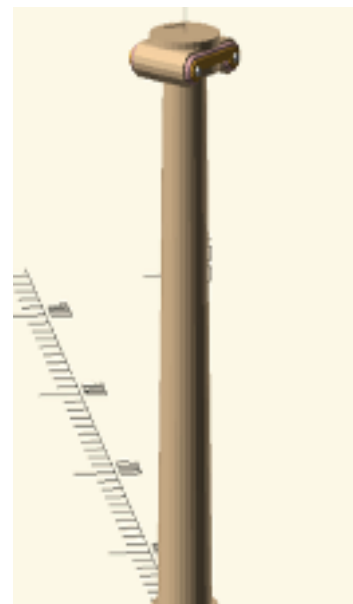


MSC 2423: Differential Equationsn - Dr. Bukaita

Enhancing Learning by Solving a Real-life Problem Though Simulation Data Obtained from Research Work

When learning mathematics, visualizing and seeing how it can be related back to real-life can be difficult for many students. By being able to apply mathematics to a real-life problem, students will be able to understand mathematical concepts faster and with a deeper understanding. The approach of visual learning consists of 3D printing mathematical models and using virtual reality goggles to investigate real-life problems of the students choosing. Visual learning will eventually be able to bridge the gap between concepts in the book and concepts in the real world. With the help of visual aids, the students will be able to fully grasp the material explained in class including concepts and equations. Studies have shown that students remember things better when they are seen visually. Through the use of visual aids, students will be able to physically see the concepts and/ or equations being described and understand things more clearly.



Looking at the results of this study, anyone can realize for which questions the students thought that would be beneficial or highly agreed with. The survey results give an accurate representation of what students on campus are feeling about this topic. It was taken using 40 participants, so a larger number of participants would give a more accurate representation.

Conclusion

The technology has been shown to help students of all age levels. The education that virtual reality goggles can give to a student is more advanced than that of a regular education student get today. VR goggles can teach to different learning styles, and if/when it is combined with normal methods of education used today, the technology could improve the education for students worldwide. Another advantage of the VR goggles is that they can be cheaper when bought in bulk amounts. With many schools and education systems being short on budgets and other items they need, the VR goggles can help to cut cost of supplies needed because certain items won't be needed as much, and if the VR goggles are used in large schools or areas, the price of the VR goggles can significantly decrease, and possibly save the schools money. The competition shows the different type of research that students can do and how each student learned something from the competition and how it will transfer over their future experiences in classes. Before starting on this project, I had very little knowledge as to how functions would look or change pre-existing models in three dimensions. Although few students came upon the general shape of model by luck, I now have a much better understanding of how 3D modeling of math equations works.

