

# Assessing Virtual Reality (VR) technology as an environmental education teaching tool for use in classrooms

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## INTRODUCTION

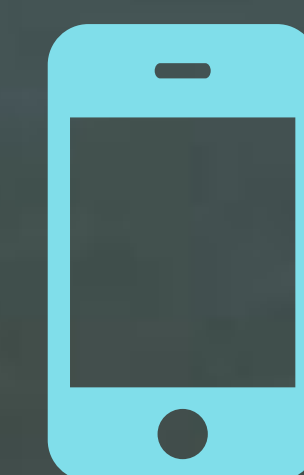
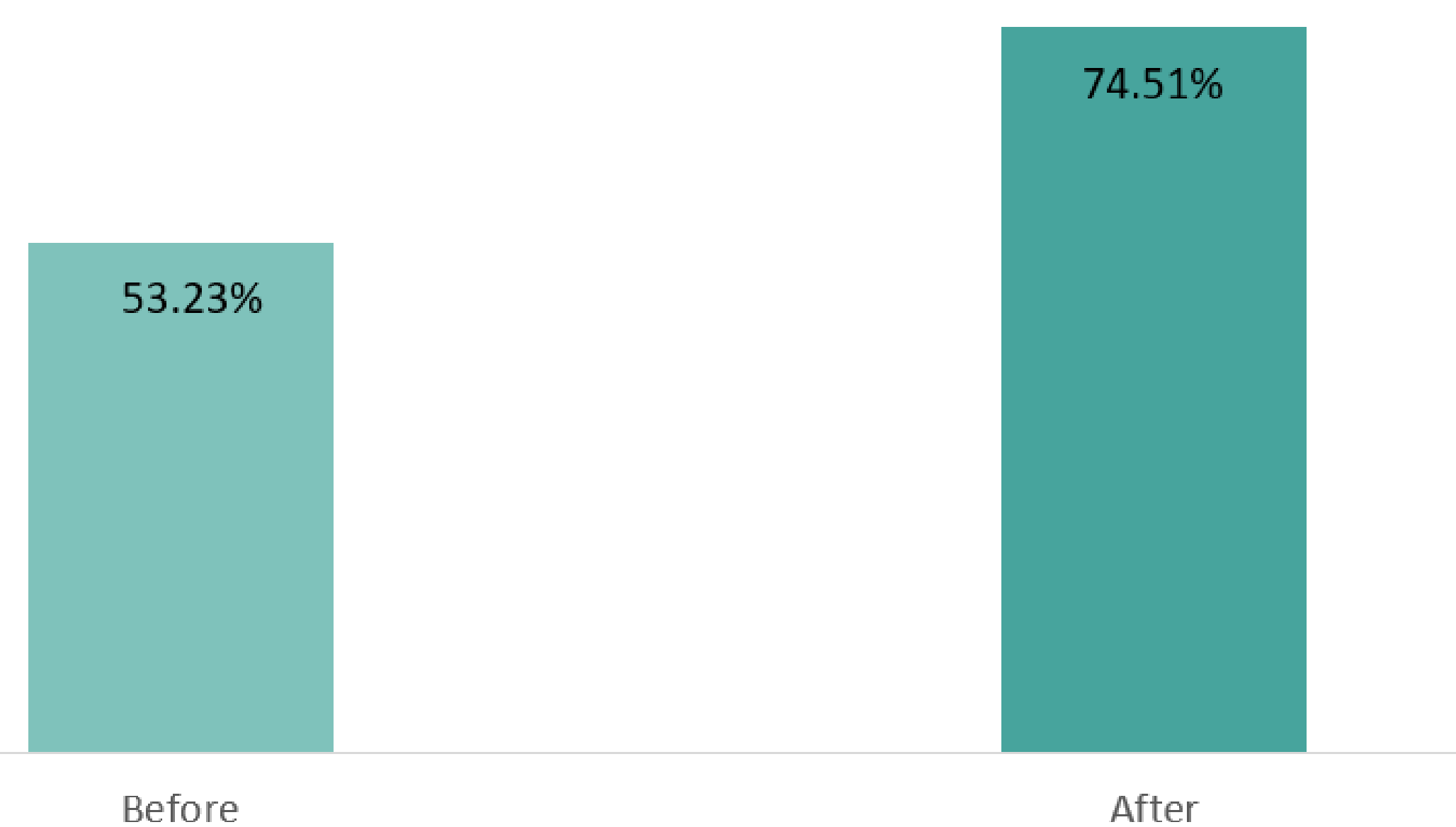
- Many schools are unable to bring their classes to the GTM Research Reserve due to low funding or distance.
- There is a need for higher engagement for students to better understand ecosystems at the GTM Research Reserve.
- Immersive programming helps improve student understanding of the importance of maintaining a healthy, biodiverse estuary.

