

To: Dr. Erika Paterson
From: Janice Pang
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Subject: Proposal for Enhancing Participation of Educators in the Greater Vancouver Regional Science Fair Committee

Introduction

For over 37 years, the Greater Vancouver Regional Science Fair (GVRSF) provided students from grades 7-12 an opportunity to showcase their research and innovations in the fields of discovery, energy, health, information, environment, innovation and resources, as well as win awards and scholarships totalling over \$45,000. All science fair projects at the fair are adjudicated by more than 200 science and technology professionals from industry, research, and academia. Participants at the fair also have the opportunity to visit UBC research facilities, attend a science show, and network with other participants from across Greater Vancouver. The top 17 students selected from this regional fair attend the prestigious Canada-Wide Science Fair. GVRSF provides a unique opportunity for youth to explore project-based science and conduct research and experimentation in areas of science, technology, engineering, and mathematics (STEM). Students develop valuable scientific research skills that could be used in their future career paths. Notably, this regional fair is made possible by volunteers on the GVRSF committee, who are passionate about STEM education and outreach.

Educators within the GVRSF committee play a pivotal role in introducing science fairs to students in Greater Vancouver. By incorporating science fair projects into their classrooms, educators expose students to project-based science and enable students to conduct original experimentations and create novel innovations. As a result, many students at GVRSF discovered passions for science that they would have otherwise never realized without participating in science fairs. This resulted in GVRSF alumni proceeding to pursue STEM careers. Evidently, it is important to maintain a network of educators within the GVRSF committee who are passionate about teaching science and aware of science fairs. Educators are pivotal in exposing students to science fairs to help develop science talent within the Greater Vancouver region.

Statement of Problem

Educators in elementary and high schools play an important role in exposing students to science fairs. They are leaders in helping youth to develop interest for project-based learning. However, in recent years, there is observed decline in educator participation on the GVRSF committee. An increase in educator participation on the committee may lead to a larger network of educators who are aware of science fairs in Greater Vancouver. This could dramatically increase the number of students who gain exposure to the opportunities presented by science fairs. Consequently, it is vital to identify potential activities that will increase educator participation within regional science fair committees and create strategies to encourage more educators to become involved within the GVRSF committee.

Proposed Solution

To address the problem stated above, a study is required to investigate the main reasons or activities that may encourage educators to participate in regional science fair committees. This is possible through surveying and interviewing educators who may or may not be involved with science fairs within Greater Vancouver or elsewhere. Additional information from other regional science fairs about educator participation in science fairs will also assist with developing strategies to resolve the issue.

Scope

The proposed study aims to understand educator participation on science fair committees and to improve educator participation within the GVRSF committee. The following will be investigated:

1. What are the main reasons or activities that will encourage educators to participate in regional science fairs?
2. Where and when do educators likely hear about regional science fairs?
3. Will additional science fair resources help educators learn more about GVRSF?
4. How are other regions recruiting educators to their science fair committee?

The formal report will be prepared specifically for the GVRSF committee to address the problem stated in previous sections. All results and recommendations will be forwarded to the GVRSF committee for implementation.

Methods

Primary data for proposed research will be collected in the form of surveys and interviews from educators in Greater Vancouver, as well as other regions in BC and other provinces. As GVRSF and the Science Fair Foundation of BC have established networks and contacts of educators, I will be collaborating with members of the GVRSF committee and the executive director, Madeleine Guenette, and program manager, Jessica Zhang, at Science Fair Foundation BC, to reach out to the educators for surveys and interviews.

Invitations to complete surveys will primarily be distributed to educators in the form of newsletters sent via email by GVRSF and the Science Fair Foundation BC. Social media platforms will also be leveraged to distribute the surveys. I will also consult with educators to inquire about the possibility of completing an interview regarding their experiences with science fairs and how their region is recruiting educators to the committee.

For additional perspective of the problem being studied, invitations for surveys and interviews will be sent to science fair alumni using the same methods. I will also consult with educators and committee members from other regions to determine the strategies they have implemented to successfully recruit educators to their committees. This will supplement the primary data gathered locally and assist with formulating recommendations that could potentially be used to enhance educator participation within GVRSF committee.

My Qualifications

I am familiar with the science fair programs at the regional, national and international level. In the past, I participated in four GVRSF and was a three-time finalist representing BC at the Canada-Wide Science Fair. In 2015, I was selected for Team Canada to attend the world's largest pre-college science competition, the Intel International Science and Engineering Fair. Through these science fairs, I had the opportunity to connect with students and teachers from across Canada and the world. I can draw upon my first-hand experiences and connections from these fairs as I gather data for the proposed research.

Since 2017, I served as the Treasurer and Sponsorship Coordinator on the GVRSF committee. My responsibilities include preparing sponsorship funding applications and building solid partnerships with sponsors via email correspondences. I have also coordinated student activities and UBC lab tours for over 300 students attending the regional science fair in collaboration with other GVRSF committee members and UBC Faculty of Science Office of the Dean administration staff. Additionally, I was a speaker at various post-secondary workshops and Science Fair Foundation of BC networking events. At these events, I had the opportunity to interact and connect with students, parents and teachers. My extensive network of science fair connections as well as written and verbal communication and planning skills will allow me to conduct an in-depth causal study, leading to potential recommendations on enhancing educator participation within the GVRSF committee.

Conclusion

The involvement of educators on the GVRSF committee can be improved and action is needed to identify how educator participation can be increased. With the approval of this proposal, I will begin to conduct the above-mentioned surveys and interviews to determine the main reasons and activities that can encourage educator participation within regional science fair committees. I aim to forward recommendations that could potentially resolve the issue to the GVRSF committee.