# Design of an Online Community

https://stalalai.wixsite.com/seroboticsnetwork

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The introduction of STEM education into the schools has brought the use of robotics to the forefront. Educators are developing ideas and activities to incorporate robotics into their math, science, and engineering lessons (Benitti, 2012). Teachers of students with disabilities are also finding new and innovative ways to use robotics to engage, motivate and educate their students. "Engaging students in inquiry-based instruction is a great way to develop conceptual understanding, content knowledge, and scientific skills" (Bayley & Mackey, 2008, p. 36).

Building an online community entails identifying and connecting with the "leaders, innovators, and visionaries" of a particular field (Fogelson, Brown, & Touchberry, 2013). It is within these virtual communities where people meet, exchange ideas and resources, and learn about specific topics (Kraut & Resnick, 2011). The Special Educators Robotics Network was created to intertwine the special education community with the robotics community. It was designed as a space where special educators could go to learn about robotics and how to implement them in their classrooms, exchange lessons and connect with others in the field. Knowing the orientation of this community offered a starting point when considering the appropriate technology to select for supporting the community's purpose and goals (Wenger, White, & Smith, 2012). The Special Educators Robotics Network offers a lesson exchange, resources page, community forum, blog and a member directory.

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The designer of the Special Educators Robotics Networks focused on a clean easy to navigate design and user experience. People tend to distrust and often do not revisit sites that are "hard-to-use" and "ugly" (Fogelson et al., 2013). When websites are too "complex," it can lead to "frustration on the part of the user and frustration with the learning process" (Paloff & Pratt,

2007, p. 97). A professionally designed site will increase member expectations about the likelihood of success (Kraut & Resnick, 2011).

Building a successful online community begins with having valuable content (Fogelson et al., 2013). "Communities need the people who participate in them to contribute the resources on which the group's existence is built" (Kraut & Resnick, 2011, p. 21). Having a resource page and lesson exchange helps to promote the addition of valuable content to the community. Members can submit lessons to specific robotic categories. All lessons will be reviewed by community administrators before being posted to the appropriate category of the lesson exchange page. To encourage members to submit lessons or contribute to the community, "lesson of the week" and "member highlight" sections were added to the home page. These sections will be used to intrinsically motivate other members to make contributions to the community. Featuring contributions and giving positive performance feedback can increase the motivation of members to perform similar tasks (Kraut & Resnick, 2011). The earning of online badges can also be used as a motivation tool for contributions.

The community forum is the place where members can go to introduce themselves, start discussions on specific robotics topics, ask questions and get help. "Participants in a web-based forum often do not engage in practice together in the forum, but their shared background in practice makes their exchanges very meaningful" (Wenger et al., 2012, Kindle Locations 3780-3781). Furthermore, discussion forums create spaces where social learning takes place, leveraging the liveliness and intelligence of the group (Horton, 2012).

In addition to topic-specific discussions, the forum also includes a board specifically for new members. Encouraging new members to post introductions or biographies increases

interactions with longstanding community members and often evokes longer community commitment and increased contributions to the community (Kraut & Resnick, 2011).

The use of the discussion forum requires members to adhere to a specific set of rules or norms. These rules are listed under the forum tab. Failure to comply with community rules can result in the termination of membership. Research has indicated that people are more likely to act within the norms when guidelines are clearly specified (Kraut & Resnick, 2011). A means to report discussion forum posts which violate the community rules will be added to each discussion post. If violations become excessive, the designer will consider utilizing activity quotas or filters within the forums.

The Special Educators Robotics Network will offer its members access to free webinars, current news items and outside resources such as scientific journals and websites. Learning from sources outside of the community gives members access to new and relevant information and ensures that the community "reflects outside perspectives" (Wenger et al., 2012). Giving members access to professional content can help to attract members to a community prior to its success (Kraut and Resnick, 2011).

As the community grows, additional administrators or contributors can be added to help manage the blog, forums and lesson submission sections of the community. To assist in the tracking of member data and statistical information, the designer will utilize Google Analytics. Examining the frequency and number of visits, posts, and sharing of content will allow the designer to determine if goals are being met and what adjustments the community will need to remain active and relevant. The use of reliable analytics will give the designer a clear understanding of the successes or failures of their efforts (Fogelson et al., 2013).

For an online community to be successful, it needs members. Kraut and Resnick (2011) state that the scope of the community, including the topics, audience, purpose and activities must be clearly defined. Utilizing strategies such as word of mouth, social media and search engine optimization can increase community membership. Allowing community members to share content with their "friends" on social media could increase the likelihood of them joining the community and in turn increasing membership (Kraut & Resnick, 2011).

While there are several online communities which focus on STEM-related uses of robotics for K-12 schools, the designer was unable to find any communities specifically focused on using robotics with special needs students. The community which most closely aligns with the Special Educators Robotics Network is the Early Childhood Robotics Network. Both networks are niche communities dedicated to a specific population of children and offer tools such as discussion forums, resources, and a blog. The Early Childhood Robotics Network, which is associated with Tufts University, is a more research-based community.

The Special Educators Robotics Network meets the purpose of an online community as it is a place where members come together to "converse, exchange information or other resources, learn, play, or just be with each other" (Kraut & Resnick, 2011, p. 1). It consists of an assortment of technology tools, from forums to blogs, resources, and member groups. The community encourages members to be active participants and aspires to be a community of practice. It was created to inspire the active exchange of information and pedagogy as "learning is an integral part of life which always involves who we are, what we do, who we seek to connect with, and what we aspire to become" (Wenger et al., 2012, Kindle Locations 369-371).

References

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