

How Students Navigate, Use & Learn From Digital Resources

Chuck Dziuban, Flora McMartin, Glenda Morgan, Joshua Morrill, Patsy Moskal & Alan Wolf

University of Central Florida, Broad Based Knowledge, University of Illinois, University of Wisconsin-Madison, University of Central Florida & University of Wisconsin-Madison

Introduction

We conducted a large study of undergraduates in the United States. We were interested in how they used digital information and how that affected their learning. More specifically we wanted to learn more about:

- Was there a difference in how students searched for information for coursework related questions compared to how they searched for information for topics in which they had a personal interest?
- What were the primary resources that students used to find information?
- What kinds of technologies did they typically use, and what would they prefer to use?
- Did students see a value in collections of digital resources and what were the components of that value?

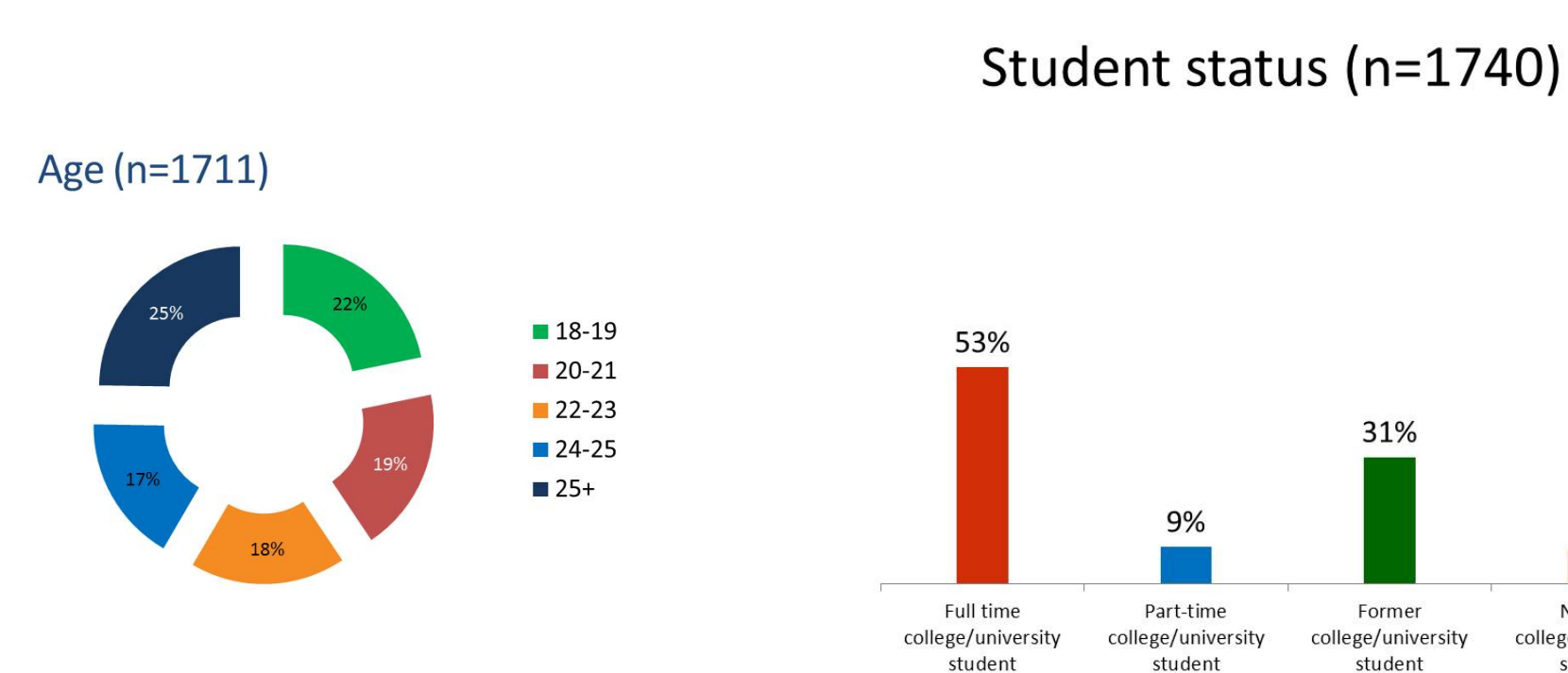
Methods

We conducted the research in 3 major stages:

1. Qualitative phase
To develop a survey instrument we conducted 9 focus groups at a variety of institutions with a variety of different types of students being represented. Using this information we refined the research question and constructed a survey instrument.
2. Quantitative data gathering
We purchased a survey sample of likely students from a survey vendor and collected responses from just over 1,700 respondents.

