³

<ul style="list-style-type: none"> ● Opportunity to gain professional knowledge and skills, such as critical thinking and communication^{2,8,9} ● Potential to enhance socio-cultural awareness by interacting with diverse populations^{2-4,8,9,10} ● Positive effect on academic, social, personal, civic and professional development^{3,5,7} ● Sense of achievement and ability to facilitate social change^{2,9} 	<ul style="list-style-type: none"> ● May need to arrange transportation to service-learning site³ ● May perceive few or no gains from service, as experiences vary depending on the instructor, service-learning project, and community partner³ ● Community partners' level of engagement and availability may not align with student needs and expectations⁴
<p><i>For Instructors</i></p>	
<ul style="list-style-type: none"> ● Increases students' motivation, attendance, and academic success^{1,3,5,6} ● Allows instructors to adapt their courses to address a variety of community issues¹⁰ ● Opportunity to create more meaningful engagement and deeper connections to students as learners and individuals³ ● Enhances community involvement³ 	<ul style="list-style-type: none"> ● Training, which may not be available, is needed to ensure whether best practices are followed (such as reflection, meaningful service, sufficient duration)^{5,7} ● Time and resources needed to discern appropriate service-learning projects and develop courses accordingly^{5,7} ● Requires flexible teaching approach to maximize benefits for both students and community partners^{1,3,11,12}
<p><i>For Institutions</i></p>	
<ul style="list-style-type: none"> ● Increases student persistence, retention, and graduation rates^{3,5,7,13} ● Bridges institutional research with policy and practice⁴ ● Opportunity to build long-term relationships with community members and organizations⁴ 	<ul style="list-style-type: none"> ● Time and resources needed to train instructors and establish partnerships with community partners^{1,3} ● Communication is crucial to prevent misunderstandings between students, instructors, and community partners³

¹Alexander et al., 2020; ²ChanLin et al., 2012; ³Miller et al., 2019; ⁴Owen et al., 2019; ⁵Song et al., 2017; ⁶Trolan & Jach, 2020; ⁷Yen & Carrick, 2021; ⁸Gasper-Hulvat, 2018; ⁹Lavery et al., 2014; ¹⁰Yomantas, 2021; ¹¹Heinrich & Green, 2020; ¹²Hall, 2020; ¹³Yue & Hart, 2017

Combining distance learning with service-learning can potentially overcome some of the challenges associated with each of these approaches in isolation. For example, disadvantages of digital learning include lack of motivation and difficulty preventing cheating. Service projects may increase students' motivation, and cheating is less of an issue with such projects than it is with forms of assessment like papers and exams. Likewise, digital approaches can mitigate service-learning challenges such as the need for flexible scheduling and transportation issues. Creating digital service-learning opportunities that are aligned with the community of inquiry and cultural wealth educational approaches can further maximize benefits and minimize challenges associated with distanced learning and service-learning. The community of inquiry model emphasizes the importance of communication, feedback, collaboration, and community building, according to which instructors and students are part of a broader community that exchanges ideas and values all participants' contributions, rather than a hierarchy in which knowledge is supposed to flow primarily from professors to students. Such an approach helps to overcome the communication challenges and feelings of isolation that can be associated with digital learning, as well as the risk of lack of engagement on the part of community partners in the case of service-learning.

Furthermore, the cultural wealth model values the knowledge and experiences that students – especially those of underrepresented backgrounds – contribute to educational initiatives. Prioritizing students' interests, knowledge, and values helps to ensure that distance learning approaches are student-centered, both in design and content, and thus helps to overcome challenges associated with time management and motivation. Additionally, adopting a cultural wealth model enables students to develop service projects that they find meaningful, thus addressing students' potential perception that they will not benefit from service-learning. To further explore how a digital service-learning project grounded in community of inquiry and community cultural wealth models can benefit students (and instructors and institutions), we analyze our experiences with the Pandemic Histories Archive Project.

