

HIGHLIGHTED CHANGE IDEA

A campus club model that involves informal peer and faculty connection as well as structured leadership development. These serve as a primary mechanism for building belonging and supporting success among first-generation STEM students.

PLAN

- This club holds weekly student-led campus club meetings will be held in LRC 324, taking place on Thursdays at 5:30 PM during Fall 2025 and on Mondays at 5:30 PM during Spring 2026.
- Monthly Institutional Team meetings prior to club meeting.
- The Club president sent weekly reminders via Discord to encourage consistent participation and club-sponsored events were promoted through email and flyers to all STEM majors to ensure broad awareness and engagement.
- Meetings and events provide opportunities for peer interaction, social connection, creating space for open discussion of academic and personal challenges.
- These conversations will support the identification of barriers to student success.
- Concurrently, student directors take the PowerSkills courses during the year.
- Retrospective post survey distributed at week 5 and week 15 during 2026 to measure: Sense of belonging, Self-efficacy, Grit, Leadership development and Evidence of leadership/skill transfer.

DO

- As planned, the campus club, composed only of student directors, met 10 times in the Fall and 9 times in the spring.
- Institutional meetings happened bi-monthly instead of monthly because supervisor ended up attending most club meetings.
- The Club president sent weekly reminders via Discord to encourage consistent participation and club-sponsored events were promoted through email and flyers to all STEM majors to ensure broad awareness and engagement.
- Most meetings served to plan and check in with each other.
- Some barriers and ideas for improvement of student success were identified in the process (e.g.
- All student directors finished at least 2 PowerSkills courses during the year.
- Retrospective post survey was distributed at week 5 and week 15 during 2026 to measure: Sense of belonging, Self-efficacy, Grit, Leadership development and Evidence of leadership/skill transfer with 5 responses per term for a total of 83% response rate.

STUDY

| Questions | Predictions |
|---|--------------|
| To what extent does regular participation in campus club meetings, PowerSkills training, and club-sponsored events: | At least 80% |
| <input type="checkbox"/> Increase students' sense of belonging in the STEM field and campus community? | |
| <input type="checkbox"/> Support students remaining in good academic standing (i.e., not on academic probation)? | At least 90% |
| <input type="checkbox"/> Support students remaining enrolled in their intended STEM major in the subsequent semester? | At least 90% |
| <input type="checkbox"/> Improve students' perceived leadership skills and abilities? | At least 90% |

SUMMARY

Participation in the First2 Campus Club, including weekly meetings, PowerSkills training, and student-led events, was associated with increased student-reported belonging, self-efficacy, grit, leadership, and involvement. The largest gains were observed in involvement and belonging, while leadership developed more gradually over time. Qualitative responses indicate a progression from initial connection and access to resources toward active participation, confidence, and contribution to the campus STEM community. These findings suggest that student-centered, relationship-driven programming supports sustained engagement in STEM.

DATA

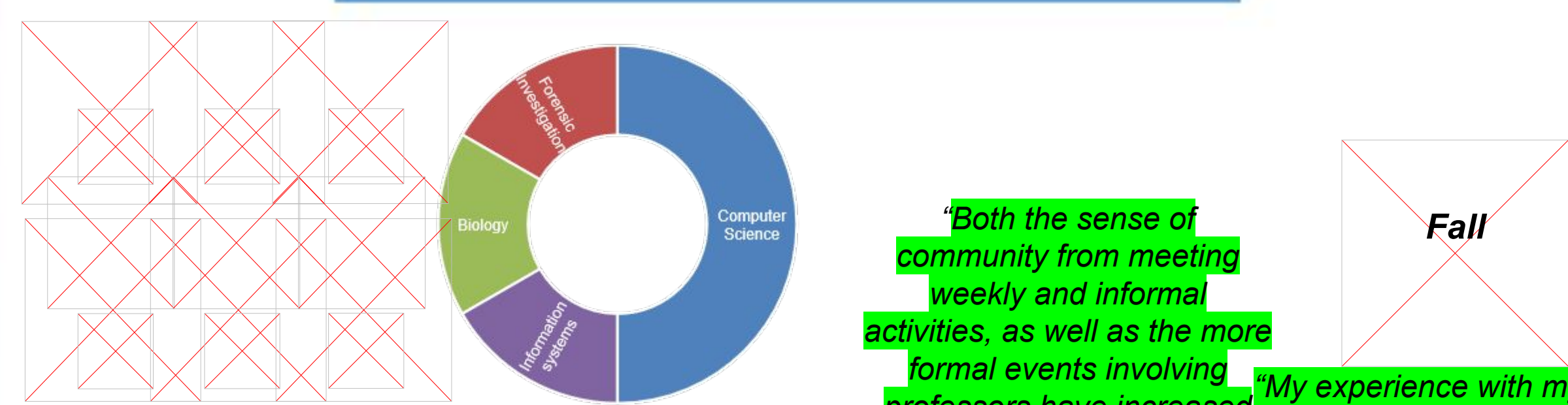


Figure 1. Demographics of the First2 Student directors for WVU Tech campus club in 2025 and 2026. First Generation (Blue), Good academic standing (Golden bear), Graduates in 2026 (Grad cap). STEM majors represented among the student directors.