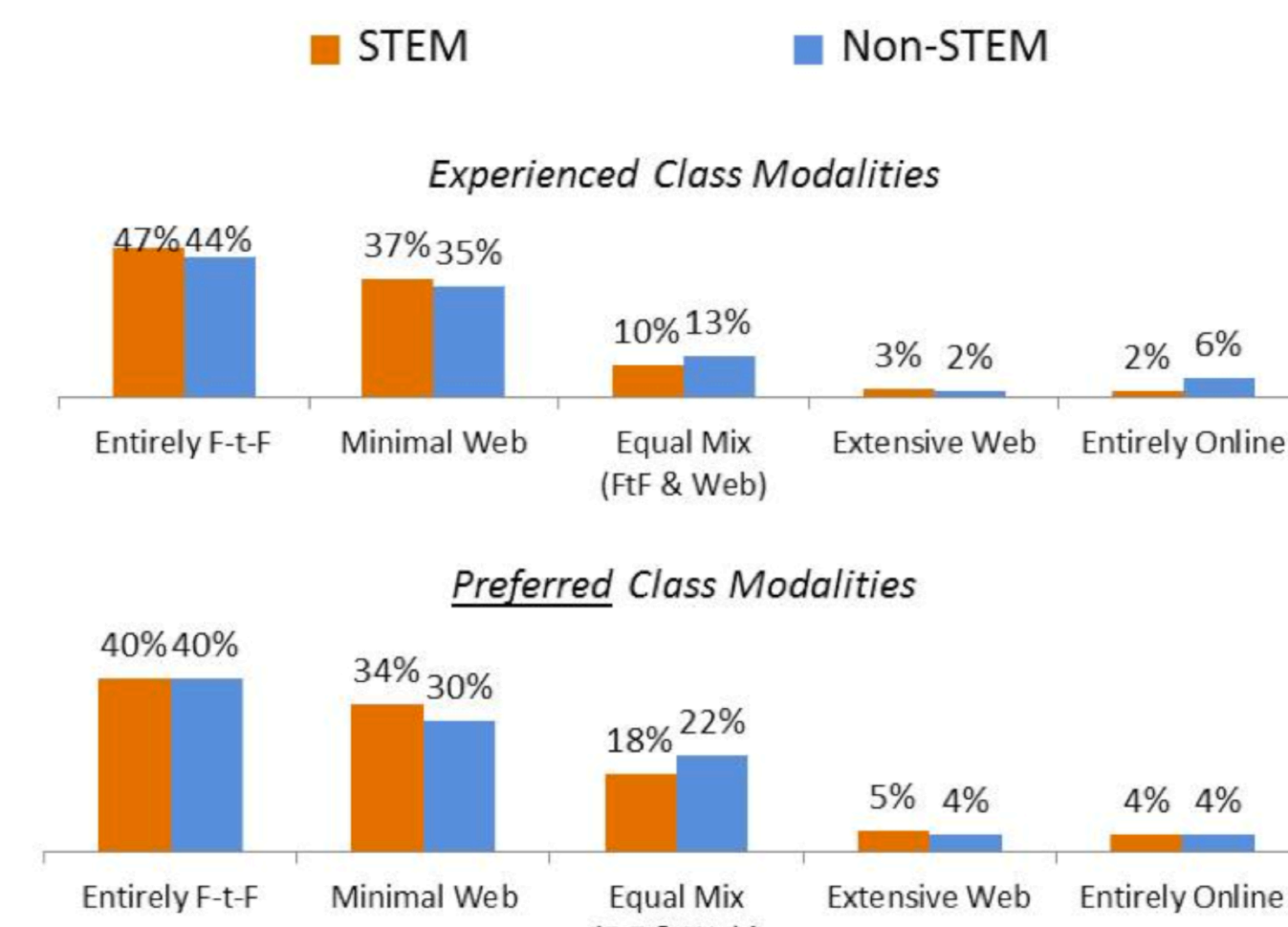
This gave us three distinct sets of responses, current students former students and a small group of respondents who had never attended college. This provided a nice set of comparisons.
3. Analysis
We looked at descriptive statistics as well as developing a dimensional analysis of the determinants of student search and conducting latent class analysis to develop a set of student personas or types classified by their information seeking behavior

