

JAMES MADISON UNIVERSITY.

# Spherical Display Systems in Higher Education

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# SOS in Higher Education

- Little documented use of SOS for HE courses
  - Some evidence of use found through searches of the web, literature, network materials, etc.
  - Some exploratory data on student and faculty perceptions of SOS as a learning tool at JMU

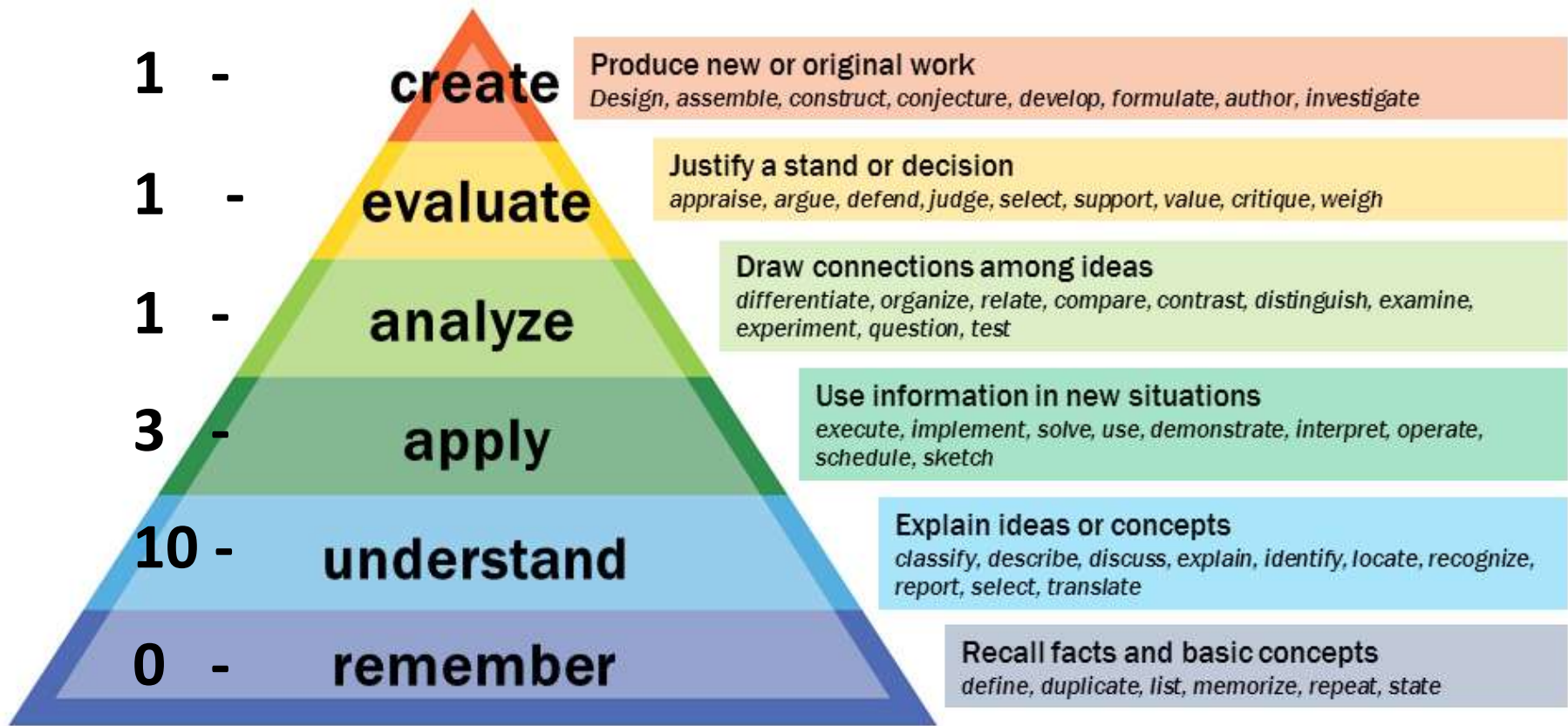


# Study

- Focus: US faculty members' perceptions and use of Science on a Sphere
- Methodology: An online survey about classroom instruction and outreach was sent to 65 probable faculty users in late 2016
- Respondents:
  - 59 people identified had eligible email addresses
  - 19 people returned valid responses (~32% response rate)
  - 13 respondents used SOS for HE coursework
  - 11 respondents began using SOS three or more years before the survey was administered, and 12 respondents had used SOS in the past 24 months