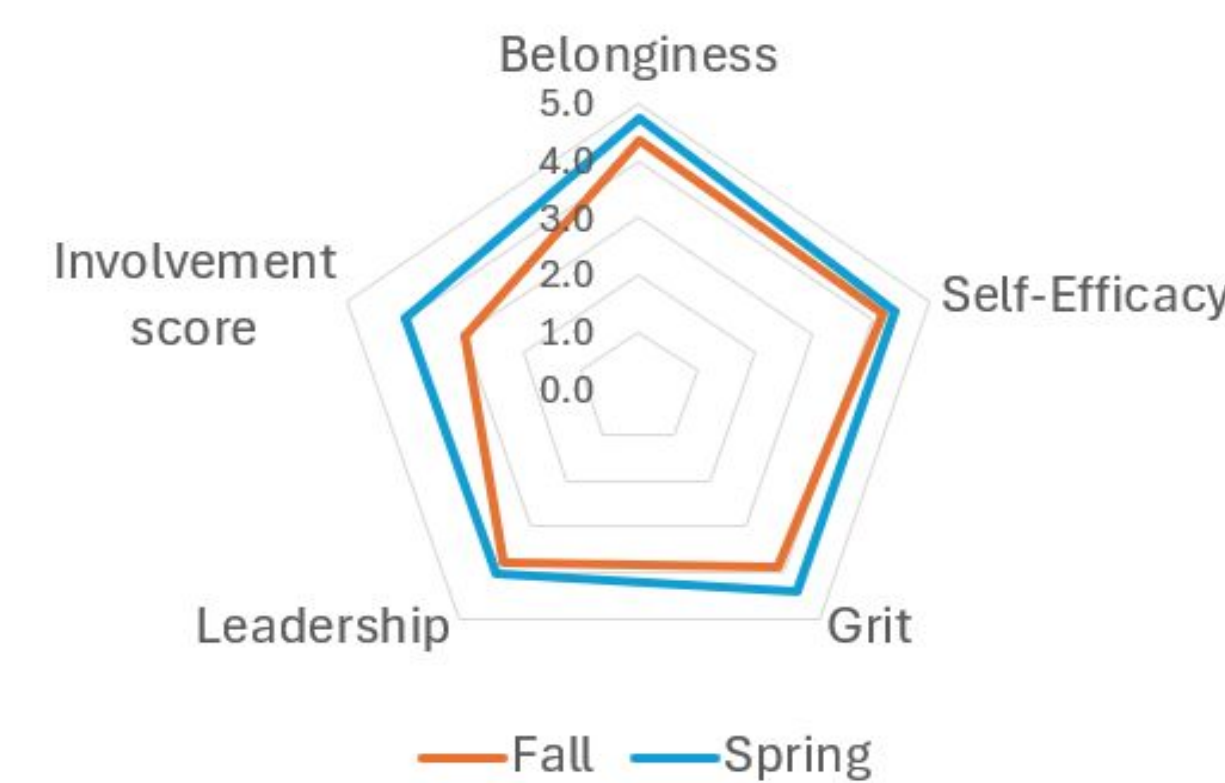


Figure 2. Comparison of student outcomes from Fall to Spring across five constructs from survey answers, n=5). Scores slightly increased across all categories, with the largest gains observed in involvement and sustained high levels of belonging.

Table 1. Student director rankings of campus club activities by perceived positive impact.

| Rank | Activity Type |
|------|--|
| 1 | Informal/fun activities socializing with faculty/staff |
| 2 | Information sessions (campus resources / First2 opportunities) |
| 3 | Peer mentoring |

Fall

"Both the sense of community from meeting weekly and informal activities, as well as the more formal events involving professors have increased my sense of belongingness."

"My experience with my first2 campus club has given an important point of contact for research opportunities."

"I feel like I have more people in my corner and to go to when needed."

"It helped me not only connect more with a variety of peers on campus, but connected me with faculty and get more settled in with campus life. In a way, First2 has become a sense of home for me."

Spring

"Felt more involved and started trying new things around campus."

"It has made me feel as though my ideas are valued."

"It has offered me a place of no judgement and sense of community."

"I have been able to contribute a lot to our campus' culture, and was able to host several events to help increase student belongingness. While these events didn't benefit me directly, being able to contribute to my campus in this way definitely did."

"Because of being within First2 I've been able to participate with my peer and get a sense of community by completing challenges and watching experiences together."

Figure 3. Answers to the question: In what ways has your experience with your First2 Campus Club this semester influenced your sense of acceptance and belonging at college?