Demographics

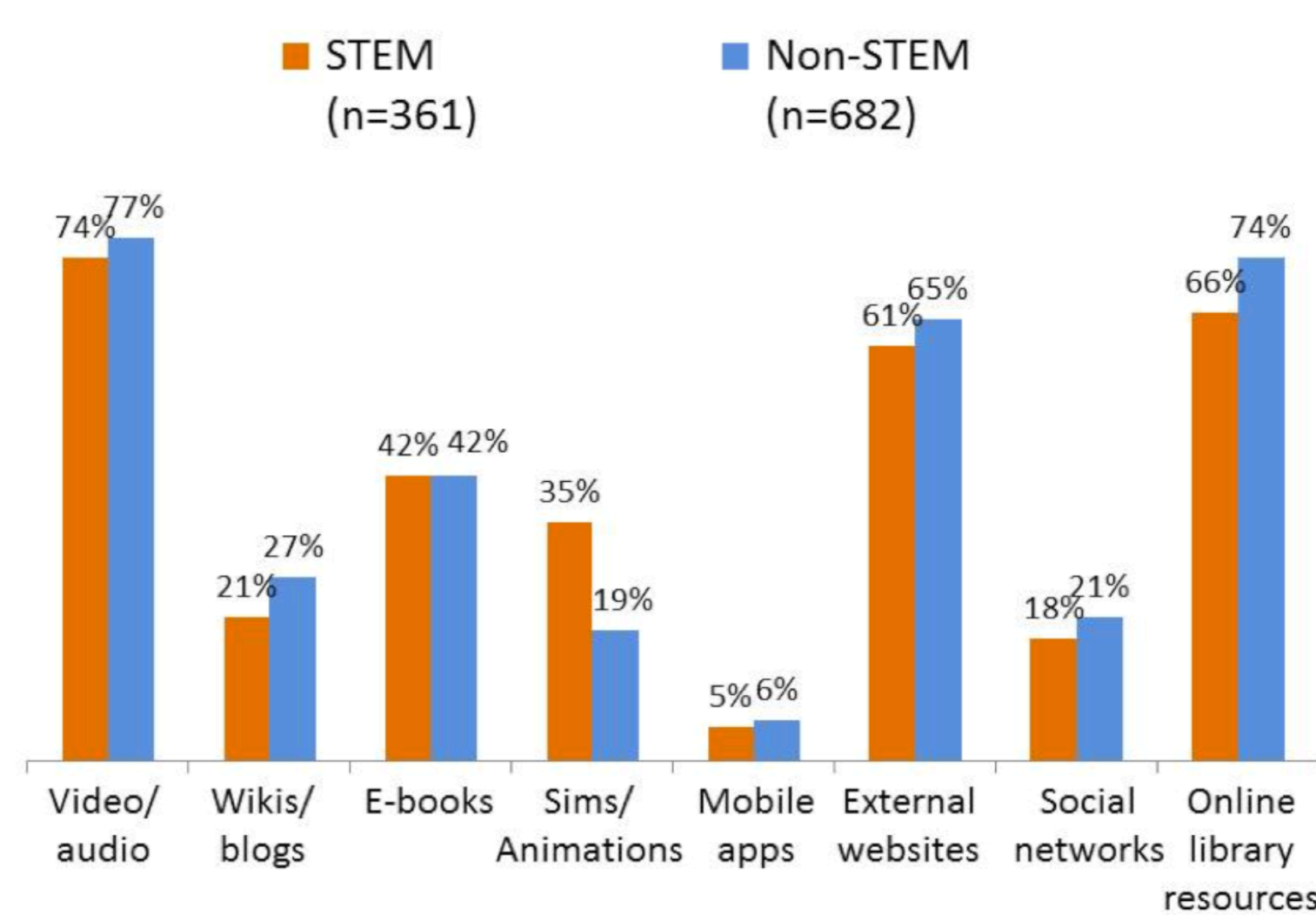


Students and Technology

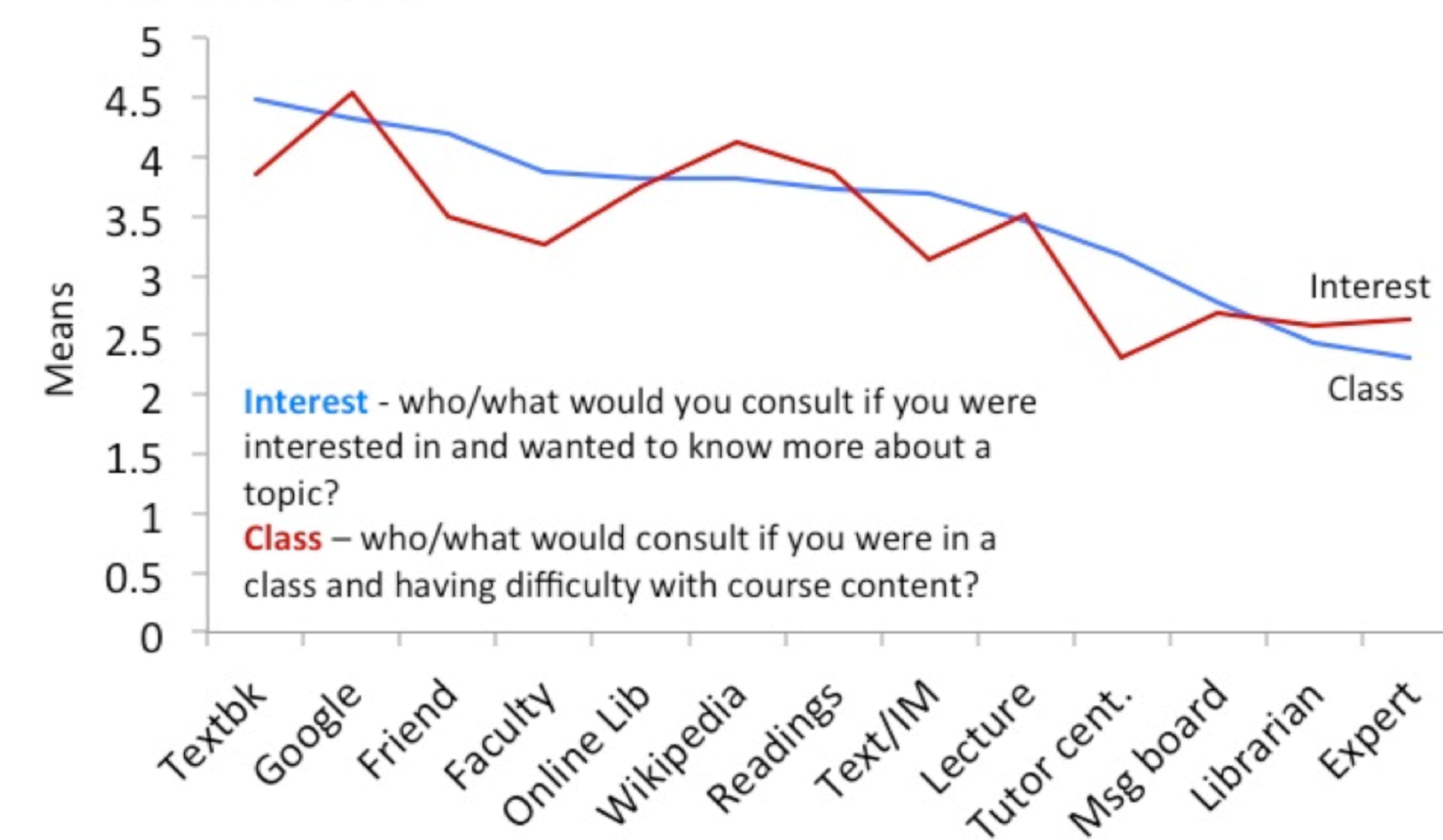
Used vs. Preferred class modalities



Technologies used in class



Student information seeking behavior: Class vs. Interest

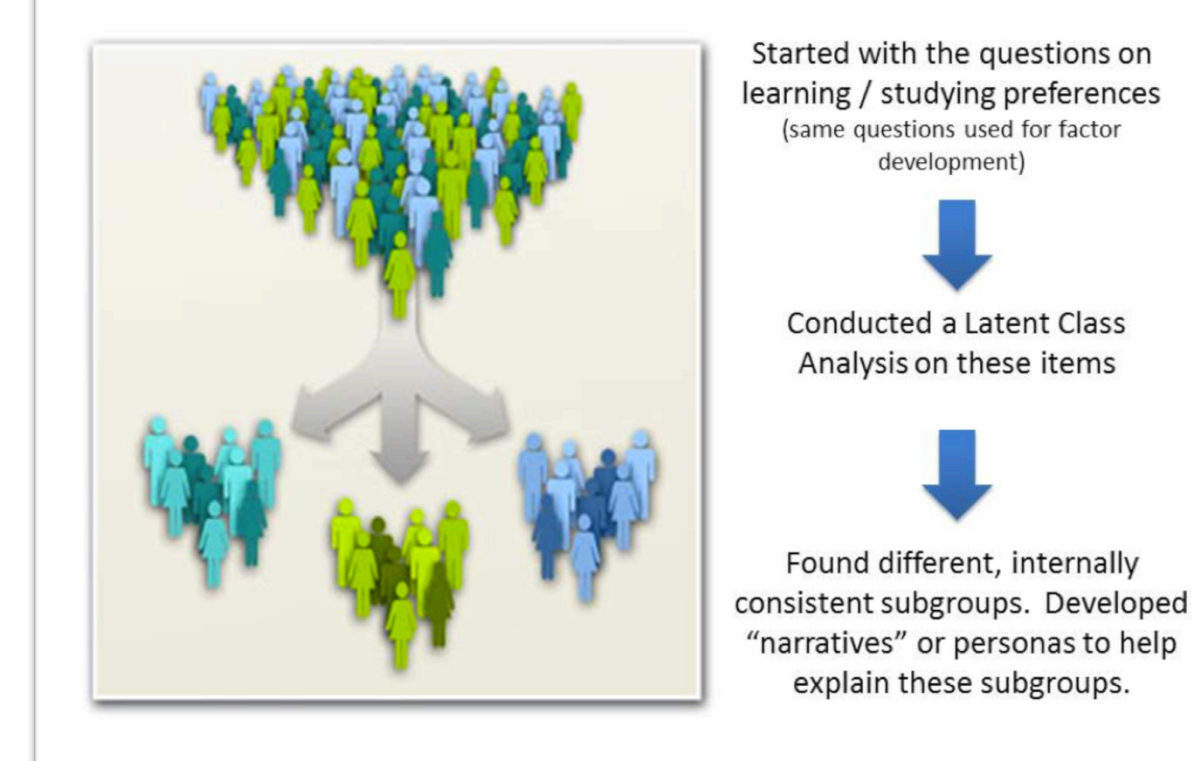


Implications

