Finding Your People in the Digital Age: Virtual Communities of Practice to Promote Education Scholarship

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Medical educators have described a number of barriers that may prevent them from reaching their education scholarship goals, including limited time, resources, mentorship, access to expertise, and intrinsic reward.[1] In the graduate medical education field, program directors may feel isolated, undervalued, and overextended. The administrative demands of residency and fellowship programs may leave little time for traveling to conferences or attending meetings that can provide opportunities for collaboration, mentorship, scholarship, and a sense of community. Engaging in a virtual community of practice (vCoP) may help educators overcome barriers to successfully generate scholarship.

Communities of practice (CoPs) began to emerge in the education community among groups of people who interact around a common educational question, problem, or specific passion. Members of a CoP share information and advice, problem solve, and support each other. Over time, the group develops a deep, unique, and shared understanding about their practice and may produce educational materials such as manuals, standards, or tools to support their work.[2] The structure of a CoP can be defined by the presence of 3 characteristics: (1) a mutual agreement where members establish group norms and build relationships with each other; (2) a joint enterprise where the group determines its focus or "domain"; and (3) a shared repertoire of resources.[3–5]

Initially starting as communities that interact face-to-face, CoPs have evolved with technology, and now vCoPs are becoming commonplace.[6] A vCoP is a CoP that utilizes web-based technology to facilitate communication and engagement.[7] Derivative of Lave and Wenger's original theories on situated learning, the practice of educators gathering together to connect over their craft is not a new one.[4,5] However, many institutions may have limited educational specialists.[8,9] Therefore, vCoPs can provide access to a larger community with which to share knowledge, build relationships, and foster innovation.[9,10] Virtual CoPs can also expand one's resources for collaboration independent of geography or time zones.[11,12] This can facilitate study site recruitment and administration of multisite studies, which can produce robust scholarship.[13] Furthermore, vCoPs can create opportunities for shared learning. One of the more popular versions of vCoP uses web-based resources, such as Twitter or Instagram. However, newer approaches can also include closed platforms (eg, Slack, Basecamp, WhatsApp, or Facebook groups).[14–16]

Educators wishing to explore vCoPs that have evolved among the health professions may find their community in existing open, blog-based, or closed communities of practice (TABLE). However, educators wanting to develop their own vCoP can take a stepwise approach that builds on literature-based recommendations (FIGURE 1).[2–5,17]

As vCoPs become more common in medical education, there will be increasing opportunities for scholarly work—from innovations and discovery research to online ethnography and program evaluation, through harnessing the power of archived comments to discovering what works (or doesn't) in these online environments.[18,19] There are opportunities to galvanize individuals within a defined vCoP to support research efforts and to recruit study sites or participants.[13,20,21] In our experience cultivating a vCOP to support and develop medical education scholarship, we found that an apprenticeship model allowed for variation in the levels of engagement based on participant interest, availability, and experience. New members have the opportunity to assume gradual progression to core membership (FIGURE 2).[14] It is important that members at all levels of engagement, from peripheral to leadership, experience benefits from participation and feel included and

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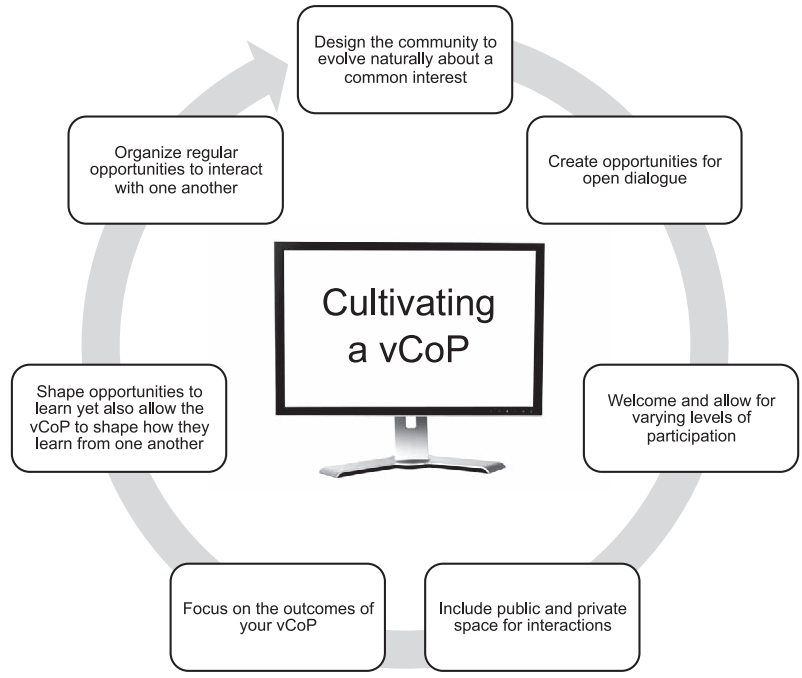