ACT

ADOPT

- Continue prioritizing informal, relationship-based activities, as these were ranked most impactful
- Integrate more academic support personnel into social events.
- Expand leadership opportunities for students earlier in the program to accelerate leadership development
- Maintain weekly meetings and consistent communication (Discord/email) to support sustained participation

PHOTO HIGHLIGHTS



Student Engagement Fair at WVU Tech Fall 2025

Ray and Nevaeh

DISCUSSION & CONCLUSION

- At the end of the academic year feelings of belonging were reported by 100% of club members.
- 50% of club members are graduating and the other 50% are in good academic standing to return in Fall 2026.
- Those who are not graduating are all staying on their STEM major as of 2026.
- For all students, leadership scores showed modest gains from Fall to Spring.
- Student outcomes improved across all measured constructs.
- Qualitative responses (Figure 3) show a shift from connection and access (early experiences) to involvement, confidence, and contribution (later experiences), supporting the observed quantitative gains.
- Together, findings suggest that relationship-centered programming builds belonging which then drives increased engagement.

TIPS FOR OTHER INSTITUTIONAL TEAMS

1. Lead with social connection to build trust and belonging before introducing structured supports.
2. Provide consistent, low-pressure meeting spaces for peer interaction and check-ins.
3. Pair qualitative (student voice) and quantitative (survey data) to understand impact.

HIGHLIGHTED CHANGE IDEA

A student-led **improv lecture** event designed to create informal, low-pressure interactions between students, faculty, and staff. By shifting faculty outside their disciplinary expertise and into a playful format, this event aims to reduce communication barriers, increase comfort, and foster belonging among STEM students, particularly first-generation students.

PLAN

What: An improv lecture event involving faculty, staff, and students where faculty and staff present topics outside their expertise to encourage engagement and humor.

When: A pilot event introduced the concept and allowed us to learn how to best organize such events (Nov 5, 2025), and the larger event was scheduled for March 12, 2026.

Promotion through: Flyers, Faculty outreach (RSVP invitations), Campus announcements

Track: Attendance (students, faculty, staff), major.

Administer post-event survey measuring:

- Comfort with faculty/staff
- Sense of belonging
- Willingness for future engagement

DO

- Both events were held on the scheduled dates
- Two student leaders and a mentor organized and facilitated the session. Pizza and drinks were served at both events.
- For event 1, held during First Gen Week, 26 attended and 2 faculty members presented on their disciplines. For event 2, 4 faculty/staff presented outside their disciplines:
 - Math → Biology
 - Biology → Math
 - Engineering → History
 - TRIO → Computer Science
- Attendance was collected via survey link
- Attendance boosted (+50) by faculty-offered extra credit
- Post-event survey distributed but low immediate response
- Follow-up email increased total to 14 responses

STUDY

| Questions | Predictions |
|---|-------------------------------|
| □ We predict that faculty from STEM departments (Biology, Math, and Engineering) will be represented, with most invited faculty and staff attending, alongside student participation across all academic years, particularly first- and second-year students. | At least 80% on each category |
| □ We predict that the improv lecture will have a moderate to strong positive effect on students' confidence (comfort) when interacting with faculty and staff, with attendees reporting increased confidence in engaging in these conversations. | At least 75% |
| □ We predict that this improv lecture will have a low to moderate impact on students' sense of belonging in their STEM courses of study, with attendees reporting increased feelings of belonging. | At least 50% |
| □ We predict that this improv lecture will have a moderate impact on how faculty and staff will feel positive about future interactions with students | At least 70% |

SUMMARY

Participation in the Improv Lecture event was associated with higher-than-expected student engagement and positive perceptions of belonging and comfort among respondents. Attendance exceeded predictions, indicating strong interest in informal, relationship-based programming. Survey responses suggest that students who participated experienced increased comfort interacting with faculty and a stronger sense of belonging, while also expressing willingness to engage in future collaborative efforts. These findings support the use of student-centered, interactive events as an entry point for building connections and strengthening the STEM community, though improvements in data collection are needed to fully assess impact.

ACT

Cycle 1-ADAPT (not part of the formal PDSA cycle but part of the planning aspect)

- Use incentives to improve participation (e.g., extra credit)
- Strengthen faculty/staff participation across departments
- Host in larger venue
- Measure faculty-staff interactions

Cycle 2-ADAPT

- Improve survey response rates (real-time completion, QR prompts)
- Increase targeted outreach to first-year students
- Enhance promotion strategy beyond flyers
- Host on WOW or orientation
- Include athletic coaches

