Journal on Excellence in College Teaching

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## Reviewers for This Issue (*continued*)

# Journal on Excellence in College Teaching

Special Issue:
*Leading, Facilitating, and Convening
Educational Social Learning Spaces–
Theory and Practice*

Guest Editors

Milton D. Cox
*Editor-in-Chief Emeritus,
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# Leading, Facilitating, and Convening Educational Social Learning Spaces–Theory and Practice: A Message From the Guest Editors

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This is the first time that the topic of social learning spaces has been featured as a special issue of the Journal on Excellence in College Teaching. In their book Learning to Make a Difference: Value Creation in Social Learning Spaces, Wenger-Trayner and Wenger-Trayner (2020) write, "We talk about a social learning space as a particular experience of engagement that takes place among people in pursuit of learning to make a difference" (p. 13). As the authors explain,

> More formally, what we call a *social learning space* is generated by three characteristics of participation:
>
> • Caring to make a difference . . .
>
> • Engaging uncertainty . . .
>
> • Paying attention. . . . (p. 15)

In addition, the authors note,

> Our experience with groups suggests all three are challenges:
>
> • Getting a grasp on the difference they care to make

- Uncovering their uncertainties to make them sharable

- Committing to paying attention to learn new things (p. 29)

This special issue contains seven articles about teaching, learning, and leadership in higher education. All seven involve communities of practice (CoPs), defined by Wenger-Trayner et al. (2023) to be "groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (p. 11). The articles can be placed into four categories: one article on a classroom as a CoP, three about systems convening, two using the CoP framework to conduct a research project, and one about a CoP using the value creation framework (Wenger-Trayner & Wenger-Trayner, 2020).

With respect to the first category, a classroom as a CoP, instructors care to make a difference in their students' learning, work with students to uncover their uncertainties, and find ways to motivate them to pay attention to learn new things. **Major's** article looks at an online classroom as a CoP. Her research highlights the idea that online learning can be more of a social process of involvement in activities than an individualistic, student-initiated process of knowledge acquisition. She examines a graduate-level asynchronous online course focused on college and university teaching and structured around a social learning perspective based on the CoP model. The study finds that success depends on the social and organizational factors that support it.

The next three articles in this issue are in the category of systems convening and systems conveners, concepts introduced by Wenger-Trayner and Wenger-Trayner (2021) in their book *Systems Convening: A Crucial Form of Leadership for the 21st Century*. These authors describe a systems convener as a person "working on sustainable change, across challenging silos, in complex social landscapes, who sets up spaces for new types of conversations between people who often live on different sides of a boundary" (p. 21).

One of the three articles in the systems convening category compares the experiences of four systems conveners, each in a different CoP at one university. **Owens et al.** describe each CoP focused on different aspects of quality in teaching and learning. These qualities contribute to problem solving in varied contexts and to shared strategies for improving learning experiences and outcomes for students. A second article in this category describes how the members of a CoP employed systems convening as a strategy to change institutional societal systems. **Shaffer** examines the formation and impact of the Women in Academia Community, a supportive networking CoP for

women faculty and staff that serves as an agent of systemic change by conducting systems convening work. Over time, the group gained the ability to alter traditionally discriminatory institutional and societal systems for the better. The article provides stories of the CoP members in the seven areas of work generally undertaken by systems conveners.

The third article involving systems convening presents a case study about the role and capacities of a systems convener in a CoP attempting to reconfigure members' professional identities. **Kay and Sheppard-LeMoine** present a case study about the role and capacities of a systems convener in a CoP in an interprofessional education landscape involving nursing, medical, and clinical simulation educators in a transnational higher education context in the Middle East.

The third category of articles in this issue features use of the CoP framework to investigate research questions. The two articles included feature research projects involving living labs and development of a Universal Wellness Model.

Universities can view living labs as optimal social environments that integrate research and education in order to achieve applicable innovations for knowledge economies. **Griffioen and Heijningen** use a literature review application of Wenger's CoP framework as first insight into what is known about the complex collaborative processes of living labs. They find that current research on lab practices is limited and that there is little common perspective across disciplines. **Stevenson et al.** describe the development of a Universal Wellness Model and four innovations through repeated cycles of the Wenger-Trayners' (2020, 2021) approaches in social learning spaces applied to increasingly complex and highly effective social learning with students, staff-researchers, wellbeing practitioners, and stakeholders. The project was inspired by a cohort of Indigenous Māori and Pacific Island students entering a higher education institution in New Zealand. The social learning space involved ethnically and culturally different perspectives, knowledge bases, expectations, and ways of thinking and being.

The fourth category of articles involves the Wenger-Trayner and Wenger-Trayner (2020) value creation framework for social learning spaces. The authors state,

> Social learning creates value for participants to the extent that they view engaging uncertainties and paying attention as contributing to their ability to make a difference they care to make. (p. 43)

The authors continue,

> If we think of this process, we can articulate four social learning modes:
>
> • Generating value . . .
>
> • Translating value . . .
>
> • Framing social learning . . .
>
> • Evaluating social learning. . . . (pp. 44-45)

In this category, **Hogan et al.** report meaningful value, suggesting potential for overcoming the entrenched culture of lecture-driven instruction and inspiring culture change in STEM instruction. Using the Reading Apprenticeship framework as a foundation, the CoP focused on text-based metacognitive conversations to facilitate students' authentic participation in disciplinary sense-making.

Wenger-Trayner and Wenger-Trayner (2020) note that some social learning spaces may not be CoPs. Characteristics of CoPs not required for a social learning space are

> • Identification with a shared domain
>
> • Commitment to plying, developing, and improving a shared practice
>
> • Longevity and continuity as a social structure
>
> • Definition of a regime of competence over time
>
> • Recognition of membership and construction of identity based on the regime of competence

> The concept of social learning spaces retains some of the fundamental characteristics of social learning often associated with CoPs:
>
> • The focus is on people and their participation.
>
> • Members drive the learning agenda.
>
> • Learning is rooted in mutual engagement.
>
> • This engagement pushes the participants' edge of learning.
>
> • Meaning and identity remain central, but on caring to make a difference rather than competence in a social practice. (p. 32)

In conclusion, the guest editors call for future manuscripts about social learning spaces in higher education that may leverage on, or take a step beyond, the involvement of CoP and/or faculty learning community frameworks. We seek to continue to publish efforts that investigate opportunities posed in teaching, learning, and leadership in innovative social learning spaces and encourage projects that involve social learning spaces that are not CoPs or faculty learning communities.

# References

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*M**ilton D. Cox***, PhD, founded the Center for the Enhancement of Learning and Teaching at Miami University, where he initiated and directed the annual Original Lilly Conference on College Teaching, now in its 42nd year. In 1990 he founded and served as Editor-in-Chief of the* Journal on Excellence in College Teaching. *Milt has been project director and systems convener of state and federal grants establishing faculty learning community (FLC) programs at other institutions and has visited over 100 institutions in the U.S. and abroad to consult and present on various issues in higher education. In 2023 these include Mainland China and Portugal, with invited virtual conference presentations in Lebanon and Cyprus. In addition to many articles on FLCs, Milt is currently contributing forewords to three new edited books about FLCs. His current interests also include Etienne and Beverly Wenger-Trayner's social learning spaces, systems convening, and communities of practice.* **Jacquie McDonald***, PhD, is an Honorary Associate Professor at the University of Southern Queensland (UniSQ) and a Higher Education community of practice consultant. She worked for 26 years as a Learning and Teaching Designer at UniSQ, designing online learning courses and programs. In 2006 she initiated the successful implementation of communities of practice (CoPs) at USQ and was recognized by a 2009 Australian Universities Quality Agency commendation and 2009 Australian Learning and Teaching Council Citation. She led a several institutional and national fellowships and grants, researching and resourcing leadership of CoPs. She is a member of the Australian Learning and Teaching Fellows Alumni and has been invited by national and international universities to facilitate CoP workshops and contribute to CoP initiatives. Jacquie co-facilitates two higher education online CoPs, and she continues to mentor, research, and publish in the areas of CoPs and social learning spaces.*

# Community Beyond Proximity: Facilitating Community in an Online Course

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*Online courses are gaining importance in higher education institutions, leading scholars to explore how individuals learn in this context and how developing an online community can support their learning. This research examines a graduate-level online course focused on college and university teaching, structured around a social learning perspective based on the communities of practice (CoP) model. The reflective case study aimed to document how community functions within an asynchronous learning environment. By doing so, the research contributes to a broader understanding of how to foster CoPs in this context.*

## Introduction

Higher education institutions have seen a rapid rise in online learning in recent years, and the COVID-19 pandemic has only accelerated this trend. According to the National Center for Education Statistics (2021), at the start of the pandemic, about 74% of undergraduates were taking at least one online course. While online courses have compared favorably with face-to-face offerings in terms of student learning outcomes (Means et al., 2009), online learners have faced some challenges, with social isolation being one of the most frequently cited obstacles to student satisfaction and success (Barreto et al., 2022; Blackmon & Major, 2016; MacMahon et al., 2020; Thacker et al., 2022). Ever aware of this challenge, educators have sought strategies

for overcoming student feelings of isolation in online courses (Major, 2015; Santa-Ramirez et al., 2022).

Conceptualizing an online course as a situated, social learning space offers promise for decreasing isolation and improving community. In theory, online courses could provide learners with a flexible and convenient platform to engage in social learning and interact with others. Indeed, many technological initiatives have focused on facilitating communication, such as the development of user-friendly learning management systems, synchronous tools, and alternative online discussion platforms (Padayachee & Campbell, 2022; Praditsorn & Ulla, 2022). Educators have also proposed and implemented various instructional methods to encourage social interaction in online learning, such as collaborative projects and regular discussions (Barreto et al., 2022; MacMahon et al., 2020; Shea et al., 2005; Thacker et al., 2022). These initiatives share the common goal of creating a social learning environment in which students actively participate in learning with and from one another. In practice, however, the question of how to create community in online courses remains.

This study investigates community in an asynchronous, online course. The research aims to document what instructional activities support a community of learners. Overall, this research highlights the idea that online learning can be viewed as more of a social process of involvement in activities than an individualistic, student-initiated process of knowledge acquisition (Siemens, 2005).

## Background

### *Community Defined*

The concept of community is rooted in the Latin word *communis*, which means "to share or make common." A community is a group of individuals who share a common bond, which defines the community's boundaries (Schwier, 2011). McMillan and Chavis (1986) define community as a feeling of belonging, a sense that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together. Communities provide individuals with a sense of security, belonging, and identification and offer opportunities to associate with people who share similar values and beliefs, and who can support and learn from one another (McMillan & Chavis, 1986).

In higher education, communities have become increasingly import-

ant. Student learning communities in particular have been shown to improve intellectual and moral development, scholastic success and persistence, and moral and intellectual growth (Major, 2015). Examples of student communities in higher education include freshmen interest groups, linked classes, and living learning communities. By fostering a sense of belonging and providing opportunities for collaboration and learning, student learning communities can have a significant influence on student success and development.

## *Community in Online Courses*

Given that higher education institutions have sought out the benefits of having various communities on campus, it is no surprise that scholars have also begun to consider community within the context of courses generally and in online courses specifically (Major, 2015). Two key areas of research are essential for considering the topic of community in online courses: learning as a process of co-labor and establishing a learner community in online learning environments.

### **Learning as a Process of Co-Labor**

The concept of learning has transformed over time from a fully behaviorist perspective to one encompassing a more constructive and social approach; creating a community of learners is now seen by many as an essential element of the learning process. According to Rogoff (1994), learning occurs when individuals engage in shared activities with others, where everyone has an active but often uneven role in sociocultural activities. This foundation forms the basis of a community of learners, where individuals collaborate to structure common projects, influence their direction, and participate in reciprocal learning activities (Brown & Campione, 1994; Newman et al., 1989; Rogoff et al., 2003). From this perspective, learning can be seen as a continuous process of identifying, establishing, and achieving cooperative learning objectives through a collaborative effort involving both the instructor and the learners. In a community of learners, everyone is responsible and accountable for fostering learning in a supportive environment where each person is a resource to the others, and all occupy varying roles and carry out diverse responsibilities (Rogoff et al., 2003).

Determining what makes a community of learners is challenging. Rogoff (1994) argues that a community of learners is a distinct instructional model that operates on the principles of autonomy and agency, which allows each member to exhibit their position and nurtures

collective learning. In a community of learners, every participant co-ordinates with each other's learning, sets shared learning objectives, and contributes to the project's direction, with purpose and leadership chosen and realized by each participant (Bereiter & Scardamalia, 2018; Brown & Campione, 1994; Young et al., 1997). The instructor's role in a community of learners is like that of a *curator* of learning, whose primary responsibility is to invite all members to engage in learning given its collaborative and participatory nature. Serving as a curator and creating a supportive environment that values autonomy and agency is vital to nurturing collective learning through collaboration among all members (Major, 2015). The instructor participates actively in learning with students as a co-learner rather than merely instructing them. Thus, the concept of a community of learners has become critical in contemporary learning as a constructivist and social approach.

## Establishing a Learner Community in Online Learning Environments

Over the past few decades, there has occurred an evolution in our understanding of community, coinciding with the development and introduction of new communication technologies. With these technological advancements, our communities can now transcend boundaries related to time, place, and space (Rheingold, 2000, 2012). The same may be said for community in higher education and how it happens in online courses. Community is a useful model for under-standing online learning pedagogy because in online learning, when learning happens in a community, responsibility and autonomy flow to the learners, and learning occurs through active participation, peer-to-peer interactions, and collective endeavors to accomplish learning goals (Heuer & King, 2004; Liu et al., 2005). In this kind of environment, achieving the learning objectives as a group is the very essence of online learning and instruction (Anderson, 2004; Hrastinski, 2009; Rovai, 2002).

According to a large body of research, creating a community of learners is critical to the success of teaching and learning in an online setting (Bento & Schuster, 2003; Liu et al., 2007; McInnerney & Roberts, 2004; Sadera et al., 2009; Shea et al., 2005; Song et al., 2004; Swan, 2002; Tang & Lam, 2014; Webster & Hackley, 1997; Vesely et al., 2007). Specifically, research has shown a correlation between community and learning engagement, course satisfaction, and learning outcomes in community-based online learning environments (Bento & Schuster, 2003; Brown et al., 2022a, b; Lawrence et al., 2021; Liu et al., 2007;

McInnerney & Roberts, 2004; Redmond et al., 2018; Shea & Bidjerano, 2010). For example, Brown et al. (2022a, b) and Lawrence et al. (2021) found a significant correlation between a sense of community and learning outcomes. Similarly, Redmond et al. (2018) suggested that a sense of community is critical to online learners' academic success. Additionally, Shea and Bidjerano (2010) found that learners who perceive a high sense of community are more likely to complete the course.

Several researchers have examined what contributes to community online. According to the research, encouraging social interaction, empowering learners to take control of their learning (Swan, 2002; Vesely et al., 2007), and fostering co-construction of knowledge are all essential components of creating a community of learners (Misanchuk & Anderson, 2001; Yen & Liu, 2009). Many studies have investigated pedagogical strategies as a means of fostering a community of learners in online learning settings (Martin & Bolliger, 2018; Shackelford & Maxwell, 2012; Tang & Lam, 2014; Young & Bruce, 2011; Yücel & Usluel, 2016). Most of these studies have concentrated on boosting participation and interactivity in online learning, drawing on Rovai's (2002) perspective on learning communities. For example, Shackelford and Maxwell (2012) investigated the kinds of interactions that could promote a feeling of community in online learning settings. They discovered that personal introductions, cooperative group projects, sharing personal experiences, entire class online discussions, and resource exchanges were the interactions between students that most contributed to the promotion of a feeling of community in online learning environments. Additionally, Martin and Bolliger (2018) cataloged learner-to-learner, learner-to-instructor, and learner-to-content engagement strategies. The researchers found that these strategies aided in creating a sense of community and improved interactions in the online courses they studied.

## Theoretical Framing

This research draws on Lave and Wenger's (1991) original communities of practice (CoP) work and the more recent concepts of Wenger-Trayner and Wenger-Trayner (2015) to explore community in an online course. A CoP is a social structure of individuals who share a common interest or concern. Lave and Wenger's (1991) original CoP model emphasizes the social nature of learning and the importance of participation in a community of practitioners to develop knowledge and skills. Effective development of a CoP depends on Joint Enterprise

(shared goals), Mutual Engagement (active participation), and Shared Repertoire (a common set of practices, resources, and tools) among members (Lave & Wenger, 1991). Lave and Wenger also emphasize the importance of legitimate peripheral participation, where newcomers gradually become more involved in the community's activities and practices over time.

Wenger-Trayner and Wenger-Trayner's (2015) CoP model builds upon Lave and Wenger's (1991) work but expands upon it in several ways, including the role of context, the landscape of practice, and identity. The authors identify three defining characteristics of a CoP in this model, which they suggest represents their broader understanding of the concept: Domain, Community, and Practice (Wenger-Trayner & Wenger-Trayner, 2015). The Domain refers to the shared area of interest that sets members apart from non-members. The Community refers to the social relationships and interactions among members. The Practice refers to the shared practices, resources, and knowledge that are developed and refined through joint activity and sustained interaction. This study examines the overlaps between the defining characteristics of a CoP (Domain, Community, and Practice) and effective practice in a CoP (Joint Enterprise, Mutual Engagement, and Shared Repertoire) to understand how the community of learners engages and develops a shared identity and expertise.

## Research Methods

The purpose of this qualitative study was to consider learning community in an asynchronous online course. To achieve these aims, I used a reflective case study design. The research questions guiding this study were these:

- How do students create community in an asynchronous online learning environment?

- What course activities and assignments facilitate the development and maintenance of community in an online learning environment?

In addition, this study seeks to contribute to an understanding of how the CoP model may be applied to asynchronous online learning environments.

## *Context*

This research took place in an online course titled "College and University Teaching." The course is intended for graduate students who are interested in careers that involve college teaching, whether full- or part- time, or who are likely to be administrators in an area related to college teaching. It is a required course for students enrolled in the Ph.D. program in Higher Education Administration. It is also required for students enrolled in the Graduate Certificate in College Teaching. The course receives broad enrollment across campus, however, and a majority of students enrolled, typically more than two thirds, take the course as an elective. Students in this course learn the basics of college teaching, including what the research reveals about effective teaching; how faculty develop pedagogical knowledge; how students learn; how to design courses and assessments; how to create an inclusive classroom, build course community, and engage student learners; how to lecture, incorporate discussion, and facilitate collaborative learning; and how to continually improve teaching. Given its enrollment , the course is taught by multiple instructors. The course had one primary instructor (the author) and two adjunct instructor assistants. Two current graduate students who had taken the course previously also assisted with the course in the roles of "mentored teachers," a required part of the Graduate Certificate in College Teaching. Their work in the course comprised student encouraging engagement by commenting on the discussion boards to note connections between student responses or by responding to questions.

## *Participants*

Participants in this study were 80 graduate students enrolled in the course at a public institution in the Southeast during a single fall semester. Participants were from a range of disciplines, including Accounting, Anthropology, Dance, Theater, Geology, Communication Studies, Educational Leadership, Educational Psychology, Educational Research, Higher Education Administration, Instructional Leadership, Instructional Technology, Engineering Health Education and Promotion, and Social Work.

## *Data*

Data for this reflective case study comprise multiple sources. First, course documents such as the syllabus, schedule, and content in the

learning management system (LMS) were collected. These documents provided information on the course structure, topics covered, and assignments given to help contextualize how community was facilitated throughout the course. Second, anonymous student evaluations of instruction posted at the end of the term also served as data. Third, the shared learning activities that participants engaged in to develop their knowledge and skills were also included in the data. Finally, my own notes and reflections as the primary instructor served as data for the study. I took detailed notes during the course, documenting my experiences and interactions with co-instructors and learners, as well as their observations of others' interactions. All data, other than my own notes and reflections, were de-identified to protect participant confidentiality (*note:* IRB approval was granted for this study).

## *Data Analysis*

To analyze the data in this reflective case study, I used a deductive approach, guided by the CoP framework. This approach involved *a priori* coding, which involves defining a set of codes based on existing theories or frameworks, such as the CoP model (Saldaña, 2015). The three key characteristics of the CoP framework, Domain, Community, and Practice, were used to guide the coding process. Additionally, the CoP model's three applied dimensions of Mutual Engagement, Shared Repertoire, and Joint Enterprise were also used as a guide for this stage of the coding process. Following *a priori* coding, I used open coding (Saldaña, 2015). Open coding involves examining the data without any preconceived categories or codes in mind. During open coding, I used descriptive coding to organize the data systematically. After coding, I analyzed the data to identify patterns and themes in the data that related to the CoP framework through a process of constant comparison. This process helped to identify common practices that encouraged community.

## *Delimitations and Limitations*

### Delimitations

Because the study was focused on one specific online course, it is not generalizable to other online courses or disciplines, although it may have transferability. The study focused only on the dynamics and experiences of an asynchronous online learning community, which may differ from those in synchronous or blended learning environ-

ments. The study used a reflective case study design that focuses on the experiences and perspectives of the researcher, which limits the scope of the study.

## Limitations

The study included only 80 graduate students from a single institution. The study covered only one semester, which may not be a sufficient duration to capture the full range of experiences and dynamics that can emerge in an asynchronous online learning community. The researcher was also the instructor for the course, which may have introduced bias in data collection and analysis.

### *Trustworthiness*

To ensure data trustworthiness, I employed several strategies, including using multiple data sources, engaging in a rigorous data analysis process, and acknowledging the study's delimitations and limitations. By using multiple data sources, including course documents, student evaluations, shared learning activities, and my own notes and reflections, I was able to triangulate and ensure that the findings are grounded in multiple sources of evidence. Additionally, I used a deductive approach to data analysis, guided by the CoP framework, which helped to ensure the consistency of the coding process. The use of *a priori* and open coding with constant comparison also contributed to the rigor of the analysis process. Moreover, I acknowledge the study's delimitations and limitations. This transparency regarding the limitations and delimitations of the study enhances the trustworthiness of the findings by providing readers with a clear understanding of the scope and context of the research. The strategies employed in this study contribute to the credibility and transferability of findings to other asynchronous online learning environments.

## Results: The Case

An online CoP involves individuals who come together to fulfill both individual and group goals related to a specific topic or problem (Edmonton Regional Learning Consortium, 2016). This constructivist-based approach to social learning theory enables participants to deepen their understanding of the subject matter through social learning in online courses. The CoP provides a useful structure for this case.

*The Domain Characteristic Applied to the Joint Enterprise*

In the context of the study, the term "Domain" refers to the shared area of interest or expertise among the members of the course community, which is college and university teaching. This Domain serves as the common ground that brings the students together and forms the foundation of their Joint Enterprise. By choosing to enroll in this elective course, the students have demonstrated a desire to engage with this Domain and deepen their understanding of college teaching. The shared interest and enthusiasm for the subject matter foster a sense of community among the students and encourage them to work collaboratively toward their shared goals. Moreover, the fact that the course was an elective signifies intrinsic motivation to learn about college teaching. This supports a more engaged and invested community, because the participants are more likely to be committed to the Joint Enterprise and to contribute actively to the learning process.

The use of personal introductory videos was an effective way to help students learn about each other's areas of expertise and to foster a sense of community in an online (or hybrid) course. By creating and sharing these videos, students introduced themselves to their classmates, shared information about their personal and professional backgrounds, and described their course goals. The students' comments introducing their videos also demonstrate the enthusiasm and excitement that they have for the course and their desire to engage with the domain of college teaching. Some examples follow.

> Hi class, I am super excited about this semester, and am looking forward to having class with you guys. Here is my welcome video!

> Hey guys! Linked above is my intro video. Excited to learn with y'all this spring!

This positive attitude helped to create an interactive and productive learning environment and contributed to the success of the Joint Enterprise. Moreover, the act of creating and sharing these videos was a bonding experience for the students. By seeing and hearing their classmates' introductions, students began to establish personal connections with their peers, which helped to foster a supportive and inclusive learning environment. They often noted each other's personal interests:

> I'm so excited that we are in another class together this semester. I had no clue you were into classic cars! I would like to pose a question of do you plan on collecting cars or fixing them up one day? Hope you have a wonderful semester!

> I'm so excited to be taking another class with you this semester. I love that you did the marathon. I am participating in a pretty big athletic feat this year, so I am happy to hear it was such a highlight for you! P.S. Your hair looks great!!

> I enjoyed your video! My son wants to DJ. I know he would be jealous of your setup. I love to paint, and I am working more with watercolors right now. Blessings this semester!

Getting to know each other at a personal level helped promote students' engagement within the course.

The course goals were designed to help students achieve a deeper understanding of the college and university teaching domain, and they included the following:

- Describing the importance of learning about college teaching for those who will work in institutions of higher education.

- Incorporating learning principles relevant to planning learning experiences for college students.

- Considering differences in the diverse cultures represented by today's college students and determining how best to meet the needs of all students.

- Realizing both the value and limitations of using student-learning outcomes.

- Evaluating a variety of teaching strategies.

- Understanding the importance of evaluation in the teaching/learning process.

- Locating resources related to teaching and teaching improvement.

Working toward these shared goals served as a guide for the community, providing a sense of direction and purpose for their interactions and activities while allowing them to collaborate and support each other's learning, leading to progress toward their shared objectives. The Joint Enterprise was not a fixed objective, however, but rather evolved over time as the community members engaged in ongoing learning and collaboration. For example, students connected with each other across formal boundaries set by the course, as this student demonstrated while reaching out to others:

> Hi everyone! I've been really enjoying learning with y'all so far. I'm hoping to interact with more STEM educators; I'm super curious to see your content and collaborate and share ideas! Could folks focusing on STEM courses for this class please like this message? I'd like to keep your names in mind when responding to peers' posts. Thank you!!!

Students, thus, communicated within smaller disciplinary circles within the larger enterprise of college teaching. This approach allowed the students to bring their unique perspectives and experiences to the activities and discussions, further enriching the Joint Enterprise. As evidenced by student feedback, this approach was effective in promoting learning and fostering a positive and engaging learning environment.

### *The Community Characteristic Applied to Mutual Engagement*

The Community characteristic is essential for creating a sense of mutual engagement in an online course. Mutual Engagement refers to the interaction between individuals that leads to shared meaning and collaborative relationships. In an online course, Mutual Engagement involves regular interactions among students who are engaged in the same course, and whose interactions are marked by communication-related activities that shape the group's culture and practices. Building norms and relationships is critical for community growth, which is influenced by the form, timing, and persistence of communication.