Case Study: The Pandemic Histories Archive Project

The Pandemic Histories Archive Project was created in 2020, in response to the COVID-19 pandemic, when in-person, community-based serving learning suddenly became remote. Since 1970, undergraduates seeking a baccalaureate degree from UCI's School of Social Ecology have been required to complete Field Study, a service-learning program in which students complete 100 hours of service at a Field Study site over the ten-week academic quarter in conjunction with an interdisciplinary faculty-led seminar. Field Study provides students the opportunity to engage with community members and impact social change. The program assists community partners in building organizational capacity while students gain new skills and further their professional development. Students have access to an extensive catalog of placements from the public, for-profit, and nonprofit sectors, in areas such as child and family

services, health care, education, environmental planning and policy, law enforcement, and legal services. Field Study sites are responsible for creating and managing their own application system. After a student applies and is accepted by a Field Study site, they may enroll in a Field Study seminar that enables students to synthesize their experiences in the field with theory from their coursework. Approximately 1,000 undergraduate students complete Field Study annually.

In March 2020, Field Study had to rapidly pivot when the campus halted in-person learning in compliance with measures to reduce the spread of COVID-19. During Spring and Summer of 2020, students enrolled in the Field Study Seminar, but the requirement to complete service hours was temporarily suspended, thus contravening a key goal of the program. As Fall 2020 approached, the service requirement was reinstated but at a reduced level of 5 hours per week, in recognition of the many challenges students experienced during the height of the COVID-19 pandemic. Furthermore, only remote placements were permitted. The community agencies where Field Study students were placed were also experiencing emergency conditions. As their resources and the nature of their work varied, not all partner agencies were able to host interns remotely. It quickly became apparent that there was a considerable gap between available placements and the number of students who needed to complete Field Study during the 2020-2021 academic year. In response, Field Study expanded placements to include opportunities to serve as a research assistant and learning assistant. By issuing a regular call for faculty to announce such opportunities, undergraduate involvement in research and teaching increased. Yet, even with these measures, the placement gap remained.

PHAP was created in a matter of weeks as an emergency solution to this sudden need for remote Field Study placement sites and was grounded in redefining the “Field” to include students’ own lives and communities. Inspired by other university projects documenting the COVID-19 pandemic, two associate deans reached out to the university library to ask whether they would be interested in establishing a digital archive to document undergraduates’ experiences of this unprecedented historical moment. The libraries responded positively, as this initiative was consistent with their own commitment to community-centered archiving, an approach in which community members, rather than experts with formal training in library science, are recognized as content creators, appraisers, and curators of materials regarding their own histories (Caswell, 2014; Caswell et al., 2016; Copeland, 2015; Flinn, 2007). Community-centered archiving is designed to alter the power dynamics that more typically undergird archives by ensuring that underrepresented voices and histories are preserved for future generations. As UCI’s library explains on their website, “community-centered archives come into being through collaborative partnerships between mainstream archival institutions and communities that are underrepresented in the historical record. The goal is to empower communities in the process of telling and preserving their own histories.”

Based on the principles of community-centered archiving, the Pandemic Histories Archive was rapidly developed as a virtual Field Study service-learning opportunity. During 2020-2021, approximately 100 undergraduates per academic quarter participated in PHAP in fulfillment of their Field Study requirement. PHAP students were expected to perform 50 hours of remote service work by completing asynchronous training modules, attending virtual meetings with supervisors and fellow student interns, recording oral histories, writing ethnographic fieldnotes about their experiences, and producing metadata (such as abstracts and narrator biographies) regarding their materials. Project supervisors provided weekly feedback on students' work-in-progress, and, at the end of the quarter, students had the opportunity to submit materials their archival materials to a new digital archive established as part of the library special collections. Designing this opportunity was a collaborative process in which faculty instructors, TAs, the Field Study office, and librarians shared their expertise regarding learning, research, and archiving. Constant communication was critical to the success of this project. The teaching team was able to structure PHAP to comply with the library's goals for archival submissions and shifts in the immediate stresses that students were facing, such as surges in COVID-19 cases and the 2020 elections.

