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Summary: Lurkers, non-participating, or minimally-participating members of an online community are a subject of interest to researchers. In the realm of eLearning communities nowhere is this more visible than in MOOCs. In this article we dive into some assumptions made of lurkers, and we advocate for the position that lurking can be a valuable learning approach depending on the learning context.

Rethinking Lurking

Think about the online communities of which you are a member. Are you a regular member of the community? How often do you participate? Do you participate across the board? Or in specific interest groups? Now, think about this: How often do you think of lurkers? Chances are that any given individual member of a community does not think a lot about lurkers in that community, if anything active members probably think about fellow active and visible members contributing to that community, or about the specific bits of information they are seeking [1]. Despite our hypothesis that people concern themselves with what's there (contributing members, and contributed information), and not what's not there (lurkers), there has been a lot written about lurkers in various online contexts [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16]. In the learning sphere, nowhere is this more pronounced than in Massive Open Online Courses (MOOCs) where the success of a MOOC is often gauged not by the number of people who successfully complete a MOOC, but rather by the number of people who do not [15]. We argue that this deficit approach of learning contributes to negative sentiments towards lurkers. But why all this negativity towards lurkers? We believe that this is an unfair attitude towards a population of learners stemming from certain assumptions about the ideal community member, and the ideal learner. In this article we aim to briefly explore these negative attitudes toward lurking, suggesting that their underlying assumptions need further scrutiny. Additionally, we are putting forth a call for research on lurkers that considers lurking from a non-deficit framework.

So what is lurking? Although lurking is often spoken about in a negative fashion [17], many consider it to be perfectly acceptable and justified behavior. For example, the Oxford English Dictionary gives a neutral definition of a lurker as:

“A person who reads communications to an electronic network without actively contributing.” [18]

This raises the question of how exactly to specify what a lurker is. Some writers consider that lurkers do not interact at all [3], while others believe that those who participate minimally can still count as lurkers [19, 20]. Popovac and Fullwood [21] suggest that the criteria for who counts as being a lurker are context dependent, and we'll return to that thought later in this article. For the time being, we'll note that lurkers often comprise the majority of a community and that fact, in our opinion, makes it worth looking for positive justifications for the behavior. Here we follow Popovac and Fullwood, and define lurkers as:

individuals who log onto online communities, but who contribute little or no written content, thus spending the majority of their time taking in information created by other members. [21]

The average individual in a community usually focuses on the exchanges that occur between members, and often might not give much consideration about how many of the registered members of a community participate in it. A common concept used to segment users into participation patterns is the 1% rule [22] which is also known as the 90-9-1 principle [23]. The concept is quite simple: 90% of any community's membership is a lurker, 9% contributes to a small degree, and 1% contribute a lot. The 9% are usually called contributors, and the 1% superposters. While this breakdown has become the shorthand way of understanding participant behaviors in an online community, it does have its critics. For example the 90-9-1 principle is critiqued by Kushner [17] as applying specifically to Nielsen's audience, namely User Experience and User Interface designers. This demographic's goal is to increase user generated content so that, in certain contexts, it can be monetized. Participant breakdowns, however, are not rigid as the 1% rule might suggest. As Popovac and Fullwood [21] mentioned, context does matter. In their analysis of the lurker literature they found that health care communities had lurker rates of around 45% while software support communities had lurkers comprise 80% of that community's membership. Hence, different contexts and different individual needs do in-fact influence the amount of lurking that occurs in a community.

We see the negative attitudes towards lurking in online learning contexts as unwelcome legacies of p-learning, which is learning that is: "taught in physical classrooms with face-to-face contact with teachers" [24]. The physical environment has certain constraints, and has evolved from a certain set of assumptions. For example, In a lecture hall, when a teacher exclaims "no talking in the back of the room!" it's not necessarily the case that they want to prevent students from engaging with the subject matter, but that the acoustics in a physical classroom do not accommodate this behavior. Side conversations between learners in a certain physical environments will drown out the voice of the instructor. In addition, getting the course to refocus to the front of the room, on the instructor, takes away precious time from the allotted class period which itself is finite. This is not usually the case in e-learning, where many side conversations can occur without drowning out the main conversation. These side conversations could either enrich the main conversation as the side conversation joins the main stream of class thought, or provide additional paths through which learners can engage with each other and the subject matter. However, in a large physical classroom behavior that has some of the

qualities of lurking (i.e., passive learning) might be seen as being encouraged, but it's framed as "paying attention."