The course involved various activities and assignments that fostered a sense of Mutual Engagement among the participants. One key aspect of the course was weekly discussion board posts. Instead of using the posts in the traditional format of a discussion question followed by a short student essay, students posted their original work gallery style and offered each other support and suggestions. Their creative posts were structured around three main foci each week. The "Activate" posts prompted students to reflect on what they already knew about a topic, while the "Apply" posts asked them to apply what they had learned from a chapter reading. Finally, the "Create" posts encouraged students to create something that would be included in their final teaching portfolio. To accommodate the large class size of 80 students, the course was divided into smaller discussion groups of 13-14 students, which remained constant throughout the term. Each group had its own thread within the discussion board, which allowed for more personalized interaction and a sense of community.

Students were also encouraged to reply to each other's posts to make connections between their own work and their peers' as well as to offer suggestions for improvement. Structuring the discussion board in this way encouraged active participation and collaboration among the students, despite the large class size. Furthermore, the focus on creating content for their final teaching portfolios gave the students a tangible goal to work toward throughout the term. Overall, the course design aimed to foster a sense of Mutual Engagement and support among the participants, ultimately contributing to their learning and growth in the field of college teaching.

Many students found these activities and assignments to be helpful and useful for their future teaching endeavors. One participant commented that the coursework provided them with a better understanding of the amount of work that goes into teaching a course. Another student put it like this: "I loved collaborating with the other students in the course! I also loved the create assignments and the final course dossier." One student noted that "This course encourages creative thinking skills, organization and time management skills, and a great deal of classroom discussion," and another similarly noted this: "Class discussion and student engagement are always difficult to navigate, and this course helped to minimize this possibility." These statements demonstrate how the Joint Enterprise of learning about college teaching brought the participants together and fostered a sense of community around their shared interest in becoming effective educators.

The course required regular interactions, and the learners developed a habit of praising one another. This Mutual Engagement was highly beneficial in creating a sense of community among the learners. The comments and feedback exchanged among students were very positive and supportive. For example, one student mentioned her love for Siberian Huskies, which sparked a conversation about pets and childhood memories. One student responded to her: "I enjoyed learning more about you through your video! Siberian Huskies are beautiful dogs; despite being a different breed, their appearance always remind me of the German Shepherd I had growing up. Congrats on your final semester and future teaching Instructional Technology!"

Another student's top-10 list of inclusion strategies was well-received, especially the items that emphasized the importance of understanding biases, providing accommodations for students with disabilities, and exploring diverse learning options. A student responded to her as follows:

> Your top 10 list is excellent. I especially gravitated to #1's, 6, and 10. It's important to understand our biases and how they may affect teaching. I had the opportunity to attend accessibility training, and it was a great experience developing PowerPoints, using videos within the class, and PDFs. Since returning to school, I fully appreciate #10, and there are so many learning options. While books are great, they may be out-of-date within a year, depending on the subject matter. You can include more content from diverse authors to broaden the knowledge base.

It was evident that the students valued their interactions and appreciated the efforts made by the instructors to create a welcoming and inclusive learning environment. The list items shared by the students varied in approach, but all had the common goal of promoting engagement and respect among peers. In particular, the emphasis on individual engagement and respect stood out. Students recognized the value of small gestures like asking about someone's day, which can make a big difference in how valued and heard students feel in the classroom. As one student responded to a peer's post,

> I really like your responses and how they deal with engaging students individually and with respect. I particularly like how you prioritize asking students about their day, I think that is a wonderful way to start class and help students feel valued, heard, and important to you as the instructor. It also gives students space to reflect on things they might not have had a moment to stop and reflect upon yet.

These interactions helped to create a positive tone for the course and fostered a sense of community among the learners.

The learners appreciated the opportunities for collaboration, which helped refine their final products and fostered peer-to-peer relationships. They enjoyed the creative assignments and the final course dossier, which allowed them to showcase their learning. One learner noted that this course was the most engaging online course they had ever taken, highlighting the importance of Mutual Engagement in creating a positive learning experience. The course also helped learners develop valuable skills such as creative thinking, organization, time management, and classroom discussion facilitation. Overall, the mutual enterprise of this community of learners contributed to a rich and engaging online learning experience.

*The Practice Characteristic Applied to the Shared Repertoire*

The Practice characteristic in online learning can develop through a variety of activities, such as sharing resources, discussing key concepts or challenges, providing feedback on projects, and co-creating learning materials. The community can also provide access to resources, such as articles, videos, and tutorials, that can help members deepen their understanding of the subject or skill. In this case study, the community established a Shared Repertoire that was critical to its success. Learners used various channels to connect with each other and engage in discussions beyond the course LMS. In addition to the discussion boards, students also used the Groupme app and text messaging to establish backchannel communications. This allowed them to communicate more informally and in real time, share ideas, and provide support to one another outside of the structured course environment. By using multiple communication channels, the community was able to stay connected and engaged in meaningful ways that supported their learning and success. Furthermore, the use of these communication channels helped to foster a sense of community and belonging among the learners, which is an important factor in promoting student retention and satisfaction.

To encourage student engagement and foster a sense of community within the LMS, I created a designated "Questions and Comments" section for each module. This area was designed to facilitate open communication between students, allowing them to share their thoughts and ask each other questions without direct intervention from the instructor. To my surprise, the students used this space extensively, with approximately 10-15% of students leaving comments or asking questions in each module. These posts received multiple responses from their peers, suggesting a positive and supportive learning environment. I rarely needed to make suggestions myself, but when I did, I chose to communicate through e-mail rather than disrupt the discussion board. Overall, this strategy proved to be an effective way to promote student engagement and encourage collaborative learning within the LMS.

During the semester, students developed a shared vocabulary through their work on the modules. Students regularly used terms associated with teacher knowledge (pedagogical content knowledge, Technological Pedagogical Content Knowledge), learning theories (constructivism, behaviorism, and humanism), motivation theories (operant conditioning, value and expectancy), course design (Backward

Design, norm referenced, and criterion referenced), diversity-related concepts (equity, inclusion, and Universal Design for Learning), instructional methods (interactive lectures, collaborative learning), and so forth. This shared language allowed them to better communicate ideas and information with each other.

In conclusion, the establishment of a Shared Repertoire was essential for the success of the community in the online course on "College and University Teaching." The community's use of tools, vocabulary, and symbols allowed them to communicate effectively, support each other's learning, and create a sense of belonging.

### Tying It Together

The findings from this study suggest that it is important to create a collaborative and supportive environment for learning, growth, and creativity. The COP model emphasizes Joint Enterprise, Mutual Engagement, and Shared Repertoire as key components that enable individuals with diverse backgrounds, interests, and skill sets to work together toward a common goal. By focusing on shared goals, interests, and actions, participants can establish a sense of belonging and connection, which can lead to more meaningful and productive interactions. The use of shared tools and language can help facilitate effective communication and promote learning and innovation. Overall, this outline highlights the importance of building strong communities of practice that foster collaboration, creativity, and continuous improvement. Figure 1 shows how the CoP model was applied in this particular case.

## Discussion

This study aimed to explore the characteristics of a community of practice in an online course focused on college and university teaching. The Domain characteristic brought the participants together around a shared goal of becoming effective educators. The Community characteristic was essential for creating a sense of community among learners. The study demonstrated that Practice was also important, with regular interaction and communication-related activities such as discussion boards, Groupme, and text messaging contributing to building norms and relationships critical to community growth.

The study's findings have implications for future researchers. The model was effective for explaining community in this course, and

Figure 1
**Visual Representation of Findings**
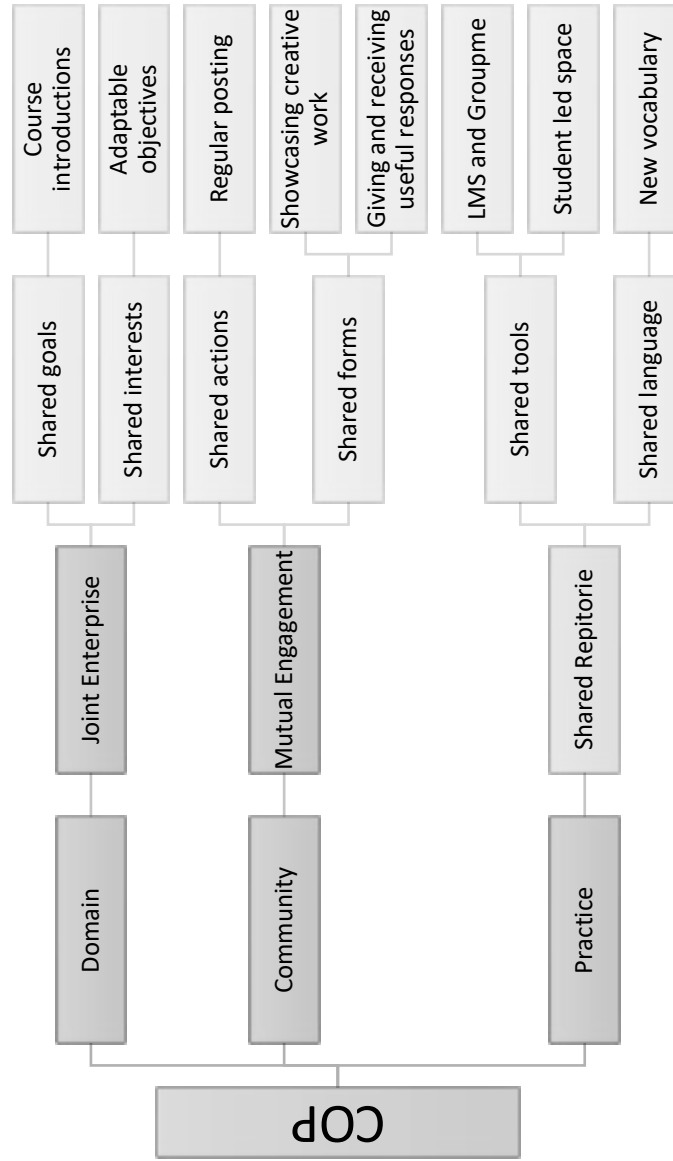
future studies can consider the ongoing efficacy of the model. Future researchers should also consider additional aspects of Lave and Wenger's (1991) work, including the role of context, the landscape of practice, and identity and how these factor into the formation of communities. The study's findings have important implications for online educators, emphasizing the importance of creating a sense of community in online courses. Educators should consider designing courses that focus on a Joint Enterprise, foster Mutual Engagement, and establish a Shared Repertoire. The study highlights the importance of regular interactions, communication-related activities, and the form, timing, and persistence of communication in community building. By adopting these practices, online educators can help learners develop valuable skills and foster a rich and engaging online learning experience.

## Conclusion

The study's findings highlight the effectiveness of communities of practice (CoPs) in online learning environments for supporting student learning and development. This approach fosters ongoing collaboration, knowledge-sharing, and feedback that can deepen students' understanding of a subject and enhance their 21st-century skills. However, the success of the CoP model depends on the social and organizational factors that support it, such as a culture of inclusivity, clear guidelines and expectations, and sufficient resources and support. By leveraging these factors, educators can draw upon the potential of CoPs to create a more engaging, collaborative, and effective learning environment that prepares students for success.

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# Four Restless Narratives: Convener Reflections on Social Learning Communities at an Australian University

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*Four stories of social learning from one Australian university reflect on communities of practice (CoPs) focused on different aspects of quality in teaching and learning. Each convener writes about their CoP convening experience in the context of Wenger-Trayner and Wenger-Trayner's mapping of the "mindset of a systems convener" (2021, pp. 81-82): a restlessness to make a difference, a social landscape perspective, a commitment to identity work, and a social learning approach. A concluding discussion considers how these CoPs are able to influence academic development and student learning and how these narratives both evidence and inform the convener mindset model.*

## Introduction

This article responds to Wenger-Trayner and Wenger-Trayner's (2021) recent articulation of the mindset of a systems convener, comprising "a restlessness to make a difference, a social landscape perspective, a commitment to identity work, and a social learning ap-

proach" (p. 82). The conveners of four communities of practice (CoPs) at an Australian university critically reflected on their convener roles in the context of these dispositions, and they identified, where possible, how their own convening practice aligns with this tetradic overview of the social learning convener. These four components of the mindset of a convener provide an opportunity to reflect on convening practice from a new perspective and, thereby, enact a uniquely reflexive and critical form of the identity work in which conveners ordinarily engage. Rather than focusing on identity work within an organizational and/or professional framework, these conveners examine these four concepts in relation to their own practice as social learning conveners, thereby extending our understanding of the convener mindset.

The four stories of social learning presented in this article are drawn from one Australian university and reflect on CoPs that have been established for between four and six years. Each CoP is convened by a member of academic staff, and each is focused on aspects of quality in teaching and learning. Two of these conveners have had prior CoP convening experience in other institutions. Two of the CoPs discussed in these stories focus on specific components of teaching, such as engaging learners in tutorials, generic skills development, and assessment reform. These CoPs were convened in order to better understand and resolve problems in teaching and learning through a collegial approach. The remaining two CoPs focus on sharing and developing scholarship in teaching and learning—that is, focusing on the production of scholarship that promotes quality teaching and improved student learning experiences and outcomes. Two of the conveners were invited to set up a CoP by leaders of various departments/schools, receiving modest workload allowances and access to facilities and administrative support. The other two conveners initiated a CoP in order to address an observed problem or gap and successfully sought support from senior leaders. In all four CoPs, conveners consulted up as well as down within their institutional social landscape to achieve a sense of legitimacy and enlist the awareness and support of relevant powerbrokers. Each convener, therefore, displays the capacity to work across boundaries and establish connections between silos that frequently fragment institutions, including universities, and that inhibit the cross-boundary innovations that can develop to change narratives, solve problems, and develop more complex identities. Each convener writes about their CoP convening experience in the context of Wenger-Trayner and Wenger-Trayner's (2021) mapping of the tetradic "mindset of a systems convener." The narratives are presented first;

then a concluding discussion considers how these CoPs are able to influence academic development and student learning.

## Narrative One:
## A Mindful Middle-Out Approach to Convening

My initial call for a community of practice occurred in 2013 within the business and law faculty community of a multicultural higher education institution. The proposed domain for this community was authentic assessment practices, and our shared purpose was to transform assessment by the faculty to achieve this authenticity. This focus on authentic assessment was linked to a broader faculty goal to holistically educate the whole student (undergraduate and postgraduate), ensuring the development of "wicked skills," such as personal, emotional, and interpersonal skills, that are difficult to instill but highly sought after by employers (Cinque, 2016). This CoP was driven by the commitment toward reshaping practices through a social learning approach (Wenger-Trayner & Wenger-Trayner, 2021). As the convener for this CoP, I developed my coping mechanisms to tackle conflicts, negotiate, co-create, inspire others, and extend my "sphere of influence" (Wenger-Trayner & Wenger-Trayner, 2021, p. 101). For example, responding to requests for support resources from educators from other faculties and drawing on our CoP shared knowledge, I developed a practical guide for authentic assessment practices, paving the way for assessment reforms across the institution. My intuitive "restlessness to make a difference" mindset is guided by my desire to collaboratively find practical, nuanced solutions to complex problems to "achieve results that are meaningful to all" (Wenger-Trayner & Wenger-Trayner, 2021, p. 82). This insight enabled me to guide my CoP to the next level with a broadened domain focused on assuring professional accreditation while meeting industry employer demands for business graduates with strong employability attributes.

Recently, my leadership responsibilities in the learning, teaching, and accreditation space demanded a more nuanced, middle-out CoP approach, which is defined as "facilitating a connection between central vision and chalkface practice" (Cummings et al., 2005, p. 6.). My agentic role (Bandura, 2017) of bringing policymakers and practitioners together in this CoP required acting as enabler, resolver, mediator, and aggregator to effect change. I gained structural support from key executive members in my attempt to articulate the value of the social landscape perspective by convening across silos involving

frontline stakeholders (Wenger-Trayner & Wenger-Trayner, 2021). For example, aligned with the social landscape perspective, our CoP facilitated multi-disciplinary brown bag sessions to share impactful strategies with diverse ideas, perspectives, and beliefs, leading to the development of collective wisdom around authentic assessment and wicked skills development.

When the unprecedented COVID-19 pandemic surfaced, my convener position facilitated connecting with upstream (policymakers) and downstream (frontline teachers) stakeholders, invoking multiple aspects of Wenger-Trayner and Wenger-Trayner's (2021) social learning theory, to refocus the CoP on the institutional imperative of reimagining online education within the sustained context of educating the whole student. For me, this resonates with Wenger-Trayner and Wenger-Trayner's idea of "networks of influence" and "connecting with the powers" (pp. 83-85) as part of adopting a social landscape perspective. As convener of this CoP, I managed the "interplay between learning and power" (p. 103) by connecting with peers, listening to student voices, and capacity building to uplift good practices. My commitment to identity work was realized through acknowledging human-centered elements of "nurture agency" (p. 90) and recognizing individual strengths and weaknesses in terms of implementing targeted, achievable strategies. This process necessitated managing manifold contradictions, including negotiating conflicting goals, finding trade-offs, zooming in and out, unlocking the potential, and balancing prescriptive and suggestive practices (for example, standardizing outcomes-focused rubrics without impeding creativity). The social learning approach engaged practitioners of diverse cultures, work roles, values, perspectives, and aspirations in collaboratively defining and transforming their practice to achieve authentic assessment and holistic learning in an online environment (Wenger-Trayner & Wenger-Trayner, 2021).

Our CoP enabled the co-creation of a standardized rubric framework by adopting the communicative action approach of conflict resolution through compromise and negotiation (Habermas, 1987) aligning with the social learning emphasis on learning from each other. Now, I have also become more cognizant of inherent biases (my own and others') and have developed mechanisms to challenge them that are closely related to Wenger-Trayner and Wenger-Trayner's (2021) concepts of agency, identity, and narrative work. This led, over the years 2019-2023, to the transformation of stakeholder "lifeworlds" (beliefs and dispositions) in adopting peer assessment and feed-forward practices that they originally perceived as a waste of time and effort.

My convening skills have matured over time, including my ability to communicate with diplomacy, refrain from reacting to criticism, listen more, and give agency to others in my perseverance to make a difference. Applying a social landscape perspective, I have managed to create a safer and more conducive environment for open and honest CoP conversations. I have been able to manage power dynamics and personality clashes, particularly around sensitive issues. Our CoP has successfully responded to changing faculty imperatives driven by re-accreditation processes and the impacts of a pandemic while retaining the domain focus of authentic assessment and holistic learning. As our professional landscape inevitably changes, posing new challenges and opportunities, I feel that our CoP has achieved a degree of legitimacy, trust, and collaboration to pursue our domain even as our learners, learning contexts, and workforce needs continue to change.

## Narrative Two: Working Across Silos

Fairly recently, I was offered the opportunity to lead learning and teaching within a large, national, multi-discipline school consisting of three clinical disciplines (nursing, midwifery, and paramedicine). The school's existing approach to scholarly professional development in teaching and learning emphasized sharing evidence of good teaching practice, with a lesser focus on the *generation* of new scholarly evidence. Agrifoglio (2015) identifies both the *generation* and *exchange* of information as crucial components of a CoP. The emphasis on sharing rather than creating evidence of good practice in teaching was interpreted by many as a missed opportunity within this scholarly community. Academics within the school clearly expressed a desire to engage in knowledge production, but many lacked the experience or networks to do so readily. Working within the domain of advancing quality evidence-based learning and teaching (Wenger-Trayner & Wenger-Trayner, 2015), a need to mentor inexperienced academic staff and collaborate in scholarly research to generate evidence of good teaching practice was identified as the vision for this CoP. Advancing a social learning approach (Wenger-Trayner & Wenger-Trayner, 2015), the purpose of the COP is to provide an environment that supports the self-actualization of staff as teachers in the academy.

Considering the social landscape, and specifically the agency, power, and boundary work of social convening identified by Wenger-Trayner and Wenger-Trayner (2021), securing stakeholder buy-in to this CoP was identified as paramount. Fostering agency within existing power structures, consultation here occurred simultaneously at two levels,

with executive and academic staff. Discussions with executive staff centered upon the strategic direction of the school and the school's aspiration to be recognized more prominently within the wider re-search community. These discussions provided strategic guidance for development of the operational elements of the formative CoP, particularly in the development of strategic priority areas as an over-arching scaffold for the operational work in this space. For example, the clear imperative to become leaders  in fostering student engage-ment and participation in learning that these discussions identified was promoted.

However, a CoP must also share a common set of problems and goals (Wenger et al., 2002) that are co-created (Beatty et al., 2020) through a process of discussion and negotiation rather than by a top-down strategy. To achieve this, we used an online forum session for a facilitated discussion on what academic staff saw as their vision for learning and teaching within the school. This afforded staff an opportunity to discuss and articulate the scope and values of this CoP within the domain articulated earlier. Following this discussion, an online survey allowed staff to provide additional information after a period of reflection, anonymously for those not comfortable with sharing perspectives in an online forum, or for those unable to attend the initial discussion. The most positive outcome from this narrative and consultative agency work was the effect of instilling agency and ownership (identity work) within staff while also enlisting support of existing power structures (Wenger-Trayner & Wenger-Trayner, 2021).

Upon reflection, and perhaps unexpectedly, my capacity to lead this CoP effectively has been sustained most strongly by the relationships built with staff over preceding years. This speaks to the legitimacy work described by Wenger-Trayner and Wenger-Trayner (2021) as key to systems convening. Although ongoing legitimacy work is required as the CoP evolves, the development of strong relationships across the school prior to forming the CoP established my track record  as a collaborator with a passion for teaching and learning and sustained scholarship. This track record encouraged key professional relation-ships that were critical in "fostering new groupings of people . . . to invent new practices" (Cox, 2005, p. 14) and driving the engagement of academics from multiple disciplines within the CoP.

Underpinning the leadership needed for this CoP as a relatively new and evolving group has been my "restlessness to make a difference." This restlessness also requires a convener to "embrace challenges in their full complexity" (Wenger-Trayner & Wenger-Trayner, 2021,

p. 81). The continuing evolution of this CoP will present challenges and complexities, such as the size of the particular member's school of Nursing, Midwifery and Paramedicine and the multi-disciplinary nature of the membership. Interestingly, upon deeper reflection, this restlessness is likely the primary driver I have experienced over the course of my career to date—the feeling that I could be doing more here to have a larger impact. It will be crucial to temper this feeling to avoid change for the sake of change and by engaging in value-focused reflection loops that recognize and articulate the social learning value that is created by and for the CoP.

## Narrative Three: Topic-Focused Cross-Discipline Work

Adult learning is effective when it is focused on the needs and wants of the individuals involved and when the learning approach values each individual's existing experiences and knowledge (Knowles, 1984). This andragogical approach to learning and teaching is one that our university espouses, and it is well-aligned with the social learning theory underpinning CoPs, where individuals identify and share practice problems, insights, and strategies that are of interest to them (Wenger et al., 2002). Two key ethical principles underpin our institution's commitment to produce graduates who can invest in building a better society; these principles have also informed my convening practice. The first principle is *subsidiarity,* where those who are affected by decisions should have some part in making them. The second principle is *participation*, where everyone has a right, indeed, a responsibility, to contribute, reflecting the observation that systems convenors have "a strong moral foundation" and are "resolute in trying to make a difference" (Wenger-Trayner & Wenger-Trayner, 2021, p. 108). As with many of my colleagues, my desire to make a difference in a specific field drew me inexorably to teaching; in hindsight, this "restlessness" to effect change that is characteristic of a systems convenor (Wenger-Trayner & Wenger-Trayner, 2021, p. 82) has shaped my academic life.

In the early 2000s, following our receipt of university teaching awards, a colleague and I were given the freedom to design and deliver a form of professional development (PD) for fellow academics that we thought appropriate (subsidiarity in action). My teaching mantras of "KYA" ("know your audience") and "WIIFM" ("what's in it for me") made a CoP the natural approach. Subsidiarity formed one pillar of our community: The focus (domain) of our inaugural CoP—making

small classes (tutorials) engaging and valuable for both student and teacher—was determined by canvassing potential members for *their* pressing concerns. Participation was our other pillar: Our community of 13 members, encompassing diverse discipline areas, from science through humanities and education to visual arts, met in two groups to maximize our availability. Aware that we were working with real people with widely divergent backgrounds, perspectives, and teaching practices (Wenger-Trayner & Wenger-Trayner, 2021), our first session was devoted to relationship building and creating a shared accountability, including a schedule for meetings and achievable tasks. People brought their own coffee, and we provided homemade snacks, contributing to a rapid thawing of any individual or collective reserve.

The facilitators prepared summaries of the literature on the purpose of small-group teaching, including examples from our own disciplines of psychology and science (for example, Perkins & Saris, 2001). Each group shared the purpose of tutorials in their own disciplines and how they were conducted, and we agreed that we would each refresh or completely rewrite one class plan from the current semester, satisfying the andragogical preference for immediate application in problem-centric contexts (Knowles, 1984) .

In subsequent meetings, each member identified the topic of their target class lesson (for example, an Australian history tutorial on the health impacts of early colonial settlers); described its purpose, learning outcomes, and current structure; and then explained why they wanted to change it. Discussion of how different disciplines might achieve related learning outcomes was always rich and energizing—and often surprising! Members worked on a revised structure that they brought back to a subsequent session, where an increasingly well-informed conversation allowed them to refine it further before they taught the class with their students. These phases of lesson refinement reflect the sharing of practice and the development of collective intelligence so valued within CoP work (Wenger & Wenger-Trayner, 2020).

In the final CoP session, members' descriptions, warts-and-all, of how successful they felt the class to have been were met with congratulations or commiserations and generous conversations about what to do next. The "lightbulb" moments were as gratifying as those experienced with students: Knowing that disciplines very unlike one's own may in fact be rich sources of knowledge encouraged many of us to "dream large" and venture outside our boundaries (boundary work) (Wenger-Trayner & Wenger-Trayner, 2021). For all of us, this community was both personally and professionally rewarding, not

the least for breaking down the silos and forming lasting friendships across organizational units, culminating in invitations for some participants to lead PD sessions within their own disciplines (legitimacy work) (Wenger-Trayner & Wenger-Trayner, 2021). That these outcomes have outlasted the physical community more than repaid the institution's contributions.