In designing PHAP, project supervisors relied heavily on the cultural wealth and community of inquiry models of student learning. PHAP served a unique group of students who are historically underrepresented in higher education (students who are female, who are the first-generation to attend college, who transfer from community college, and who are Black, Latino/a/e/x, or indigenous to the US and its territories). Consistent with both community-centered archiving principles and the cultural wealth model, PHAP empowered students to draw on their own backgrounds and interests to decide what would be of enduring historical value for future generations. This invitation to preserve their own history recognized and honored their cultural capital and enabled them to construct meaning from their personal experiences. Furthermore, because community-centered archiving empowers community members – in this case, student interns – PHAP also established a community of inquiry in which supervisors provided guidance and mentorship while student interns were also recognized for their expertise. For example, while the supervisors taught students how to collect oral histories and write fieldnotes, some students drew on their own skills to produce other forms of documentation, such as poetry, diaries, zines, artwork, photography, videos, and even a cookbook featuring recipes that a student had prepared during the pandemic. Additionally, the community of inquiry model encouraged project supervisors to respect the challenging social conditions that students faced. Supervisors provided students with feedback on a weekly basis, reached out if assignments were missing, and were flexible regarding deadlines. Supervisors communicated that PHAP was intended to be a source of support rather than stress, devoting a full week of the internship experience to wellness activities such as meditation, breathing exercises, and self-care.

PHAP was successful in that it met the need for 300 additional remote service-learning placements during 2020-2021, and that it produced a digital archive featuring the work of the approximately one-third of the PHAP participants who chose to submit

their materials to the libraries. However, how well did PHAP work as a form of digital service-learning? Are there lessons from this experience that can serve as a model for others? To address these questions, we turn now to feedback from student participants.

Methods

To assess how effectively PHAP combined online instruction with service-learning, we evaluate two forms of data: 1) exit surveys completed by 268 PHAP participants over the 2020-2021 academic year, and 2) student satisfaction data obtained by the Field Study office. PHAP students ($n = 268$) completed the **PHAP Exit Survey** as part of their Field Study course on Canvas Learning Management System (LMS), the online platform for their remote internship. There were six students who participated in PHAP but withdrew from Field Study during the quarter and thus did not complete the PHAP Exit Survey. Exit surveys were used to share access to their archive materials, document students' service hours, and comment on their project experiences through open-ended questions regarding the materials that students created, how these materials would help future archive users understand the current historical moment, what aspects of PHAP students considered to be the most valuable, and recommendations for improvement. Exit surveys provide insight into how students experienced this online service-learning opportunity. In addition, the Field Study office surveyed all field study students over the 2020-2021 academic year to gauge satisfaction with their placements. The **Field Study surveys** create an opportunity to compare PHAP with remote placements in community agencies. During the 2020-21 academic year, a total of 1,049 undergraduates participated in Field Study. The PHAP provided Field Study opportunities to 26% of the field study participants across three quarters (Fall 2020, $n = 74$; Winter 2021, $n = 96$; Spring 2021, $n = 98$). In addition, all Field Study students were asked to complete a Field Study Evaluation on Qualtrics by the Field Study office. The PHAP response rate for the Field Study Evaluation was 74% ($n = 198$).

Data Analysis

The (internal) PHAP Exit Survey responses were anonymized, then qualitatively coded by a graduate student researcher and faculty member who supervised PHAP students. Open coding is the "active process of identifying data as belonging to, or representing, some type of phenomenon" (Tracy, 2013, p. 189). First, responses were examined and assigned codes, words or short phrases that captured their essence, such as "communication," "flexibility," and "skills." The constant comparative method was used to compare responses for each code and modify code definitions to fit the data (Charmaz, 2006; Tracy, 2013). Then, a systematic codebook (Appendix A) was developed with key codes and definitions for the analysis. Based on these codes, survey responses were categorized into different themes.

The (external) Field Study surveys asked students to rate their experience at their remote site and describe beneficial aspects and challenges of their Field Study

experience. Students were asked to rate their experience at their Field Study site as either “extremely good,” “somewhat good,” “neither good nor bad,” “somewhat bad,” or “extremely bad,” and could elaborate by providing additional comments. Results from the PHAP Exit Survey were compared to the responses of the Field Study Evaluation.

