Analysis

3. Learning Cycles and Documentation
Conduct preliminary research of cultures and histories within each STEM activity to make a meaningful connection to STEM contributions.

4. Resources
Expert Collaboration
Reaching out to different panels of experts and resources to improve the representation and implementation strategies for inclusion (i.e., College Of Education, Multicultural affairs, community leaders and organizations).

Interdisciplinary Team
A student-led workforce of various academic backgrounds such as education, engineering, art, music, foreign languages, etc. accompanied with various socio-economic backgrounds to participate in the planning and implementation of the event.

C. Implementation.

Immersive Cultural Experience: SMARTS

4. Linear Engineering Sequence (LES):
Networking details, planning and budgeting, implementation practices

6. Protyle of Innovative Technology:
Stand-alone educational solutions that are culturally and historically tied together, creating more culturally inclusive picture of STEM.

Implications

The Foundry is utilized as a roadmap to guide the integration of multiculturalism into STEM outreach planning.

Two major takeaways from the analysis include:

• The Knowledge Acquisition paradigm increases the depth of cultural knowledge that relates to STEM. See Figure 4.

• Learning Cycles and Documentation and Resources are leveraged to increase authenticity within representation through the use of expertise from a panel of perspectives with diverse academic and socioeconomic backgrounds. See Figure 2 and 4.

Conclusions

Several steps include permanent action research to gather insight on the experience of implementation and assessment of the Foundry.

Culture and STEM naturally go together

Outlining the Foundry model as part of the planning and implementation process can provide a useful framework for creating a more multicultural understanding. See Figure 3 and 4.

References


The Connection Between Learning Cycles and Documentation (3) and Resources (4)

• Preliminary research of cultures’ contribution in STEM is deepened and authenticated by the resources found through expert collaboration and interdisciplinary teamwork. See Figure 3.

• Multiple perspectives within outreach planning creates a transdisciplinary learning climate in STEM representation efforts that are both high in Knowledge Acquisition and cultural inclusivity. See Figure 4.

Methods

Research Question:
• Is what aspect of the Foundry enhance the integration of cultural inclusivity in community outreach programs?

Criteria A. Context
• Knowledge Acquisition

Criteria B. Cultural Inclusivity

Criteria C. Pathways

SMARTS

Figure 2. SMARTS and Acquisition of Knowledge

Figure 3. Planning and Implementation Analysis

Figure 4. Analysis of Knowledge Acquisition

Figure 5. Planning and Implementation Analysis

Figure 6. Knowledge Acquisition and Cultural Inclusivity Steeple

Findings

The Connection Between Learning Cycles and Documentation (3) and Resources (4)

• Preliminary research of cultures’ contribution in STEM is deepened and authenticated by the resources found through expert collaboration and interdisciplinary teamwork. See Figure 3.

• Multiple perspectives within outreach planning creates a transdisciplinary learning climate in STEM representation efforts that are both high in Knowledge Acquisition and cultural inclusivity. See Figure 4.