The project was repeated and extended to other campuses while funding lasted. Importantly, the small workload allocation provided to support their involvement was strongly appreciated by participants: a very small carrot for a large reward. While often as system convenors we "fly under the radar" ((Wenger-Trayner & Wenger-Trayner, 2021, p. 60) with little if any institutional recognition, we were encouraged to present this CoP model at an international conference. It also formed an explicit part of the reason I was awarded a national teaching citation. Although the formal and funded phase of this CoP is completed, and our CoP has not met for over a year, requests to reconvene have now developed as members recall the value of this collaborative learning forum and encounter fresh challenges to designing and delivering engaging teaching and learning in a changing landscape of online, face-to-face, blended, and hi-flex learning contexts.

## Narrative Four: Expanding Identity

I had initial experience as convener of a community of practice a decade ago at a prior university where the topic *of Internationalization of the Learning Experience* was a focus for myself and many colleagues as we engaged in teaching rapidly increasing numbers of international students at an Australian multistate university. I responded to an internal call for conveners by suggesting this topic for a CoP and engaged in some professional development around the process of systems convening. Multiple CoPs formed at this university, and the CoP structure has remained an effective and resilient social learning aspect of the university culture. At that stage (2010), we were called "champions" of a CoP rather than "systems conveners," but the term *champion* was contested when I proposed a CoP at a different university on the grounds that it implies competition and embattlement rather than the spirit of collaboration and supportive engagement associated with CoP work. This is, perhaps, a small but important example of the "identity work" that Wenger-Trayner and Wenger-Trayner (2021) emphasize as part of a convener's commitment that starts from the moment you place a CoP call.

I am now a convener. In my current university context, I lead the Scholarship of Teaching and Learning (SoTL) units in a Graduate Certificate of Higher Education (GCHE) in which teaching and also learning support staff are enrolled (often as a mandatory aspect of teaching-focused contracts of employment). In addition to identity work, Wenger-Trayner and Wenger-Trayner (2021) propose that social convening reflects a "restlessness to make a difference" and, also, a social landscape perspective that recognizes and responds to systems, practices, and relationships of a context, community, or institution (p. 86). Wenger-Trayner and Wenger-Trayner identify the systems convener as a "maverick" who is compelled to contribute to, comply with, and resist the system within which the convenor works. In the context of my work teaching the SoTL component of the GCHE, I realized that the system was incomplete. My student-colleagues completed their GCHE with a planned research project that evaluated some aspect of their teaching practice (often innovative). But there was no further program of study, learning support, or community to maintain their interest or advise them on their implementation and efforts to disseminate/publish. This implied a need for sustained relationships, and I formed the SoTL CoP primarily to provide a community focused on continued scholarship.

In terms of the social landscape perspective framing this CoP, scale becomes an interesting consideration. There are over 50 members of this CoP, which includes academic staff, educational developers, library staff, as well as some faculty leaders. It is an oversized CoP by conventional norms. Wenger-Trayner and Wenger-Trayner (2021) point out that there can be "a price to scaling" in some loss to the "texture of relationships and how things work in practice" (p. 86), and they observe that "whenever a challenge includes multiple levels of scale, convening work needs to cross these levels" (p. 86). This issue has been addressed in our CoP by adopting an online, synchronous delivery mode allowing flexible, multi-campus access to meetings and resources by members. The meeting format is designed so that the whole group (Meta-CoP) typically hear, present, or view some topical material, then split into smaller groups to discuss and respond to questions, and then regroup as a whole (Meta-CoP) to share and discuss findings. It is by necessity, however, a less intimate CoP experience, with many occasional attendees or silent members referred to as "lurkers" (Hung et al., 2015, p. 2494) or, more positively, as "legitimate peripheral participants" (McDonald et al., 2003, n.p.). Presenters include staff/members, invited guests from other departments (most recently a university research

institute), and external presenters. Topics of interest are discussed at meetings and developed in consultation with relevant presenters. My focus is always on the communal, discursive, and interactive design of meetings to preserve the engagement of members. I hope that the unusually large scale of this CoP is somewhat mitigated by the contribution this broad and diverse membership can bring to meeting topics. In this way, this CoP is designed to promote "the development of a more fluid identity, an evolving identification with multiple places in the landscape, one that is more dynamic and agile than identification with single locations or issues" (Wenger-Trayner & Wenger-Trayner, 2021, p. 92).

Certainly, this CoP crosses boundaries. According to Wenger-Trayner and Wenger-Trayner (2021), "Engaging across a boundary can be threatening to one's sense of self. Existing identities may not function well, and people can feel vulnerable when what counts as knowledge, competence, or power doesn't have the same currency as it does on their own side of the boundary" (p. 90). For example, in our very first meeting, I presented on the topic of Technology Enhanced Learning Tools and modelled a popular Student Response System application. One attendee observed, "You have just compromised our data." Their role was directly related to securing and reporting student data; thus, the focus on this aspect of the session was logical. Wenger-Trayner and Wenger-Trayner (2021) observe that conveners persist through inevitable failures and setbacks and build resilience to bumps and knocks. My response to this comment was to emphasise the lesson that this participant had shared with the community: "We have learned something already." An alternative, internal polling tool was shared with the CoP following the meeting; however, external tools remain in more frequent use in the university curriculum. Returning to the concept of language and identity in relation to systems convening, this exchange illustrates, I hope, my move from a battling "champion" to a collaborating "convener."

## Discussion

A restlessness to make a difference (Wenger-Trayner & Wenger-Trayner, 2021) was a concept that resonated strongly with each convener when reflecting on their CoP experience. This restlessness is evident in the convener's strategic attention to accruing support from powerbrokers as well as ensuring interest and ongoing engagement from invited members. The conveners' pragmatism tempers their

strong determination to make a difference and get things done (Wenger-Trayner & Wenger-Trayner, 2021). This is evident for each convener in their narratives, which relate experiences that are often frustrating, sometimes requiring relinquished control, but eventually produce an outcome or solution that is owned by the community and can, therefore, have an impact on the system. It is also evident from these narratives that this restlessness can ebb and flow as the social landscape transforms and as conveners move from one institutional context to another. Wenger-Trayner and Wenger-Trayner (n.d.) have pointed out that a CoP may disperse when the problem is resolved or when members no longer see value in the CoP. But the narratives reported here also indicate that a CoP may reform or refocus in response to changing conditions of the social landscape.

Different levels of scale that are a component of the social landscape aspect of convening are issues discussed in the first narrative. This CoP worked in the wider industry context of assuring professional accreditation while meeting industry employer demands for graduates with strong generic skills.  This CoP had a broad scale focus to reimagine curriculum across a school with an objective to develop more authentic assessment. This narrative acknowledges the necessity for managing inherent bias, reframing purposes, and negotiating different perspectives and alignments, which are important components of the identity work that conveners perform (Wenger-Trayner & Wenger-Trayner, 2021). Ultimately, this CoP developed a solution to the focus problem through shared practice that included technology-enhanced learning and the adoption of authentic assessment practices that were originally perceived as "a waste of time and effort." The narrative acknowledges the sustained interaction required to achieve consensus or buy-in and also the adjustments made by the convener in terms such as "finding trade-offs" to work toward "achievable strategies." Ultimately, the CoP space provided for discussion of differing opinions and perspectives and allowed for a solution that promoted agency for community members.

This narrative also acknowledges challenges encountered by conveners in engaging in identity work where unequal power relations exist and where, in particular, the convener is in an empowered position over CoP members. Promoting the agency of others, including more junior staff, is imperative in a CoP (Green et al., 2017), which may be situated within a hierarchically organized, institutional social landscape but which can only function through a collaborative, safe, and open culture that presents an "equal playing field" (Green et al.,

2017, p. 160). The question of how senior staff/leaders can successfully convene democratic practice in the CoP suggests that identity work for conveners involves critical introspection as well as extrospection.

The second narrative also acknowledges the importance of creating agency for community members, from the first convening call through careful consultative work, both up-stream and down-stream, to establish alignment between the CoP and its social landscape, which includes the roles, rules, and accountabilities that shape, define, and limit any system. In this way, CoP members recognized the school's aspiration to develop scholarship to gain sector recognition, but they also negotiated, through multiple feedback opportunities, co-created goals and focus problems and shared their visions for teaching and learning. This approach recognizes and draws on the imaginative power of a social learning approach, where the community can consider other practices and possible futures relevant to the focus domain and, through this process, generate greater engagement. The legitimacy work evident in this narrative also recognises the convener's capacity to bridge "closeness to the ground with political savvy" (Wenger-Trayner & Wenger-Trayner, 2021, p. 83). Drawing on an established track record as a collaborator while also engaging executive support for this CoP allowed the convener to co-articulate a shared domain of interest that could engage and reward collaborators across boundaries of discipline and potentially transform the social landscape of the school. This narrative acknowledges the importance of legitimacy work that a convener can engage in pre-CoP, in forming a CoP, and in sustaining the CoP in terms of its relevance and influence.

The third narrative reworks the social learning emphasis on consultation and collaboration in the context of two principles of Catholic Social Thought: subsidiarity and participation. This approach reflects careful consideration of the social landscape that all CoP members work within—in this case, a faith-based university. This CoP also began in a consultative process of establishing an achievable target focus within the domain of academic professional development. This focus domain became tutorial engagement, and the learning process was organized through member contributions in social learning loops that allowed for revisiting and refining solutions to student disengagement. The CoP was informed by different disciplines, delivering rewarding outcomes, lasting friendships, and enhanced legitimacy through ongoing and expanding involvement for the convener in professional development of academic staff. This CoP existed for a finite period to achieve a specific task, but in the process of reflecting on the social

learning experience for the development of this article, the value of this social learning group was newly appreciated by the convenor. It is to be reconvened as one example of Wenger's (1998) "disperse" stage, where CoPs no longer intensely engage but stay in touch and, through these sustained relationships, may recognize fresh domains of interest through which to reconvene. These may include, for example, engaging students in online or blended forms of learning that are now so common in pandemic and post-pandemic university contexts. This narrative also identifies principles that are common to social learning and andragogical approaches to adult learning, providing conveners with a more broadly theorized rationale for social learning.

The final narrative highlights a convener's social landscape perspective that allows them to identify gaps in a system and apply their restless determination to embrace challenges through a social learning community. CoPs are recognized as being highly variable in the size of their membership and are shaped by geographic and organizational complexity (Wenger-Trayner & Wenger-Trayner, 2021). These factors contribute to the large scale of this SoTL CoP, a scale that the convener acknowledges leads to a large number of peripheral members. Yet this scale also allows for crossing of boundaries within and between institutions, contributing to transformations in identity SoTL and enabling a more fluid and dynamic identification with multiple places and issues. In addition, this narrative focuses on a common element of these convener narratives: Learning from each other, whether it be purposeful or incidental, remains the most valued process of a CoP. Each convener identifies the personal learning that they have experienced in fulfilling the role of a convener and in reflecting on their evolving practice. This, again, highlights the multiple dimensions of learning that a CoP supports in relation to the self, the social learning community, the domain of interest and related field of practice, as well as the organizational system within which the CoP is situated.

## Conclusion

This article contributes to the narrative work of articulating the value these four social learning communities generate for themselves and the systems within which they work, think, and reflect. Clearly, these CoPs contribute to problem solving in varied teaching and learning contexts, shared strategies for improving learning experiences and outcomes for students, more fully developed academic identities and relationships, and the generation of scholarship that disseminates

insights and innovations to the wider community of higher education. These CoPs highlight the contribution that social learning can make to an institution and the important work that multiple and multi-layered communities do when they engage voluntarily with each other to make a difference.

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# Women[1] in Academia: How a Community of Practice Conducts Systems Convening Work

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*This article examines the formation and impact of a supportive networking community of practice (CoP) for women faculty and staff at a university in the southeastern U.S. Barriers to success for women in higher education, both during and after the COVID-19 pandemic, are discussed. The framework of systems convening and the ways in which the CoP conducts this important work are explored. The article concludes by conveying the importance of such social learning spaces for women. Strong communities of this type can contribute to the success of females in higher education as well as to the advancement of the entire institution.*

## Introduction

The COVID-19 pandemic changed the lives of many higher education faculty and staff members across the United States. As our homes became offices and schools, work-life balance took on an entirely new meaning. One of the groups to be disproportionately affected by this shift was women, who, even prior to the pandemic, routinely faced systemic inequalities. For instance, women academics are often judged based on their appearance or demeanor rather than their contributions to their field (Fritsch, 2015) and are less likely to apply for promotion due to consistently increasing workloads (Augustus, 2021; Francis & Stulz, 2020). Given these long-standing biases, it is perhaps no surprise that female academics also bore the brunt of the pandemic's impact (Augustus, 2021; McMillen, 2021).

As stress and frustration grew, so did research confirming the disparate effect of the pandemic on women in higher education. At Eastern Kentucky University (EKU), a mid-sized (approximately 14,000 enrolled students) public institution in the southeastern United States, casual conversations on this topic evolved into a formal panel, where women shared their lived experiences about balancing their work in academia with the "new normal" of their everyday lives: increased caretaker responsibilities, almost no personal space or time, and feelings of being isolated and overwhelmed. At the request of the participants, this panel grew into a new, ongoing group for female faculty and staff, known as the Women in Academia Community (WIAC).

Wenger-Trayner and Wenger-Trayner (2020) define a social learning space as "a particular experience of engagement that takes place among people in pursuit of learning to make a difference" (p. 13). Specifically, the Wenger-Trayners note that social learning spaces are generated when participants care enough about making a difference that they share uncertainties they may have and engage fully in the group by paying attention to one another through comments, questions, empathetic responses, and even body language. Now in its second year, the WIAC is a social learning space where participants do just this. They seek to make a difference by improving the environment of academia for women, and they have started moving toward this goal by sharing stories (both joyful and discouraging), giving and seeking advice, reading relevant articles and books, and supporting each other—be it through an encouraging word, listening ear, or comforting hug. The WIAC also meets the definition of a community of practice (CoP) as described by Wenger-Trayner and Wenger-Trayner (2015): a group of people who share "a concern or a passion for something . . . and learn how to do it better as they interact regularly" (para. 3). It is a true CoP, in that its members have a shared domain of interest to which they are committed, and they engage in communal processes of learning rather than simply being a loose gathering of friendly colleagues. Furthermore, the WIAC serves as an agent of systemic change by conducting systems convening work. Wenger-Trayner and Wenger-Trayner (2021) define systems conveners as individuals or groups who foster social learning across boundaries, connecting people, teams, and entire systems, to tap into fresh knowledge and potential. Although the Wenger-Trayners' work focused on individuals, they note that "the work [of systems convening] is often done as a team" (p. 22). In many ways, the WIAC expands the influence and power of its members through new connections and the exchange

of information and other resources. Over time, the group gains the ability to alter traditionally discriminatory institutional and societal systems for the better.

## Women in Higher Education: Concerns From the Pandemic and Beyond

Historically, women who work in higher education have had a very different experience than men. Employment, leadership prospects, available roles, and promotion opportunities have been limited, a trend that is heightened for women of color (Allen et al., 2021; Harvey & Jones, 2022). Systemic factors, such as men traditionally being in "gatekeeper" roles at the institution (van den Brink & Benschop, 2014) and societal gender expectations that women spend more time on caretaking and household duties (Augustus, 2021; Diego-Medrano & Salazar, 2021), contribute to this sustained inequality. The pandemic exacerbated this gap, having a disproportionate impact on the working conditions and work-life balance of women as compared to men (Yildirim & Eslen-Ziya, 2020). Women in higher education did not fare better (Augustus, 2021), and many traditional activities of life in academia were disrupted.

There is evidence that career advancement processes, such as promotion and tenure, may be biased against women overall. Often, publications are a key piece of such advancement in higher education. However, females in leadership roles at the institution have to spend more time than their male counterparts providing support and nurturing relationships around campus (Francis & Stulz, 2020), and women are more often assigned tasks that do not count toward promotion, such as writing administrative reports or mentoring junior faculty (Babcock et al., 2022). Such activities may result in less time devoted to research. Women also may not fare as well as men in promotion and tenure processes that are highly focused on quantitative measures of success (Davies et al., 2021; Francis & Stulz, 2020) or that are inconsistent and lack well-defined processes for reviewing applications and making decisions (Murphy et al., 2021). Compounding these already-existing issues, the pandemic placed an increased burden of domestic responsibilities (caretaking, schooling, housework, and the like) on women, and particularly women of color, making it even more difficult for them to progress in their careers (Augustus, 2021; Caldarulo et al., 2022; McMillen, 2021). While post-pandemic research submission rates from women have remained, overall, about the same

as pre-pandemic rates, studies have indicated that articles by women as the sole author have dropped significantly, indicating that women may have had less time to submit their own work than men did amidst the crisis (Andersen et al., 2020; Dolan & Lawless, 2020).

It is important to note that while the pandemic exacerbated these existing issues and served as the impetus for the creation of the Women in Academia Community that is the focus of this article, higher education as a whole has always perpetuated power differentials between men and women. Caretaking responsibilities, which traditionally fall to women, have long been seen as being at odds with a career in academia (Harris et al., 2019). Female faculty are more proportionally represented at lower- and mid-career ranks (Allen et al., 2021) and often lack guidance on how to move into the top faculty ranks and/or leadership roles (Harvey & Jones, 2022). Institutional environments can often be more competitive than collegial, and many women hesitate to move into higher roles where that competition will negatively impact their happiness and disrupt their work-life balance (Francis & Stulz, 2020). While these concerns are not exclusive to women, their careers are often impacted the most, which may, in turn, perpetuate other systemic concerns, such as financial and job security and the persistent gender pay gap (Spitalniak, 2022).

Despite these gender-related disparities, women often do not have the mentorship and guidance they need to support them in their work environments, despite evidence that having a trustworthy network of other women is beneficial in a variety of ways (Casad et al., 2020; Francis & Stulz, 2020; Harvey & Jones, 2022). For instance, having a mechanism for women academics to support each other in a collaborative way has been identified as a facilitator in promotion processes (Francis & Stulz, 2020). Participating in such a group increases one's sense of belonging, providing women with validation, information, support, and resources that they can use to elevate their standing and create more secure futures in an ever-changing higher education environment (Macoun & Miller, 2014). Furthermore, systems of mentoring, networking, and professional development for women can address gender inequality issues such as numeric underrepresentation, stereotype threat, and unwelcoming academic climates (Casad et al., 2020). Having female role models and mentors can even be "strong facilitators for women taking on leadership roles" at colleges and universities (Allen et al., 2021, p. 7). Although the literature suggests that the potential value of a networked social learning space for women is high, there is a notable gap in research examining how such a CoP might conduct the work of systems convening.

## Founding the Women in Academia Community (WIAC)

In response to some of these ongoing (and recent) concerns, administrators and faculty at EKU planned a one-time session as part of the institution's annual Faculty Scholars' Institute (FSI). FSI is an event, held just prior to summer, to help faculty begin thinking about how they might further their research agenda over the break. Envisioned as a "Women in Scholarship" panel, this session brought together nine female faculty and staff from across campus, encompassing varying races, ethnicities, ages, and tenure statuses. Some of the women were married and/or parents, and some were not. This group shared their experiences during the pandemic in response to a set of prompt questions:

1. Please introduce yourself, your role here, and in the spirit of the day, who is a role model that has inspired you?

2. Everybody has a unique story about how their lives have changed since March 2020. We'd like to let each of you tell us a little bit about your experience during the pandemic. Included in that, please share what have been the most potent challenges for you, as women in academe, and where have you found your greatest successes?

3. We've all spent our fair share of time on Zoom this year. An article was just released with research from Stanford, indicating that Zoom fatigue hits women harder than men. The article proposed a few suggestions for addressing this, such as maintaining one "Zoom-free" day each week, or turning your camera on for the first 5 minutes of a meeting only. What are some practices that have worked for you, to stay motivated and reduce this feeling of fatigue?

4. How has your research agenda changed during the pandemic, and what are some methods you have used to reserve time in your day for scholarly activities? Have you been able to sustain your research agendas?

5. Now that we will be returning to an on-campus envi-
ronment more in the fall, how do you anticipate being
able to achieve and maintain work-life balance? Are
there any practices that should/should not carry over
into the next academic year?

Participants discussed the unique ways that their lives, as women
in academia, shifted during the pandemic. Many comments were
rooted in themes of inequality and societal gender roles, echoing
findings from the literature. Some would likely be shared by women
across fields, and some were unique to higher education. Overarching
themes included the following:

- increased caretaker responsibilities (for children, el-
derly parents, and surprisingly, for spouses/partners),

- exhaustion and fatigue (emotional and physical),

- barriers to publishing (less time to write; journals
stopped accepting manuscripts),

- no physical space of their own, and

- heightened impact of the pandemic on minoritized
populations as an added burden for women of color.

Toward the end of the hour-long session, a number of participants
suggested that they would like to continue these conversations in the
future. The three members of the FSI planning committee who had
proposed the initial panel volunteered to assist with coordination; thus,
the ongoing "Women in Academia" Community (WIAC) was formed,
self-organized by interested FSI contributors.

## The WIAC as a Community of Practice

Since its inception, the WIAC has served as a support and networking
group for female faculty and staff. The composition varies as schedules
allow, but approximately 40 women flow in and out of the gatherings,
which are held in-person once a month at the Faculty Center for Teach-
ing and Learning (meetings were virtual during heightened pandemic
times). Generally, meetings average around 10-15 participants. Each
year, the members decide upon a book or resource to read together.
The resource is usually selected to correspond to a theme of interest
to the group (for instance, women in leadership or faculty burnout)

and is generally easy to read, such as a collection of essays or personal stories. A priority was to avoid adding a substantial burden of reading to the to-do lists of the already-busy participants, especially because the community does not necessarily function like a book club in that the readings are not analyzed in and of themselves. Rather, they serve primarily as inspiration and a basis for personal reflection and sharing about the experience of being a female in higher education. A member can easily participate in group discussions even if they do not complete the readings, although most participants regularly do.

What makes the WIAC a true community of practice rather than just a casual gathering? According to Wenger (1998), there are three required components that distinguish a CoP from other groups: Domain, Community, and Practice. Comments received through e-mail from members of the WIAC and examples obtained via participant observation are included and illustrate each of these components in action. These details are presented anonymously. The WIAC has always been a safe place to share ideas, emotions, and concerns, and including names would violate this core tenet of the group.

## Domain

The identity of the CoP is defined by a shared domain of interest that "creates common ground, inspires members to participate, guides their learning, and gives meaning to their actions" (Edmonton Regional Learning Consortium, n.d., para. 3). The members of the WIAC are linked via a shared domain of being a female working in higher education and are invested in the group because of this connection. For instance, one WIAC member commented that "listening to other females in academia who expressed the same struggles I've encountered validated my experiences." It seems this shared domain lends credence to the group discussions, and participants relate to the comments in a personal and reflective way that may differ from discussions in other groups.

## Community

Members of a CoP engage in common activities, where they build relationships and share information. The WIAC members meet monthly, collaborating as they work through readings, and sharing their own stories when they gather. In this way, collective learning occurs among the community members. Members also learn that the CoP community extends beyond the regular meetings, and that they have friends and

advocates across the university. One WIAC participant emphasized this communal nature of the CoP: "Academia can be a lonely place. Having the opportunity to share my stories and experiences with other women who empathize is extremely valuable." In this way, boundaries are blurred through relationship formation, and knowledge is shared between individuals who may not have crossed paths otherwise.

### *Practice*

Members of a CoP are practitioners who utilize the resources gained from the community in their own practice (Wenger, 1998). A CoP serves as a repository of collective knowledge, and the members of the WIAC regularly implement lessons learned from the meetings. For instance, at one meeting, a participant was discussing how she is always expected to do the lion's share of departmental service, committee work, and the like. She did not know how to say no to her supervisors. Another attendee mentioned possible language to use and discussed how she had once suggested to her own department chair that someone else (who happened to be male) might be better for a particular service role. At a later meeting, the first participant reported back that she had tried the suggestions given, and her supervisor had responded positively. The two had a productive conversation about the faculty member's workload and how the supervisor might divide up service opportunities more equally, and the faculty member reported feeling supported and heard by her supervisor. Although such positive outcomes may not always occur, it becomes more likely that they will as community members learn, from the wisdom of the group, how to approach similar situations in an effective way. Beyond shared interests, the collective knowledge created and stored by the WIAC, and the subsequent integration of that knowledge into practice, distinguishes this group as a CoP.

## Discussion: The WIAC and Systems Convening

The goal of providing a supportive, networked CoP for female academics is valuable in and of itself. Mentorship in various forms, as well as collegial support, have been shown to be facilitators for job success for women (Francis & Stulz, 2020). Certainly, the WIAC began with these goals in mind, but it soon became evident that the discussions that ensued were being turned into action in both subtle and overt ways. This community had untapped knowledge and the potential to effect

change at the institution, not just for individuals but at a systemic level.

In education, business, government—nearly any sector imaginable—it is imperative to understand how systems influence and are influenced by various factors. Systems thinking allows us to see "wholes rather than parts [and] patterns of change rather than static snapshots" (Senge, 2010, p. 59). In examining core principles of improvement in educational settings, Bryk et al. (2015) highlighted "seeing the system" as a key principle, noting that you cannot improve what you do not fully understand. Given that higher education relies heavily on the principle of continuous improvement (Temponi, 2005), systems thinking is a necessity.

Building upon these concepts, Etienne and Beverly Wenger-Trayner (2021) discuss the importance of "system conveners" who enable learning across boundaries, connecting people, groups, and entire systems to tap into new knowledge and potential. Such individuals and groups may be particularly important in addressing gender inequities that exist in higher education, which often have systemic causes that require system-level solutions. In their book, the Wenger-Trayners identify seven areas of work generally undertaken by systems conveners: narrative work, legitimacy work, boundary work, identity work, agency work, power work, and a second round of narrative work. This section contains more detailed descriptions of these areas, but it also includes stories of individuals acting as systems conveners in various ways. Indeed, the three original "founders" of the WIAC have served as systems conveners, creating a community that enables connections and knowledge sharing across boundaries, but the stories of systems conveners that have emerged from the group are equally notable. Additionally, the WIAC itself, as a CoP, conducts the work of systems convening, establishing a new and powerful path to enhance learning.

