ALLIED STEM: An Online Community for Girls and Minorities

Assessment 3

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As reported by the second-annual U.S. News/Raytheon STEM Index, even though multi-million dollar efforts have been made by both the private and public sector to increase opportunities in Science, Technology, Engineering and Math, the gender and racial gap has yet to be closed. Female students and minorities continue to be underrepresented in fields associated with Science, Technology, Engineering and Math. A recent report indicated that women also lag behind their male counterparts in earning STEM degrees, scores on exams and interests in pursuing the fields. Furthermore, it was noted that white and Asian males overwhelmingly outperformed Blacks, Hispanics and American Indians on all three of the same metrics (Neuhauser, 2015).

The purpose for creating Allied STEM is to build an online community for girls and minorities in order to address the existing need to increase diversity in STEM fields. Technology can clearly reframe how communities organize, express boundaries and relationships, which changes the dynamics of participation, peripherality, and legitimacy (Wenger, White, and Smith, 2009, p.11) The prototype for the Allied STEM website is designed to provide a venue in which participants can express a common identity via the online content posted, educational blogs and informative webinars related to STEM fields. The participants can choose whether to participate inside or outside of the domain. In addition, face-to-face sessions including Meetups and afterschool enrichment programs encourage meaningful learning experiences and opportunities to connect with one another in an effort to foster a sense of community within the members of the organization. The live sessions enable members to get to know one another while providing a shared context for ongoing meaningful exchanges.

Membership is another strong component of this organization and would include professional memberships, collegiate memberships, mentors and volunteers. Every month, one of the members of the Allied STEM community would be honored as the Featured Member of the Month. Creating a recognition system would be used as a motivating factor to acknowledge members for their outstanding contributions to the organization.

The conceptual framework that was used to design the prototype for Allied STEM was based on Richard Millington’s Community Management Framework which encompasses eight distinct elements. The eight elements include Strategy, Growth, Content, Moderation, Events and Activities, Relationships and Influence, Business Integration and User Experience (Millington, 2012, pp. 17-18). Although the Community Management Framework is based on eight elements, the designer will solely focus on Strategy, Growth and Content for the purposes of this paper.

Several existing online organizations including Black Girls Code, Girls Who Code and Latinas in STEM have been designed to promote diversity in STEM fields; however, the content being delivered is primarily in English. The Latino community is one of the populations that is being cultivated for Allied STEM and at least 50% of the content on the website will be delivered in Spanish. When designing new online communities, it is essential to carve out a niche (Resnick, Konstan, Chen and Kraut, 2011). By providing content in both English and Spanish, the Latino community will have access to content-driven information and will be able to exchange ideas in their own language. In addition to promoting bilingual content, the members of the online community will have access to webinars and special events that cater to both English and Spanish speakers.

In order to successfully build Allied STEM as an online community, a strategic plan has been put in place based on data and theory. The strategic plan was designed to not only maintain the community, but to also build capacity and sustainability. One of the first goals of this organization is to select the individual that would be managing the online community. The role of the community manager would be to gather both quantitative data and qualitative data about the community in terms of the participants, interests and the existing growth of the organization (Millington, 2012). The data would then be analyzed in order to set forth goals for the community along with measurable targets that can be assessed. The goals and the targets would be used to create an action plan that would be Specific, Measurable, Attainable, Relevant and Time-oriented. These S.M.A.R.T. goals are based on George T. Doran’s management goals on objectives (Doran as cited in Flores, 2015). By closely monitoring the goals and the objectives established by the organization, the community manager would be able to fine tune any changes that needed to be made to carefully strategize based on specific needs.

In terms of growth, the goal of the Allied STEM would be to retain the existing members while recruiting new ones to replace members that are no longer following the organization. According to Millington, data should be used to optimize growth within an online community. In order effectively grow a community, segments should be targeted that share demographic, habitual or psychographic attributes (Millington, 2012, p. 61). The data from the Allied STEM community would be analyzed to determine the geographical location of the members to create events and Meetups for them to attend either virtually or in person. Metrics would also be gathered to determine demographics, habits and psychographics of the community. Additional data would be gathered to analyze the social media tools utilized by the Allied STEM community including Twitter, Instagram, LinkedIn and Facebook to increase traction within the organization.

One of the goals of the organization is to build a Latino following within the community which would include educators, students and parents. In terms of analyzing the growth of the Allied STEM community, Google Analytics would be utilized to measure the number of unique new visitors in each of those categories. Furthermore, the data would be tracked to determine how many of the visitors are accessing the Spanish content in comparison to the English content. The data would also be analyzed to determine the channels of growth and the sources that lead to registered members. Key metrics would be utilized to track visitors using the platform, as well as, the number of registered members and participants along the continuum with the ultimate goal increasing membership and maintaining sustainability.

The founders of the Allied STEM movement will strive towards making connections with its online community via events and activities to increase growth and build capacity. Young et al. (as cited in Millington, 2012, p. 164) discovered that offline events can increase page viewers by 60.4% and participation by 27.2%. Some of the activities being offered would include financial literacy sessions for parents and students in both English and Spanish. By providing informative sessions on financial literacy, the members of the organization would be able to learn about scholarship opportunities, receive assistance on how to complete financial aid forms and invest in saving for college. The members of the Allied STEM community would also have additional opportunities to participate in special face-to-face events that promote hands-on engagement with STEM related topics including App development, 3-D printing and robotics. Enrichment opportunities would also be available for middle and high school students during the Summer Institute and the afterschool program.

Currently, the Allied STEM community is in its inception stage with the creation of a prototype and a strategic plan in place. Once the prototype is officially launched the designer of this community will be able to measure its success by obtaining critical feedback and carefully analyzing the metrics to retool existing structures as needed. The metrics would be used to measure the efficiency of the community with the ultimate goal of utilizing technology as a means to bridge the STEM gap for minorities in underrepresented communities.

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