Changes Effective Environmental Educational Programs Due to COVID-19.

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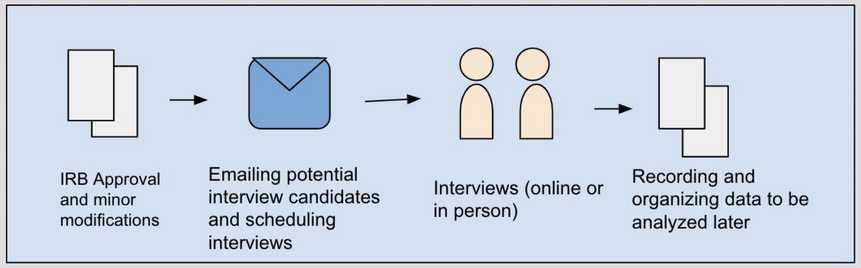
INTRODUCTION

Millions of people per year interact with environmental education programs, either by taking specific courses, visiting museums and aquariums, learning in school, or visiting other institutions. COVID-19 safety measures had a large impact on many of these institutions, limiting or completely closing their in-person, physical learning. This study looks at how institutions have adapted to the changes caused by COVID-19 from January 2019 to March 2023. It takes a look at how effective virtual learning is compared to traditional in-person learning. Employees and project designers from Environmental Education institutions are interviewed to provide a look at the changes made to programs to analyze the success of virtual learning environments. It is found that virtual classroom environments are less successful in fulfilling programs intended values and traits in students. While these virtual classrooms can be helpful to keeping students engaged in times of crisis they are simply not replacements for traditional learning environments, which all around are more effective at connecting students to presented topics.

RESEARCH METHODOLOGIES



Inquiry approach for this project is case study research and content analysis. Collection of data through interviews and case studies. This was to Identify the changes that programs went through, before during and after the covid pandemic peak, and how if affected the success of the program.

DATA AND FINDINGS

There were no survey results for the online program, but the leader of the program said "The program is more effective with classroom or in person instruction".

(Figure 2) Active Environmental Education Program Data.

Program function.

2020/2021: Online program takes students through six google classroom environmental learning activities. Recorded lectures are the main learning device. Students go at their own pace. No in-person learning available for students due to safety concerns (Covid).

2022/2023: Education curriculum for students in grades 6 through 8 is created and starts being implemented. It has in-school or after-school sessions held in-person, and facilitated by company staff or host school staff.

Program results.

2022/ 2023: Program explosions into multiple host schools.
1. Every student participating in the program committed to a personal climate action Pledge.
2. After completing the program, students were asked again how prepared they felt take climate actions on a personal level, scores ranging from 1 to 5. 63.9% of survey respondents selected a 4 or 5 for their personal preparedness score, contrasting with the pre-course percentage of 38.3%.
3. 37.4% of survey respondents selected a 4 or 5 for their community level leadership preparedness score, contrasting with the pre-course percentage of 21.4%.

CONCLUSIONS AND ANALYSIS

Online programs are less effective for students in connecting them with the programs intended values. The lessons stayed similar from online to in-person and the online program has pre-recorded lectures, but still students were able to feel more confident in their learning after the in-person learning. In response to the research question, without in-person, in-nature learning (due to Covid-19), how have environmental education programs adapted to these changes virtually, and are they as effective as they would be in person? We can see that virtual programs are less effective in virtual methods even with the same materials, and that students gain a clear benefit and a better understanding with in-person learning. We also see that we are moving out of the virtual classroom setting and returning to more in-person classroom and program settings.

IMPLICATIONS AND NEXT STEPS

It is concluded that programs are less effective in virtual methods even with the same materials, and that students gain a clear benefit and a better understanding with in-person learning. These findings show that while virtual learning can be effective in allowing basic factual education to occur in participants, it is lacking in the "connectivity" factor that comes into place with in-person instruction, which leads to the highest chance of increased environmental literacy. If more programs were to be interviewed and analyzed, an evaluation system could be created, so that current or upcoming programs could be evaluated and helped to further their effectiveness. As well as really taking a look at different education tactics, hands on learning, lecture based, go at your own pace style to see what is the most effective at creating increased environmental literacy.

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