Participant Demographics

Demographic data of undergraduate students who participated in Field Study during the 2020-21 academic school year was obtained from enrollment records. Table 3 compares the race/ethnicity of PHAP students to those who participated in other remote Field Study opportunities, such as assisting a community partner, campus center, or faculty.

Table 3
Race/Ethnicity of Field Study Students 2020-21 (N =1,049)

	PHAP Students (<i>n</i> ₁ = 268)	Other Field Study Students (<i>n</i> ₂ = 781)
Latinx	36%	46%
Asian	32%	28%
White	13%	14%
American Indian, Alaskan Native, Native Hawaiian, other Pacific Islander	8%	5%
Black or African American	6%	5%
Decline to State	4%	2%

Like students in other Field Study sites, most PHAP students identified as Asian (32%) or Latinx (36%). As shown in Table 4, the majority of those who participated in Field Study are female and first-generation students, meaning that they are the first in their families to attend college (University of California [UC], 2021). About 40% of all Field Study students are categorized as low-income, much like the overall campus and system-wide population (38% of UCI undergraduates are low-income).

Table 4
Additional Demographic Characteristics

	PHAP Students ($n_1 = 268$)	Other Field Study Students ($n_2 = 781$)
Female	71%	76%
First-Generation	61%	65%
Transfer Student	57%	39%
Low-Income	40%	42%

Nearly 20% more transfer students participated in PHAP compared to other Field Study placement sites. Aside from the higher number of transfer students, PHAP students were demographically similar to those in other Field Study placement sites.

Results

PHAP Exit Survey Analysis

Seven recurring themes were identified in the PHAP Exit Surveys: 1) **student-centered approach**, 2) **skills**, 3) **knowledge** 4) **public service**, 5) **communication**, 6) **attention to wellness**, and 7) **areas for improvement** (see Appendix A for codebook). Of these themes, **student-centered approach** recurred the most overall and for each quarter. Over half (55%) of students responded that documenting the historic moment for themselves and developing project goals based on personal interests and strengths were valuable aspects of their experience. Commenting on their PHAP experience in Winter 2021, one student wrote, “I learned that our stories matter, my story matters. With the use of field notes we can preserve these stories for later generations to look back on and learn from.” A student from the Spring 2021 quarter, who chose “uplifting the voices of street vendors” as the focus of their project, described how they could “speak more freely on what I observe and my own experiences.” Overall, students enjoyed the creative freedom to choose what to work on and include in their final project portfolio, as opposed to “rigid assignments.”

The next most common theme mentioned by 44% of students was the acquisition of research and professional **skills**. According to the PHAP Exit Survey responses, students valued learning archival techniques, improving their writing through assignments, managing their project, and acquiring skills that would prepare them for

graduate school and/or future careers. One student interested in the field of psychology “found the lesson on field notes very valuable, as ... being able to properly document interviews, observations, etc. [in their field] is a must.” Students also described how they developed soft skills, such as creating a work-life balance, becoming more independent, and increasing self-awareness.

About 43% of students stated that they had gained **knowledge** through critical reflection on the COVID-19 pandemic and other current events, such as the 2020 United States presidential election, discrimination against Asian Americans (Tessler et al., 2020), and the murder of George Floyd, which had resulted in a global protest movement against police brutality (Eichstaedt et al., 2021). One student felt that their social justice reflection “will allow archive users to understand the frustration felt by the U.S. public following the murder of George Floyd... a moment in history that will be talked about as we continue to fight against social injustice against African Americans.” Through documentation such as field diaries and interviews, students were able to preserve stories from family, friends, and community members. Another student who interviewed Asian Americans described how the interviews “encapsulate... unease some Asian American individuals feel when going into public spaces with others” and “harassment or threats witnessed or experienced by Asian Americans that may not make the news but are still concerning nonetheless.” Students learned firsthand how community archiving allows diverse perspectives to be included in historical events and reported increased awareness of issues such as racial inequality, social injustice, political polarization, and public health disparities.