DATA

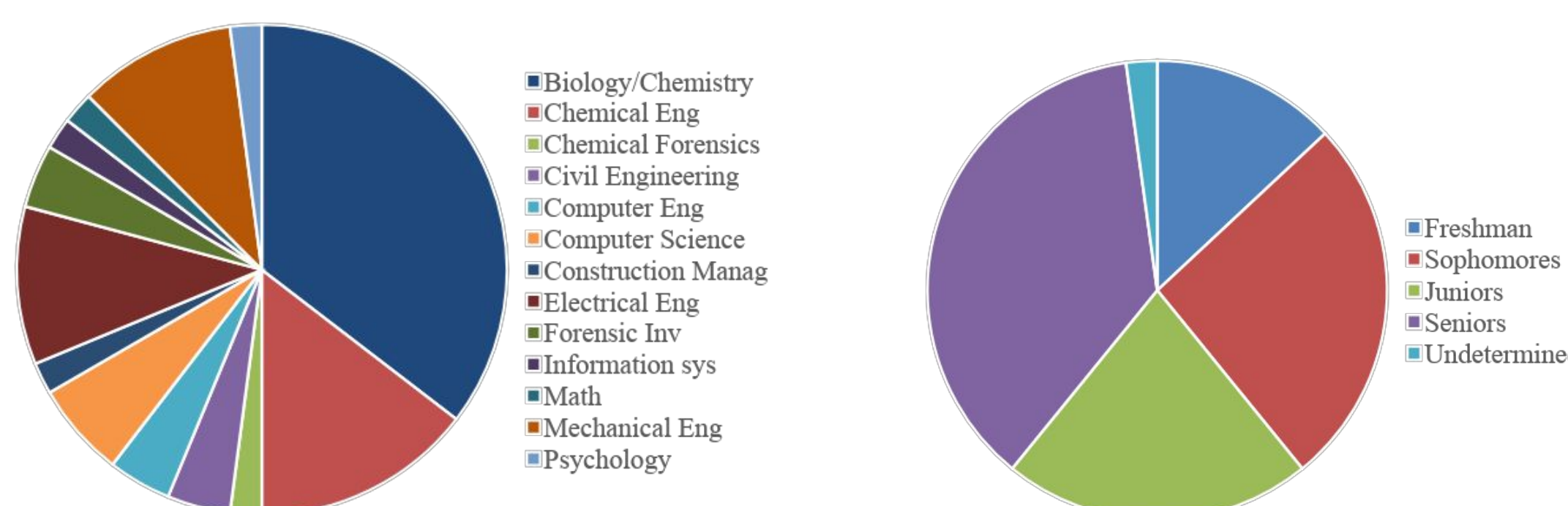


Figure 1. Breakdown of the majors that attended the event. 45% of total attendees were Biology majors with Forensic Investigation making up a significantly smaller margin.

Figure 2. Seniors made the majority of the attendees followed by Sophomores and Juniors. First year students were the lowest proportion in attendance.

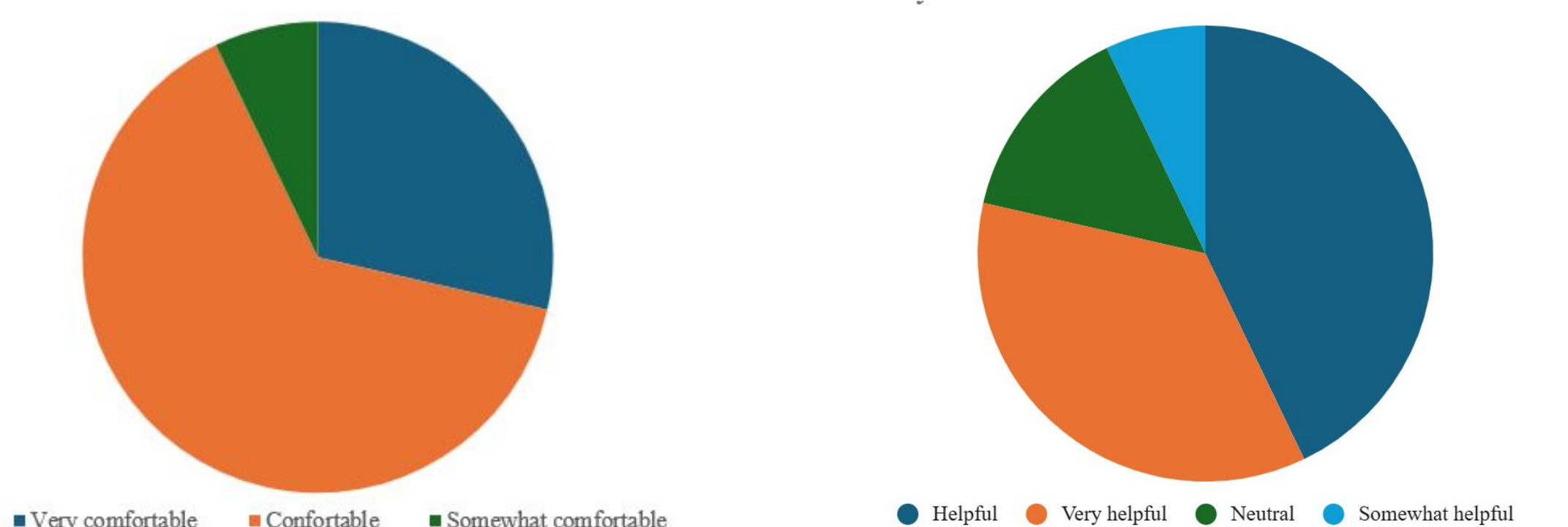


Figure 3. All respondents reported some level of comfort in speaking to faculty or First2 members after attending the event (N=14).

Figure 4. Most respondents reported that the event was helpful in connecting them to First2 Institutional team and faculty (N=14).

