Discourse Moves in Action: Hosting my 1st STEM Day Camp!

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Abstract

Based on the preface that discourse moves aligned with responding to students' thinking and promoting productive dispositions will increase positive experiences; a group of students were given the opportunity to participate in a STEM Day camp, held with facilitators using discourse moves and Positive Behavior Intervention Strategies (PBIS). Pre and Post-surveys were given to determine whether student dispositions showed signs of improvement after participating.

Introduction

Teachers want to know,"How can I encourage engagement while still providing real-world relevance and academic rigor for my students in the area of STEM?" Based on a study that found discourse moves in addition to positive reinforcement, in the form of teacher response to increase positive experiences in the students dispositions, Kanoelani Elementary agreed to hold a STEM Day Camp, during their Fall Break, on October 13th, 8:30 am-12:30 pm.

Driving Question

If students are provided with a highly engaging, low-risk environment and discourse moves are used in the process with positive responses from their teacher, will students' disposition towards their area of study and their abilities show a positive increase?

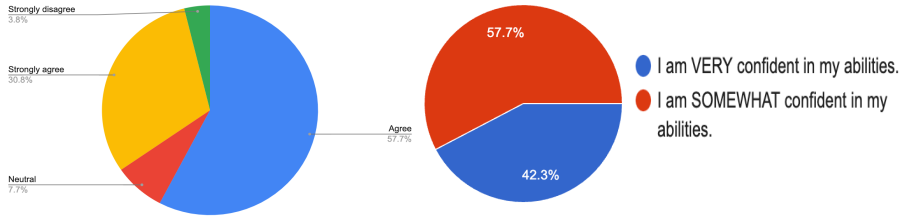
Methods

To test the validity of the hypothesis, support from Kanoelani Administration and faculty were attained. This was done first, through a meeting with Principal Kunihisa, then presented to the staff at a faculty meeting. The Camp was open to all 5th graders and announced via school communication platform, Seesaw. Research was conducted through the National Council of Teachers of Mathematics, the Hawai'i Science Teaching Association, Kanoelani Elementary human resources, and Behavior Intervention literature.

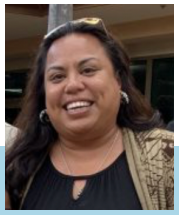
Results

Based on the research, students experienced a sense of competence, as well as recognized the support provided by their teachers. They experienced learning as understanding and application over memorizing.

I can do well in Science, Technology, Math, and Engineering.



Pre Camp Survey *Post Camp Survey*



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Discussion

Research shows that when teachers use on-going discourse methods to interact with the students, such as encouraging in-progress thinking, re-voicing student contributions, pressing students to elaborate in their thinking, and providing them with multiple opportunities to respond (OTRs), students feel more engaged, and show increases in overall dispositions and math proficiency.

Conclusions

- Teachers can use intentional discourse moves to improve student engagement and foster a positive disposition towards STEM.
- Research indicates that increasing the rate of OTRs during instruction results in desired outcomes for students.
- Students responded to their teacher's effort to encourage and support her students in many positive ways.

References

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