FIGURE 1
Creating a Virtual Community of Practice

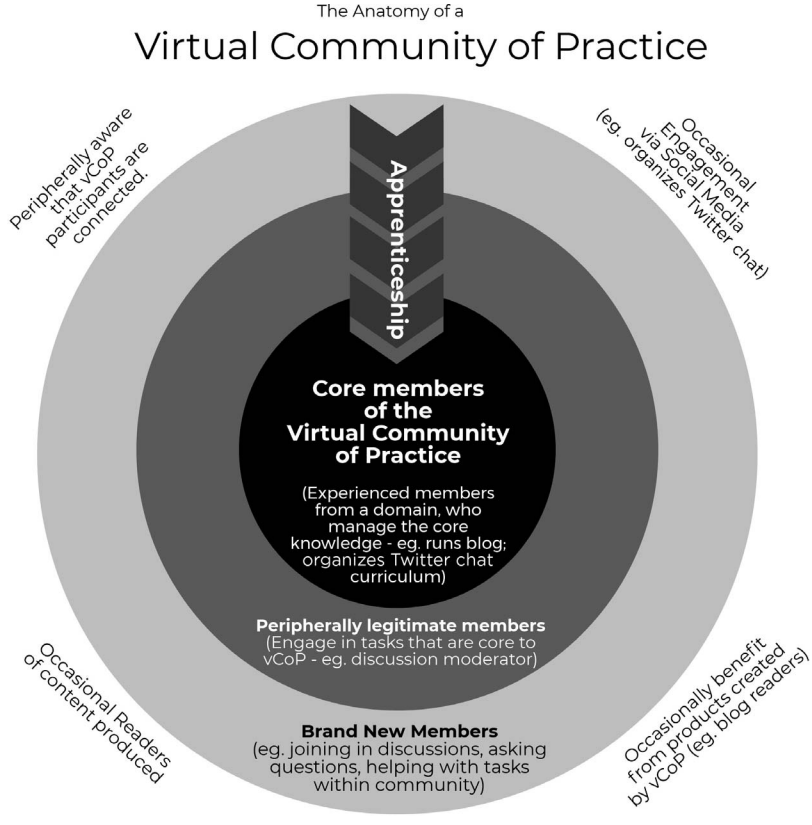

FIGURE 2
The Anatomy of a Virtual Community of Practice

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TABLE
Virtual Communities of Practice for Health Professions Educators

Virtual CoP	Audience	Description	Examples
Open Networks	Open participation *Usually via Twitter, (although communities will arise on other platforms over time).*	▪ Open engagement of multiple stakeholders ▪ Loose associations ▪ Common practice, usually around a specific area (eg, discipline in medicine, medical education) ▪ Anchored connecting continuously, no real home base	▪ #FOAMed[9] ▪ #FOAMsim[24] ▪ #MedEd[25] ▪ #HMIchat ▪ #WomeninMedicine
Blog-based	Open participation with moderation *Usually focused on a curated topic (eg, a specific journal article, topic, or artifact). Not all blogs qualify as fostering a vCoP; there must be active participation of members to engage with one another.*	▪ Open engagement of multiple stakeholders ▪ Focused on some form of archiving via a blog, for posterity ▪ Evolving applications in graduate medical education[26]	▪ ALiEM Medical Education in Cases (MEdIC) Series[27] ▪ #ALiEMJC[28] ▪ #NephJC[29–31] ▪ #JGMEscholar[32] ▪ CanadiEM blog[33] ▪ St. Emlyn's blog[34] ▪ International Clinician Educator Blog's Education Theory Made Practical series[35]
Closed networks	Selective participation *Harnessing the safety of a closed network, these groups are often used to foster development within a smaller group.*	▪ Closed networks allow groups to engage in a smaller group, creating a safer space that is less intimidating than an open network. ▪ Closed networks can give more junior or introverted educators a more consistent, defined CoP, which can facilitate networking and peer mentoring in a format targeted to their developmental career stage.	▪ ALiEM Faculty Incubator on Slack[14] ▪ ANZCEN project on Trello[36] ▪ CanadiEM.org editorial team on Slack[33]

Abbreviations: FOAMed, Free Open Access Medical education; FOAMsim, Free Open Access Medical SIMulation education; MedEd, medical education; HMIchat, Harvard Macy Institute chat; AliEM, Academic Life in Emergency Medicine; NephJC, Nephrology Journal Club; JGMEscholar, *Journal of Graduate Medical Education* scholarship.

intrinsically motivated to contribute. In addition, succession plans should be built into the model to prevent core member burnout and maintain fresh perspectives, ideas, and enthusiasm.

Ethical issues may arise when performing research using online communities. Individuals engaging in these online forums are creating open-access content, which may raise discussion and debate regarding data ownership and subject consent for participation in research. However, some research ethics boards have broadly approved research involving vCoP data, and it is likely that further taxonomy of best practices and ethical standards will follow trends in online data collection and analysis.[22,23]

Graduate medical educators can at times feel lonely in their academic pursuits. Developing or engaging in a vCoP can facilitate the sharing of workload and expertise, and provide a support network to boost scholarship, career satisfaction, and ultimately advance the science of education. Burgeoning virtual opportunities are a great place to start for educators who struggle with limited time, local networks, or opportunities for travel.

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