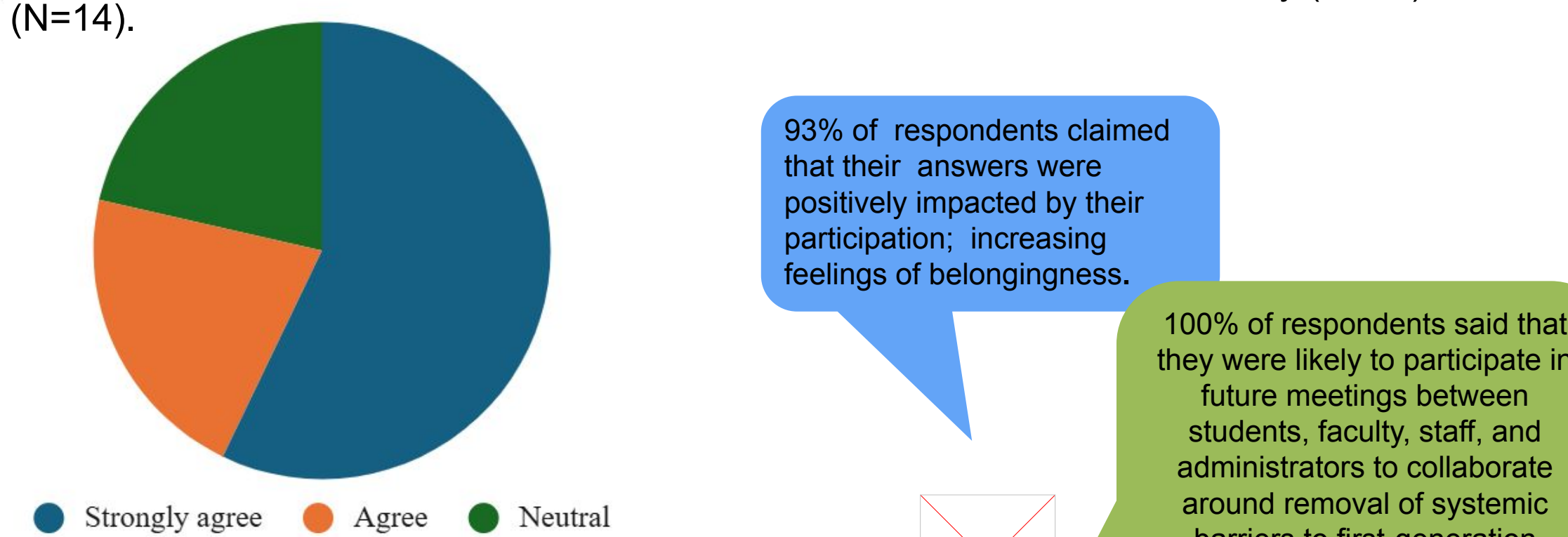


Figure 5. Respondents reported an overwhelmingly strong sense of belonging in their STEM community and are likely to engage in future events (N=14).

PHOTO HIGHLIGHTS



Students during Improv Lecture pilot event as part of First Gen celebration.

DISCUSSION & CONCLUSION

- Data reveals an overwhelmingly positive campus environment, particularly inside of the overall STEM community.
- The event effectively fosters belonging and faculty-student connection among attendees, as evidenced by strong positive ratings across respect, comfort, belonging, and confidence—even with a limited response rate.
- Attendance skewed toward upperclassmen: seniors and 67% (8/12) of invited faculty/staff attended, both below projections. The larger participation by seniors could be also influenced by which courses offered bonus points for participation
- Faculty representation included Biology (100% attendance), Engineering (5%), and Math (15%), with TRIO staff also present, but these are not near our expected level of participation. We need to figure out how to get more faculty and staff to participate.
- Survey response rate was low (30%), limiting generalizability.
- Among respondents, outcomes were strongly positive although engagement is strongest among already-advanced and motivated students (upperclassmen), suggesting a need to better recruit and capture earlier-year students and improve survey participation to fully assess impact.
- No faculty survey responses, representing a key data gap.
- Student-centered, interactive events effectively build connections and strengthen the STEM community but improved data collection is needed to more fully assess their impact

TIPS FOR OTHER INSTITUTIONAL TEAMS

1. Incentives (e.g., extra credit) can significantly increase participation.
2. Collect feedback during the event, not after.
3. Intentionally recruit early-year students to maximize long-term impact.
4. Include staff and support programs to increase relationship building among students-staff and staff-faculty.

HIGHLIGHTED CHANGE IDEA

Student-led, informal social events (Murder Mystery & Trivia Night) to reduce communication barriers. Designed to increase student comfort, belonging, and interaction with faculty, staff, and administrators. Focus on casual, mixed-role environments to promote authentic connections and future collaboration.

PLAN

Host two structured social events:

1. Murder Mystery in a box
2. Trivia Night

Recruit students, faculty, and staff through social media, email, flyers, and peer outreach.