### *Narrative Work (Initial)*

The initial work of a systems convener is to craft a convening call, creating an aspirational narrative to inspire participation and encourage constituents to work together. The initial "Women in Scholarship" panel described above contributed to this initial narrative work. The stories the participants shared about the many challenges of balancing life during the pandemic with their academic work was a call to action for many women, leading to the demand for an ongoing community. Additionally, outreach to other faculty and staff who did not attend the initial panel consisted of messaging related to support, networking,

and improving the experience for female faculty at the institution. In these ways, the WIAC established a narrative about its purpose and goals.

## *Legitimacy Work*

Growing the sphere of influence to reach multiple constituencies at varying scales is the second task of systems conveners. The WIAC has grown continuously since its inception two years ago, with close to 40 women now rotating in and out of attendance at the group meetings. As these connections expand, so does the reach and influence of the group. Leaders up to the Department Chair level participate in the group, and some of the concerns raised by members have been brought up to senior leaders, with action being taken. For example, the WIAC once had a rich discussion regarding the ways that the academic calendar as currently configured, without breaks between teaching terms, may be contributing to faculty burnout. One of the participants then decided to share some of these concerns at a "lunch and learn" opportunity with the President and the Provost. In response, the Provost convened an *ad-hoc* committee charged with developing recommendations for revising the academic calendar. Despite not having "official" status as an established university committee with a formal charge, the WIAC is expanding influence in unofficial capacities each semester, and empowering individuals such as this participant to serve as systems conveners.

## *Boundary Work*

A common concern in higher education is that work is often done in isolated groups called *silos* (Roper, 2021). Silos are particularly worrisome when they result in less sharing of knowledge and, thus, fewer opportunities for social learning. Boundary work involves collaborating across real and imaginary barriers to tap into new learning. The WIAC, by its very nature, participates in boundary work. Faculty who would not ordinarily interact by job duties alone end up being close allies and friends. Staff, faculty, and administrators connect in new ways. Women of color and white women have the chance to share their own stories and backgrounds. An example of this blurring of boundaries occurred recently between a new and a returning faculty member. The new instructor was in a STEM field, and the returning instructor was in education, so they ordinarily would have been unlikely to cross paths. However, at a meeting of the WIAC, they were able to connect and

realized that not only were they both international faculty, but they had similar stories of being unable to travel home during the pandemic to deal with parental illness and loss. Since then, they have met for lunch on their own, each finding unexpected support and empathy from a new friend. Such boundary work may actually occur more in the WIAC, because a level of acceptance and vulnerability exists in this CoP that might not elsewhere.

### *Identity Work*

Identity work involves support of personal transformation, considering not only how one's own identity may evolve, but also how that evolution may affect others and the environment. Identity as a concept is socially driven—the way we think about ourselves is in large part dependent on the environment we inhabit (Berger & Luckmann, 1966) and the groups of which we are a member (Tajfel & Turner, 1986). Bandura (1977, 2002) further elaborated on this concept, suggesting that people internalize interactions with their environment, which then impacts their own sense of identity. The WIAC members entered the CoP with individual stories and experiences as well as their own sense of self. However, for some, it was not until they began participating in the group, hearing from others with similar stories, that they connected their own experiences with their identity as a female in academia. For example, during one WIAC meeting, participants began sharing tales of times where they had spoken up in department or committee meetings and the negative reactions they had received as compared to their male counterparts. Near the end of the meeting, a participant who had been quiet the rest of the time mentioned that her supervisor had just recently told her she "spoke too much in meetings" and had an "aggressive tone" when she made comments. She was encouraged to "tone it down," and she began feeling like she had done something wrong simply by being herself. This caused her to question whether she needed to change who she was to be successful. However, after listening to similar tales during the meeting, she realized that this was not a shortcoming on her end, but rather a cultural bias that shames outspoken women, or those who don't interact in a certain way. Such shifts in identity perception can change the way women view their role in the institutional ecosystem.

### *Agency Work*

Along with a shift in identity, a change in the power to act underlies

agency work. Systems conveners draw upon practice and knowledge and use that wisdom to effect change. As noted earlier, the WIAC serves as a repository of years of combined experience for members to draw upon. Learning about and applying solutions that worked in previous settings to new situations is a key way that the WIAC cultivates the power to act among its members. The group also serves as a sounding board, so that members can gauge how ideas or actions might be received by others at the institution. Additionally, the community can amplify the voices of faculty who have not yet achieved tenure, and, thus, they may be more hesitant to speak out. As illustrated by one WIAC member, "it's okay to be vulnerable in the group. We all are. But we need to let our voices be heard." This potential to impact the future through words and actions is at the heart of agency work.

## Power Work

Who holds the power at the organization and how those power structures can be leveraged and challenged lies at the heart of power work. As a group of women—who historically have not held as much power in higher education as men—the WIAC frequently discusses and challenges gender norms. As mentioned earlier, the positioning of women, and particularly women of color, in higher education as being less valuable than men (Nadel-Hawthorne et al., 2021) is often evident in compensation, the distribution of leadership roles, and even promotion and tenure requirements (Babcock et al., 2022; Davies et al., 2021; Francis & Stulz, 2020; Spitalniak, 2022). Changing these norms will require unapologetically drawing attention to such inequities, which the WIAC is well-positioned to do. Noting how often women assume the unrewarded role of nurturer, one WIAC participant stated, "I think [going forward], fewer women will be willing to sacrifice their mental health for a system that doesn't recognize the really hard, interpersonal work we do with students and our staff/faculty." Through such discussions, the WIAC members share knowledge and encourage one another, as well as the institution as a whole, to challenge these established power structures, thus contributing to a more equitable higher education landscape.

## Narrative work (continued)

The final area of systems convening work revisits the concept of narrative work. While the initial narrative work phase focused on creating an inspirational narrative to garner participation, this narrative work is

focused on articulating the value of the work that has been conducted. Others have come to understand why the WIAC is valuable and how it has contributed to positive change. Each semester, new women write to us, wanting to join the group. This year's focus is on burnout among female faculty, and a wider audience than ever before seems to recognize the importance of dialoguing on such a topic, finding ways to reduce fatigue, improve morale and engagement, and reduce faculty attrition. Identifying mechanisms to convey the value of this group to institutional leaders will be a key piece of this narrative work in the future, beginning in spring 2023 with a campus-wide program on faculty burnout featuring members of the WIAC.

## Future Directions and Limitations

The WIAC CoP is a social learning space that ensures resource and information sharing across institutional boundaries. It also has demonstrated potential to aid in the work of systems convening, creating new communal knowledge that may support continuous improvement at an organizational level. This group also provided female faculty and staff a safe place to learn from and share with one another, which is often lacking in higher education settings. Although the pandemic served as the impetus for this CoP, the group can and should continue beyond the COVID-19 threat. Such community spaces for women are a mechanism through which higher education might move toward a more equitable future.

Additionally, as the WIAC continues, the group should routinely encourage more faculty members, and particularly early-career faculty, to participate. One of the challenges of the WIAC has always been maintaining a group of regular attendees due to schedule conflicts, illnesses, and the like. Having a larger group will ensure that there are enough participants to maintain a critical discussion each time the group meets. More members would also allow for new leaders to emerge within the group, which is needed because most of the coordination is still done by the original three volunteers from FSI. Such growth would contribute to increased knowledge generation and legitimacy, thus amplifying the group's potential for impact.

Finally, while the group is diverse as far as age, race, ethnicity, and experience, there is not much diversity in terms of gender and sexuality, with nearly all participants being cisgender, heterosexual women. As long as these boundaries exist, the full capacity of the WIAC to foster collaboration across systems will not be realized. Therefore,

intentionally reaching out to those who identify as part of the LGBTQ+ community, and ensuring a welcoming community for all, should be a priority going forward.

A limitation of this study is the lack of data that exist outside of participant observations and anecdotes. Therefore, a more structured assessment of the benefits and challenges of the WIAC should be conducted, to more clearly understand

(a) how the members benefit from their participation in the group;

(b) how individuals from the group function as systems conveners;

(c) the ways in which the personal identities of participants may have been impacted by their group membership; and

(d) the degree to which the learning that occurs in the group is perceived to improve the ability of its members to make a difference, a concept known as *value creation* (Wenger-Trayner & Wenger-Trayner, 2020).

A second study limitation is that this examination of the WIAC involves only one institution. Generalizations about how similar CoPs might function in other organizations cannot be made without a broader examination. Additionally, future empirical work on the impact of faculty peer support in a non-mentoring capacity may be beneficial for understanding the nuances of female friendships and support mechanisms in academia.

## Conclusion

> I think groups and meetings like this are so important to help women in academia to discuss where we've come from, what the present issues are, and how we can advance in a better way that does not burn us out but leaves us with a sense of fulfillment and joy again in what we do. (WIAC member, personal communication, December 13, 2022)

Women in higher education settings are still at a disadvantage due to systemic factors that create inequitable environments. Communities of practice, such as the Women in Academia Community, can be powerful tools not only to support the emotional and professional

well-being of women, but also to enhance learning and shift existing discriminatory power structures by conducting systems convening work. The WIAC exists to increase that sense of "fulfillment and joy" that can be elusive amid our daily frustrations. Most important, it seeks to support women as they "advance" toward a more secure and equitable future.

## Footnotes

[1]In this article, the terms "women" and "female" should be understood in their most inclusive sense, encompassing all people who identify or present as such. This is how the Women in Academia Community operates.

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# Systems Convening in Landscapes of Interprofessional Education Practice

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*This case study explores leadership emergence within a faculty-based community of practice engaged in a scholarly interprofessional education initiative between nursing, medical, and clinical simulation educators within a transnational higher education context in the Middle East. Findings in this qualitative study revealed rich insights into the inner mindset of an interprofessional education systems convener as applied to the four dimensions of Wenger-Trayner and Wenger-Trayner's (2021) theoretical model. The study identifies and presents the role and salient capacities of a systems convener in attempting to reconfigure professional identities within a unique interprofessional education landscape of practice.*

Exploring and applying E. Wenger-Trayner and B. Wenger-Trayner's (2015) landscapes of practice (LoP) framework has emerged as a recent area of interest in interprofessional education (IPE) literature (Balmer et al., 2021; Beuken et al., 2021; Stalmeijer & Varpio, 2021; van Duin et al., 2022). With a theoretical trajectory beginning with Wenger's (1998) communities of practice (CoP) framework, the LoP framework has been found to align well with many IPE ecosystems because it allows for a more complex exploration into multi-disciplinary CoPs comprising both faculty and students. However, the role of the systems convener has been less explored and applied within this IPE context. As an innovative approach to conceptualizing multi-disciplinary CoP leadership

within situated LoP ecosystems, systems convening offers new and exciting facilitation strategies for potential IPE landscape conveners to consider and explore. This article shares findings from a larger case study that explored leadership emergence within a faculty-based CoP engaged in a scholarly IPE initiative between nursing, medical, and clinical simulation educators within a transnational higher education context in the Middle East (Kay, 2018). The purpose of this limited study was to contribute more theory application within the practice field as a way in offering insights into the essence of systems convening as applied in an IPE context. As a single case study, this research was not intended to be theory building, but instead seeks to answer the call for the sharing of further frontline experiences and lessons learned in systems convening from diverse practitioners in the field.

## Background Context

The background origins of this single case study involved a nursing educator from a North American-based international transnational nursing higher education institutional (HEI) branch campus within the Gulf Cooperation Council (GCC) region who was inspired to collaborate with a small group of corresponding local medical and clinical simulation educators in forming a CoP focused on piloting a trial IPE experiential teaching and learning curriculum initiative. This initiative sought to bring nursing and medical students together in a shared simulated environment around the topic of family assessment. While IPE is still a relatively novel pedagogical and professional workplace concept in the Middle East, there has been growing interest in funding and supporting IPE-based research initiatives at the tertiary education level to leverage shared knowledge strengths and promote best practices in teamwork among allied health professions such as medicine, nursing, pharmacy, and dentistry (El-Awaisi et al., 2021; Shakhman et al., 2020; Wilbur et al., 2015). Thus, the collective concept and motivation behind this shared IPE collaboration was timely and supported by the CoP members' respective transnational branch campus institutions.

### CoPs in Transnational Landscapes of Practice

CoPs have garnered increasing attention at HEIs for their inherent ability to mutually foster and support faculty members pursuing professional development and educational improvement initiatives

(Bolisani et al., 2021; Gehrke & Kezar, 2017; McDonald et al., 2012). As ideally self-organized, self-directed, and laterally structured social learning entities, CoPs offer faculty members at HEIs both a voluntary and flexible operational venue to share and expand upon common pedagogical interests that can make a meaningful impact on their teaching and learning contexts (Bond & Lockee, 2018; Stark & Smith, 2016). However, a recent frontier in the trajectory of social learning and CoP theory has involved a shift in focus from concentrating on single learning communities to multiple practices connecting and intersecting within a broader and more complex environment. Having developed a more encompassing framework referenced from a landscape of practice (LoP) metaphor introduced in Wenger (1998), E. Wenger-Trayner and B. Wenger-Trayner (2015) offered a lens of focus where "knowledgeability manifests in a person's relations to a multiplicity of practices across the landscape" (p. 13). This is an environment that acknowledges much greater complexity, where differing CoPs and their participants within the landscape broker both internal and external power dynamics, local practices, and diversity.

Transnational higher education contexts themselves have been the focus of concerted research interest due to the unique, complex, and sometimes controversial landscape under which they operate (Wilkins & Juusola, 2018). This is a landscape that has predominantly involved Western-based and -supported educational providers that essentially cross national boundaries in attempting to provide high-quality education programs to countries undergoing rapid development (Mazzarol et al., 2003; Wilkins, 2018). Issues within this professional and educational environment have revolved around curriculum and staffing, cultural-societal distance, and regulatory distance (Shams & Huisman, 2012). Furthermore, transnational HEIs operate in landscapes where institutional history is often undeveloped, and where channels of support and infrastructure are not necessarily well established or sustainable (Altbach, 2010; Wilkins & Huisman, 2011). These are all issues that have had impact on faculty retention and overall quality assurance that are often beyond the immediate logistical control of the corresponding Western-based main campuses (Wilkins et al., 2017). These are also relevant issues that provided a contextual backdrop for the five participants in this case study who self-identified and attempted to operate as a CoP comprising nursing, medical, and clinical simulation technical and educational experts.

*Systems Conveners*

Recent attention in LoP-related literature has focused specifically on leadership and the role of a "systems convener" in the process of building and cultivating CoPs within landscapes of practice. Convening emerged as a particular focus in E. Wenger-Trayner and B. Wenger-Trayner (2015) and subsequently in Wenger-Trayner and Wenger-Trayner (2021). Systems conveners are observed to function as a type of 21$^{st}$-century organizational leader by attempting to "reconfigure social systems through partnerships that exploit mutual learning needs, possible synergies, various kinds of relationships, and common goals across traditional boundaries" (Wenger-Trayner, B., & Wenger-Trayner, E., 2015, p. 98). A framework outline on how these systems conveners interact and navigate through the "three modes of identification" (Wenger, 1998) was again utilized in the LoP framework.

Wenger-Trayner and Wenger-Trayner (2021) have most recently focused on refining the articulation of systems convening as an applicable approach in various professional settings. In addition, the social learning theorists introduced an integrated theoretical model that highlighted four essential component of a convener's "mindset": making a difference, awareness of one's social landscape, engaging with people, and adopting a social learning perspective and approach. An important development of E. Wenger-Trayner and B. Wenger-Trayner's (2015) LoP framework, with the additional focus on systems convening, is offering an integrated lens to capture leadership emergence and practice implications through the rich and diverse interactions occurring throughout the engagement process.

In this study, the core community that was built during this interprofessional teaching and learning innovation consisted of five members, three of whom belonged to a nursing-intensive North American-based international university branch campus, one of whom belonged to a North American-based medical international university branch campus, and one of whom was a professor emeritus in the field of family assessment based in North America. Although all community members assumed leadership roles at various stages throughout their shared engagement, the principal convening role was represented by a nursing lead who identified by the pseudonym "Pearl" for purposes of this study.  Pearl was the initial community catalyst and the member who most frequently coordinated and navigated more complex relationships between the core community members and who moved between various other stakeholders across the landscape, including institutional leadership representatives.

## Positioning Interprofessional Education
## in the Landscape of Practice

*Interprofessional education* is a term that is contextually associated with the more socially constructive pedagogical practices developed and facilitated between health and social care professions such as medicine and nursing (Barr, 2002). Through this teaching and learning lens, IPE is considered an "important pedagogical approach for preparing health professions students to provide health care in a collaborative team environment" (Buring et al., 2009, p. 1). With its emphasis on experiential learning within multi-disciplinary team-based collaborative educational environments, IPE has examined and embraced social learning concepts and approaches, including CoPs.

A sample of the salient literature over the past two decades has seen CoP theory, along with expansive learning and activity theory (Engeström, 2001), utilized as an analytic framework in a meta capacity for assessing IPE pedagogical approaches and emergent trends in participant interactivity occurring throughout the social engagement process (Hean et al., 2009; Lees & Meyer, 2011). Although Wenger's (1998) CoP theory has been found to align generally well and naturally within the highly socially constructive IPE ecosystem, limitations have also been raised in terms of fostering accessible communication networks between communities. While the use of technology has been of research interest in terms of forming more accessible and fluid virtual CoPs (McLoughlin et al., 2018), the inherent nature of health professionals finding more comfort within their own discipline-specific communities has been perceived as a unique interdisciplinary challenge (Gum et al., 2020). Additional reasons for this more "intraprofessional" discipline-specific inclination have been attributed, particularly in the medical training field, to entrenched characteristics such as "professional autonomy and role boundaries; power and hierarchy within health care teams; and problems with mutual credibility" (Stalmeijer & Varpio, 2021, p. 898).

Such perceived challenges have been further explored and navigated with the growing awareness and application of E. Wenger-Trayner and B. Wenger-Trayner's (2015) LoP framework as a heuristic in healthcare education and IPE settings (Balmer et al., 2021; Beuken et al., 2021; van Duin et al., 2022). In their "Observation Paper," de Nooijer et al. (2022) applied the LoP framework to achieve a better understanding of how the IPE pedagogical design can help foster more student knowledge and awareness of key and inherent interdisciplinary elements

that can better position and scaffold them into eventually becoming more effective interprofessional collaborators in the field. Although de Nooijer et al.'s (2022) study is learner-focused, an important meta-implication is raised in terms of the importance of IPE educators themselves in implementing reflective activities and sharing experiences from the field who position themselves as interprofessional practitioners. Perhaps compiling more fieldwork evidence through the use of a narrative framing tool such as the value creation conceptual framework (Wenger et al., 2011; Wenger-Trayner & Wenger-Trayner, 2020) could build upon observations in de Nooijer et al. (2022) and provide useful systematic evidence for both students and institutional leadership on the value and impact of IPE in the healthcare field.

As LoP research and literature is emerging in IPE, there is a growing need for more field stories from IPE practitioners and educators on the successes and challenges of their own interdisciplinary engagement in designing and developing IPE pedagogical environments for their learners. This is a landscape that is rich in complexity, dealing as it does with overcoming entrenched hierarchies within and among disciplines (Engel et al., 2017). Furthermore, because there appears to be a current dearth of literature relating to the role and work of systems conveners, specifically in the IPE landscape, more stories from the field will help in gaining insights into the mindsets, successes, and challenges facing practitioners who assume a leadership position within a multi-disciplinary IPE CoP. In such a landscape, a key element is exploring the role of systems conveners in terms of their strategies and approaches when attempting to foster optimal collaborative environments.

## Research Context

This single case study was situated in one country within a transnational higher education landscape in the Gulf Cooperation Council (GCC) region within the Middle East over a six-month period and covering one academic term.  The overarching study focused on exploring emerging leadership trends within a small interprofessional group of faculty and academic support members from two Western-based international branch campuses who self-identified as a "community of practice." This CoP included five faculty and academic support experts in medicine, nursing, and clinical simulation technology education; they were focused on exploring more authentic and innovative educational and skills-based training in the area of family assessment

practice within their local HEI system to better prepare students for the workplace. Their shared pedagogical and academic focus aligned well with the national strategic priorities mandated within their host country in the areas of human and social development.

## Method

Ethical approval for this research was granted from the Conjoint Faculties Research Ethics Board (CFREB) at the university. The overarching intention of this research was to capture and explain emerging leadership trends occurring within one single and mutually supportive group comprising five members from the fields of nursing education, medical education, and clinical simulation technology and education. This intrinsic case study was further defined as being explanation building within a single case. In approaching the specific research sub-question specific to this study, "How is leadership represented through a systems convener?" a qualitative single case study approach (Yin, 2014) was adopted. Merriam (1998) described this approach to the case study to be "characterized as being particularistic, descriptive, and heuristic" (p. 29). Multiple qualitative data sources were used to ensure that protocols of triangulation were observed in "converging lines of inquiry" (Yin, 2014, p. 120). The data sources for the case study comprised semi-structured interviews, observations of the CoP during active communication and engagement, documents generated by this community, and field notes.

As the nature of this research involved evolving themes based on a lack of prior knowledge about the phenomenon under study, an inductive approach to content analysis was adopted. The inductive analysis process selected for this study was based upon and adapted from the three main analysis phases (preparation, organizing, and resulting) outlined by Elo and Kyngäs (2008). The coding process for this research was informed by Tesch's (1990; as cited in Creswell, 2014) "Eight Steps in the Coding Process." After general data review and exploration, the data were organized into themes around the four dimensions of the Wenger-Trayner and Wenger-Trayner (2021) systems convening theoretical model. The use of this model as a conceptual filter enabled the organization of findings according to their relevant elements for a closer understanding of how the data related to the explored phenomenon. In the context of this emergent case study, the data collected were rich and copious, with themes widely dispersed throughout the interview and observation transcripts as well as through field notes.

# Results

The findings for this study focused primarily on the first-hand experiences of "Pearl," the one identified systems convener in this IPE CoP, who was a senior nursing instructor at her international branch campus.  In answering the research question "How is leadership represented through a systems convener?" and in the spirit of capturing the "essence of convening" in this study's unique context, the data collected have been filtered and presented through Wenger-Trayner and Wenger-Trayner's (2021) theoretical model, which includes a combination of the following four dimensions: *Making a Difference*, *Awareness of the Social Landscape*, W*orking With People*, and *Adopting a Social Learning Approach*.

## *Making a Difference*

From the beginning of the case study, it was evident that Pearl was inspired and driven to move what she regarded as her "idea" forward. For example, during her pre-study interview, Pearl referred to her role as a "catalyst" in "building a community of practice around a common focus of family assessment." She also made reference to the "passion" she felt in pursing this opportunity. By joining this project, she explained, the other members were

> going to be part of something very unique and very visionary, and something that can have a huge impact on practice in terms of bringing the two main professionals together and strengthening their relationship of how to work together around not themselves, not their personal piece, but around supporting families or family assessment*.*

In this respect, Pearl was observed to be sharing her personal mission with a diverse group of educators that involved drawing upon her own extensive professional experience with the aim of co-constructing new knowledge and a cohesive group identity structure to enhance their shared practice.

The academics and skilled technicians that Pearl approached and was ultimately able to enlist into this IPE CoP shared her passion and commitment to the vision of the initiative. Pearl's effectiveness as a convener was self-identified at the end of the first project iteration in her ability to reign in the "passion about [CoP members'] individual parts" and "work with everybody but not let them forget why we were there" and in her observation that "it was about family assessment

and bringing nursing and medical students together." Indeed, one CoP member related Pearl's ability to foster community cohesion by making everyone feel that they were responsible to bring their "pieces of the puzzle" together in "contributing to the big picture."

Throughout the study and in her role as a convener, Pearl was also observed to emerge as a type of "maverick" within her own institutional landscape (Wenger-Trayner, E., & Wenger-Trayner, B., 2015, 2021). In this role, she was championing some innovative academic and field-related practice approaches within her environment; sometimes this led to certain challenges related to bureaucracy and logistics. Reflecting toward the end of the first project cycle, Pearl related the hierarchical "decision-making" differences she felt between her home country and the transnational environment within which she and her CoP were operating. These decisions were normally related to funding and other general supports needed for the success of the initiative. However, Pearl and the community understood the importance of maintaining the initiative's alignment with the bigger national and institutional priorities and goals, and they were often recorded during meetings referencing their host country's strategic "vision" document in relation to enhancing healthcare education.

## Awareness of the Social Landscape

B. Wenger-Trayner and E. Wenger-Trayner (2015) identified systems conveners as having an inherent "systems view of the landscape" and, thus, as being adept at "forming heterogeneous learning partnerships to transform existing practices or create new practices" (p. 97). Pearl was cognizant of the inherent "hierarchies" between medicine and nursing that often provided some level of challenge in IPE collaboration. Reflecting at the end of the project's first iteration, Pearl revealed that the transnational landscape was even "a little tougher" in this respect because CoP members "had to work across cultures" and that this "hierarchy of how medical and nursing students view each other" was even more entrenched within this unique landscape. In this way, it was important for the IPE CoP to be cognizant of the uneven landscape and to follow best practices in flattening the political power dynamics.

Pearl and her other CoP members were often aware of external threats to their work and efforts, ranging from perceived institutional politics to systematic policies and economic changes that were occurring within their landscape at the time of the study. Nonetheless, as convener, Pearl was observed to instill a collective confidence that the core CoP's initiative would succeed. "I mean yeah, we got hit . . . we

got punched down a little bit by different things that happened," Pearl shared during her post-study interview. "But then we'd say, okay, give us a day to catch our breath, or a few days. . . . And everybody would say just give me a little bit of time just to kind of get collected and then we would go back at it again." This collective resilience seemed to stem directly from Pearl's influence and her ability to remain "upbeat and persistent" (Wenger-Trayner, B., & Wenger-Trayner, E., 2015, p. 115) in the face of challenges. Observations made throughout the course of the study strongly suggested that awareness of these external threats and challenges further united the CoP and made them more protective of their shared domain and more determined to succeed with their collective goals.

## Working With People

Because the nature of this vision involved multiple players from diverse healthcare education areas, Pearl realized that this was an initiative she would have to manage and share with other likeminded professionals. On this level, she realized that she needed support from other CoP members belonging to different practices in order to "build a community" around her idea. Pearl was observed to have relied upon her own knowledge and experience in selecting community partners who she felt had the required passion, competence, commitment, and integrity to contribute to the success of the initiative. As a result, the core membership appeared to respond well to Pearl's role as a protagonist and her leadership approach.

