Engaging Underrepresented Communities with Science Using Social Networking Platforms [1]
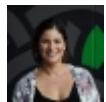
Enviado por Mónica Ivelisse Feliú-Mójer [2] el 25 octubre 2012 - 9:44pm

[2]

☆☆☆☆☆

By Mónica I. Feliú-Mójer [3]

Although Hispanics comprise 16% of the total population in the United States, they remain largely underrepresented in Science, Technology, Engineering and Mathematics (STEM) degrees and careers.

This underrepresentation of Hispanics in science is problematic on several levels. The attrition of Hispanics among the ranks of scientists limits our ability as a society to benefit from the full range of talent and minds. The scientific enterprise is enriched by the variety of thoughts, experiences and ideas contributed by diversity. A lack of diversity among the research workforce is detrimental for innovation [4] and can also have the effect of decreasing the diversity of research topics [5], particularly those that pertain to Hispanics.

Many barriers have been found to contribute to the disproportionately low numbers of Hispanics in science, including insufficient guidance and mentoring, lack of culturally-relevant science information and lack of access to education and professional resources. Today, social networking platforms have emerged as powerful tools to help knock down some of these barriers.

Social networking websites can help democratize access to knowledge and provide new opportunities for fellowship and mentorship by linking groups from resource-limited geographical regions with others in resource-rich centers. Science is a global activity and, with the Hispanic scientific community dispersed over a wide geographic area, a virtual space that brings individuals of that scientific diaspora together represents a powerful and innovative way to address the challenges faced by Hispanics in science and technology.

This is precisely the type of space the non-profit grassroots organization Ciencia Puerto Rico has established. Our volunteer-run [6] networking platform, CienciaPR.org [7], brings together the geographically dispersed Puerto Rican scientific community under a virtual collaborative space, and uses their collective knowledge-wealth and expertise to engage the public in science; to serve as role models and mentors for the next generations of scientists; and to promote the development of science endeavors in the Puerto Rican archipelago. In just six years the website's membership has increased to over 6,100 members underscoring the strong interest and need for such an endeavor.

By encouraging user participation and the exchange of knowledge and ideas, social networks foster a sense of community and facilitate the creation of user-driven initiatives. For instance, CienciaPR.org [7] provides people with common interests – science, research and Puerto Rico – with the tools, information and resources to help them forge collaborations and mentoring relationships. The ideas and shared interests of the members of Ciencia Puerto Rico's online community have fueled our organization's most successful initiatives.

Over the years, by engaging its membership and leveraging its breadth and reach, CienciaPR has been able to implement a number of formal and informal science education initiatives that have contributed to the teaching and learning of science in Puerto Rico and the support of scientists at various stages of their training and career. Some of these efforts include increasing content about Puerto Rican scientists or research performed in Puerto Rico in local print, radio, and online news media [8]; publishing a book of essays [9] relating scientific stories contextualized and culturally-relevant manner; offering workshops to K-12 teachers [10] to complement their classes with contextualized activities; and piloting a program [11] to increase students' interest in and awareness of science and scientific careers [12]. In addition to these initiatives, CienciaPR uses social media networking platforms (i.e. Facebook [13], Twitter [14] and LinkedIn [15]) to disseminate original science articles and podcasts, as well as other relevant news and science-related information.

The lack of mentors that can advice Hispanic students about the pathways towards STEM degrees and careers is a key contributing factor [4] to their attrition in the scientific training pipeline [16]. A good mentor and role model is an invaluable source of experience and insights [17], someone to identify with, who knows how it is and what it takes to develop into and perform successfully as a scientist or engineer. Often, Hispanic youth have limited access to role models in their communities to engage, mentor and empower them to go into science.

To showcase role models in the Puerto Rican scientific community, roughly each month, Ciencia Puerto Rico features a story profiling the life and work of Puerto Rican scientists: their trajectory in science, the relevance of their work and their personal journey through science. In addition to showcasing their work, these stories speak of the challenges faced by these Puerto Rican scientists, their drive to succeed and their will to give back to their communities and be an example for future generations.

Online networking platforms like CienciaPR.org [7] are uniquely poised to help overcome the lack of mentors among Hispanic students, because they enable the far-reaching personalized mentoring relationships needed to succeed in the scientific enterprise. Our recently revamped platform provides a number of social networking tools such as a private and secure messaging system; a message board [18]

where members can "meet" and communicate with each other; maps of users; <u>personal blogs</u> [19]; and links to members with similar interests. Besides encouraging the establishment of mentoring and collaborative relationships through our social networking tools, Ciencia Puerto Rico organizes social events at national scientific conferences. These social events give attendees the opportunity to share information about their research and careers in Puerto Rico or abroad, and get to know fellow Puerto Rican scientists.

Although our initiatives have focused primarily on Puerto Rico, we believe that the principles of community participation and collaboration that guide CienciaPR can fuel the creation of initiatives that can benefit all Hispanics. We hope our platform can serve as a model to help establish creative strategies that effectively tackle the issues of scientific literacy, cultural relevance and access to mentors and resources for minority populations.

The topics discussed here were the subject of a professional development workshop organized by Ciencia Puerto Rico and presented on Oct. 11, 2012 at the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) National Conference. The panel included Dr. Yaihara Fortis-Santiago, AAAS Science & Technology Fellow and member of the CienciaPR team; Dr. Frances Colón-Hastings, Deputy Science and Technology Advisor for the Secretary of State Hilary Clinton; Dr. Wilson González-Espada, Associate Professor of Physics and Science Education at Morehead State University and part of the CienciaPR team; and Mónica Feliú-Mójer, Ph.D. candidate in Neuroscience at Harvard Medical School and vice-director of CienciaPR.

Tags:

- <u>CienciaPR</u> [20]
- <u>SACNAS</u> [21]
- <u>social networking</u> [22]
- <u>underrepresented minorities</u> [23]

Source URL:<u>https://www.cienciapr.org/es/blogs/equipo-informa/engaging-underrepresented-communities-science-using-social-networking-platforms</u>

Links
[1] https://www.cienciapr.org/es/blogs/equipo-informa/engaging-underrepresented-communities-science-using-social-networking-platforms [2] https://www.cienciapr.org/es/user/moefeliu [3] http://cienciapr.org/user/moefeliu [4] http://www.nap.edu/catalog.php?record_id=12984 [5] http://report.nih.gov/FileLink.aspx?rid=760 [6] http://cienciapr.org/about/team [7] http://www.cienciapr.org/ [8] http://cienciapr.org/about/partners [9] http://cienciapr.org/book-ciencia-boricua?language=en [10] http://cienciapr.org/workshops-book-ciencia-boricua [11] http://cienciapr.org/project-ciencia-boricua [12] http://www.scribd.com/doc/111171209/Executive-Summary-External-Evaluation-Ciencia-Boricua-Project [13] http://www.facebook.com/cienciapr [14] http://www.twitter.com/cienciapr [15] http://www.linkedin.com/groups/CienciaPR-1911741/about [16] http://www.nsf.gov/statistics/nsf10300/ [17] http://www.nature.com/naturejobs/2011/110728/full/nj7357-533a.html [18] http://cienciapr.org/forum [19] http://cienciapr.org/showing-our-new-digs [20] https://www.cienciapr.org/es/tags/cienciapr [21] https://www.cienciapr.org/es/tags/sacnas [22] https://www.cienciapr.org/es/tags/social-networking [23] https://www.cienciapr.org/es/tags/underrepresented-minorities