Embed faculty/staff within student groups to encourage interaction

Collect data using attendance tracking and post-event surveys



DO

Event 1: Murder Mystery in a Box (April 2, 2026)

- 12 participants (2 teams of 6)
- Held at Tech Center in Benedum
- Mixed groups (4 students, 1 faculty, 1 student success center staff)
- Mini hand-held sandwiches provided

Event 2: Trivia Night (April 9, 2026)

- 11 participants in 3 teams using Kahoot
- Held at Learning Commons-Tech Library
- Mid-game survey given during pizza break
- Pizza and snacks provided and gift cards gifted to winning teams and student participants

STUDY

| Questions | Predictions |
|--|---|
| To what extent does participation in these social events: | At least 24 students, mostly first and second year, 20% of invited participation across all academic years, particularly first- and second-year students. |
| <input type="checkbox"/> Involve faculty from STEM departments (Biology, Math, and Engineering), with most invited faculty and staff attending, and student participation across all academic years, particularly first- and second-year students. | At least 80% and/or administrators? |
| <input type="checkbox"/> Impact students' feelings of confidence (comfort) in speaking with faculty, staff and/or administrators? | At least 80% |
| <input type="checkbox"/> Increase students' sense of belonging in their STEM courses of study? | At least 80% |
| <input type="checkbox"/> Support students remaining enrolled in their intended STEM major in the subsequent semester? | At least 90% |

SUMMARY

Two student-led events were implemented to strengthen STEM community connections. Both events fostered positive faculty engagement and student belonging. Attendance was lower than expected, but interaction quality was high. Findings suggest these events are a promising strategy, with improvements needed in recruitment and data collection.

DATA

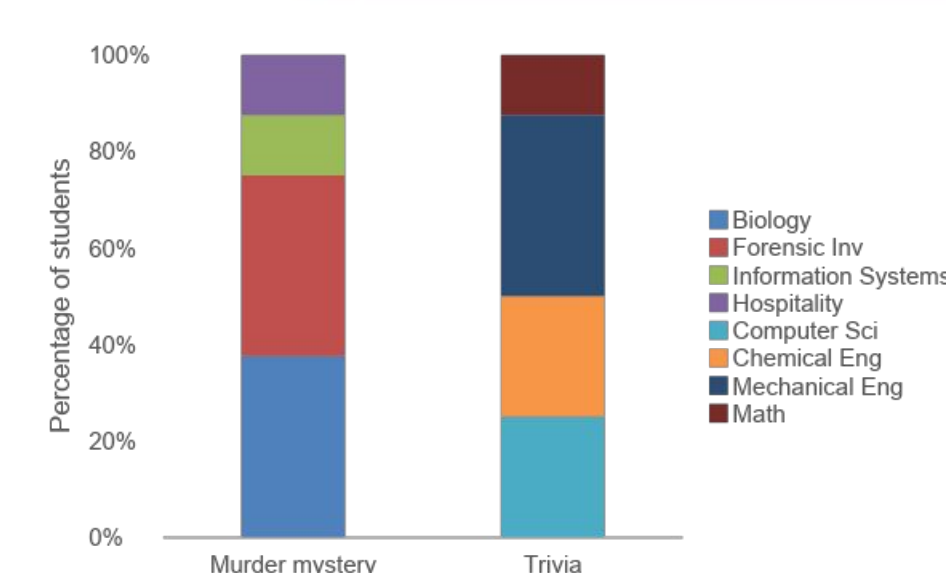


Figure 1. Breakdown of the majors that attended each event. Students who attended each event were from a very different set of majors. 94% of students who attended were STEM majors.

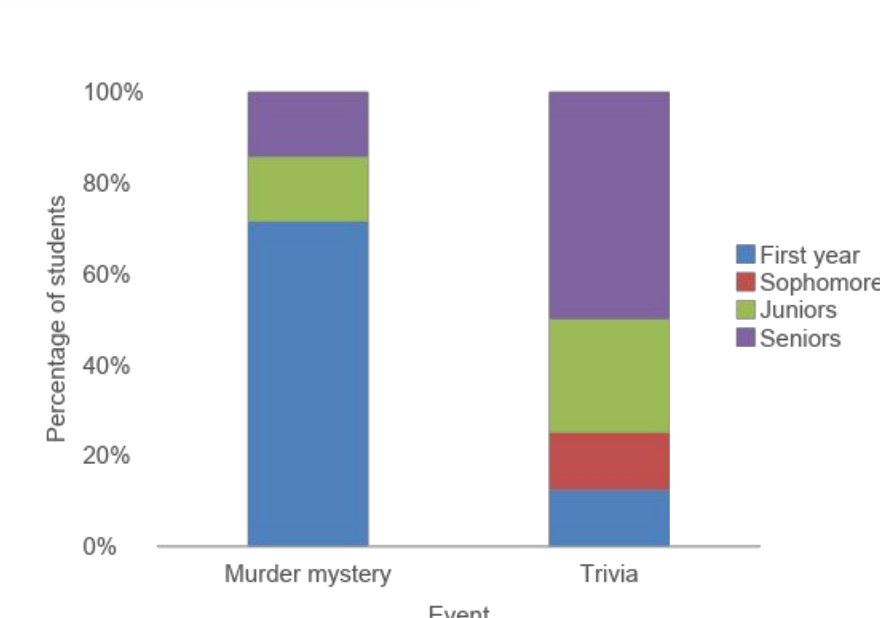


Figure 2. For the murder mystery event, first year students made up the higher proportion of attendees. Seniors made the majority of the attendees for Trivia night. The Trivia night event was attended by students at every level.