## METHODS

1. GTM Research Reserve's Virtual Reality Program (VR) and surveys were modeled through NOAA's Estuary 101 Curriculum.
2. Surveys were created to measure what the students knew before the VR Program and what information they retained after experiencing the VR Program
3. Surveys were administered before and after the VR Program was presented to four 4<sup>th</sup> grade classes consisting of about 20 students each.

## RESULTS

Before and After Survey Scores of Students' Estuarine Knowledge Using VR Technology

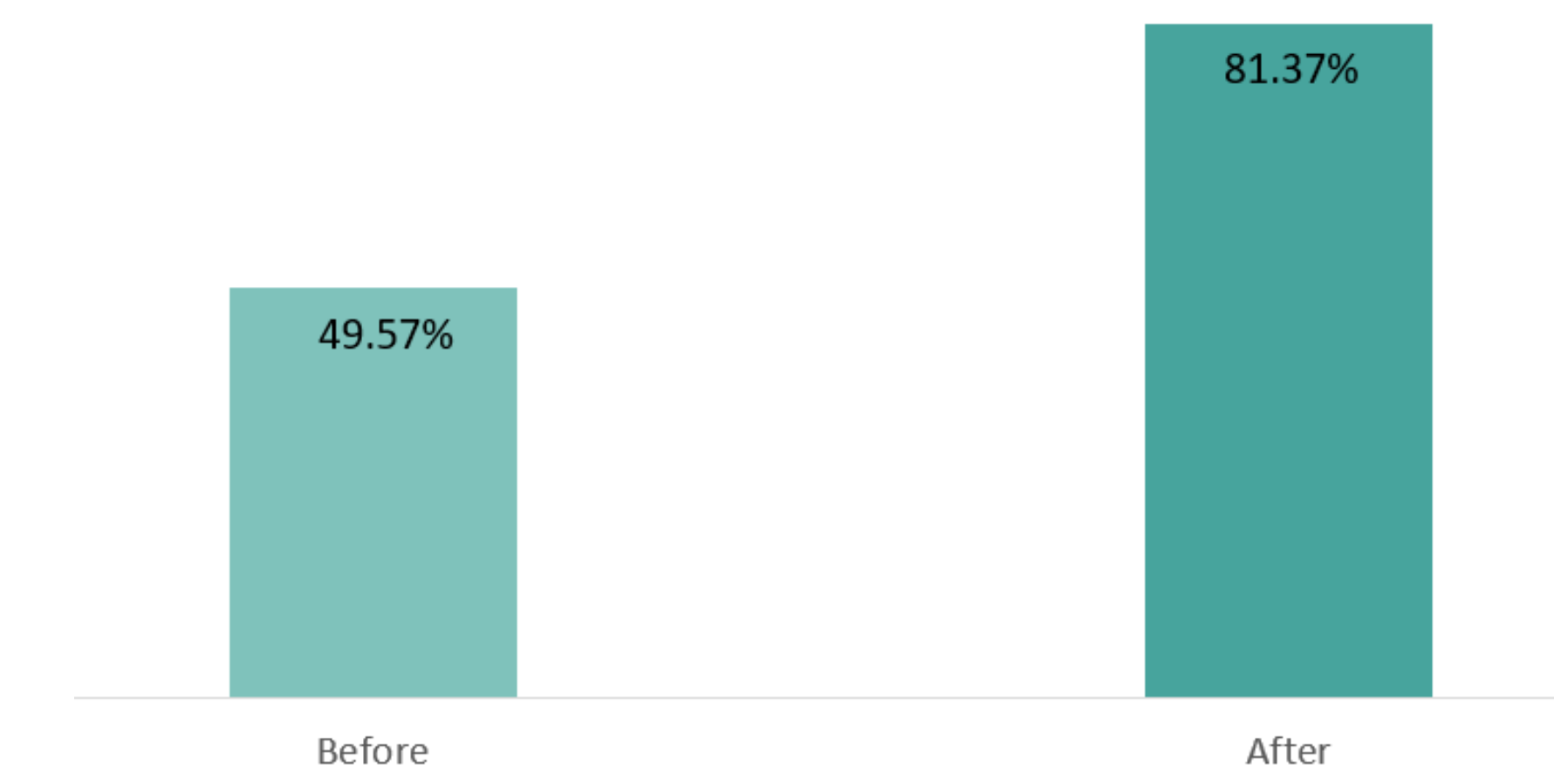


Take a picture to experience the Virtual Tour!

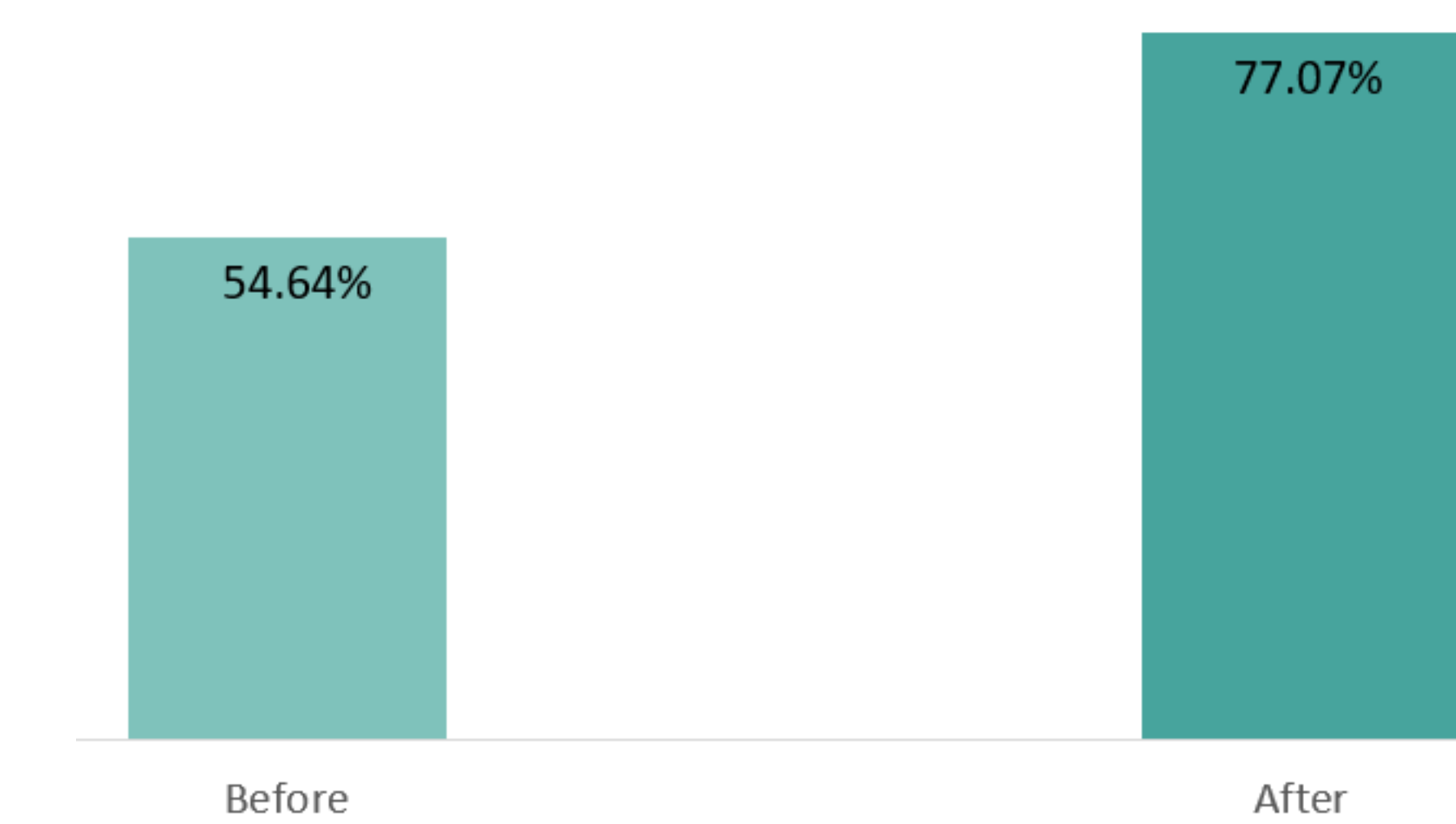
# Virtual Reality is an effective teaching tool for environmental educators.