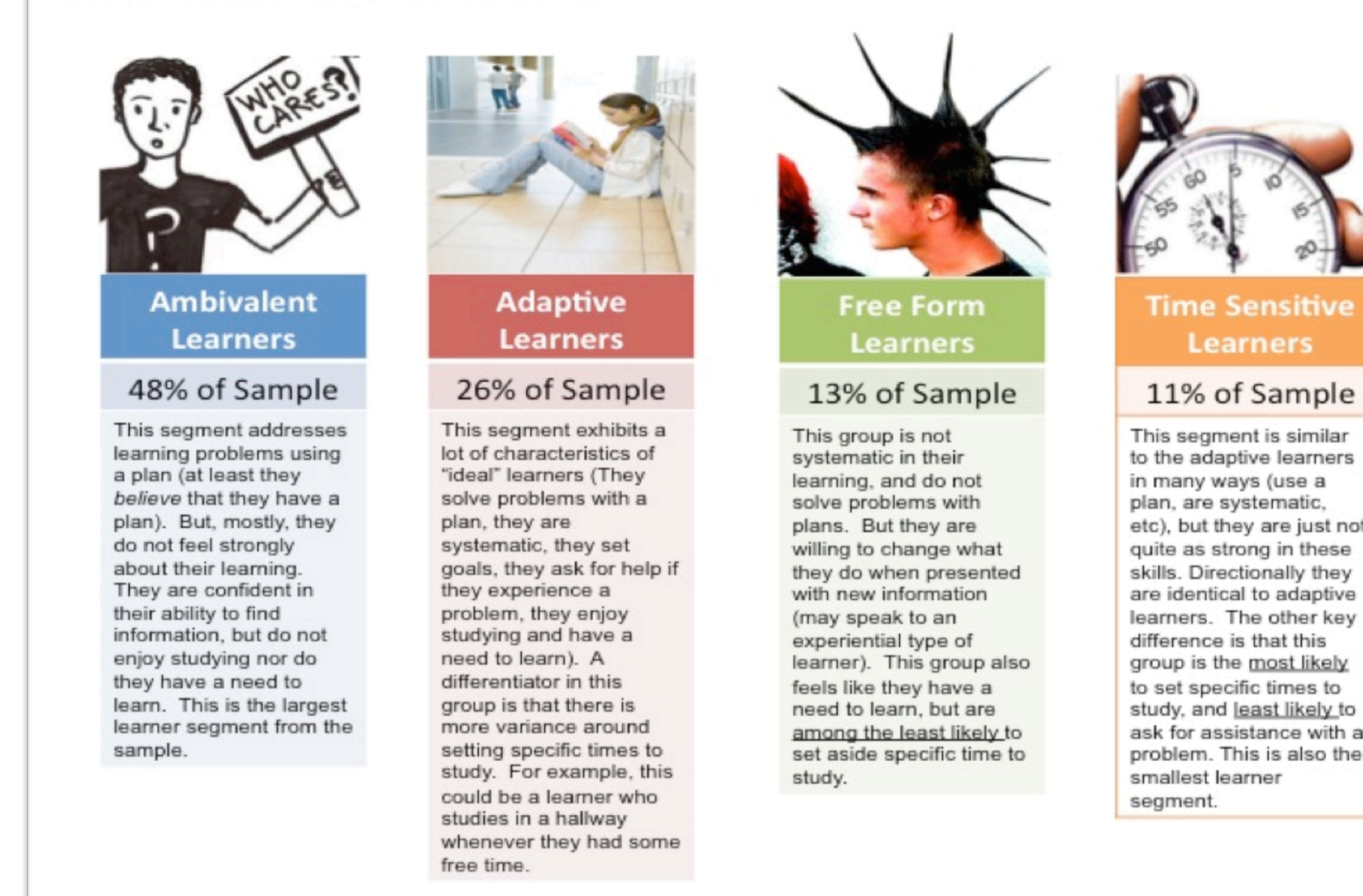
- Students appreciate mixed modalities for learning – are faculty prepared to meet that challenge? What Support do they need and what's effective?
- Students still show strong preference for 'passive' modes of learning, e.g., videos over interactive social network sharing – how do we encourage students to interact?
- What students experience and what they prefer are very similar – is change necessary?

Student Technology Personas

How Were Personas Derived?



Student Personas



Persona Demographics

	Ambivalent Learners	Adaptive Learners	Free Form Learners	Time Sensitive Learners
- % full time student	54%	55%	39%	47%
- % former students	30%	33%	44%	33%
School/Institution				
- 2 year/ community college	13%	15%	21%	28%
- 4 year college/ university	72%	57%	51%	55%
Race				
- % White/ Caucasian	74%	75%	73%	48%
Is / Was Major				
- Business, Marketing	17%	14%	17%	25%
- Humanities & Fine Arts	8%	11%	20%	8%
- Engineering	10%	13%	7%	10%