Public service was the next most common theme overall (37%), and the second most common theme during Winter quarter (48% of the 99 Winter participants). Students from Winter specifically described the importance of documenting the United States Capitol attack, which had occurred January 6, 2021. One student from Winter quarter 2021 recounted:

I was in my room at the time and seeing everything happen through my tiny phone screen; I was in complete disbelief and also a little bit scared, honestly. Yet, after all of that, I still had to carry on about my day and act as if nothing had happened so I could focus on my schoolwork. My drawing represents the struggles with mental health and mental illness during this pandemic. I believe, without a doubt, that this has been a pressing issue for many people this past year. The drastic changes to everyday life, the threat of sickness and death, unemployment, racial injustice, political turmoil, and more, have impacted countless individuals and their mental health has suffered because of it.

Across all quarters, students expressed pride and gratitude for the opportunity to contribute to a historical archive, pass on knowledge to future generations, and represent the people they connected with during the project (such as family and community members featured in archive materials).

Over a third (36%) of students stated that **communication** between supervisors and students was a valuable aspect of their Field Study experience. One student said, “I felt really secluded from the people in this project (due to the distance learning). I felt much better after [the supervisors] made reassurances to be available every week and to start up discussions for students to talk to one another.” Another student stated, “This Field Study [project]... opened up the idea that I am not alone in my experiences... Being in this community of leaders and peers has made me feel safe.” Online communication helped students feel a sense of social interaction and community, despite the experience being remote.

In their open-ended responses, about 28% of students discussed the project’s **attention to wellness**. Students valued the “understanding” and “caring” nature of the supervisors, flexibility provided through asynchronous training materials and recorded virtual meetings, and the opportunity for self-reflection. Students appreciated that the supervisors “foster[ed] a stress-free environment” and “cater[ed] to students when necessary,” by providing assignment extensions and a week of “Reflection, Rest, and Respite” dedicated to self-care during midterm season.

Responses to the question, “How could we improve this experience for future students?” were coded as “**Areas for improvement**.” About half of all PHAP students (49%) answered this question with recommendations for the project. In Fall, 57% of students responded with feedback for improvements, such as additional Zoom meetings and group discussions to increase peer interaction, clearer guidelines for project expectations at the beginning of the quarter, and additional assignments. Although the Winter student cohort included over 20 more students, the percentage of responses (47%) decreased by over ten percent. Similar to the Fall cohort, Winter students requested additional Zoom meetings and assignments, and also suggested more examples from previous students, assistance with project management, and updated instructions for DocuSign, the electronic signature website used to send signed consent forms to the library. Feedback from 44% of Spring students recommended clarification in “what [remote activities] counted” for Field Study service hours, correcting inconsistencies in the guidelines for naming project folders and files, and improving the organization of the Canvas page, which one student described as “intimidating” and “clunky.”

Field Study Evaluation Analysis

At the end of each quarter, the Field Study office emailed an evaluation survey to students. This evaluation was conducted separately from the previously described PHAP exit survey, and was intended to collect student feedback on their overall Field Study experience. According to survey data, the majority (75%, $n = 141$) of students across all three quarters rated PHAP as “extremely good.” Many students provided additional feedback regarding benefits of participating in PHAP and challenges they faced. For example, one PHAP respondent who rated their experience as “extremely good” wrote:

The Field Study course was a lighter load than I had expected, which was pleasantly surprising. However, it did feel very one-sided; despite that, getting feedback directly from the professor was a nice experience. The field study site was also well-constructed, despite being online. The supervisors and TA were always ready to answer questions or provide feedback on assignments!

Another PHAP student reported that the project gave them “intrinsic purpose at a time that is very low for me & so many others,” by “collecting stories from real people,” to share their perspective and the perspectives “of the people [they] know who would have been forgotten.”