Pearl's ability to foster a shared domain that focused on a collective IPE vision toward family assessment appeared to have a transformational impact on all of the CoP members. She related that success in this area may have been attributed to the "personalities" involved and that none of them were "people that have to have all the attention," even though all members were "very strong in [their] own areas." Pearl's success as a systems convener depended on her ability to actively inspire, engage, and empower the other core members of the CoP. Literature relating to leadership trends in CoP management references a great likelihood of leadership failure if conveners have a propensity toward power domination and micro-management (Cashman et al., 2015; Coenders et al., 2014; Wenger-Trayner, E., & Wenger-Trayner, B., 2015). Although never explicitly stated, observations made by the research lead throughout the study indicated that Pearl seemed successful in avoiding any negative inclinations often related to leadership

control and that she followed best practices in her role as a systems convener. Such practices included her ability to continually convey an appreciation for her partners' mutual "enthusiasm" and "respect" in relation to the level of "integrity" and "commitment" they jointly placed upon the initiative (Wenger-Trayner, B., & Wenger-Trayner, E., 2015, p. 112). As a result, she was observed to have garnered a great level of trust and support from her fellow core CoP members throughout the group's engagement process.

## *Adopting a Social Learning Approach*

Although the CoP members all had some peripheral knowledge about social learning theories, none of them seemed to have been deeply familiar with any one particular theory. Rather, they seemed to self-identify loosely as a "community of practice." Pearl, in particular, often referenced the concept of "building a community together" around IPE and family assessment. During her final interview, Pearl recognized that this particular community was carefully constructed from other strong professional communities that had their own inherent domains and practices. It was during her final interview when Pearl reflected upon the attributes of a "shared vision, values, and leadership" that facilitated the CoP's joint learning trajectory:

> And so I think all of us were all strong leaders in our own right. And I think we shared the leadership. And I think we did a really nice job. I didn't see one person coming out as like the dominant leader; I saw us all sharing it. And we were so cooperative. Because I think we had a shared vision of where we wanted to be around the project. So I guess in terms of building a community, I think we did really build a community together. And I think each one of us had our own leadership role. So I saw it more as like a shared leadership role for all of us.

Field notes and observations made during the CoPs engagement over the six-month period were consistent with Pearl's assessment on the cohesiveness of the group throughout their various meetings and more agile and informal interactions.

## **Discussion**

In her operational capacity as a convener, Pearl was able to navigate through the "three modes of identification" (Imagination, Engage-

ment, and Alignment) that B. Wenger-Trayner and E. Wenger-Trayner (2015) outlined in conceptualizing a new and, in this context, unique IPE landscape for the CoP. In relation to the Imagination mode, Pearl was successful in recruiting members that strongly identified with her vision and essentially played a part in co-creating a collective narrative around this IPE initiative. Within the Engagement mode, Pearl was able to lead by understanding the strength of diversity in maximizing learning across boundaries within an interprofessional landscape. Finally, Pearl was cognizant of the various levels of Alignment required between the core CoP participants and external stakeholders to sustain this trial initiative. These three modes were also leveraged by the collective IPE CoP entity.

B. Wenger-Trayner and E. Wenger-Trayner (2015) identified systems conveners as having an inherent "systems view of the landscape" and, thus, as being adept at "forming heterogeneous learning partnerships to transform existing practices or create new practices" (p. 97). They do this most effectively by building a community to serve as an "intervention" in the landscape "in order to transform practice" (p. 97). Possessing passion about pursuing an idea within such a landscape did not ensure Pearl's success as a lead CoP convener. She needed to work at fostering the collaborative atmosphere that proved to inspire, engage, and empower her community throughout their process of mutual engagement. This is a role that the lead researcher observed to require a high level of resilience and perseverance in the face of perceived adversity. In this situated context, Pearl was observed to possess the required facilitation attributes to operate in the role of a systems convener and, thus, to have a strong influence in the transformation of IPE community identity and practice within her transnational landscape.

Although this IPE CoP was observed to have collaborated together with no evident internal conflict throughout this first project iteration, group cohesion, under the facilitation of an effective and even more experienced systems convener, should never be assumed, nor should social learning concepts be over-idealized. Context is a key factor, and even the most successful learning communities can fall prey to external factors and influences that can create challenges over time. More research contributions from different IPE CoP convening experiences, whether positive, negative, or mixed, might help to further highlight convening attributes from Wenger-Trayner and Wenger-Trayner's (2021) theoretical model and how they play a role, if any, in influencing CoP cohesion and engagement.

Since this first project iteration, members of this CoP have continued to engage and collaborate further on their IPE initiatives. However, most of the members have now moved on to other university positions across the globe, which has created challenges in engagement due to other commitments and time differences. Conditions and face-to-face meeting constraints imposed through the recent COVID-19 pandemic have forced many CoPs to seek virtual platforms such as Teams and Zoom to engage in community collaboration. Another case study iteration could build upon the work of McLoughlin et al. (2018) and explore spatial and temporal challenges for conveners in attempting to build and sustain IPE initiatives such as this one.

## Conclusion

The systems convener identified in this limited single case study emerged as a local visionary who built a community around an idea by inspiring, engaging, and empowering her fellow CoP core members. The presence of both an effective leadership steward and a receptive community where a sense of shared leadership was encouraged contributed to the overall strength and success of this CoP in achieving their collective vision. It also greatly assisted this CoP in navigating through the ostensible challenges it faced as a collective entity throughout its trajectory within its unique transnational landscape. Although the objectives of this research were not necessarily intended to be applicable to other contexts or theory building, they were expected to begin more scholarly dialogue and to contribute to convener narratives in the IPE field in efforts to inform similar studies undertaken in the future.

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# Living Labs
# Through Wenger's Conceptual Lens:
# A Literature Review

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*This literature review applies Wenger's community of practice framework as a theoretical lens to generate insight about the complex collaborative processes of living labs. The authors explore this model with insights from the literature on labs and then set out to understand higher educational living labs. The findings show that current research on lab practices is limited, the field is scattered, and there is little common perspective across disciplines. The authors advocate for more research on the actual social processes. Only then can living labs hold their promise of integrating learning and innovation in higher education.*

Living labs are increasingly proposed as social learning situations where different stakeholders can interact and learn while also fostering innovation (Schipper et al., 2022). Universities view living labs as optimal environments that integrate research and education, reflecting policymakers' desire to position these labs as core transformation instruments to achieve applicable innovations for knowledge economies, higher education, and lifelong learning (Ministry of Education, 2019; Prime Minister's Office, 2006). Scholars also embrace the living lab approach due to the belief that its transdisciplinary setting, involving a heterogeneous mix of stakeholders, is ideal for impactful innovation (Paskaleva & Cooper, 2021). In educational contexts, students are considered an untapped resource for research in complex problem solving, and the labs also provide experiences to prepare them for

the job market (Evans et al., 2015; Rogers et al., 2021). Living labs in higher education are mostly positioned as part of a larger network of structures that promote open innovative, collaborative processes in real-life environments through the inclusion of multiple stakeholders from business, society, and academia (Ballon & Schuurman, 2015; Burbridge, 2017; Chronéer et al., 2019; Hossain et al., 2019). These network structures imply the "horizontal adoption" (Burbridge, 2017, p. 1726) of innovations, or they create innovations through changed work practices.

The collective social learning by different types of stakeholders yields a multi-disciplinary evidence base, reaching across higher education research, innovation management studies, and studies about successful (student) learning in complex contexts. While studies have been done in each of these fields, they rarely combine perspectives across disciplines. Collectively, the studies seem to focus primarily on two perspectives. The first perspective is the interaction between universities, governments, and the market and how living labs fit into this system (Almirall & Wareham, 2011; Greenwood et al., 2017), also known as the triple or quadruple helix. The second perspective focuses on the elements that make up living labs, such as the participants, funding, and coordination (Westerlund, Leminen, & Habib, 2018; Westerlund, Leminen, & Rajahonka, 2018). This second perspective remains descriptive and lacks a practical approach to the interaction of living lab elements in actual labs (see also Chronéer et al., 2019; Compagnucci et al., 2021).

While this literature review can be positioned in line with the second approach, aiming to understand the what and the how in living labs, our intention is to reach beyond the elements of living labs into their innerworkings, and it is based on what is empirically known about the processes of living labs in the current academic literature. This approach follows the call by Hakkarainen and Hyysalo (2016), who provide guidelines for practitioners, and by Hossain et al. (2019), who note the lack of reference models for developing and managing living labs.

## Defining Living Labs

A living lab is a concept that has various definitions and interpretations across knowledge fields and practices. Generally, it is described by its two core characteristics: co-creation and a real-life experimentational environment with user participation (Hossain et al., 2019). The term was first used in the 1990s to describe user testing in smart

living homes. Since then, its meaning has evolved from a research and development methodology to encompass a broader definition, such as a "user-centric innovation mileu built on every-day practice" (Bergvall-Kåreborn et al., 2009, p. 3), an "open innovation environment" (Mulder & Stappers, 2009, p. 1), an "ecosystem" (Hossain et al., 2019, p. 982), or "interaction spaces" (Leminen, 2015, p. 29). While these research studies provide high level defintions of a living lab, its defintion remains elusive in practice.

When students are the core stakeholders in living labs, they are called "educational living labs." These labs have gained popularity, but their meaning can also vary widely, often with a preference for "authenticity" over "real-world experimentation" (p. 4) as a key component (Miltenburg & Weerheijm, 2018). Co-creation and multi-disciplinary teamwork varies in its application in practice. Each lab differs in its set-up, structure, and goal. Students may work together within a single discipline or across multiple disciplines, and practitioners and users are involved in various ways. While benefitting all stakeholders is considered crucial for integrating learning, promoting innovation, and providing a sustainable practice, innovation is often seen as a by-product of student learning rather than as a value for the stakeholders in the lab (Burbridge, 2017).

Although a clear multiplicity of living lab definitions exists, collaboration is considered a key overall component (Kalinauskaite et al., 2021). Labs are essentially posed as transdisciplinary collaborative "interaction spaces, in which stakeholders from public-private-people partnerships (4Ps) of companies, public agencies, universities, users, and other stakeholders, all [collaborate in a] real-life context" (Leminen, 2015, p. 15). This commonality provides a united focus to observe how practice and collective learning might be shaped in the body of knowledge on living labs.

We define living labs as inherently social processes characterized by the in-lab mechanisms in which stakeholders simultaneously learn and innovate. This takes place in a setting where stakeholders collaborate and co-create meaning, new perspectives, and knowledge (Zenk et al., 2021, p. 2). The lab brings together stakeholders from different backgrounds who identify and feel accountable to different communities of practices (Kubiak et al., 2014). As a result, stakeholders must learn how to collaborate and form a community of practice together, which can be "a messy reality of historical, social, and political relationships that are charged through and through with power" (Kemmis, 2005, p. 400).

# Approach of This Study

The foregoing description of living labs suggests that this type of lab can be seen as a practice community, characterized by its social process, as described by Wenger (2019 [1998]). To be able to provide such a rich description of collaboration and collective learning in living labs, we use Wenger's community of practice framework (2019 [1998]) as a theoretical lens in this literature review. Wenger's framework is widely used in various settings, such as in workplace learning (Gijbels et al., 2001) and in learning across organizations (Mavri et al., 2021). The framework's variables can describe processes in living labs following the integration of foci on practice, community, identity, and meaning (Wenger, 2019 [1998], p. 5) as shown in Figure 1. This figure applies the characteristics of CoPs to higher education labs. The four key stakeholders of students, lecturers, researchers, and non-higher education professionals were included as representations of distinct practices that often intersect in higher education lab environments. Some individuals may embody multiple practices.

Figure 1
**Think Model of Living Labs
Through the Lens of Wenger's CoP Variables
(Wenger, 2019 [1998])**
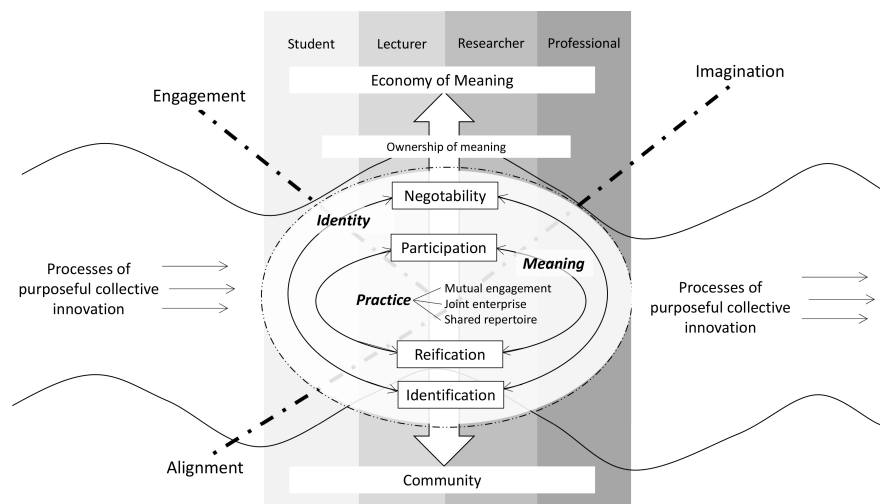
The variables in this figure are applied to describe the current body of knowledge on living labs from two perspectives. First, the variables in the center of the figure outline the current knowledge about living labs in general and focus on the concept of "Practice." According to Wenger, practice in a CoP is built upon 3 dimensions: joint enterprise, mutual engagement, and shared repertoire. Of these three dimensions, *joint enterprise* is a defining feature of labs: a collective negotiation process focused on a common goal or purpose. Other than in CoPs, this joint enterprise in labs is an actual collective project—not a metaphorical one—on which stakeholders work collaboratively. This requires a more intense negotiation of the practice in labs (Mørk et al., 2010). Similarly as in CoPs, *mutual engagement* refers to the communication and social relationships, while *shared repertoire* is about having a collective narrative for sharing ideas, concepts, and building a history of tradition. Next, "Participation" is the process of taking part in a practice. All *meaning* is negotiated in practice trough an interwoven process of participation and reification, in which the latter is the creation of artifacts such as in writing or objects as part of practice.

These labels will be applied to structure and conceptualize the findings in this article,  each at the level of detail provided by the body of knowledge found. This will be done, first, with a general focus on living labs, and second, with a focus on living labs in higher education. In the latter, the body of knowledge has shown particular relevance of the combined processes of practice, meaning, and identity into perspectives of the economy of ownership, which seem to shift when the focus in living labs is altered from innovation to (student) learning.

Our adapted version of the Wenger (2019 [1998]) framework provides us with a more integrated view of the living lab process as a social constellation of which "learning is their practice" (p. 95). This has been done before for other social settings, such as collaboration in multi-disciplinary project teams (Hildreth & Kimble, 2004). It is important to note that living labs deviate somewhat from Wenger's traditional definition of CoPs. Labs are often a formal entity with a specific start date, and they frequently include an assigned topic, while CoPs are more continuous in nature. However, other studies have already applied CoPs to more formal organizational structures (Hildreth & Kimble, 2004). Furthermore, labs align with Wenger's (2019 [1998]) view that learning is a source of social structure, and that structure is an emergent, not a separate, entity. As such, both CoPs and living labs involve an open negotiation of meaning and are both constantly changeable, balancing stabilizing and destabilizing forces. In both settings, learning drives the practice in an emergent manner.

For this literature review, we reviewed the current body of knowledge on the topic in the scholarly literature and present it using an integrative literature method. This method was chosen because it effectively crosses disciplinary boundaries in new or emerging topics (Torraco, 2016). The focus of the literature review was to understand how labs integrate learning and innovation through collaboration processes. The literature was initially sourced using keywords and synonyms of "educational living labs" and "living labs," with the additional keywords of "students," "learning," and "innovation," and the search was limited to studies written in English. The research was deemed relevant if it contributed to the understanding of the collaborative social processes within living labs. Additionally, relevant literature was identified through snowballing and structured using the CoP lens. The aim of this study is not to be comprehensive, but to generate initial insight into the complex collaborative processes of living labs and to identify any remaining gaps in knowledge. Although this type of review has limitations, such as non-reproducibility and possible cherry picking, it is preferred for exploratory research (Greenhalgh et al., 2018).

## The Current Understanding of Living Lab Processes

In this section, the more generic findings on living labs are presented. In the next section, the findings on higher education living labs will be described.

The most important general finding of this literature review is the rather limited body of empirical knowledge on the social processes within labs (Kalinauskaite et al., 2021; Paskaleva & Cooper, 2021). This is despite a sharp increase in the number of publications on living labs since 2015 (Greve et al., 2020). Generally, the empirical studies do not position collaboration and social practices at center stage in many of these studies, even if these processes are considered essential to the labs' function. The research is focused mostly on exploring common characteritics or discussing the possible benefits of living labs (Nesti, 2018).

The lack of focus on the workings of collaboration in living labs, as confirmed by Kalinauskaite et al. (2021), seems in line with a wider tendency to reduce complexity in empirical innovation studies. This is also documented by Hoholm and Araujo (2011), who observe a focus on case studies and the use of nondescript variables such as "structures" or "culture," and by Mäenpää et al. (2016), who note the exclusion of too-diverse actors. Still, because this complexity is an integral part of the daily routine in living labs, empirical research should

consider it, for its absence poses serious challenges in advancing living lab research and practice.

What emerges in the current body of knowledge on living labs is a clear recognition of mutual engagement as a crucial component of successful collaboration in laboratory settings. According to Wenger (2019 [1998]), mutual engagement involves establishing relationships, defining identities, and determining roles and expertise among stakeholders. Additionally, some scholars, like Mäenpää et al. (2016), state that teamwork can occur only when there is a mutual understanding and common knowledge shared among stakeholders. This is in line with Wenger's (2019 [1998]) notion of a shared repertoire among stakeholders, including the shared routines, language, tools, and ways of doing things as part of a group's practice. While it is essential to the understanding of lab practices to unpack these practice elements further, the studies focus mostly on alignment between stakeholders from a process standpoint (Kalinauskaite et al., 2021). Other than providing an in depth analysis, it is merely that language and cultural barriers can intervene in knowledge exchange among the labs' stakeholders, or that a high level of interwoven shared competence among stakeholders can provide effective collaboration (Fam, 2017). Similarly, Johansson and Lundh Snis (2011) found that creating "temporary" mutual understanding between stakeholders during co-creational workshops was sufficient for in-lab collaboration.

With a similar abstractness, scholars acknowledge that collaboration among stakeholders can be challenging and complex (Hakkarainen & Hyysalo, 2013, 2016). The studies indicate that conflict and tension often arise when stakeholders from different organizations and with different roles co-create (Hakkarainen & Hyysalo, 2013, 2016; van Geenhuizen, 2016, 2018). Although these studies do not explicitly discuss the importance of mutual engagement in understanding the processes creating tension, Wenger (2019 [1998]) suggests that disagreement and tension can be a natural part of prolonged interpersonal interaction, especially in heterogeneous group processes such as those found in laboratory settings. That is, members of a heterogeneous group strive to balance their alignment within the group with their other communities of practice, which can lead to multiple instances of tension throughout the lab process (Kubiak et al., 2014).

Contrary to promoting efforts to reduce tension, some studies have suggested that tension can be essential for innovation, that disagreeing opinions result in more knowledge, and that the transdisciplinarity that underpins this diversity also provides the foundation of lab construc-

tions (Wannenmacher & Antoine, 2016). Essentially, this argument also follows from Wenger's (2019 [1998]) notion that "mismatched interpretations or misunderstandings need to be addressed and resolved directly only when they interfere with mutual engagement [because] they [provide] occasions for the production of new meaning" (p. 84). Scholars (Kalinauskaite et al., 2021; van Geenhuizen, 2016) have observed that these tensions result in the need for a balancing act to manage the interactions and engagement of all stakeholders. Living labs, therefore, should focus on avoiding imbalances in power and creating an equal and flexible environment for all stakeholders (van Geenhuizen, 2016). To achieve this aim, an upfront discussion of values and differences among stakeholders is recommended, for instance, as a reflective layer around lab collaborations to monitor, maintain, and guide stakeholder alignment (Kalinauskaite et al., 2021). Many scholars note that establishing a shared focus, or a joint enterprise, is not only a core characteristic of living labs as we define them here, but also key for successful lab processes to occur (Kubiak et al., 2014).

Overall, it can be recommended that the meaning making for learning or innovation in living labs be based fundamentally *on* the tension among stakeholders of different backgrounds, including the power plays that underpin this tension. Thus far in the literature, however, this functional tension seems to be a conceptual or even "romantic" notion. The empirical research basis currently is lacking, as are the instruments needed to manage its development. Research is needed that considers the full complexity of collaborative processes in living labs using an evidence-based design.

## Higher Education Living Labs

In this section the particular characteriscs of practices in higher education living labs are presented. Generally it is suggested in the literature that higher education labs hold explicit potential for integrating innovation and student learning, following the potential of the integration of education and research in (applied) universities. Van Geenhuizen (2018) describes how, apart from teaching students, these labs involve a large variety of actors, including researchers, industry partners, and community members.

The living lab literature shows a clear division, in which students in living labs are commonly viewed in pedagogical terms, with the labs seen as a tool for students to learn about societal issues or professional development (Dabaieh et al., 2018), rather than as settings for

innovation. The pedagogical discourse provides a focus on student learning only, leaving out information on the perspectives or practices of other stakeholders involved. In contrast, studies on innovation in labs hardly discuss the learning or practice of students, who are, therefore, often portrayed as mere future workers. Both sides of the division contradict the transdisciplinary nature of innovation processes, where all stakeholders should be involved in meaning making (Gibbons et al., 1994), to achieve innovative tension as previously described. Van Geenhuizen (2018) also describes that maintaining common interests among the diverse activities and stakeholders involved, both on- and off-campus, is crucial for effective management of higher education labs. Within that context, balancing the needs of all stakeholders while ensuring meaningful participation and shared ownership is considered particularly challenging. It is, however, not explicated in the research why this is the case, other than the suggestion that with students yet another group of stakeholders is involved.

## Student Autonomy

Students are the core participants in educational labs. Creating a balance in the mutual engagement and joint enterprise of students and other stakeholders in labs is addressed in the more conceptual studies we reviewed. Practitioners and researchers frequently cite partnership and shared ownership as essential aspects of living labs (Blom et al., 2013; Miltenburg & Weerheijm, 2018; Veltman et al., 2021). However, studies that focus on the participation of students have shown that they may not always feel like equal partners (McLaughlan & Lodge, 2019; Schrevel et al., 2020). The notion of the autonomy of students seems to be debatable between stakeholders. Some researchers may be reluctant to trust the quality of student work and may aim to reduce student autonomy to increase the quality of collective output. On the other hand, educational programs often require high levels of autonomy for sound assessment, which is an argument outside of the direct lab work. The findings, however, also reveal that achieving the level of autonomy needed to generate learning is difficult for students (Veltman et al. (2021), and the tension created can result in feelings of exclusion (Schrevel et al., 2020). Such difficulties can lead to less-optimal learning outcomes and reduced innovation (Veltman et al., 2021), minimizing the collective learning benefits.

Providing fit-for-purpose student autonomy is crucial for both establishing partnerships in labs and students' intrinsic motivation (Reeve

& Jang, 2006). Again, this is viewed as a balancing act that is related to students' expectations. While some students may fully engage with the lab, others may view their engagement in minimal terms (Fenton-O'Creevy et al., 2014) and feel uncomfortable with high levels of responsibility (Mørk et al., 2010); this makes it challenging to encourage high levels of lab engagement related to sufficient amounts of autonomy. To solve this difficulty, Fenton-O'Creevy et al. (2014) suggest two modes of participation for students—the "tourist" and the "sojourner." The tourist engages only superficially with the community's practice and is unaffected in terms of their identity, while the sojourner partially identifies with the lab's practice and competence regime, focusing on understanding these aspects to function well within the community. Fenton-O'Creevy et al. (2014) regard the sojourner mode of participation as a "profound opportunity for learning" (p. 45). This difference in student motivation was also reflected in comments by lab practitioners at the International Society for Professional Innovation Management conference in Valencia, Spain, in 2021, who found student motivation to be a significant challenge.

### *Lab Authenticity*

A second element that is posed to characterize potential student learning in learning lab situations is the lab's "authenticity," which yields meaningful mutual engagement between stakeholders and their practices, as in real-life settings, going beyond just acquiring skills or knowledge (Fenton-O'Creevy et al., 2014). The presumption of authenticity in labs requires all stakeholders to occupy a potentially uncomfortable space and "practice the skills required for epistemic fluency themselves" (McLaughlan & Lodge, 2019, p. 93). This authenticity is presumed to be a prerogative for a transferable innovation. For authentic learning by students in labs, sufficient autonomy and equal footing among stakeholders are presumed essential (Blom et al., 2013). While it might be easier to design labs in which students are the knowledge gatherers, and the other stakeholders guide, provide feedback, and manage the process toward innovation, it is this notion of authenticity that makes the lab format an appealing learning environment to educators. Drawing on Wenger's (2019 [1998]) theoretical framework, one could argue that for learning to take place, the collective practices and meaning making need to be characterized by at least a sufficient level of ownership. This collective ownership, then, shapes the direction of the joint enterprise, creates mutual engagement, and

provides inclusive input on the shared repertoire. In the literature the answer as to what this level of ownership entails remains lacking.

### *The Paradox Role of Assignments*

The final element central to educational living labs are the assignments (and exams) given to students to fulfill their educational tracks. Following from the discussions of autonomy and authenticity, these assignments play a paradoxal role in the living lab literature. On the one hand, assignments serve the educational purpose of providing a predicable, assessible learning outcome and, therefore, reduce the autonomy of students as part of the lab process. The assignments do, however, serve to align the needs of stakeholders and guide their participation by reducing the autonomy of all participants equally (Schrevel et al., 2020; van den Berg et al., 2019; Veltman et al., 2021). This paradox between autonomy and authenticity has not yet been resolved in the current body of knowledge.

What does become clear is that if an assignment is not mutually shared by all stakeholders involved, as with pedagogical assignments, unequal ownership of the lab process results (Schrevel et al., 2020). Lab practices have, therefore, been attempted to address this issue by the development of collective assignments that take into account the expectations and interests of all stakeholders, including the students and the related educational programs (Crosby et al., 2018; Veltman et al., 2021). However, it has been shown that this approach requires intensive teamwork, because participants in the lab may bring different discourses and behaviors to the negotiation (Crosby et al., 2018). One can also wonder if this approach not only results in a reduction of stakeholders' autonomy but also detracts from lab authenticity (Markauskaite & Goodyear, 2017).

