Abstract

Online discussion communities play an important role in the development of relationships and the transfer of knowledge within and across organizations. Their underlying technologies enhance these processes by providing infrastructures through which group-based communication can occur. Community administrators often make decisions about technologies with the goal of enhancing the user experience, but the impact of such decisions on how a community develops must also be considered. To shed light on this complex and under-researched phenomenon, we offer a model of key latent constructs influenced by technology choices and possible causal paths by which they have dynamic effects on communities. Two important community characteristics that can be impacted are community size (number of members) and community resilience (membership that is willing to remain involved with the community in spite of variability and change in the topics discussed). To model community development, we build on attraction–selection–attrition (ASA) theory, introducing two new concepts: participation costs (how much time and effort are required to engage with content provided in a community) and topic consistency cues (how strongly a community signals that topics that may appear in the future will be consistent with what it has hosted in the past). We use the proposed ASA theory of online communities (OCASA) to develop a simulation model of community size and resilience that affirms some conventional wisdom and also has novel and counter-intuitive implications. Analysis of the model leads to testable new propositions about the causal paths by which technology choices affect the emergence of community size and community resilience, and associated implications for community sustainability.

Keywords: Online communities, social media, benefits, costs, emergent systems, simulation