About 19% ($n = 36$) of PHAP students rated their experience as “somewhat good” and 5% ($n = 10$) rated their experience as “neither good nor bad.” One PHAP student who gave a rating of “somewhat good” explained, “In the beginning, I was very confused as to the expectations of the field study and what I had to do for hours.” However, the same student reported that through the project they gained “interview skills” and the ability to “think in different perspectives” about current events. A PHAP student who felt their experience was “neither good nor bad” wrote that PHAP “wasn't as challenging” as they expected, since they received “a lot of freedom with what [they] wanted to submit.” The student found it unclear whether their submission was “appropriate to the archives,” but “liked the insight” they received on the pandemic through “other students' comments on discussions.”

When asked to choose the most beneficial aspects of their field study experience, 32% ($n = 61$) of the PHAP student respondents selected “improved communication (e.g., learning interview methods)” and 29% (54) of students selected “improved writing skills (e.g., writing field notes, interview transcripts, time logs, resume writing, etc.)” Other beneficial aspects selected by students included “honing professional career skills (e.g., time management),” “freedom to research & reflect on topics of interest in this contemporary moment,” “being a part of a large collaborative project,” “schedule flexibility,” “learning how an archive works,” “collecting data & synthesizing research information for history (meaningful/purposeful),” and “helpful Field Study supervisor & course professor/teaching team.”

PHAP student respondents were also asked to select the challenges they faced during their field study experience. The most common challenge selected by 29% ($n = 55$) of the PHAP students was “lack of social interaction (e.g., conducting interviews remotely, disconnect from peers).” About 14% ($n = 26$) of the PHAP students also faced “technical difficulties (e.g., internet connectivity).” Additionally, students reported that they faced challenges with “personal struggles (e.g., loss of loved ones, mandatory quarantine, etc.),” “figuring out the [library] system,” “lack of guidance from supervisors (e.g., no regular meeting times),” “increased difficulty learning material remotely,” “lack of interest in site/Zoom fatigue,” and “time management.”

Discussion

Overall, the majority of the PHAP students reported a positive experience with digital service-learning and commented on gaining skills and knowledge through producing archival materials, curating their project, and reflecting on current events. Consistent with both the Community of Inquiry and Community Cultural Wealth models, PHAP was able to foster a sense of belonging among students, which supports previous research on community archives (Caswell et al., 2016, Gilliland & Flinn, 2013). As members of a shared research community who were empowered to draw on their own cultural wealth in developing archiving projects, students felt intrinsically motivated to participate in PHAP, and went beyond the initial Field Study requirements by creating additional materials, such as photographs, videos, artwork, poetry, and zines. PHAP students were encouraged to use their existing strengths and cultural capital, and had the opportunity to develop bonds with friends, family, and community members while documenting their stories (Yosso, 2005). Furthermore, PHAP students reported feeling safer and reassured that they were not alone in their experiences.

Reliance on the Community of Inquiry model encouraged PHAP supervisors to be attentive to students' situations and needs and accommodate them accordingly, thus contributing to "authentic accessibility," as suggested by Lee (2017). PHAP's emphasis on student wellness aligned with research from Stanton et al. (2016), who found that learning environments that enhance wellbeing also increase satisfaction and engagement with learning. Supervisors offered extensions on assignment deadlines, shared basic needs and wellness resources, and allowed students to devote a week to self-care. The first module on the PHAP Canvas page is a list of resources, including links to the university's hotspot and laptop loaner program, campus centers, and public assistance for food, housing, and unemployment. Anticipating the stress that students may have felt during midterms (and during Fall quarter, the 2020 presidential election), supervisors scheduled a week of "Reflection, Rest, and Respite," which offered a break from assignments and provided self-care resources, such as meditation and exercise videos.