The question remains, then, as to whether higher education labs can foster appropriate levels of ownership and learning for all collaborating stakeholders, especially students, who may experience disjunction between the professional setting of a living lab and the pedagogial setting they inhabit (Fenton-O'Creevy et al., 2014).

## Discussion

In this article, we have explored the inner workings of living labs and have proposed a conceptual framework derived from Wenger's comunity of practice perspective (2019 [1998]) to consider lab practices.

Based on this perspective, we suggest that rather than focusing solely on system and design characteristics, a focus on the full complexity of lab practices is essential to understand how they operate and to identify areas for improvement. Establishing a conceptual analysis of lab practices using Wenger's notions of joint repetoire, mutual engagement, joint enterprise, and exploring the processes of meaning making, ownership, and inclusion, reveals that most studies have not thoroughly explored the social dynamics of living labs with all of their inherent complexities. We argue that only when this complexity is considered through empirical research can proper evidence-based guidelines be created for lab practioners. Moreover, only then can higher education ensure that living labs are the authentic learning environments that many proclaim them to be.

This literature review indicates that current research still offers a limited and conceptual understanding of meaning making among stakeholders in living labs. Previous work, such as Fam (2017) and Johansson and Lundh Snis (2011), illustrates that the level and type of mutual understanding required for succesful collaboration may differ between contexts. It is crucial, then, to further learn the qualities of living labs to facilitate successful collaboration among stakeholders. Further research should aim to understand these processes of collective meaning making, including overcoming barriers of language, culture, and norms that resonate from stakeholders' own contexts, such as their professional fields and educational assignments.

This study has, however, made clear that a more sound and integrated empirical research base is sorely needed in light of the increasing enthusiasm for living labs for innovation and student learning. Frameworks such as the one shared here based on Wenger's work can assist in gaining a more comprehensive view of complex collaborative practices such as living labs.

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# The Universal Wellbeing Model:
# A Theory Designed to Transform Praxis

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*This article traces the journey and outcomes of research undertaken by evaluating theoretical wellbeing models and practice research. The findings have culminated in the new Universal Wellbeing Model (UWM). Emerging from this UWM are innovative ways to support and inform higher and wellbeing education and social learning in praxis. The innovations described have been influenced by the value creation work of Wenger (1998) and Wenger-Trayner and Wenger-Trayner (2020, 2021) to support the importance of communities of practice in knowledge innovation. The UWM has achieved a vision and promoted pragmatic strategies that can support diverse disciplines and contexts.*

## Introduction

Developing an improved theoretical wellbeing[1] model was a long-term, multi-phased process used by staff/researchers at the New

Zealand Curriculum Design Institute to produce a culturally responsive model applicable to the shifting learning contexts of the day. The process of developing a wellbeing model involved continuous investigation, evaluation, and adaptation to ensure it remained relevant and effective in addressing the changing holistic wellbeing needs of individuals and collectives. This also required collaboration and mutual social learning between students, staff/researchers, wellbeing practitioners, and other stakeholders to identify trends and negotiate emerging new best practices. This happened through comparing and critiquing the theoretical models of others post publication and, when available, practice-based research further investigating such models. The emerging UWM is an enhanced wellbeing model that identifies the sensory input, the output dimensions, the 70 variables that influence human wellbeing, and the overarching principles that support wellbeing trsnsformations by individuals and collectives.

Wenger-Trayner and Wenger-Trayner (2020, 2021) theorized that during social learning diverse types of value may be created (immediate, potential, applied, realized, and transformative) through each participant working to make a difference. Individual participants as well as macro-level stakeholders contributed to the transformative value of the UWM that emerged. For example, the publication of the Ottawa Charter for Health Promotion, published by the World Health Institution (WHO) in 1986, was a watershed macro- and micro-level "social learning" moment for those working in health, higher education, community, Indigenous, and workplace research and practice-related roles. This publication signaled aspirations to transform the health and wellbeing of people globally. The Charter illustrated the complexities and number of stakeholders who would need to be engaged in such social learning, and it flagged the subsequent changes in practices that health and wellbeing practitioners and policy makers alike would need to make.

The Charter laid out the diverse environmental layers and variables influencing social learning and change for those working in these fields. The Charter also endorsed the view held by many working in these fields globally that learning, and change, could no longer be supported through the simplistic cause-and-effect models of the past, which assumed that mere information delivery would lead to change. As Wenger-Trayner and Wenger-Trayner (2020) state, value creation does not take learning to be the "transmission of stuff"; and it does not take social learning to be the "sharing of knowledge" (https://www.wenger-trayner.com/value-creation/). It is now clear that for

new and complex social learning to occur, such as multifactorial and cultural responsiveness, new social learning capabilities such as those discussed by Wenger-Trayner and Wenger-Trayner (2020, 2021) would be needed. These capabilities include the ability to collaborate, find and negotiate meaning, engage in critical reflection, and participate in micro and macro communities of practice. It is, therefore, important for educators to design learning experiences that foster the development of these skills.

The Ottawa Charter was underpinned by two significant and seminal theoretical models that proposed new explanations of the nature of human learning and change: the socio-ecological model of Bronfenbrenner (1979) and the socio-cultural model of Vygotsky (1980). These models and the Charter resonated globally to the extent that many countries changed their health, wellbeing, education, and business curricula to reflect the latest ideas and explanations they included. Among these countries was New Zealand. The socio-ecological and Indigenous Hauora and socio-cultural models informed new school health and physical education curricula and intersected with a solution-finding challenge faced by the researchers in 2006 (and in multiple education, health, and work world contexts since).

The challenge emerged when a cohort of Indigenous Māori and Pacific Island students entering a higher education institution were required to study to maintain financial government supports. It quickly became apparent to staff/researchers and wellbeing practitioners that their conventional student wellbeing and support approaches for achieving and improving equity outcomes for these students would not be adequate. Key among staff/researchers' concerns was the clash between existing staff/researchers, wellbeing practitioners, and student social learnings and those of the new cohort. The engagement, inspiration, and alignment levels (Wenger, 1998) of this new cohort of students, due to the group's social history and experiences, were not supportive of their achievements. Some students were hostile to the compulsory nature of the education, the government-funded institution, and the staff/researchers, wellbeing practitioners, and other students they encountered.

Most outstanding were the clear differences in the social, ethnic, and cultural learning history of the new cohort. Their social learning was embedded in ethnically and culturally different perspectives, knowledge bases, expectations, and ways of thinking and being. With the need to provide a holistically supportive social learning community for these students being a priority, the staff/researchers began to

search for models, research, and practices that might assist them in supporting this student cohort. As Wenger-Trayner and Wenger-Trayner (2020, 2021) state, learning unfolds from a range of informal as well as formal contexts, through sporadic conversations between strangers, social network activities, cultural events, and so on. They also make clear that students' drive, aspirations, and the pursuits they care about will directly impact the world they inhabit and whether they will achieve their goals or not. Mutual understandings were not present at the commencement of the research between the students, staff/researchers, and wellbeing practitioners.

The program of research outlined included a long-term vision to build a robust underpinning philosophy and theory base for wellbeing research and practice that would progress and become more effective over time. The work of Wenger-Trayner and Wenger-Trayner (2020) on value creation, which emphasizes the significance of understanding the social aspects of knowledge creation and sharing within communities of practice, supported this work by providing signposts that recognized the value of such work and its outcomes. In New Zealand, improvements in wellbeing are sought for health and equity aspirations to be realized. Thus, the New Zealand Curriculum Design Institute research team conducted this research knowing that the key to enhancing wellbeing is the engagement in and valuing of individual and collective aspirations, strategically and effectively, through in-depth and transformative social learning-informed practice. With these elements and ongoing supports in place, the potential value was for individual and collective progress in maintaining positive wellbeing variables and the transformation of those variables that were challenging or causing harm to wellbeing. Key to both aspirations and at the heart of the program of research and subsequent transformation are programs of social learning.

## Research Journey Context and Outcomes

The students, staff/researchers, and wellbeing practitioners participating in the research journey were encouraged by the institute to pursue what made a difference for them, and the four learning modes inherent in Wenger-Trayner and Wenger-Trayner's (2020, 2021) social learning spaces were at play: (1) generating value, (2) translating value, (3) framing the creation of value, and (4) evaluating value creation (https://www.wenger-trayner.com/value-creation/). The search for models, research, and practices that could meet the

complex needs of the cohort of students took three directions, each emerging from the former and driven by an aspiration to make a difference. First, it led to an array of definitions and discussions of the concept of wellbeing, which promoted the value of wellbeing from various standpoints. A surprising finding was that despite notions of wellbeing having appeared in academic literature for over 40 years, there have been few robust attempts made to define the term itself. Ryff and Keyes (1995) noted, for example, that the absence of theory-based (and evidence-based) formulations of wellbeing is puzzling given the abundant accounts of positive functioning in subfields.

The staff/researchers also found that most definitions of wellbeing came from clinical health or psychological perspectives from the 1990–2000 era only, because there have been no recent definitions found. Those coming from psychological perspectives related to mood or affect (Hattie et al., 2004) tended to view wellbeing as being related to intellectual or emotional areas such as depression or positive self-attributes (Keyes, 1998; Ryff & Singer, 1996). Others related wellbeing to the degree to which a person demonstrated valued attributes such as academic achievement (Carr-Gregg, 2000; Marks & Fleming, 1999; Rickwood et al., 2002; Whatman, 2000; Wyn et al., 2000). Those from clinical health backgrounds viewed wellbeing as an absence of diagnosed physical health conditions such as heart disease. Thus, these definitions of wellbeing were found to be quite varied and highly influenced by the underpinning field of study.

While some of the models found in the literature focused on emotional or psychological factors, others emphasized physical health or academic achievement as indicators of wellbeing. These findings highlighted the need for a more multi- and interdisciplinary approach to understanding meaning creation and promoting wellbeing and related social learning needs. At a similar time, the WHO (2010) defined mental wellbeing as "a state of wellbeing in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community" (https://www.who.int/data/gho/data/themes/theme-details/GHO/mental-health).

In 2017, the WHO revised the initial health advice they provided to schools and stated, "a school that constantly seeks to strengthen its capacity to promote healthy living, learning and working conditions" (p. 19) is providing early intervention to reduce long-term risk. The WHO was then urging schools to consider making a commitment to enhancing the social, emotional, physical, and moral wellbeing of all

members of their school community and promoted the six ecologically oriented positive health-promoting outcomes to support wellbeing:

- Engagement with health and education community leaders

- Providing a safe and healthy environment

- Curriculum teaching and learning

- Access to health services

- Policies and practices that intend to improve wellbeing

- Improving the health of the school community. (p.19)

The direction of change signaled by the WHO above emerged from and aligns with Wenger's (1998) social learning theory components: learning as experience, learning through doing, learning as belonging, and identity and learning that supports becoming. The view of a school supported by the WHO is one of a community that operates according to the six features of an Indigenous CoP also articulated by Wenger-Trayner and Wenger-Trayner (2020, 2021): a clear focus on shared wellbeing practice problems, actively learning through inquiry; taking collective ownership, including an appropriate mix of partners, and having a sufficient commitment to implementation and effective governance structures and decision making relating to wellbeing. The WHO (2019) also drew attention to the many mental risk factors that may be present in a working environment or community.

A second investigation direction pursued was prompted by the findings and social learnings derived from students, staff/researchers and wellbeing practitioners, and a larger national dialogue about equity for those experiencing disabilities, Indigenous Māori and Pacific Island peoples, which was beginning and led to a wellbeing model emerging in the field of education. In 1999 the New Zealand Ministry of Education published a Health and Physical Education curricula that included the conceptual framework shown in Table 1.

These curriculum changes were prompted, as Wenger-Trayner and Wenger-Trayner (2020, 2021) note, by student support aspirations and pursuit of what they cared about, plus what would directly impact the world(s) they inhabited. The curriculum introduced the Indigenous Māori concept of *hauora* (breath of life or wellbeing), which led, in turn, to two Indigenous Māori models of *hauora*. The

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Table 1
**Health and Physical Education Curricula Conceptual Framework**

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***Hauora***: A Māori philosophy of wellbeing that includes the dimensions *taha wairua, taha hinengaro, taha tinana,* and *taha whānau*, each one influencing and supporting the others.

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**Attitudes and values**: A positive, responsible attitude on the part of students to their own wellbeing; respect, care, and concern for other people and the environment; and a sense of social justice.

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**The socio-ecological perspective**: A way of viewing and understanding the interrelationships that exist between the individual, others, and society.

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**Health promotion**: A process that helps to develop and maintain supportive physical and emotional environments and that involves students in personal and collective action.

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*Note.* Available at https://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum/Health-and-physical-education

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first, *Whare Tapa Whā* (the four-sided house), was described by Durie (1994). This model, initially designed to enhance the ethnic and cultural capabilities of non-Indigenous health workers supporting Indigenous patients in health settings, was now being applied in a range of diverse contexts. Durie's model outlined the world view and wellbeing needs of Indigenous Māori patients in relation to the following four dimensions: *taha wairua* (the spiritual side), *taha hinengaro* (the intellectual and emotional side), *taha tinana* (the physical side), and *taha whanau* (the family and social side). The students, staff/researchers, and wellbeing practitioners piloted the providing of support to the first cohort of new Māori and Pacific Island students using Durie's model.

The first national investigation (Schofield et al., 2011) of the *Whare Tapa Whā* model found quantitative and qualitative data supporting the view that social learning and interactions were successful in the achievement of "Immediate, Potential, Applied, and Realized" value. Student achievement and retention levels were improved, with-

drawals reduced, and a family-like learning community was created and sustained over time. It was also found, however, through focus group discussions with students, staff/researchers, and the wellbeing practitioners, that while the model resonated with most Indigenous Māori students, some had different perspectives due to their tribal links. It was less successful in meeting the needs of the diverse Pacific Island students, who came from 16 different Pacific Island nations and whose ethnic and cultural worldviews were different. Students, staff/researchers, and wellbeing practitioners also expressed practice-related concerns about (1) who were ethnically and culturally "appropriate" to deliver student support underpinned by the *Whare Tapa Whā* Indigenous model; (2) the level of understanding of *Whare Tapa Whā* required by wellbeing practitioners; and (3) whom the model was intended to support, and if it was genuinely inclusive of all students' and staff/researchers' ethnicities and cultures. The conclusion reached was that the *Whare Tapa Whā* model's lack of a guiding ethnic and/or cultural dimension meant that it did not support wellbeing practitioners to respond holistically to diverse students.

The inability of the *Whare Tapa Whā* (the four-sided house) model to equip students, staff/researchers, and wellbeing practitioners to support students from diverse ethnic and cultural backgrounds, thereby becoming sustainably transformative as envisioned, led to an ongoing search for a more effective and, some would claim, a more ancient Māori model: the *Whare Tapa Rima* (the five-sided house) by Moeau (1997) and, to a lesser extent, the Fonofale Model created by Pulotu-Endemann in 1984, published in 2009 and 2021. Moeau's Indigenous Māori model included all four dimensions set out in Durie's model but also a new fifth dimension, *whenua* (cultural and ethnic). This addition required staff/researchers to support the ethnic and culturally different dimensions of each student with whom they worked. Pulotu-Endemann's Fonofale Model is represented as a *fale* (Pacific Island House), including the family as the foundation, four support posts representing the Physical, Spiritual, Mental, and other dimensions (the latter including gender, sexuality, and socio-economic status), and protected by a thatched roof within an ecological framework that includes time, environment, and context.

A second nationally funded investigation of the outcomes of providing support to diverse national and international students by Fielden et al. (2020a) and informed by both the Moeau and Pulotu-Endemann models found "Immediate, Potential, Applied, and Realized" value was achieved; however, all but the conclusion above remained for the

students, staff/researchers, and wellbeing practitioners from the first investigation. Again, the research showed that student achievement and retention levels were significantly enhanced and maintained over time due to the ongoing and holistically supportive community the models fostered. Withdrawals in the cohort also ceased despite the investigation being conducted before, during, and after COVID-19 lockdown periods. Wenger-Trayner and Wenger-Trayner's (2020, 2021) view that learning is perceived as a process whereby practitioners' identities are slowly transformed as they engage the practices of a social community was supported. The staff/researchers' view of themselves transformed as they developed greater awareness of their own ethnicities and cultural practices and how these impacted their practice.

Concerns about the new models' capacity to transform wellbeing emerged from the CoP and staff/researcher focus groups after the second investigation. First, it was still unclear who was ethnically and culturally "appropriate" to deliver student support underpinned by the models, and attempts to clarify this concern with Indigenous advisors and stakeholders failed to resolve these concerns to the satisfaction of the students, staff/researchers, and wellbeing practitioners. This left the latter two groups indicating they felt unsafe and unconfident using the models with diverse clients. Second, the level of understanding of *Whare Tapa Rima* required by wellbeing practitioners was also unclear, as was guidance about how the different dimensions were to be interpreted. An absence of evidence-based *Whare Tapa Rima*-related materials and resources was noted. Finally, whom the model was intended to support, and if it was genuinely inclusive of all students, staff/researchers, and wellbeing practitioner ethnicities and cultures was again questioned. Some Indigenous Māori students and staff/researchers argued the model was exclusively by Māori and, therefore, was only for the use and benefit of Māori, while others stated it was gifted to all by the model's creator (Moeau,1997) at a conference. Some Pacific Island students indicated the Fonofale Model did not meet the diverse wellbeing views of all Pacific Island nations and advocated for the spiritual dimension to be changed to Christianity.

Both nationally supported research investigations (Fielden et al., 2020a; Schofield et al., 2011) showed that the key reason for the models being effective was that students received consistent, encouraging, ongoing, and semi-holistic support from the social learning community where they undertook their studies. That is, students, staff/researchers, and wellbeing

practitioners were engaged, inspired, and aligned eventually toward achieving real change in their lives. In 2020, the implementation of wellbeing practice informed by the *Whare Tapa Rima* model in institutions was further supported via a digital film research output (Fielden et al., 2020b). To support those with an interest in better understanding this model, Stevenson and Zagala (2021) further clarified its potential for transformative value contributions to equity in higher education institutions. The outcomes and, especially, the practice challenges that remained through the first and second investigations prompted the final investigation direction, which was a review of wellbeing models published internationally. This ultimately led to the emergence and development of the UWM. Wenger-Trayner and Wenger-Trayner's (2020, 2021) view that students (staff/researchers and wellbeing practitioners) are driven by aspirations and pursuits that they care about and that will directly impact making a difference in relation to the world they inhabit and in which they work was confirmed by the research outcomes.

## Review of Related Literature: Wellbeing Models

The humanistic philosophies and theories forming the basis for this research and practice contexts included the education, health, psychology, business, Indigenous, and community development fields. Having noted thousands of anecdotal, professional, and research papers on wellbeing, the researchers elected to implement a themed wellbeing literature review search. Wellbeing Model literature that they determined could qualify for inclusion needed to include one or more of the following: (a) an identified philosophical base; (b) the capacity to support wellbeing literacy through a comprehensive and explainable model; (c) sufficient information so that it could be evaluated through research; (d) guidance provided to wellbeing practitioners; and (e) fit for purpose, so it could be implemented in the fields the researchers worked in and with ethnically and culturally diverse youth, adult individuals, families, teams, organizations, and communities. Underpinning the criteria developed was the aspiration to create transformational value as described by Wenger-Trayner and Wenger-Trayner (2020, 2021). Themes emerging from the literature are discussed below.

*Theme 1. Ethnic and Cultural Perspectives of Wellbeing*

Beginning in 1982, a range of wellbeing models emerged that ap-

peared developed for specific ethnic and cultural groups. For example, Pere published the *Te Wheke* (the Octopus) Model (1991), which included eight cultural concepts for support and development to meet the specific wellbeing needs of New Zealand's Indigenous Māori people. In 2004, Love provided expanded explanations of *Te Wheke*, its underpinning Indigenous philosophy and worldview. While Love's work was supportive of *Te Wheke*, no research into applications of the model could be located. Also created at this time was the Fonofale Model of Pacific Health & Wellbeing (Pulotu-Endemann, 2009, 2021; see prior description) and the *Whānau Ora* Model (Ihi et al., 2020; Ministry for Community and Voluntary - Whānau Ora, 2009; Taranaki District Health Board, 2014). The *Whānau Ora* Model (family life) sought to reframe wellbeing from a Western, colonized, and individual perspective to an ethnic/cultural, family, and collective one.

The *Whānau Ora* Model and its evaluation in praxis assumed an increased focus when political negotiations led to the establishment of a national *Whānau Ora* program for New Zealand's Indigenous Māori population. Alongside the adoption of this model to support the implementation of the Treaty of Waitangi contract, Indigenous Māori supported the initiative as having Immediate, Potential, Applied, Realized, and Reframing Value (Wenger-Trayner et al., 2011; Wenger-Trayner & Wenger-Trayner, 2020, 2021). Included in the developments of this model were new definitions of success, reframed strategies, goals, and values in alignment with Indigenous Māori knowledge, protocols, and power structures. Also created at this time were models from ethnic, cultural, and professional groups designed for specific and exclusive audiences. For example, Hassan (2015) published a paper on the Islamic Transcendental Wellbeing Model, which was underpinned by Islamic philosophies and the Koran, that supported the provision of counseling services for Malaysian Muslim women.

The *Kawa* Model (Teoh & Iwama, 2015) was designed specifically to support occupational therapists to improve the wellbeing of clients to whom they were providing therapeutic services. An Aboriginal Social and Emotional Wellbeing Model published by the Mental Health Commission of New South Wales (2018) was also designed to exclusively serve this ethnic and cultural community who were not being well served by western health and wellbeing service provisions. Hinemoa Elder, an eminent youth forensic psychiatrist, set out two further models in 2017, *Te Waka Oranga* and *Te Waka Kuaka*. The first was designed to establish partnership between those with an interest in supporting Indigenous youth, and the second promoted the inclusion

of ethnic and cultural knowledge and skills to support improvements in the wellbeing of largely Indigenous youth receiving forensic services.

Shifting focus, Lester et al. (2020) advocated for the promotion of staff wellbeing and Garvey et al. (2021) for a better Care Model to support Aboriginal and Torres Strait Islander wellbeing. A strength of these two models were the open presentations of the philosophy, theory, and practice they included, as well as the option to conduct evaluative research using Wenger et al.'s Value Framework (2011). In summary, all the above ethnic, cultural, and professionally focused models add to the diversity and richness of the social learning community focused on wellbeing and practicing in ways that positively enhance wellbeing. Each of these models achieves this by voicing the perspectives of a disadvantaged and/or previously unheard community. Most of these models may be legitimately critiqued as being exclusive or limited in nature, by, for example, advocating for service provisions and practices that could be provided by and for people only of certain ethnic, cultural, religious, or professional backgrounds. Debate about whether such models support equity is, to date, unexamined and often politically motivated.

## Theme 2. Student Wellbeing

Progressing from the WHO publications, from 2004 on interest in student wellbeing and its measurement begins to emerge in the literature (ACER, 2005; Masters, 2004; Soutter, 2011; Soutter et al., 2011). Soutter et al. (2011) proposed a multi-dimensional conceptual framework that included the concepts of having, being, relating, thinking, feeling, and striving as indicators of a student's wellbeing. In 2008, Dunn et al. proposed a "Coping Reservoir" Model for Medical Student Wellbeing. It supported the notion that medical students' wellbeing was dependent on their store of coping skills. In 2014, Crawford et al. reported the implementation of four models of enabling student wellbeing in four Australian universities.

While Crawford et al.'s (2014) research aspired to realize Immediate Value, Potential Value, Applied Value, Realized Value, and Reframing Value, their research demonstrated only the achievement of the first four value constructs; the Realized Value and Reframing Value remained incomplete. The researchers identify two themes that emerged: creating a "culture of care" and creating a "culture of self-development and growth." A final insight gained about university staff and supported by Wenger-Trayner and Wenger-Trayner (2021)

was the need to create enabling spaces where social learning could support visioning and mapping of an integrated wellbeing journey beyond program achievement in their institutions. The journey of these researchers parallels the Wenger-Trayners' (2020, 2021) developments and refinements in understanding what constitutes a CoP.

Also emerging among education-based and student wellbeing models are those developed by United States of America school counselors, such as "Paces" (Nelson et al., 2015). Interestingly, their model excludes ethnicity and culture as dimensions of interest. During this same period, the Ministry of Education in New Zealand published in 2017 "Te Pakiaka Tangata Student Wellbeing for Success," which firmly embedded cultural and ethnic identity as a wellbeing dimension in the models they promoted. This change in the Ministry of Education's perspective is even more dramatic in the light of revelations that the inclusion of a cultural and /or ethnic dimension was rejected by New Zealand's Ministry of Education in 1997. Such a 360-degree change in perspective shows the extent of transformations in wellbeing models and practices through social learning over time.

Other education-oriented wellbeing research has focused on Immediate and, at times, potential value evaluations of specific programs designed to support wellbeing (Pesu, 2017). This type of publication was found to be prolific and usually "one-off" in nature and frequently dislocated from robust literature. A final noteworthy development in the wellbeing model area has been Oades et al.'s (2021) creation of a Wellbeing Literacy model. This model has the potential to optimize and accelerate wellbeing enhancements, thereby potentially being transformative in practice. It has led to UWM researchers commencing an investigation into the value of wellbeing literacy.

### Theme 3. Sciences Versus Humanities Perspectives

A final theme emerging from the review of literature on wellbeing models is the significantly different science and humanities perspectives of wellbeing. For example, Seligman (2011) proposes the Perma Model: A Scientific Theory of Happiness, Abraham and Sheeran (2015) propose a Health Belief Model, and Li et al. (2021) propose a Mind Body Spirit Holistic Wellbeing Model—all from a humanities base—while Choudhury and Barman (2014) and Zaffar (2021) pursue notions of subjective and objective wellbeing from a science perspective. While the viewpoints contribute to discourse on wellbeing, all of the models in this section failed to meet more than one qualifier in the themed

literature review criteria and to demonstrate value as described by Wenger-Trayner's Value Framework (Wenger-Trayner et al., 2011; Wenger-Trayner & Wenger-Trayner, 2020, 2021).