| | Murder mystery event | Trivia Night |
|--------------------|----------------------|--------------|
| First Gen students | 38% | 25% |
| STEM majors | 88% | 100% |

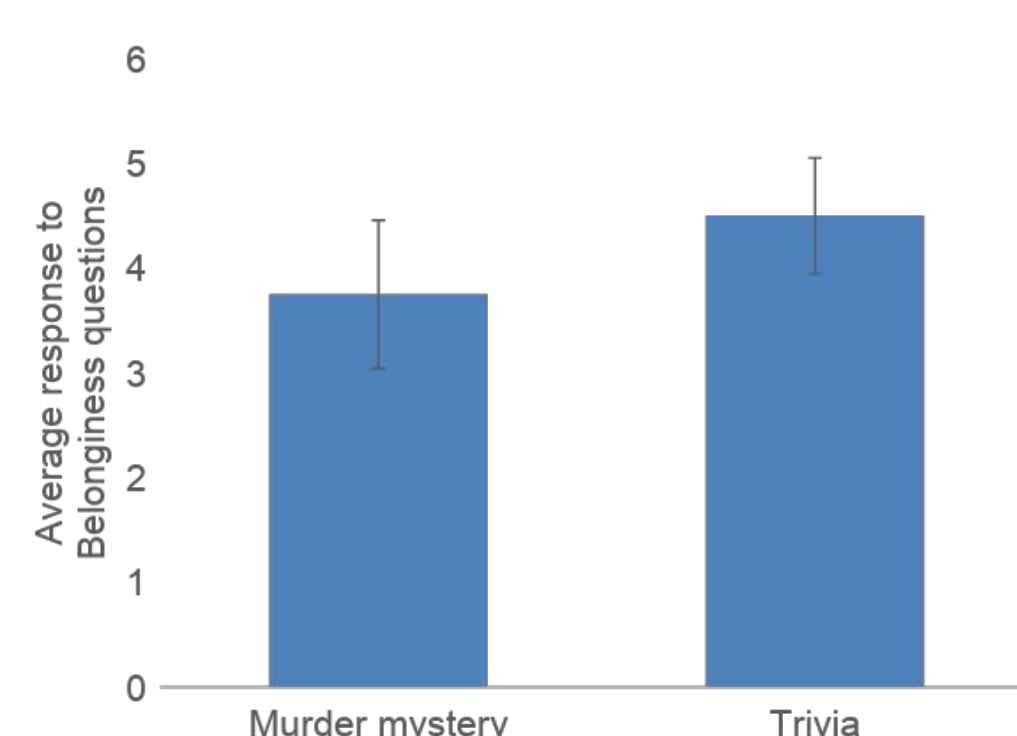


Figure 4. Average of answers (Strongly agree=5 to Strongly Disagree=1, to statements: I feel respected in my campus's, I feel respected in my STEM community, I feel comfortable in my STEM community and classes and I feel that I belong in my campus's STEM community. (N=5 and N=11, respectively).