Consider another example of the constraints of p-learning translating to e-learning by not questioning underlying assumptions. In a seminar-style classroom environment learning occurs in a constructivist way when small groups discuss a topic and share their understandings with each other. In this environment, if someone is not participating they are viewed as detracting from the overall learning which is predicated on discussion and sharing. This underlying mandate that everyone must actively participate in order to learn has been carried over into online learning, but without a consideration of whether, or why, everyone must actively participate. Non-active online participants (lurkers), are also often seen as damaging others' learning. However, the question to ask in this case is: If the discussion is proceeding just fine, and both active participants and lurkers perceive that they get something from the exchanges that are occurring, why is there such fear of missing out on what a lurker *might* contribute? And why discount their presence if they don't actively contribute? In fact, do active learners even care about lurkers?

We surveyed learners in a MOOC and asked them for their views about lurkers. Rather than seeing lurkers as unengaged observers, our respondents viewed them as "engaging silently with invisible social ties and ongoing conversations that are happening in the network" [26]. Although lurkers were perceived to be consumers of content rather than contributors, actions such as liking or sharing others' tweets were taken to be indicators of lurking behavior. None of the respondents of our survey viewed lurking as negative behavior. Some participants commented that they lurked when they saw no need to be more visible, as their comments would not add anything to the conversation. Others pointed out that while they might appear as a lurker on one platform, as they used it rarely, actually they were very active on a different platform. Lurking can thus be seen, as Popovac and Fullwood suggested above, to be context dependent.

A major reason given by our respondents for lurking was a lack of time, as others had previously noted [2, 25] often coupled with a lack of perceived need to interact more visibly which, again, others had previously found [26]. In an online community, where much of the engagement can be done silently, busy people can reinforce their connections with a community without visibly interacting with them. However, that does not mean that these lurkers are not actively engaging with the community, the content, or with learning.

We suggest that the term lurking is a simplified way of looking at a set of complex behaviors, and that having a lack of time is not the sole reason that people do not visibly engage with a community that they identify with. In fact, researchers have identified a variety of factors that contribute to participants engaging in lurking behavior [27]. As it seems that there is not one single cause for this complex behavior, it's important to look at the cause of lurking and the goals of the participant, and then determine whether or not being a visible member of the community contributes to those goals. One reason people join an online community is to fulfill some sort of social or emotional need, and affective and verbal intimacy correlated to higher posting behaviors [4]. Amichai-Hamburger [27] categorize this under the heading of "needs gratification." Participants in a this type of community get certain non-tangible benefits on top of whatever content or knowledge they receive [28]. However, it might be a mistake to equate a

member's level of gratification from certain activities (e.g., receiving praise for posting something useful) with the overall benefit of being a member of a broader community even as a lurker (e.g., benefiting from shared knowledge).

Amichai-Hamburger et al. also note that "the high turnover and low participation rates present a challenge for virtual communities which rely on the contributions of participants for their sustainability" [27]. This fear that a community won't be sustainable if people are allowed to lurk is probably what's driving attempts to encourage people to actively participate. However, the existence of lurkers is pragmatically beneficial: if every member of a community participated there would be a need to help filter relevant content and save community members from drowning in content that they don't need. Colloquially the term that has been used for this is "drinking from the firehose" and it's been used in social networks like twitter.

It should also be noted that even though a lurker is not always visible, they *could be* beneficial to a community in contexts of information abundance. In fact, in other contexts researchers have a name for them: multipliers. Writing in the context of electronic word of mouth, Munzel & Kunz [29] observed that there is a category of users who are characterized by a high degree of passive activities. We would argue that while lurkers might not be active creators of content, some lurking activities might provide a valuable to the entire community, for example by up-voting, sharing, or otherwise amplifying resources created by others and which are valuable to the community [30]. In addition, lurking has often been considered from the instructor's point of view, rather than from the lurker's perspective, and this lack of appreciation of what lurkers say that they are doing should be addressed

In conclusion, we reiterate that lurking is a complex behavior and that further research is necessary. Emic perspectives on lurking would be a valuable addition to the research literature. Emic perspectives are those that take the native view on a phenomenon or action; a lens which explains the rules of behavior from the perspective of those who live it [31]. Hence, in order to understand the broad category of lurking behaviors we suggest examining lurking from an emic perspective to get a sense of why lurkers lurk, in what context, and whether "delurking," encouraging people to be visible participants [2], is of value in accomplishing the goals of those learners. Furthermore, with that emic framework in mind, we should strive to understand lurking by using measures that are learner-centric; for example, we could measure the learning gains on goals stated by the learner instead of goals dictated by the course designers. As well as determining why lurkers lurk, be it lack of time from competing interests or something else, researchers should consider what lurkers gain from their level of participation in a learning community, and what a community gains from having lurkers. Additionally, considering ways of leveraging technology and research to account for lurker's behaviors, such as the "multiplier" category described above by Munzel & Kunz [29], would go a long way to further describe and provide more nuance to lurking behaviors.

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