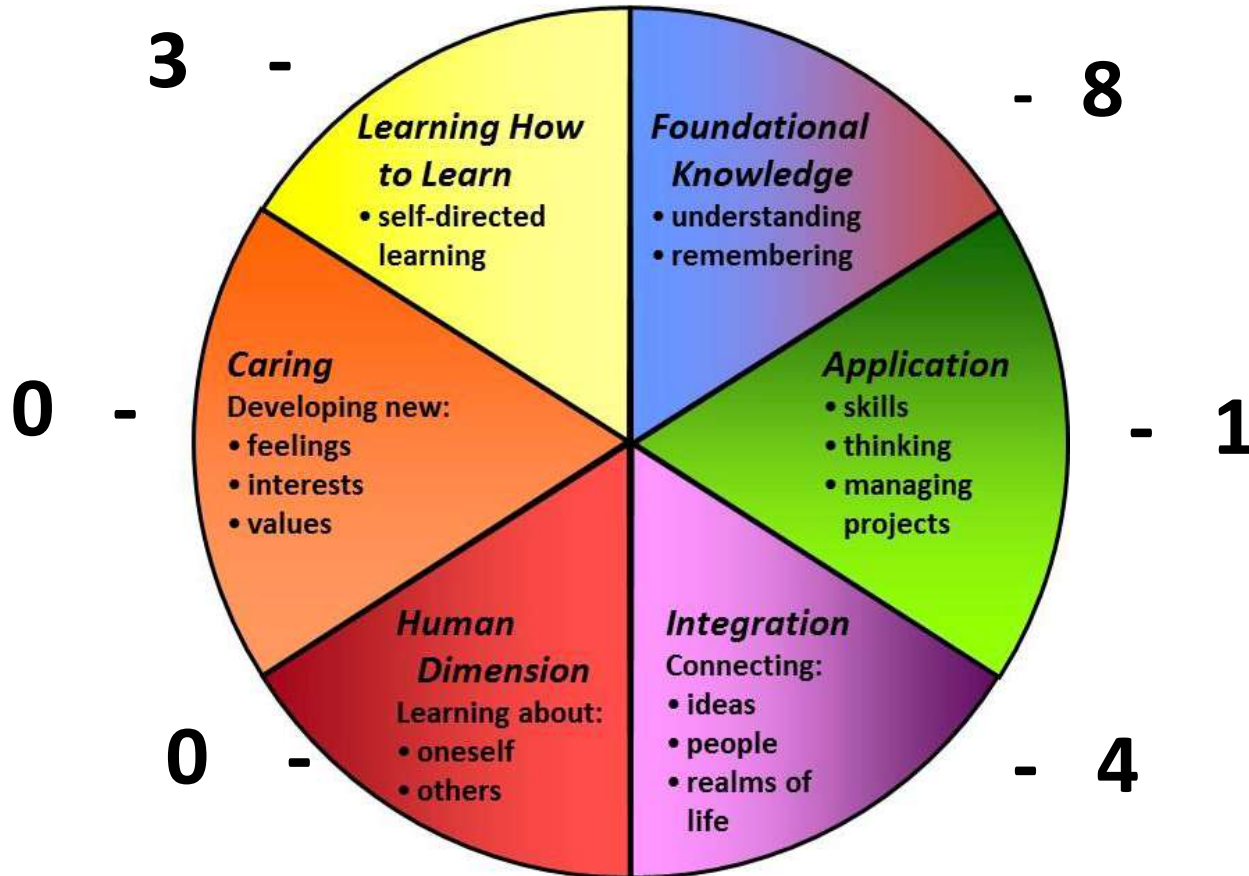
# Mapping of Reported Learning Outcomes (for 11 courses reported by 11 faculty)

## Bloom's Taxonomy



# Mapping of Reported Learning Outcomes

## Fink's Taxonomy



# Benefits and Barriers to Students

- Benefits:

- Better & deeper understanding of content & processes
- Active engagement in learning
- Enhanced inquiry skills
- A different view of data
- Better memory of the material
- Increased ownership & pride from creating something
- Increased excitement about the material
- An enjoyable experience

- Barriers:

- Inconvenient location
- Technology challenges

# Benefits and Barriers to Faculty

- Benefits:
  - Enhanced student relations
  - Professional benefits
  - Excitement using SOS
- Barriers:
  - Creating or using data sets in desired ways
  - Managing presentations for a class

# Opportunities

- Exploring learning outcomes in categories of creating, evaluating, and caring
- Creating content/lessons (by students and faculty)
- Measuring learning
- Understanding non-respondents' use (40 faculty?)
- Understanding course use by international HE faculty
- Understanding faculty use for outreach



# Your Turn

- Is your spherical display system used by higher education faculty in any of these applications?
  - Teaching
  - Research
  - Service or Outreach
- If not, do you have interest in using spherical display systems for higher education in any of these applications?

# As a Group

- Is there a need to facilitate communication between higher education institutions?
- Are there materials to share for courses?
- Is there interest in research collaborations?
  - Any interest?
  - Topics?
  - Funding opportunities?

**Thank you for participating!**