# Effective Science Communication Tactics


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## Introduction

The current research being conducted at the University of California- San Diego branch of the UC Global Food Initiative includes Will Tanaka's work on efficiently growing mushrooms from compost, and Maggie Zhou's work on creating a Geographic Information Systems(GIS) map of the metal concentrations in soil around the community, which can be used to help with local garden efforts. Being the Student Ambassador for this fellowship, I was tasked with supporting this research and the mission of the initiative through research communication and collaboration with other organizations. Although 90% of medical based researchers, a subcategory in the life science department, admitted that the connection between science and the public proves to be important, this connection is often viewed as a highly neglected part of the science-research community (Peters 2013). Additionally, participation in public engagement activities is lower for life science professionals than in other science related disciplines (Varner 2014, 333). However, 91 percent of Americans surveyed found moderate to strong interest in scientific discoveries (Varner 2014, 338). With such a phenomena in mind, it becomes apparent that very few studies address efficient ways to strengthen this relationship related specifically to the life science field. I, therefore, used my position as a case study for such an endeavor. This ultimately resulted in the creation of a diverse platform for civic engagement and awareness of sustainable food systems. Three projects, each centralizing around different aspects of engagement, were initialized: (1) Social Media Engagement (2) Engagement through In-Person Workshops (3) Collaboration with Other Organizations. Through this, I researched what actions appeared to be the most efficient in meeting the UC Global Food Initiative mission. Here, we may define efficiency as any increase in engagement, and a more efficient procedure as one that gained high amounts of civic engagement relative to other procedures performed through these trials. A question was formed for each project: (1) How effective were social media platforms, specifically Instagram and Facebook, in meeting the civic engagement goals? (2) How effective were the workshops in gaining engagement? (3) What was the impact of collaborating with other organizations?


## Project Goals

The goals of the three projects are to uphold the UC Global Food Initiative mission, specifically honing in on the third point: "[3] Deploy UC's research to shape, impact and drive policy discussions around food issues at the local, state, national and international levels" ("Global Food Initiative"). For this, I emphasized engagement of the UCSD student population that centered around sustainable food systems and work being done in the initiative.

## Materials and Methods

Project I: I both maintained a pre-existing Facebook page titled "UCOP Global Food Initiative at UCSD" and created and maintained an Instagram account under the username "ucsdgfi." I followed students and organizations to gain more followers, and posted about research going in the initiative as well as upcoming events. Statistics on the social media accounts were maintained and analyzed, specifically regarding likes and followers.

Project II: I hosted a series of in-person, hands-on workshops based on research at the UC Global Food Initiative. After the shutdown of California due to the COVID-19 pandemic, we adapted to this by creating a weekly webinar series. Occasionally we would hold a 3 hour webinar "Palooza" that featured several workshops from people in the GFI at UCSD and other campuses, as well as researchers from organizations such as the Carbon Neutrality Initiative. Multiple-choice surveys were sent out to workshop attendees to understand the level of engagement that the workshop series evoked.

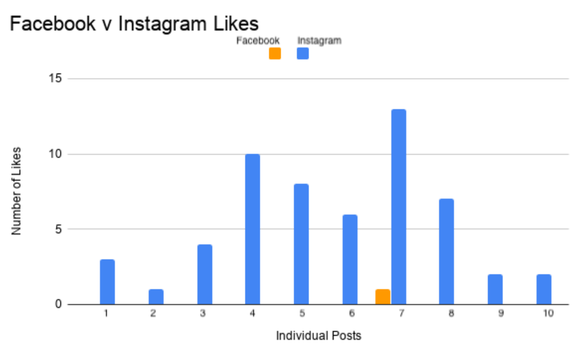
Project III: I began collaborating and networking with a multitude of organizations around campus in order to increase engagement and spread knowledge of the initiative. While some were collaborated with in meetings, others aided in event advertisement or provided a venue for the workshop. Organization involvement was compared to attendees at workshops in an attempt to draw a correlation.

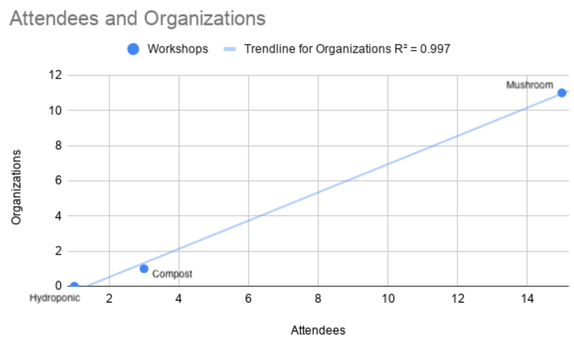
## Results and Outcomes

Project I: Focusing mainly on likes and follows as a form of engagement rather than a passive page/account view, the Instagram account maintained the most likes regarding 10 posts that were posted over a 2.5 quarter time period (see histogram below). Additionally, the Instagram account was able to acquire followers faster and eventually maintain a follower set that superseded the Facebook followers, even though the Instagram account was not pre-established.

Project II: Although some opinions on the surveys were scattered, a couple questions were conclusive. The attendees that took the survey unanimously agreed that they learned something new from the workshops. Secondly, 80% of the survey-takers reported discussing the workshop with at least one other person. Finally, 70% of the survey-takers agreed that they are more likely to attend the workshop when it is put in a virtual format.

Project III: When attempting to find a correlation, I plotted each workshop as a separate point on a scatter plot, based on the amount of attendees at the in-person workshop and the number of organizations collaborated with in the event planning process. It had a high correlation of 0.997. Additionally, when asked where attendees heard of the event, 30% of them responded to the question by noting a separate organization.




## Conclusions

Overall, this study on scientific communication, specifically relating to the life science field, showed that the most effective form of engagement over social media platforms was Instagram in comparison to Facebook. The in-person and virtual workshops did teach individuals previously unaware of these ecological and agricultural practices more about the field, and sparked conversations about sustainable food systems, fulfilling the third mission statement of the UC Global Food Initiative. Finally, the integration of other University of California- San Diego organizations did more efficiently engage students as well.

## Future Goals

I hope to pass on many of these projects to the incoming Student Ambassador Fellow, hopefully allowing them to expand and increase the presence of the UC Global Food Initiative on campus. Although some smaller creations will surely be passed on, such as the business cards, polo shirts, and email that I established specifically for the Student Ambassador, I hope they will also take the initiative to pick up the three larger projects discussed here. Although progress was made in the way of drawing awareness to the program, it still appears to be in the developing stage of creating a well-known and engaging presence on campus.

Although the in-person workshops were cut short due to the COVID-19 pandemic, I believe building on this could allow these discussions to reach more people. Especially one that maybe joint with another, more well-developed organization.

Webinars were recorded and posted on the youtube account that you can visit here: https://www.youtube.com/channel/UCqOvkUh-dINyEEFyDGoSpGA

## Literature Cited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