Personas And Technology

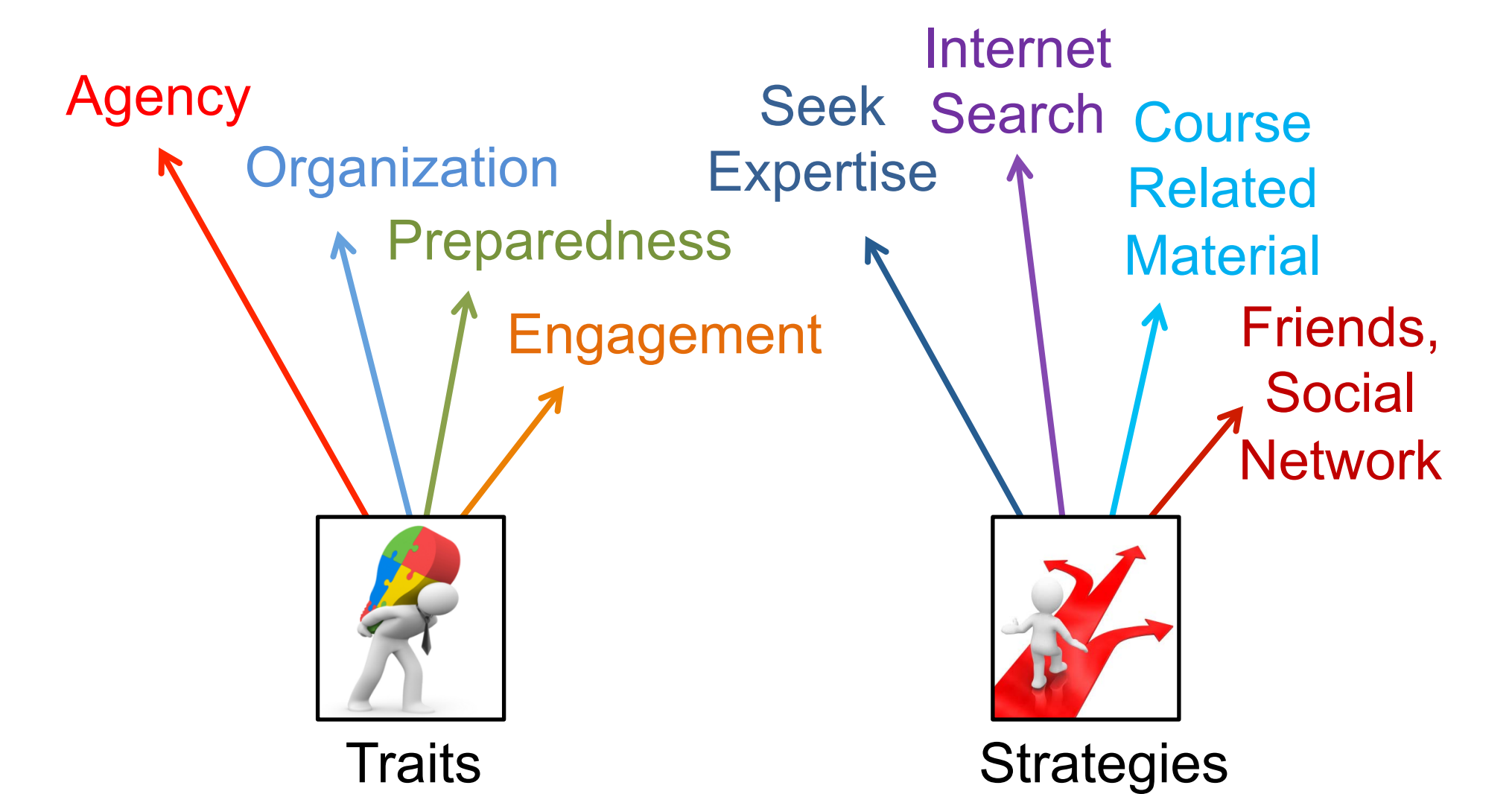
	Ambivalent Learners	Adaptive Learners	Free Form Learners	Time Sensitive Learners
Wikipedia				
- % using Wikipedia (for school or work)	56%	57%	62%	47%
Technology Preferences				
- % wanting FREQUENT wiki or blog use in their classes	10%	13%	21%	26%
- % wanting FREQUENT e-book or eText use in their classes	23%	40%	34%	45%
- % wanting FREQUENT content from websites outside of campus used in their classes	24%	48%	53%	45%
- % wanting FREQUENT social media (Facebook, Twitter, etc.) use in their classes	10%	18%	11%	32%

Implications

- The majority of students are ambivalent about technology and digital resource use - What ways might overcome this ambivalence?
- More research needed!

Dimensionality of Digital Search

STEM Resources: Digital Search



Implications

- Student traits (agency, organization, preparedness and engagement) affect how they see digital search.
- Students skill sets (seeking expertise, internet searching, using course related materials or talking with friends, networking) affect how they search in STEM.
- Based on their traits and skill sets, how do they negotiate information seeking and accessing information to support their learning?
- Potential rich resource area

Research Support

Support for this project was provided by the National Science Foundation DUE Award No 1049537. Any opinions, findings, conclusions or recommendations expressed are those of the authors and do not necessarily reflect the views of the NSF.

