

Photovoice: Investigating Barriers in STEM Retention

by Emilio Ames, Dr. Jerrod Henderson, Department of Chemical Engineering

UNIVERSITY of
HOUSTON

Background

- Growing demand for STEM professionals
- 230,246 STEM Jobs, 31,000 graduates
- Less than 50% of students are retained in desired STEM major until graduation. Photovoice is designed to investigate the reasoning for poor retention rates in STEM
- Using photos of student experience to determine perceiver barriers to student success and retention

Methodology

- Used a *qualitative*, novel action based research method at a research one, Hispanic Serving Institute
- In recorded focus group meetings, photos were discussed and later transcribed to identify common codes.
- Participants were sophomore level or higher from Cullen College of Engineering, School of Natural Science & Mathematics, College of Technology

Acknowledgements

- Office of Undergraduate Research – Summer Undergraduate Research Fellowship

Results



Conclusions

- Identified the barriers surrounding STEM graduation
- Preliminary results show commuting and university climate hinder students while living and learning communities along with professor transparency aids students
- Found more non-academic barriers that affected student success
- Further work → Expanding the participation to from 5 to 20 students hoping for a wider range of data brought forth