PHAP participants' feedback demonstrates ways that PHAP effectively drew on the Community Cultural Wealth framework. Enabling students to pass down knowledge to future generations could be considered an example of aspirational capital, the "ability to maintain hopes and dreams for the future" (Yosso, 2005, p. 77). As part of their service-learning, PHAP students wrote field notes and social justice reflections, which often touched on navigational and resistant capital. Navigational capital involves the ability to maneuver through social institutions, particularly in environments that are "racially-hostile" or "not created with Communities of Color in mind" (Yosso, 2005, p. 80). This relates to resistant capital, which refers to knowledge and skills gained by challenging inequality in order to secure equal rights and freedom (Yosso, 2005). In their archive submissions, students described how they adapted to institutional changes caused by the pandemic and reflected on topics such as racial injustice and health

disparities. PHAP students were also trained to conduct oral history interviews. Students were encouraged to develop their linguistic, familial, and social capital by interviewing people in their families and communities, to capture culturally significant events and perspectives. Using the Community Cultural Wealth model in conjunction with the Community of Inquiry framework enabled supervisors to create a supportive, online teaching environment that honored students' cultural capital and empowered them to construct meaning from their personal experiences.

PHAP students did experience internet connectivity issues and other technical difficulties, a disadvantage of online learning mentioned by several scholars (Adnan & Adwar, 2020, Händel et al., 2005, Swanson et al., 2015, Ali, 2020). Challenges unique to this project included ambiguity in earning remote service hours and technical instructions becoming outdated within the ten-week quarter. For example, a video created in Fall 2020 to demonstrate how to electronically sign consent forms via DocuSign became obsolete in Winter 2021, when DocuSign changed the layout of its website. Additionally, certain students were not granted access to DocuSign due to a technical error. This development prompted the project supervisors to create a list of alternative methods for signing documents electronically, including using a different electronic signature service, or simply scanning a physically signed copy of the document.

PHAP rapidly adapted to student feedback and to offered a plethora of digital resources, similar to online courses described in previous research (Arkorful & Abaidoo, 2015, Barratt & Duran, 2021, de Oliveira et al., 2018, Ali, 2020). Throughout the quarter, the team of supervisors quickly added and updated content, such as clearer project guidelines and examples, to the Canvas page as needed. The PHAP supervisors recorded instructional videos to answer questions that students asked via email, Zoom meetings, and in the space for comments on their weekly timesheet. At the end of each quarter, the PHAP implemented changes based on feedback from student exit surveys, such as updating instructions and adding more project resources. The percentage of students who commented on project deficits decreased each subsequent quarter, suggesting that while there was room for improvement, PHAP addressed some of the previous concerns raised by students.

PHAP participants' positive experiences with remote service-learning are particularly noteworthy given the ways that the COVID-19 pandemic exacerbated preexisting educational disparities. The pandemic disrupted students' access to support services and ability to share resources with one another (Aristovnik et al., 2020; Barratt & Duran, 2021; Fruehwirth, 2021; Händel et al., 2020; Huckins et al., 2020; Zimmermann, 2020). Such changes were particularly damaging to socioeconomically disadvantaged and historically minoritized students (Barratt & Duran, 2021; Bintliff, et al., 2020). Pre-pandemic research suggests that these students are more likely to withdraw from college before obtaining their degree, due to working more hours, living off campus, and commuting longer hours compared to their peers (Schulzetenberg et al., 2020). Furthermore, although some students (particularly those who enjoyed the increased autonomy of remote learning) increased their academic performance during

the pandemic (Gonzalez et al., 2020, Wong 2020), many students grappled with stress, loneliness, anxiety, depression, and personal difficulties related to the crisis (Aristovnik et al., 2020; Fruehwirth et al., 2021; Händel et al., 2020; Huckins et al., 2020; Wong, 2020; Zimmermann et al., 2020; Zhou et al., 2020). In a survey of over 1,800 students enrolled at a German University, Händel et al. (2020) found that while most students had access to digital resources (such as a notebook, personal computer, or tablet), about half of students reported not having prior experience with online learning. These studies support previous findings that suggest institutions must address educational inequities and provide additional support for underserved student populations (Lee, 2017; Warschauer et al., 2004). To reduce students' feelings of isolation and lack of motivation, educators may be able to increase engagement in online courses by implementing elements of service-learning, as occurred through PHAP (Alexander et al., 2020; Barratt & Duran, 2021; Miller et al., 2019; Trolan & Jach, 2020).