In summary, no models discussed here meet all of the themed literature criteria and qualifiers. Most models appeared once in the literature; then no further research or ongoing programs of wellbeing research relating to these models were found. Consensus was, however, detected in terms of the nature of wellbeing; all researchers view this concept as multi-dimensional, and while agreement on the dimensions and terminology has not been reached, most models recognize intellectual/cognitive, social, cultural/ethnic, emotional, spiritual (beliefs, values, and resulting attitudinal disposition), and physical dimensions. Another feature in the development of the models proposed from ethnic, cultural, and professional perspectives is the utility of narrative or interactive dialoguing (for Europeans), such as *Korero* (for Māori) or *Yarning* (for Aboriginal), to establish common social understandings, accurate interpretations, and transformative meanings. The proposal of such meaning-making dialogue within many contexts is supportive of Wenger-Trayner and Wenger-Trayner's (2021) developments addressing social learning and the extended nature of a CoP.

The different ethnic and cultural interactions focused on in the literature include dialogue and experiences to establish the meaning of wellbeing. They fully align with and support the Wenger-Trayners' propositions about the value and contributions a CoP can make. Despite originating from diverse ethnic and cultural bases, the above ethnically and culturally focused social learning interactions suggest that the Wenger-Trayners' CoP conceptualizations are also practiced in diverse ethnic and cultural communities under protocols and guidance pertinent to those communities. One difference in the interactions Vygotsky (1980) and many Indigenous scholars subscribe to is that interactions may be with objects in the environment as well as with people.

The UWM emerging from these investigations is explained next, from the underpinning humanistic philosophy, themed literature synthesis, and collective knowledge and skills acquired to wellbeing enhancement practices developed or being developed to date.

## Research Output

The key outcome of this themed literature review was the emergence of a new Universal Wellbeing Model (Stevenson, 2022a, b). The

UWM has been designed to provide explanations of how variables that impact our wellbeing are received or inputted via our senses and outputted through both macro (dimensions identified) and micro (evidence-based variables, also known as determinants of wellbeing) components that make up and influence the status of human wellbeing at any given point in time, all guided by a set of five overarching principles. An understanding of wellbeing (wellbeing literacy) has been found in pilot studies to support changes in the wellbeing status of some people; thus, the clarity of the UWM's presentation is important.

## The Universal Wellbeing Model (UWM)

The UWM is shown in Figure 1 in a balanced, naturally occurring hexagonal form, like a spice box used in kitchens across the world. The six human dimensions—Social, Physical, Intellectual, Cultural, Emotional, and Spiritual—create the acronym "SPICES," like those we eat. They "flavor" our interactive experiences, interpretations, meaning making, and outward manifestations of the state of our holistic wellbeing. Too much or too little of any variable will impact our wellbeing. The four components of the UWM are described next.

### *Component 1: Sensory Inputs*

The five Sensory Inputs are placed at the center of the model, because the state of human wellbeing is influenced by these multiple single and combinations of these inputs from our senses—that is, what we see, hear, smell, taste, and touch during interactive or social learning experiences. These interactive and social experiences occur at all of the levels set out in Bronfenbrenner's Socio-ecological Theory (1979). That is, according to Vygotsky (1980) and some Indigenous perspectives, for example, the concept of *mauri* (life force) discussed by Love (2004), the learning we acquire throughout our lives will be sourced via social learning interactions: within us (intra-psychological); with others (inter-psychological, meso, level, and exo-level); and with items, materials, and inanimate objects in our wider environment. Some of the interactive social learning experiences we encounter will be controllable, and others will not; some will be pleasant and uplifting, others will be insignificant, and still others will be unpleasant, either short- or long-term, such as a car accident or a traumatic life event.

Our wellbeing is influenced by the multiple sensory inputs we encounter and then processed and manifest through one or a combination of our social, physical, intellectual (cognitive), cultural (ethic),

Figure 1
**The Universal Wellbeing Model (Stevenson, 2022)**



*Note.* The dimensions named are designed to support well-being literacy and should not  be viewed as cognitively, socially, or psychologically discrete as in, for example, Gardner's Multiple Intelligences Model.

emotional, or spiritual dimensions, where meaning is assigned and learning occurs. Vygotsky's Socio-cultural Theory (1980) sheds further light on how meaning and knowledge develop. He proposed that it is through our socio-cultural interactions that we give meaning to what we learn and attain knowledge, echoing Wenger-Trayner and Wenger-Trayner's (2021) discussions of a CoP and its value for human social learning. The impact of our experiences and learning is usually then displayed through one or a combination of the dimensions identified, for example, as physical tiredness, expressions of anger or affection, and so on.

Key micro social-cultural learning experiences that Vygotsky (1980) discusses include scaffolding (being supported by a more capable other), bridging gaps in zones of proximal development and social-cultural guidance and experiences. Scaffolding, especially, empowers people to structure and acquire culturally specific tools that assist us to learn, memorize, attend, and problem solve. As humans, our survival or thriving depends on whether we learn and accurately interpret experiences we have and whether they are helpful or harmful to us and our wellbeing. New learning in humans is usually quickly rewarded by an increase in capability and mastery of our world. For example, if we put a hand in a hot oven, we will quickly learn this causes pain. In the future, we will likely be able to approach and use ovens without experiencing such pain. While the learning above does not require social interactions with other people, it could have "Immediate" value, as described by Wenger-Trayner and Wenger-Trayner (2020, 2021), for the person involved.

## Component 2: Wellbeing Dimensions

Wellbeing determinants have been grouped under six dimensions in the UWM: the social, physical, intellectual, cultural (and ethnic), emotional, and spiritual. These dimensions have been identified to support wellbeing literacy and provide focus areas for professional wellbeing facilitators seeking to implement the UWM in praxis. Below is a summary of the parameters for the evidence-based variables included within each dimension.

- **Social dimension:** social interactions (a) within ourselves (intra-psychological); (b) with those around us (inter-psychological) and those closest to us (significant others); (c) with those in our family; (d) within our home, work or study places, and community, national, and global contexts; and (e) with people, items, materials, images, and objects in our wider environment.

- **Physical dimension:** food, water, exercise, affection, warmth, sleep, fresh air, shelter, freedom from disease, financial means, physical safety, and other selected controllable physical human needs.

- **Intellectual (Cognitive) dimension:** our awareness, knowledge, and skills related to (a) our thinking styles,

patterns, processes, and strategies (such as how we make decisions); and (b) the learning styles, patterns, processes, and strategies we use to acquire new knowledge, skills, and attitudes.

- **Cultural (Ethnic) dimension:** knowledge, skills, beliefs, and values that make up our ethnic and cultural intelligences and competencies, plus the underpinning origins of (a) our genetically determined ethnicity(ies); and (b) our selected cultural ways of interacting, existing, and living in the various environments that make up our world.

- **Emotional dimension:** all aspects making up and informing our emotional intelligence. These include awareness of our emotional landscape and repertoire as well as that of others, emotion identification and impacts, expression of emotions, and understandings and insights about what we can and cannot regulate.

- **Spiritual dimension:** (a) the beliefs we hold, which may or may not be religious in nature and which inform and frame our interactive experience and how we interpret them; (b) the values held and what is valued; and (c) a synthesis of the beliefs and values held, which informs the overarching attitude with which a person usually approaches all interactive experiences in their life.

These six dimensions should be viewed as dynamic or fluid, influenced by interactive experiences and social learning, yet integrated and interrelated. The state of variables in each dimension can be enhanced, unaffected, or harmed through related social learning experiences, meaning, interpretations, and capabilities. In Wenger-Trayner et al. (2011) and the Wenger-Trayners' (2020, 2022) Value Framework, the UWM dimensions component is hypothesized as capable of contributing to the Potential, Applied and, possibly, Realized value. Research is currently underway to investigate the value ascribed by students, staff/researchers, and wellbeing practitioners, via "spaces, where valuation takes place—where people in general care about something and want to achieve and 'do' something, however vague that 'something' might initially be" (https://www.wenger-trayner.com/value-creation/).

## Component 3: Wellbeing Variables

The third component in the UWM are 70 wellbeing-influencing variables (also known as the determinants of universal wellbeing), which were identified by participants during the practice-based research phases. The variables are organized under the six overarching dimensions of the UWM to support wellbeing literacy and indicate where signs of the status of wellbeing variables manifest or are expressed (outputted). While discussion of the literature and applied practice underpinning the selection of the 70 variables identified in Table 2 is beyond the scope of this article, the aspiration to create tangible value has driven the creating and designing of the UWM. The variables identified include, for example, "self-talk" in the social dimension. Vygotsky (1980) identified intra-psychological interactions within a person as one of the most influential social interaction contexts humans experience. Literature reviews also supported the significance of self-talk on human wellbeing across multiple fields.

Likewise, psychologists and physiologists have developed extensive bodies of research showing the clear relationship between adequate sleep, including what that means, and physical wellbeing. Sleep is one of the wellbeing-influencing variables included at the micro level in the model under the physical dimension. All variables identified in the UWM are, likewise, supported by participants' contributions and bodies of research that support the ability of that variable to influence human wellbeing. As the Wenger-Trayners state on their website, the "grounding of social learning in processes of valuation empowers Wenger-Trayner to identify four learning modes inherent in social learning spaces: (1) generating value, (2) translating value, (3) framing the creation of value, and (4) evaluating value creation. Social learning spaces can, thus, enable learning in different ways" (https://www.wenger-trayner.com/value-creation/). This process supported identification of the variables in the model.

## Component 4: Overarching UWM Principles

The overarching UWM principles that guide its interpretation are as follows:

- It is holistic and supports outcomes greater than the sum of its parts.

- It is integrated; all dimensions are interwoven, interlinked, and interdependent.

Table 2
**The Universal Wellbeing Variables**

| *Social Dimension* | *Intellectual Dimension* | *Emotional Dimension* |
|---|---|---|
| 1. Self-Talk | 29. Intellectual Safety | 51. Emotion Recognition |
| 2. Significant Others | 30. Thinking Skills | 52. Emotion Recognition in Others |
| 3. Family | 31. Problem Identification | 53. Emotional Knowledge |
| 4. Friends | 32. Solution Finding | 54. Emotional Regulation |
| 5. Study/Workplace | 33. Decision Making | 55. Emotional Safety |
| 6. Community | 34. Achievement | 56. Acceptance |
| 7. Nationwide | 35. Learning Activity | 57. Emotional Growth |
| 8. Global Context | 36. Reading | 58. Self Esteem |
| 9. Social Safety | 37. Writing | 59. Validation |
| 10. Social Acceptance | 38. Mathematics-Numeracy | 60. Love-Connection |
| 11. Social Confidence | 39. Comprehension | 61. Social Media-Internet |
| | 40. Learning Challenges | 62. Gambling |

*Physical Dimension*

12. Sleep
13. Physical Safety
14. Exercise
15. Hydration
16. Financial Security
17. Physical Touch (Affection/Sex)
18. Warmth
19. Prescribed Medicines
20. Non-prescribed Medicines/Illegal Drugs
21. Alcohol
22. Smoking
23. Vaping
24. Physical Disability
25. Pain
26. Disease
27. Housing
28. Eating

*Cultural Dimension*

41. Ethnic Identity (Genetic)
42. Ethnic Group Acceptance
43. Ethnic Capabilities
44. Ethnic Safety
45. Ethnic Confidence
46. Cultural Identity (Lifestyle Choice)
47. Cultural Group Acceptance
48. Cultural Capabilities
49. Cultural Safety
50. Cultural Confidence

*Spiritual Dimension*

63. Belief System
64. Values System
65. Default Attitude
66. Intuition
67. Loci of Control
68. Resilience
69. Unique Value
70. Life Value

- All dimensions are of equal importance, and balanced development is supported.

- It is designed to empower, appreciate, and support wellbeing enhancements.

- It can respond to diverse individuals and collective differences and needs, for example: ethnicity, culture, beliefs, and gender.

The UWM has been designed to empower and support, specifically, youth, individuals, families, teams, organizations, institutions, and communities, plus those who work to enhance their wellbeing in a range of settings. The UWM achieves this support by (a) supporting the development of wellbeing literacy, (b) enhancing understanding of the impact of our sensory inputs, (c) identifying the dimensions through which we usually express the impacts on wellbeing variables, (d) identifying variables that impact human wellbeing, and (e) guiding wellbeing enhancement practice through the overarching UWM principles. Disciplinary fields implementing the UWM include those relating to education, psychology, health, Indigenous, community, and workplaces as well as areas that are the focus of the humanities and social science disciplines.

## Emergence of Innovations

Four innovations have been subsequently developed that are underpinned by the UWM, all of which are the result of the researchers' long-term vision to contribute to the enhancement of holistic human wellbeing. All of them can be successfully implemented only with significant and effective social learning experiences. Social learning experiences that advance human wellbeing include creativity, praxis, analysis, and evaluation with individuals and communities across diverse disciplines, institutions, and contexts. Social learning experiences CoPs or extended CoPs (Wenger-Trayner et al., 2011; Wenger-Trayner & Wenger-Trayner, 2020, 2021) all foster the development of social learning spaces. The four innovations to be discussed next have emerged from evaluations of value by students, staff/researchers, wellbeing practitioners, and other stakeholders whose objectives are to sustainably transform human wellbeing and equity outcomes.

## The Universal Wellbeing Evaluation Tool

The Universal Wellbeing Evaluation Tool (UWET) is underpinned by the UWM. It consists of 6 dimension subscales: social, physical, intellectual, cultural, emotional, and spiritual. Each subscale includes between 6 and 11 questions designed to evaluate the status of the 70 wellbeing variables via a 5-point Likert scale. The responses selected demonstrate the status of the variable for the participant or party undertaking the UWET. The UWET is designed to optimize and accelerate the identification of the status of the variables being evaluated. The UWET reveals whether a variable is *very positive and well supported, positive and supported, not impacting, neutral or yet to be considered, partly harmful,* or *seriously harmful*; and to what degree it is useful for youth, adults, families, teams, institutions, organizations, and communities. Accredited Universal Wellbeing Facilitators administer the UWET (also known as the Universal Wellbeing Check). Responses to questions are interpreted according to a pre-set formula, analyzed, and reported to participants with recommendations and support options. Participants then have the option to co-design the innovation discussed next.

## Universal Wellbeing Enhancement Planning

After post-survey administration, analysis, and reporting of UWET outcomes to participants, Universal Wellbeing Facilitators offer support to co-design and create a Universal Wellbeing Enhancement Plan (UWEP). The UWEP identifies wellbeing variables that are well supported and how this support and positive status can be maintained, supports further understandings of neutral or wellbeing variables not yet considered, and plans ways to address variables presenting challenges and harming universal wellbeing. Strategies, supports, and actions to be taken are recorded on the UWEP. Participants or communities also may request that the Wellbeing Facilitators monitor and/or educate about implementation of their UWEP, facilitate social learning interactions and experiences, manage risk, advise, and/or refer participants to other services or experts as appropriate. The objective of the UWEP is to accelerate systematic enhancement(s) to youth, individuals, families, teams, institutions/organizations, and community universal wellbeing over time.

## Professional Wellbeing Practitioner Guidelines

A third innovation guides the practice of accredited Universal Well-

being Coordinators, Facilitators, Coaches, and Leaders implementing the first two innovations. The Professional Wellbeing Practitioner Guidelines (PUWPG) were developed to support the quality practice and boundary setting by Professional Wellbeing Practitioners. The Universal Wellbeing Model is shown in Figure 2, with the four practice responsibility areas noted: Educate, Facilitate, Risk Manage, and Advise and Refer. The aspirations of Professional Wellbeing Practitioners are to empower those they work with to optimize their universal wellbeing through these four social learning-oriented practices.

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Figure 2
**Professional Universal Wellbeing Practitioner Guidelines**

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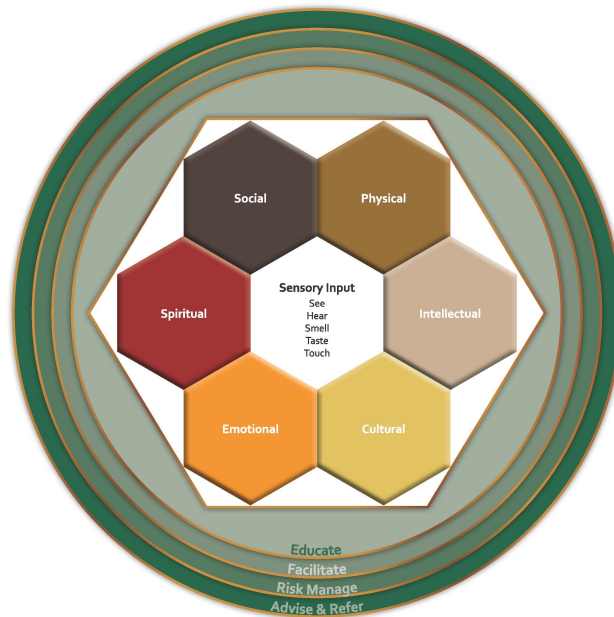
## Education

Professional Wellbeing Practitioners will research and provide social learning experiences to develop evidence-based knowledge, skills,

and awareness of beliefs, values, and attitudes to achieve enhanced individual wellbeing variables, and overall universal wellbeing.

## Facilitation

Professional Wellbeing Practitioners will facilitate effective universal wellbeing enhancement planning and create powerful interactive learning experiences, when needed, to support the acquisition of wellbeing literacy.

## Risk Management

Professional Wellbeing Practitioners will identify holistic wellbeing risks for themselves and those with whom they work, fully informing them of options to remove, mitigate, manage, and minimize such risks if they occur.

## Advice & Referrals

Professional Wellbeing Practitioners will use professional advice-giving practices and make referrals to other skilled people, clinicians, or services when in the best interests of their clients.

To date, the CoP has agreed that their practice is underpinned by being aligned with humanistic education, social sciences, health sciences, and psychological philosophies, theories, research, and practice. Key knowledge, skills, and practices utilized include communication, facilitation, planning, monitoring, risk management, advice giving, referral, and evaluation. Experienced Professional Universal Wellbeing Practitioners also may provide coordination, management, and leadership capabilities to further engage and empower ownership with whom they work. Professional Universal Wellbeing Practitioners undertake specific education and accreditation programs, engage in ongoing supervision of or membership in a CoP, and attend conferences or refreshers to retain their currency in relation to professional and ethical conduct, professional boundaries, reflective practice, evaluation, inclusion, diversity, equity, cultural responsiveness, and empathetic communication.

### *Whole of School/Organization/Community Universal Wellbeing System*

The final innovation being designed and gradually implemented in schools, workplaces, organizations, institutions, and communities

is a customized whole of universal wellbeing support systems. The development of the Universal Wellbeing Model and its associated UWET, UWEP, and PUWPG, plus the education of leaders, coaches, facilitators, and coordinators, has made possible an extensive cross community of universal wellbeing support systems that can be scaled up or down depending on the number and needs of participants and the nature of the community. The cross school/organization/community systems utilized during investigations by Schofield et al. (2011) and by Fielden et al. (2020a, b) have provided successful prototypes for a Whole of School/Organization/Community Universal Wellbeing Support System implementation. It should be noted that some school/organization/communities elect different terminology, for example, pa, tribe, or village.

The key features of the above systems include an appropriate combination of Universal Wellbeing leaders, coaches, facilitators, and coordinators. The system is created through a planned social learning program via a five-step process. Key components that support the success of cross-school, organization, or community systems are respect for others, privacy, active participation, protection of what individuals hold dear (for themselves and others), personal benefit from the system, and observed progress across the universal wellbeing variables. These components echo Wenger-Trayner and Wenger-Trayner's (2020) engagement, inspiration, and alignment requirements for CoPs. In high-need schools, organizations and communities, the number of Professional Wellbeing practitioners may need to be increased to provide ongoing cycles of powerful social learning events and experiences related to the specific variables that create challenges (for example, intimidation, illegal drug taking, unwanted touching). Professional Wellbeing leaders must not only be capable but also empowered to be prompt and effective in reducing and eliminating behaviors such as bullying, sexism, racism, and ageism that may threaten individual and collective universal wellbeing.

All of the innovations above are individually and collectively intended to achieve Wenger-Trayner and Wenger-Trayner's (2020, 2021) Cycle 5, Reframing value, that is, transformations that cause learning to be reconsidered; success definitions to be re-written; and strategies, goals, and values reframed. The key limitation encountered to date in implementing this fourth innovation has been lack of engagement by school, organization, and community leadership.

# Discussion of Findings

## *Social Learning in Praxis Developments*

The development of the UWM and four innovations detailed are the products of repeated cycles of increasingly complex and highly effective social learning with students, staff/researchers, wellbeing practitioners, and stakeholders. At all stages in the development and from the inception of the program of research commenced in 2006, engagement with others has been built in and is a critical factor supporting motivation, solving challenges, and advancing thinking and practices over time. Key to the initial nationally supported research project was the readiness of students to patiently support and engage with staff/researchers as they sought to move into a hitherto unknown ethnic and cultural world. Over time, there has been joint identification of what was working, what was not, and why this led to gradual and ongoing honing of concepts included in the creation of the UWM. The two national research projects challenged current wellbeing support practices and brought into sharp focus what was valuable, meaningful, and transformative and what was not.

A review and recent re-visiting of Bronfenbrenner's (1979), Vygotsky's (1980), and the Wenger-Trayners' (2020, 2021) views of social learning reveal synergies and alignments that collectively provide a more comprehensive understanding of the nature and needs of those engaging in and keen to learn more about the topic. Efforts to optimize and accelerate learning require that attention be given to the nature and "atmosphere" of social learning spaces provided along with the development of understandings about what constitutes safe and supportive communities. The UWM Model provides transformative value by shining light on the micro to macro components social learning spaces need to support. At a micro level, those facilitating learning must consciously arrange such spaces to support social, physical, intellectual, cultural, emotional, and spiritual safety and wellbeing on multiple levels and in multiple and culturally and ethnically diverse ways. The capabilities of students, staff/researchers, wellbeing practitioners, managers, leaders, researchers, and other stakeholders, likewise, require supportive micro-level wellbeing support to participate in social learning that transforms universal wellbeing. Key to such success is the understanding and engagement of leaders.

*Positive Wellbeing*

Positive wellbeing at the micro and macro levels adds value because it empowers people to engage, be confident, sponsor, and contribute to challenges being faced. It also creates spaces that seem refreshed or new where gains can be developed, sustained, evaluated, and safely revised in new directions. The provision of safe learning spaces adds vitality while promoting and extending engagement in developing and implementing new understandings of wellbeing. Early in the researchers' journey, the immediate and potential strategic values of their work were apparent but vaguely realized. As philosophy, underpinning theory development, and theory supported the honing of research and practice, the reframing value of the work was realized and found to be transformative. For example, students staying in programs despite being in COVID-19 pandemic lockdowns and far from their usual wellbeing support system was holistically transformative for their lives.

## Conclusions

In conclusion, it is acknowledged that while the Wenger-Trayner and Wenger-Trayner (2020, 2021) conceptualizations of learning spaces and value framework were not part of the researchers' original wellbeing philosophy, theory, research, or practice parameters at the inception of their program of research, and especially during the theory creation process, reflection on and utility of these conceptualizations and models have been recognized as generating rich new understandings and directions.

Three insights have emerged to date. First, support for and development of wellbeing literacy and the UWM are valuable products of engaged, iterative, and diverse multi-level social learning communities. Second, implementation of the UWM and further research over time are producing further value in terms of achievement and equity only dreamed about at the commencement of the research program. Third, Reframing Value is the most challenging value to attain and requires stakeholders to care about making a difference that goes beyond self-interest and to engage in uncertainty and to pay attention (Wenger-Trayner & Wenger-Trayner, 2021). Also important is the capacity of leadership to inspire and motivate stakeholders to move by participating in a "dance between accepting, taking in, thinking about, resisting, and refusing feedback" (Wenger-Trayner & Wenger-Trayner, 2021, p. 28). Finally, the three most pressing needs of those working to enhance universal wellbeing are (a) engaged and aspirational lead-

ership; (b) ethnically and culturally responsive universal wellbeing literacy; and (c) the broad, easily accessible, and inclusive provision of aspirational and transformative universal wellbeing social learning at the micro and macro levels across communities.

## Footnotes

[1]The word *wellbeing* (as opposed to *well-being*) is used throughout this article to reflect the Indigenous contributions plus the multi- and interdisciplinary nature of the research conducted.

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# Texts, Tasks, and Talk: A Social Learning Pathway to STEM Literacy, Engagement and Belonging

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*This article presents a community of practice (CoP) designed to help California State University and California Community College STEM faculty implement active, equity-centered pedagogical changes. Using the Reading Apprenticeship framework as a foundation, the CoP focuses on text-based metacognitive conversations to facilitate students' authentic participation in disciplinary sense-making. The CoP, which emphasizes sustained social learning and dialogue among diverse perspectives, was evaluated using the Value Creation Framework (Wenger et al., 2011). Preliminary findings suggest that participants experienced meaningful value, suggesting potential for overcoming the entrenched culture of lecture-driven instruction and inspiring culture change in STEM instruction.*

# Introduction

As professional development providers in the California State University (CSU) and California Community College (CCC) systems, we have the privilege to work with Science, Technology, Engineering, and Math (STEM) faculty who are determined to design more active and equitable learning environments, but who struggle to do so against an entrenched culture of lecture-driven instruction. This article describes the design and implementation of a California statewide community of practice (CoP) that shows promise for helping instructors implement meaningful, equity-centered, and culturally responsive pedagogical changes and inspire a larger culture change in STEM instruction, although grounded in an unlikely focus: STEM disciplinary literacy. CoPs have been well documented to be an ideal context for deep learning and transformative change for professionals across many disciplines (Costino, 2018; Li et al., 2009; Wenger, 2000). Wenger (2000) and Reed (2014) define a CoP as something "alive." Specifically, a CoP aims to create an environment that combines the familiar with the new, emphasizes sustained collaboration, allows for organic evolution, fosters dialogue among diverse perspectives, and provides a space for practitioners to share their problems, needs, and knowledge. In our CoP, participants engaged in text-based metacognitive conversations and learned to facilitate such conversations with their students, thereby building their ability to successfully engage their students as apprentices to the discipline.