## ADDITIONAL INFORMATION

Before and After Survey Scores of Students' Estuarine Literacy

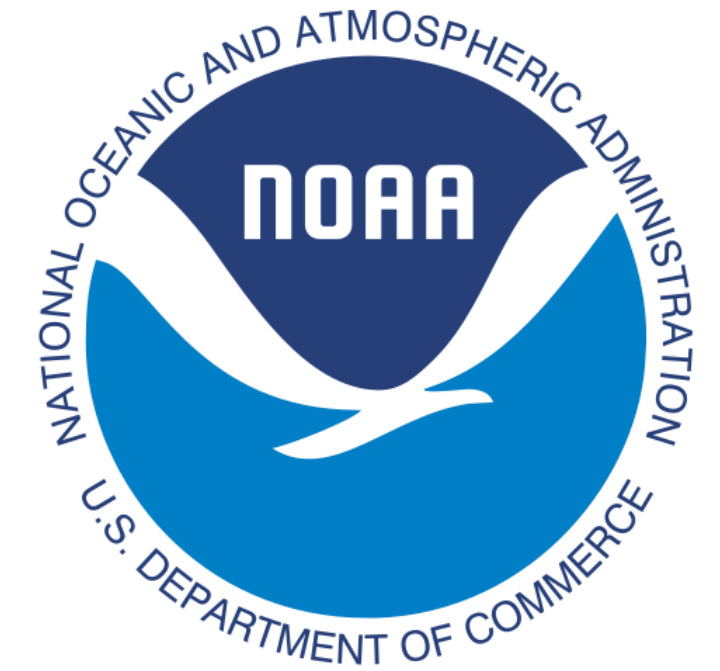


Before and After Survey Scores of Entire Program



## NEXT STEPS

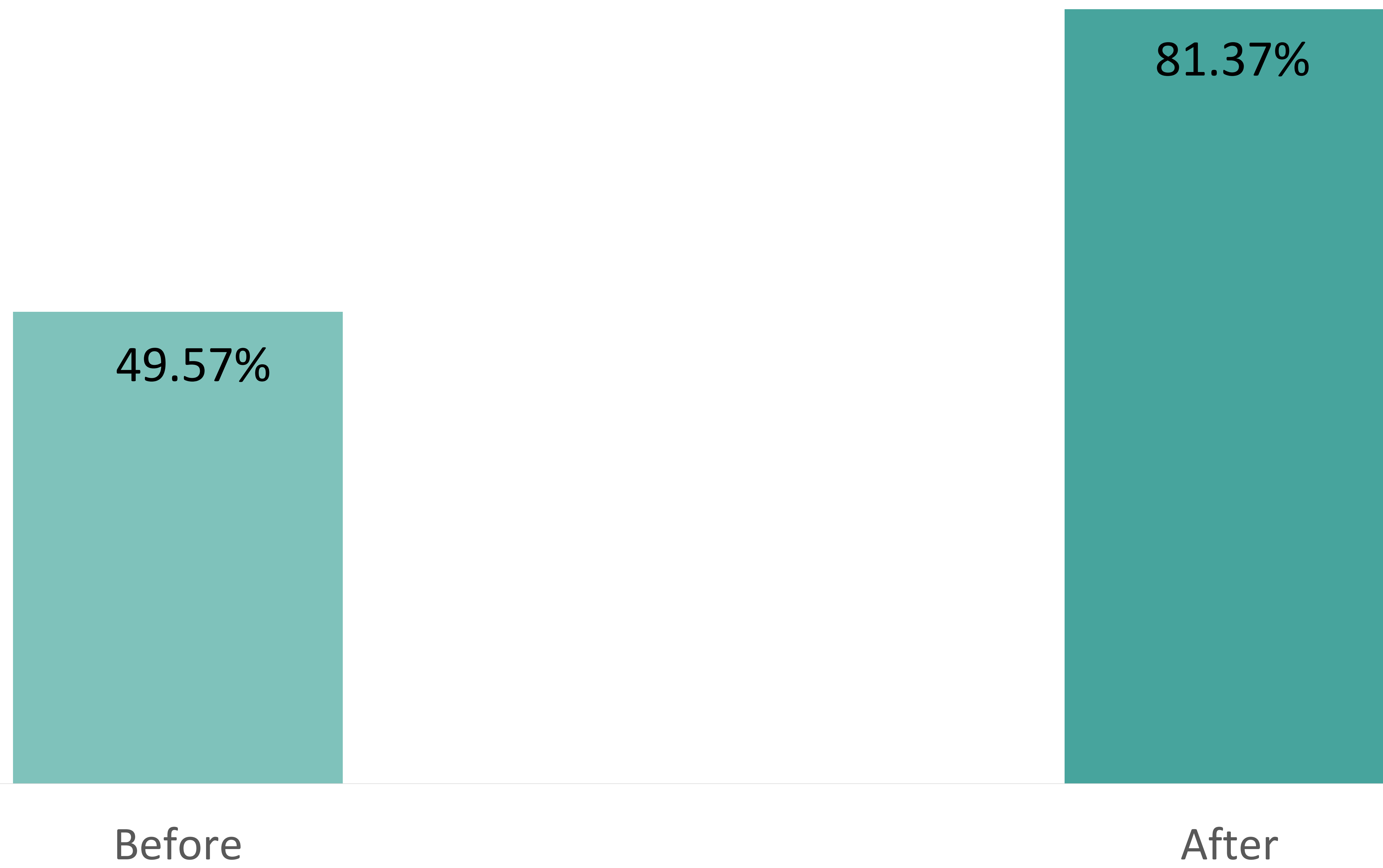
- Compare effectiveness of VR to PowerPoint teaching tools.
- Create and administer VR Programs for all of GTM's ecosystems (beach, uplands, inlet, etc.).
- Design a Virtual Reality Program for individuals with disabilities.
- Work alongside other NERRs to share Virtual Reality experiences across the country



## Before and After Survey Scores of Students' Estuarine Knowledge Using VR Technology



## Before and After Survey Scores of Students' Estuarine Literacy



# Before and After Survey Scores of Entire Program



Before

After