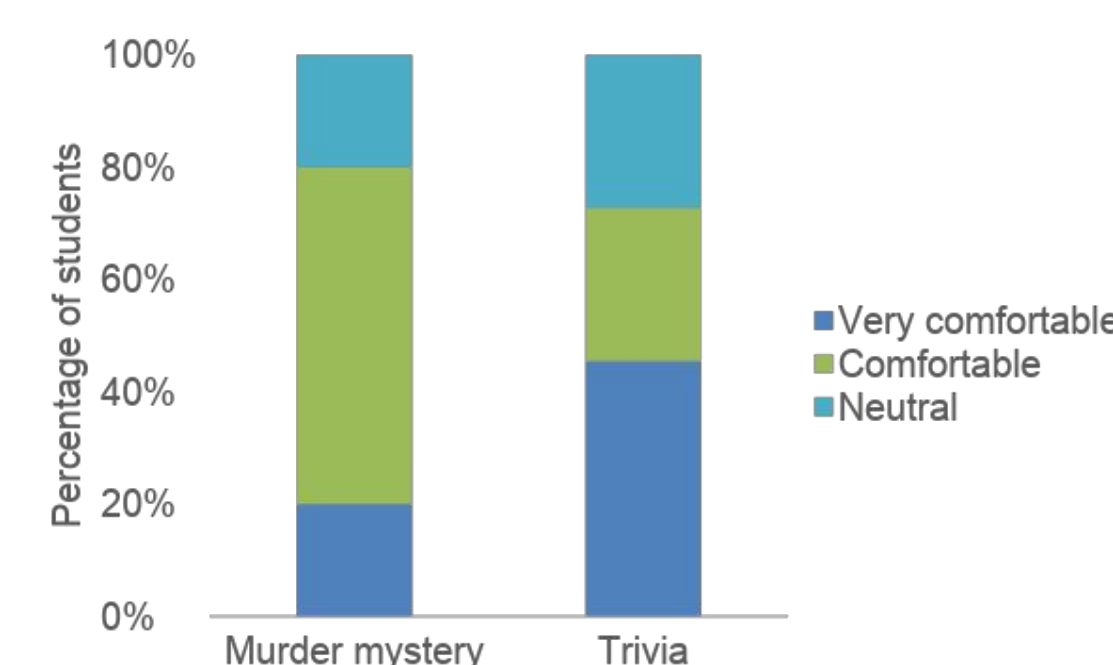


Figure 3. Most survey respondents reported feeling comfortable speaking with faculty and First2 Institutional Team members after attending the social events (N = 5–11).

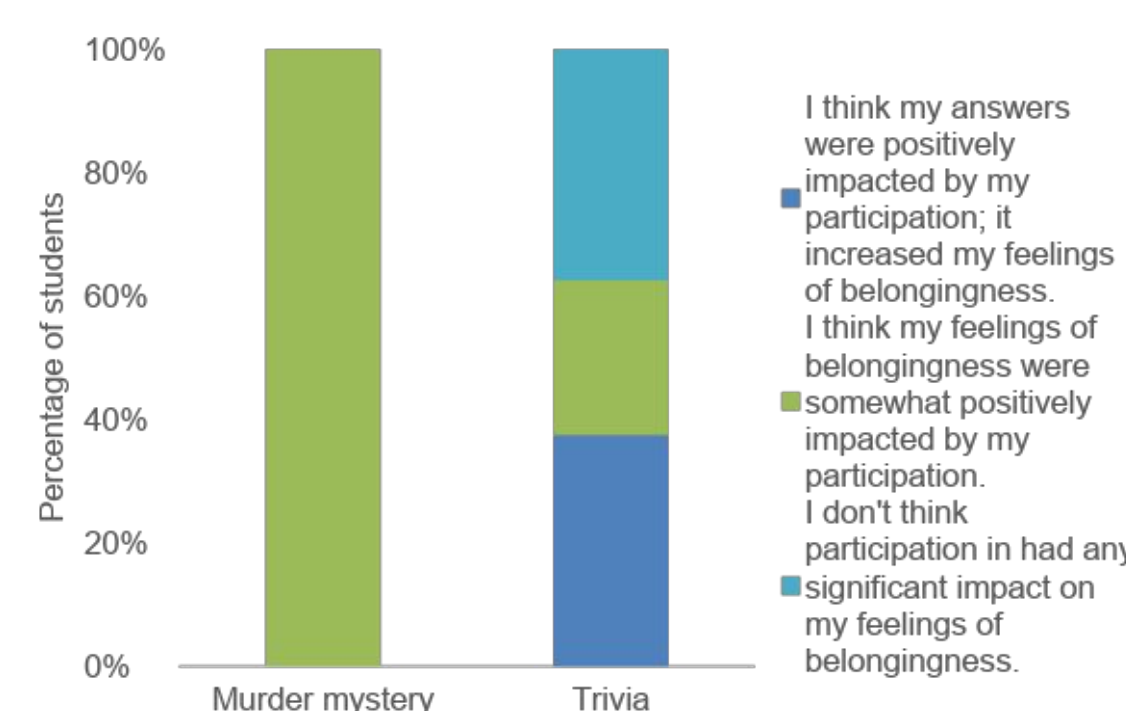


Figure 5. Percentage of student respondents who answered that participating in the event influenced their feelings of belongingness.

TIPS FOR OTHER INSTITUTIONAL TEAMS

1. Start outreach early and use multiple recruitment channels.
2. Embed faculty/staff directly into student groups.
3. Provide incentives to increase participation and survey completion.
4. Prioritize repeat engagement to impact belonging and confidence.

ACT

ADAPT

Improvements for next cycle:

- Begin promotion 2–3 weeks earlier
- Target first- and second-year students by reaching out to academic success center advisors to help email those students.
- Build in dedicated survey time during each event and offer incentives
- Increase student leadership involvement
- Schedule events in main university calendar to avoid conflicts
- Continue faculty/staff embedded in groups

PHOTO HIGHLIGHTS

Murder Mystery Game Night

Trivia Night Event



DISCUSSION & CONCLUSION

- Student-centered social events are effective for initiating connections and building STEM community
- These events show a moderate to strong positive impact on students' sense of belonging and comfort, particularly when faculty are embedded in small groups.
- Faculty and staff engagement needs to increase.
- Student attendance was the primary limitation, largely influenced by late outreach and recruitment strategies
- A single event provides initial gains, but sustained and repeated engagement is needed to impact deeper outcomes like belonging and academic confidence.
- Overall, these events are good for strengthening STEM community and supporting first-generation student success, with improvements needed in recruitment and data collection