## *Context*

In the U.S., and specifically in California, many students who begin college with the intention of pursuing STEM fields either switch to a different major or leave college altogether; this is especially true among traditionally underserved and underrepresented student populations (California Center, 2018; National Academies, 2019). The CSU and CCC systems, which annually serve over 2.2 million students, struggle to address this issue and need solutions. For instance, recent CSU data show that only 41% of first-time, full-time first-year students seeking STEM degrees had been retained after four years, and only 30% graduated in that time (California State University, n.d.). Further, almost half (45%) of CCC STEM transfer students did not continue in STEM after two years in the CSU system, and only 20% had completed a STEM degree within two years of transferring (California State University, n.d.). These outcomes, combined with evidence that the association

between low performance in introductory STEM courses and failure to earn STEM degrees is stronger for minoritized students than others, underscore the importance of professional learning for STEM faculty, especially in a statewide network that allows CCC and CSU instructors to align curriculum and create a shared culture of teaching centered on the science of learning (Hatfield et al., 2022).

Brain-based studies show that learning is social, emotional, influenced by culture, and supported through inquiry-based tasks (Hammond, 2014; Immordino-Yang et al., 2019; National Academies, 2018). Learners need to connect to prior knowledge, organize knowledge in conceptual frameworks, engage metacognitively, and discuss their learning (Bransford et al., 1999). However, STEM instructors face challenges implementing inclusive, active learning due to content requirements, class size, and general resistance to change. Despite students learning more through active learning, they often resist it (Deslauriers et al., 2019), and faculty often lack institutional support to change their teaching practices (Bathgate et al., 2019). Our CoP model helps to address these challenges by building robust social support for long-term, intensive professional learning focused on designing meaningful social learning tasks around disciplinary texts.

## *Disrupting the Status Quo By Rethinking the Role of Texts*

Disciplinary texts and discourse are essential to deep learning and a sense of belonging in a discipline. Teaching the language and practices specific to particular disciplines is critical for developing students' understanding in subjects like science, history, and mathematics (National Academies, 2018). However, faculty may have an "expert blind spot" regarding how academic discourse can alienate students who are outsiders to the discipline (Nathan & Petrosino, 2003; Paulson, 2013). A textbook explanation, lab manual, or assignment that seems clear, transparent, and accessible to the expert/"insider" often feels impenetrable to the novice/"outsider." Without appropriate support from more knowledgeable others, students' frustrating experiences with disciplinary texts can exacerbate stereotype threat (when individuals underperform due to anxiety about confirming negative stereotypes about an aspect of their identity) and contribute to equity and achievement gaps (Steele, 2010; Vygotsky, 1978; Yeager & Dweck, 2012). Instructors can provide students a pathway to disciplinary understanding by modeling specific reading and problem-solving practices with texts, such as graphs, simulations, and textbook chapters.

This is a way to focus on both students' active learning process and, through careful text selection, emphasize the most important ideas in a discipline. In other words, if we are successful in transforming the way that instructors make decisions around *texts, tasks,* and *talk* in disciplinary learning, we are effectively supporting them to facilitate students' authentic participation in disciplinary sense-making rather than "content coverage." See Table 1 for an illustration of this reframing.

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Table 1
**Instructor Decisions Around Texts, Tasks and Talk**

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| | |
|---|---|
| Texts | Why choose this text? Is there value to spending instructional time on this text? Is there a more accessible and relevant text that would better capture students' interest? |
| Tasks | What is the task I want students to do with the text?  What disciplinary thinking and problem-solving practices can I model, and how can I guide students' practice? |
| Talk | In this learning sequence, who gets to talk?  How can I support equitable talk? How can I listen and respond to provide formative feedback? |

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Spending instructional time guiding students in their reading is uncommon in higher education. Reading is often viewed as a basic skill acquired by third grade, after which students are expected to read independently. However, research shows that reading is actually a complex activity that requires contextualized problem solving and social engagement (Pearson et al., 2020). Many STEM faculty cannot recall experiencing explicit instructional support to develop disciplinary ways of reading, writing, questioning, and problem-solving (Bransford et al., 1999; Land et al., 2014). To address this experience gap and help faculty overcome their expert blind spots (Nathan & Petrosino, 2003), we must provide opportunities for them to engage in social text-based learning themselves.

## *The Reading Apprenticeship Framework*

Our CoP is grounded in the Reading Apprenticeship instructional

framework (see Figure 1; Greenleaf et al., 2023; Schoenbach et al., 2012), which emphasizes the importance of text-based metacognitive conversations that go beyond discussing what learners know to include how they came to know it. By fostering a strong *social dimension*, Reading Apprenticeship provides a supportive space for learners to share their thinking; develop confidence, motivation, and persistence; and negotiate the interplay between their personal and academic identities (the *personal dimension*). The framework's social and emotional aspects enable work on the *cognitive dimension*—collaborative sense-making of difficult texts, surfacing confusions, and practicing disciplinary problem-solving strategies. Through this work, we not only build the disciplinary *knowledge dimension*, but also leverage the knowledge that students bring with them into academic situations.

Figure 1
**The Reading Apprenticeship Framework
(Greenleaf et al., 2023)**

In a Reading Apprenticeship classroom, students regularly reflect on their learning and share their thoughts with partners and small groups. To ensure equitable participation, structures such as reciprocal listening and discussion protocols are implemented, requiring everyone to take turns speaking and listening. Collaborative work includes metacognitive routines, such as the Think Aloud strategy, where an instructor briefly shares their approach to the text, speaking out loud the things going through their mind. Students then continue the Think Aloud with a partner, sharing their connections, confusions, and problem-solving strategies. The instructor listens in on these conversations to formatively assess where students are focusing, progressing, and struggling. Following pair work, the whole class debriefs their thinking and problem-solving processes, utilizing collective wisdom to gain a critical foothold of comprehension with the disciplinary text. This metacognitive conversation transforms the course text from a *gatekeeper* to a *gateway* to deep learning and a sense of belonging in the discipline. In Reading Apprenticeship professional learning, participants engage in the same practices and routines to overcome their expert blind spots and devise effective ways to apprentice students in the discipline.

The Reading Apprenticeship framework is strongly linked to improved outcomes for students and faculty (Campaign for College Opportunity, 2017; Corrin et al., 2009; Edmunds, 2017; Greenleaf, Hanson et al., 2011; Greenleaf, Litman et al., 2011; Hogan & Rose, 2018).

In California, the framework has been used as a basis for professional learning in a variety of student success initiatives since 2011. Although these initiatives have engaged over 4,500 faculty members from 114 CCCs and 10 CSUs, many participants received only introductory training and lacked support to make significant changes to their teaching practices. The project team's first-hand observations and previous evaluation studies (Edmonds, 2017; Schoenbach et al., 2012) have shown that despite enjoying the professional learning experiences, participants faced difficulty implementing text-based active learning when confronted with obstacles such as student resistance, lack of support, or their own comfort level.

## The Project

In the spring of 2020, during the early days of the COVID-19 pandemic lockdown, we received an institutional change grant from the California Educational Learning Lab to introduce four innovations to

our Reading Apprenticeship CoP: First, we reconfigured professional learning into 10-month learning community courses (see Table 2) with assignments designed to support faculty in making real changes to their instructional practices. Second, we developed advanced "level 2" learning community courses focused on equitable facilitation strategies for faculty who wished to continue their engagement for a second year. Third, we offered these courses fully online both to provide support to instructors learning to teach online during the pandemic and to increase the accessibility of professional learning. Fourth, we developed a project website for participants to publish Open Educational Resources (OER) Text-Based Activity plans to be used as resources for other STEM instructors. We engaged "more experienced others" from the existing network to serve as coaches and offer support workshops on various topics to support the larger CoP beyond the learning community course participants. We also welcomed new participants to offer workshops and coaching based on their expertise.

Using the Reading Apprenticeship framework as our foundation, we sought to establish an "alive" CoP (Reed, 2014; Wegner, 2000). To achieve this, we instituted regular institutes and monthly meetings, which created a rhythm for the community. In response to challenges of the pandemic, we adjusted our expectations and assignments to meet the changing needs of members. Our community brought together faculty across California's CCCs and CSUs from various STEM fields, establishing private community spaces outside of their institutions to facilitate learning and growth. Finally, our community emphasized sharing problems and building a shared body of knowledge.

To support faculty in transformative revisions to their identity, understanding, and practice, we took inspiration from Costino's (2018) model of an identity-conscious CoP. In our CoP, we first focused on the science of learning and threshold concepts and gradually moved toward equity-centered topics such as confronting privilege and bias and developing cultural humility. We emphasized the role of text and metacognitive talk both in research about how people learn and in their current teaching, which appealed to STEM faculty's existing concerns and identities. After we had established a robust sense of safety in the learning communities, we invited faculty to examine their deeply held beliefs and take emotional risks, creating a culture of ongoing and transformative faculty learning to support the creation of more equitable and inclusive learning environments for students (Costino, 2018; Hammond, 2014).

Table 2

**The Equity in STEM Through Metacognitive Conversations Project**

| *Level* | *Learning Community* | *Structure* |
|---|---|---|
| Level 1 | **Apprenticing Students Into STEM Thinking** <br> Introduction to the Reading Apprenticeship framework, supports instructors to choose OER disciplinary texts and design disciplinary tasks to better "apprentice" students into STEM learning. | Fully online: asynchronous (Canvas) and synchronous (Zoom) <br><br> 3-day summer institute (July) |
| Level 2 | **STEM Equity Facilitator Learning Community** <br> Extends experience and knowledge of backwards designing, using scientific principles of how people learn to facilitate learning and advance equity in any setting—classroom, professional learning, department meeting, etc. Participants explore the inner work required to lead culture change. | Fall monthly workshops (September, October, November) <br><br> 2-day winter institute (January) |
| | **Leadership Community of Practice in Reading Apprenticeship** <br> Participants are "apprenticed" into the Reading Apprenticeship facilitator community, focused on designing powerful inquiries to help colleagues re-imagine their instruction. | Spring monthly workshops (February, March, April) <br><br> 2-day Spring Institute (May) |

Reading Apprenticeship provides an effective framework to support an identity-conscious CoP. Its focus on the social and personal dimensions of learning nurtures relationships and encourages all learners to participate fully in the community. Metacognitive conversations, which focus on the process of reading and thinking, promote new insights and different perspectives. Structured participation routines help to break down hierarchies and disrupt the common dynamic of a few voices dominating the conversation. These conversations can also address tensions that arise due to "discourse mismatch" (Paulson, 2013, p. 7) by surfacing confusions and negotiating meaning. For example, during a discussion about disciplinary problem solving, some participants thought "disciplinary" referred to solving student discipline problems instead of approaching problems differently in different STEM fields. Engaging in metacognitive conversations allowed the facilitators and participants to discover and discuss the different meanings of "disciplinary," which resulted in valuable insights from all members' contributions.

In sum, metacognitive conversations enable STEM faculty to engage in professional learning that integrates their academic and professional identities with their desire to promote diversity and inclusion. Research suggests that such equitable professional learning experiences increase the likelihood that STEM faculty will implement evidence-based practices and become change agents who influence their departments and communities (Borrego & Henderson, 2014; Kezar, 2014; Macdonald et al., 2019). Building on this research and our experiences, we propose the following two theories of change:

- *Proposition 1*: If STEM faculty are supported to design text-based lessons, where disciplinary thinking and problem solving are modeled and practiced through metacognitive conversations, try those lessons out with their students, and workshop the implementation experience with a supportive community, then they will change their practices and reconceptualize their courses in light of what they know about culturally responsive teaching and how people learn.

- *Proposition 2*: Similarly, if STEM faculty leaders are supported to consider how to design courageous conversations and/or professional learning focused on disciplinary literacy for other faculty, attempt to facilitate that learning, and workshop the experience

with a supportive community, they will disrupt the status quo of STEM instruction and accelerate the pace at which other faculty adopt culturally relevant and active learning techniques.

## *Project Evaluation*

We evaluated the effectiveness of our redesigned Reading Apprenticeship CoP and its ability to produce change agents and disrupt the status quo using Wenger et al.'s (2011) Value Creation Framework (VCF). The VCF helps identify the types of benefits (value) expected within a CoP and the data needed to measure whether the benefits were realized. The framework has five levels of value: immediate, potential, applied, realized, and transformative. Together with CoP facilitators and coaches, we defined our aspirations for the CoP as examples of value (see Table 3). Our external evaluation partner used these aspirations as a rubric to develop evaluation tools and interpret findings.

The primary method used to evaluate our project was the Values Creation Framework Survey. The VCF Survey was developed by the external evaluator with our input and used the pre-established VCF elements and aspirations as its conceptual basis. Table 4 provides a sample of survey items for each of the five levels, along with the reliability coefficient (Alpha; Cronbach, 1951) of each survey scale for our data sample.

We achieved a response rate of 72% ($n$ = 99) to the survey, which was distributed to all CoP members at the conclusion of our two-year project. Demographic comparisons between the survey sample and the CoP as a whole revealed that the sample was highly representative. With acceptable psychometric properties and a strong response rate, we conducted descriptive analyses at the item and construct level and inferential analyses comparing level one and level two participants and demographic subgroups of our sample to inform our evaluative conclusions. To supplement our VCF survey, we used three additional methods: (1) a qualitative investigation of 20 CoP members' written reflections, chosen through stratified random sampling to proportionally reflect each learning community cohort and subjected to deductive coding (Azungah, 2018) using the VCF values and aspirations, (2) CoP facilitator and coach interviews, and (3) CoP participation records and project artifacts. These supplemental methods were intended to provide further depth and triangulation to our evaluation.

Table 3
**Values Creation Framework Aspirations
for the Project Community of Practice**

| | |
|---|---|
| Immediate Value | Faculty will feel supported as members of a professional community. |
| Potential Value | Faculty will build knowledge about: the Reading Apprenticeship framework; principles of how people learn; equitable/culturally responsive practices. |
| Applied Value | Faculty will redesign lessons based on the Reading Apprenticeship framework and literature about the science of learning and will gain expertise and experience using digital tools and mediums to support active learning. |
| Realized Value | CSU and CCC students will experience greater success; equity and achievement gaps will be improved. |
| Transformational Value | Faculty will experience a new norm for designing courses and assignments. |

## Findings

As depicted in Table 5, our two-year project engaged 140 unique faculty from 20 CSUs, 43 CCCs, and 37 STEM disciplines. Our findings, albeit preliminary, indicate that faculty who persisted in our intensive learning communities experienced meaningful value creation at each level of the VCF framework.

The data indicate that our CoP fostered a safe and supportive professional community where participants gained knowledge and confidence in the Reading Apprenticeship framework, principles of learning, and culturally responsive teaching practices. As a result,

Table 4
**Values Creation Framework Survey**

| VCF Value | Items | Sample Items | Scale Reliability (Alpha) |
|---|---|---|---|
| Immediate Value | 9 | I built relationships with other faculty.<br>I felt safe to share my point of view.<br>I felt like we were all equals in this learning community. | .88 |
| Potential Value | 16 | Confidence to:<br>• Facilitate a social and cooperative learning process<br>• Address power dynamics in the classroom<br>• Strategically select course texts to support STEM literacy | .94 |

| | | |
|---|---|---|
| Applied Value | 7 | I regularly experiment with new ways to use texts to support my students' learning.<br><br>I provide my students with more time to actively engage with STEM texts.<br><br>I have incorporated new digital tools into my classes to support active learning. | .93 |
| Realized Value | 8 | Observed changes in students as a result of changes to practice:<br>• Level of equity in student talk<br>• Openness to new teaching strategies<br>• STEM reading confidence | .93 |
| Transformative Value | 7 | I am able to give my students more ownership over their learning.<br><br>My perspective on text has been significantly transformed. Active learning and inquiry-based learning are becoming the norm in my classes. | .92 |

Table 5

**Community of Practice and Values Creation Framework Survey Participation**

| Community of Practice Learning Communities | Cohorts | Number of Participants | Number of Completors | VCF Survey Response Rate |
|---|---|---|---|---|
| Level 1: STEM Instructors Learning Community | 4 | 140 | 106 | Y1: 53% (N = 26) Y2: 84% (N = 48) |
| Level 2: Facilitators Learning Community & Leadership Learning Community | 2 | 33 | 32 | 78% (N = 25) |

CoP members began implementing new teaching strategies aimed at promoting active learning and supporting student success, which shifted their professional practice toward a new norm. The evaluation of the project identified several emergent findings.

## *Immediate Value Finding: Sense of Community*

The Reading Apprenticeship framework created a robust, supportive, and non-hierarchical virtual community for CSU and CCC STEM faculty, with survey respondents reporting a strong sense of immediate value ($M$ = 4.67, $SD$ = .39 [on a scale of 1-5]). Ninety-eight percent of survey respondents agreed or strongly agreed that their contributions were valued by other members of the learning community. Participants felt supported as members of a professional community, with one describing it as "welcoming and supportive in a manner that I have never experienced before," and another citing "catharsis in having a space to debrief and get support from my fellow peers." The virtual statewide network provided added value, exposing members to a range of perspectives and fostering a sense of belonging and relationship-building. The survey found no evidence of hierarchy between CSU and CCC participants or differences in the experience of immediate value, indicating inclusivity for a diverse group of STEM educators. Our study suggests that virtual CoPs can provide a much-needed community, connection, and support during challenging times, and they can effectively gather diverse perspectives that are geographically dispersed.
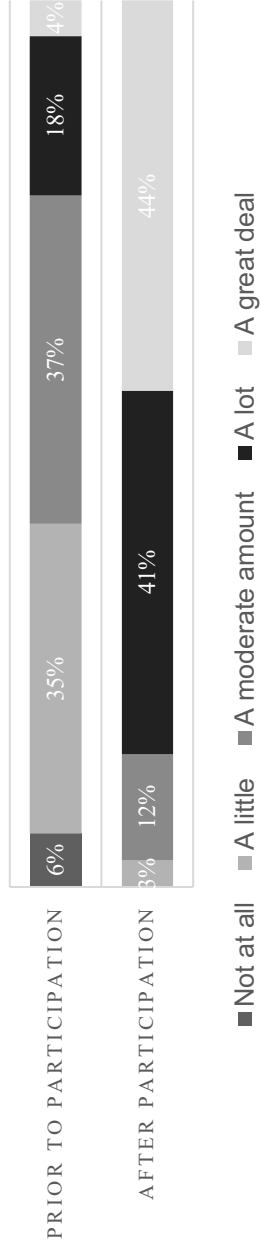
## *Potential Value Finding: Perspectives on the Role of Text*

The project aimed to help faculty reflect on the role of text in their instruction. Results from the VCF survey show that participation in the CoP had a significant impact on members' consideration of this role. As one member noted, "I underestimated the usefulness of reading strategies and actually have become a better reader and instructor just by being part of this community." Figure 2 illustrates that prior to participating, most members considered the role of text only a little or a moderate amount ($M$ = 2.79, range 1-5). However, after participating, the majority considered the role of text a lot or a great deal ($M$ = 4.26).

## *Applied Value Finding: Use of Text in the Classroom*

The data indicate that CoP members made substantial and mean-

Figure 2
**Consideration of the Role of Text Among VCF Survey Respondents**

PRIOR TO PARTICIPATION

| 6% | 35% | 37% | 18% | 4% |

AFTER PARTICIPATION

| 3% | 12% | 41% | | 44% |

■ Not at all  ■ A little  ■ A moderate amount  ■ A lot  ■ A great deal

ingful changes to their use of text in their courses. As shown in Figure 3, 75% of survey respondents reported increasing their use of text by a *moderate* to *substantial* amount.

CoP members were asked to describe how the CoP changed how they incorporated reading into their teaching. Several themes emerged (see Table 6), revealing significant changes not only in instructional practices related to text, but also the uncovering of assumptions and significant shifts in members' core teaching beliefs and philosophy, providing evidence not only of applied value creation, but transformative value as well.

### Transformative Value Finding: Transformational Change

The evaluation of our CoP revealed compelling evidence that participation disrupted the status quo for many members. A majority of participants (63%) reported that their involvement in the learning community transformed their teaching practices to a large extent or a very large extent (see Figure 4). Furthermore, the length of participation had a significant effect on the transformative value of the CoP. Those who participated in the CoP for two years reported significantly higher levels of applied value ($M$ = 4.43) than those who participated for only one year ($M$ = 3.99, $p$ = .003). Similarly, participants who engaged with the CoP for two years reported significantly greater transformation in their teaching practices ($M$ = 4.21) than those who participated for only one year ($M$ = 3.58, $p$ = .001).

The study also found that after two years of participation, faculty members were more confident in their ability to implement culturally responsive teaching practices, such as addressing power dynamics and highlighting the cultural wealth of students. Additionally, participants who had been involved for a longer period mentioned feeling more comfortable leading discussions with their colleagues and having improved their listening skills. These findings suggest that the process of moving from potential value (knowledge and confidence building) to applied value (changes in teaching practices) is gradual. However, our data indicate that sustained participation in the CoP does support faculty in transforming their ways of thinking and their professional practices.

## Limitations and Future Research

The study data show promising signs of the CoP's positive impact. However, a few limitations in the study should be noted and addressed

Figure 3
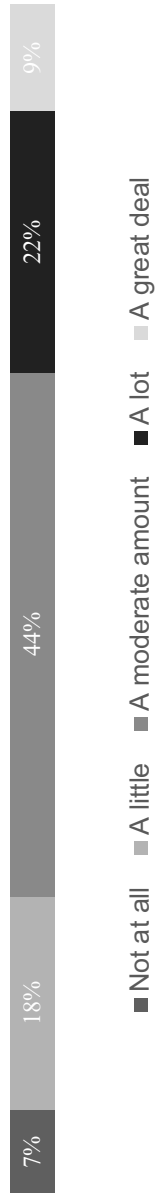**Increased Use of Text Among VCF Survey Respondents**

| 7% | 18% | 44% | 22% | 9% |

■ Not at all  ■ A little  ■ A moderate amount  ■ A lot  ■ A great deal

Table 6

**Changes in Use of Text as a Result of Community of Practice Participation**

| *Theme* | *Illustrative Quotation* |
|---|---|
| **Scaffolded Use of Text (*N* = 19):** Providing more space and time to support students' engagement with text | "I do spend much more time explicitly leading students to think through their own reading processes and try to be transparent about the texts I am using with them. I built in more opportunities for metacognitive engagement around reading early in my courses and spend some time in class discussions doing the same." |
| **Increased Use of Text (*N* = 11):** Using more STEM texts in their courses, particularly in-class text-based activities as a core part of instruction. | "There was no in-class reading before my participation in the RA learning communities; I had readings assigned as student homework, which many students never completed before class. After participating in this RA learning community, in-class reading now takes 60 to 70 percent of class time." |

Table 6 *(continued)*
**Changes in Use of Text as a Result of Community of Practice Participation**

| *Theme* | *Illustrative Quotation* |
| --- | --- |
| **Shifted Beliefs about Role of the Teacher (*N* = 9):** Feeling more responsibility to support their students' engagement with text. | "Before, I assumed that all students either read the text or ignored the text. After, I realized that I could and should take a greater role in scaffolding reading, to show students how it can aid learning, to remove the inertia of taking that deep dive into the knowledge conveyed by the text." |
| **Uncovered Assumptions (*N* = 8):** Reflecting on their past assumptions or misconceptions about students. | "Prior to my participation in this learning community (FLC), I was ready to accept that students do not read. I took that as a characteristic of our new generation of students and was getting ready to make videos of all the content that I once delivered via text. I used to believe that I had to redesign my classes to work around the reading deficiency that my students come with. Now, I am focused on helping my students learn how to read as part of the discipline specific learning goals. I formerly believed that learning how to read was a task that only grade school teachers were trained to do well. Beyond giving my students tips on how to read a textbook, I did not know how to teach my students to improve their reading skills." |

**More thoughtful choice of text (*N* = 7):** Thinking more about the texts they chose for their courses.

"I choose my text more carefully!"

**Increased appreciation of text (*N* = 7):** Designing activities around engaging with text due to deepened appreciation for the importance of text.

"Before the course, I thought reading was important but after the course I realized that reading properly is extremely important. By making reading an interactive task, the learning process is improved."

**Expanded definition of text (*N* = 7):** Thinking much more broadly about what constituted text.

"Before this class I thought text was a paragraph in a book. Now, I know text can be a graph, image, equation, videos and more."

Figure 4

**Extent to Which Community of Practice Was Transformative
to Teaching Practices Among VCF Survey Respondents**



| 1% | 9% | 39% | 24% |

■ Not at all   ■ To a small extent   ■ To a large extent   ■ To a very large extent

by future studies. First, we were limited by the retrospective design of our VCF survey and would have benefited from the added rigor of a pre-post survey design, ideally with a comparison sample of faculty who did not participate in our CoP. Future research on this approach to professional development should include a pre-post comparative design. Future research should also involve refinement of the VCF survey, its adaptation for implementation as a pre-post measure, and perhaps even a formal scale validation process (Dima, 2018).

The second significant limitation of the study was the lack of student-level data, which would have allowed us to better understand the realized value of the CoP. Although we intended to collect student-level data on their experience in Reading Apprenticeship classrooms, as well as their learning outcomes, the context of the pandemic made this impossible. Therefore, additional studies are needed that explore the extent to which these changes in teaching practices lead to the hypothesized positive impact on student outcomes.

## Discussion

In today's age of unlimited open-source information and artificial intelligence, college courses and texts should not be defined solely in terms of "content coverage." Rather than simply presenting information, we must prioritize developing critical competencies that enable students to make sense of this wealth of knowledge. Studies show that deeper learning experiences, rooted in students' prior knowledge and identities, are essential for successful engagement in STEM disciplines (National Academies, 2018). However, despite this knowledge, both STEM instructors and students often struggle to move away from passive, lecture-driven learning experiences that have long been the norm (Bathgate et al., 2019; Deslauriers et al., 2019).

Our STEM Reading Apprenticeship CoP provides a promising approach for addressing this challenge. By focusing on text selection, task design, and opportunities for student discussion, instructors can make meaningful changes in their teaching practices and professional identities. Rather than adding to the overwhelming amount of information available, instructors can leverage their disciplinary expertise to design learning experiences that help students uncover disciplinary ways of thinking. In this approach, specialized disciplinary texts are no longer gatekeepers of "insiderness," but rather vehicles for negotiating meaning and, ultimately, leading to new understandings and a sense of belonging for students.

When STEM instructors engage in sustained social learning to transform their understanding of texts, tasks, and talk, they have a new starting point for designing active and equitable instruction. As one CSU mathematics instructor stated, "I dream of students, all people, really, being able to interpret the technical information that is available to them and make decisions based on their own values using this raw data rather than depend on media, politics, authority figures, or teachers telling them what the information means." While more research is needed to fully understand the impact of this approach on student outcomes, our CoP provides a promising model for improving STEM education and fostering this vision for an empowered and critically literate citizenry.

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