Conclusion and Recommendations

This case study of PHAP has implications for teaching beyond the pandemic. Teaching approaches modeled in PHAP demonstrate how instructors can create more meaningful learning experiences for students, regardless of where learning takes place. Students' positive experiences of PHAP demonstrate how service-learning and remote instruction can effectively be combined, drawing on the Community of Inquiry and Community Cultural Wealth Models. Although in-person instruction has resumed for many universities, online courses continue to be offered. It is also inevitable that students may face obstacles that prevent them from attending lecture in-person. Therefore, it is important for educators to be aware of best practices and solutions for potential difficulties that diverse students may face (e.g., illness, work, taking care of family).

For instructors to create inclusive, authentically accessible courses, we recommend implementing elements of service-learning (such as exploration of community issues and contribution to a public service project), prioritizing wellness, and adapting the online space to fit student needs. As our own team found while returning to in-person instruction, these aspects of PHAP can be adapted for online, in-person and hybrid learning. Despite technical difficulties and desire for more social interaction- a recurring challenge during the pandemic- PHAP students enjoyed the freedom to select project formats and adapt instruction to their own schedule. Students felt a sense of belonging through community archiving, which celebrated their existing strengths and distinct backgrounds. Overall, this study suggests that a flexible, student-centered approach to course design can successfully engage students in online learning.

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Appendix A

Codebook for Analyzing Exit Survey Responses

Code	Definition	Examples
Student-centered approach	Statements describing the creative freedom to develop their own project goals, pursue personal interests, utilize existing strengths, and document the historic moment for themselves.	“It was also very easy to keep up with all the requirements, and everyone was very understanding, so it was not difficult to get done even if there were a lot of other things going on in our lives. Also, it was very open with the materials that could be included in the project and allowed students to be creative in what they wanted to do.”
Skills	Statements describing the acquisition of research and professional skills, such as preparing archival materials, writing, project management, and teamwork.	“The emphasis on documenting historical events and how to gather data to make an archive were the most interesting to me, especially the field notes exercise as I think it is the most hands-on and practical exercise for students.”
Knowledge	Statements describing the ability to reflect critically on the experience they are living through. Students learned the perspectives of family, friends and community members, and gained knowledge of issues such as racial inequality, social injustice, political polarization, and public health disparities.	“...this pandemic has brought up the many indifferences and injustices that many go through in their lives here in the US. Either from their jobs, their living conditions, or learning we are all going through something and this pandemic has brought up the many things people

		have to do to earn an education or to simply get food on their table.”
Public service	Statements describing the public service component of PHAP, including gratitude for the opportunity to contribute to a historical archive, the ability to represent the people they connected with during the project (such as family and community members featured in interviews, field notes, photographs), and the desire to pass on knowledge to future generations.	“One aspect of this experience that I considered to be the most valuable includes knowing that I am contributing to something bigger than myself. I am very excited and proud to know that my contribution to the Pandemic Archive Histories Project will serve the purpose of illustrating and informing future generations of what I have endured throughout 2020.”
Communication	Statements describing communication between supervisors and students, such as supervisors’ continual updates and feedback on Canvas, and the sense of community among students in discussion boards and Zoom meetings.	“Going into this project was a bit difficult at first because I didn’t know what was expected of me and I felt really secluded from the people in this project (due to the distance learning). I felt much better after [the project supervisors] made reassurances to be available every week and to start up discussions for students to talk to one another.”
Attention to wellness	When asked about valuable aspects of the project, students described the flexibility provided through asynchronous training materials and recorded virtual meetings, the compassion demonstrated by supervisors, and the opportunity for	“...I was able to stop and think about my feelings, because it was the assignment. It allowed me to stop and cope, to think about my situation without feeling like I was wasting

	self-reflection. Students appreciated self-care resources, assignment extensions, and the week of Reflection, Rest, and Respite during midterms.	the time that I could be spending doing homework or studying. I think it really helped with my well-being...”
Areas for improvement	Comments about areas where the project felt lacking, and it could be improved in the future.	“The modules are organized in a very intimidating, clunky structure and make it hard to sort through items due each week. More clear-cut direction on how each project is to be completed and what is expected of the student I think would make this more enjoyable.”