

Understanding Student Use of Digital Learning Resources

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Why Study Use of Digital Resources

- How people interact with scholarly content is changing
- Roots in NSDL and other digital library initiatives
- People had only studied how faculty used specific collections
- No one knew how faculty found & used materials



We Started Out Looking at Faculty Use of Digital Resources

- 2006 – 2009 – National survey of STEM instructors regarding their use of digital resources in teaching (n=4,439)
- 2009 – Large international survey of Physics instructors (n=9,275)
- 2011 – National study of Social Science faculty (n=1,037)

Research Questions - Faculty

- What do faculty members do with the online digital resources they find at digital libraries, online collections, etc.?
- Do faculty value digital resources?
- How do faculty use digital resources for teaching purposes?
- What are the barriers to their use of resources and digital libraries/collections?

How different are faculty from one another?

- When we look at traditionally identified faculty populations, we saw few differences.
 - The type of institution where they serve
 - The amount of time that they have been teaching
 - Even discipline was less a factor than expected
- As far as these traditional groups go, we have a homogenous population

Types of Digital Resources

Type of Resource	% Use Very Frequently
Digital images - visual	42
Animations	11
Data Sets	22
Teaching, Learning Exercises	28
Online scholarly resources	49

Digital Resources

– other findings

- Google favorite starting point
- Iterative process (satisficing)
- Most are not authors of DRs
- Tend to use DRs developed by others
'as is'

Motivations

- Strong Agreement
 - Top – Improve student learning
 - Stay abreast of professional developments
 - Keep material fresh
 - Help students learn difficult concepts
- Agreement
 - Incorporating DR's in class is fun
 - *Saves time

Barriers to use

- Agreement
 - *More time
 - More useful DR available
 - More/better training in
- Ambivalent
 - Institutional rewards for use
- Disagreement
 - Access to dependable technology
 - Greater priority to institution



Photo Credit: Brandon

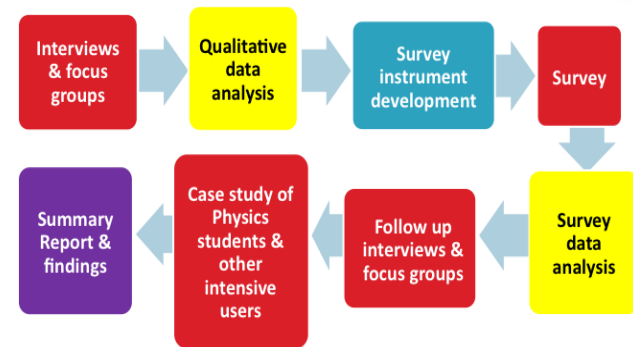
Conclusions about Faculty

- Instructors are changing more slowly than the educational landscape
- Need activation to overcome barriers and encourage adoption
- Intrinsic motivation is a powerful force (but people do not have limitless reservoirs)
- Still, students are a powerful extrinsic motivator

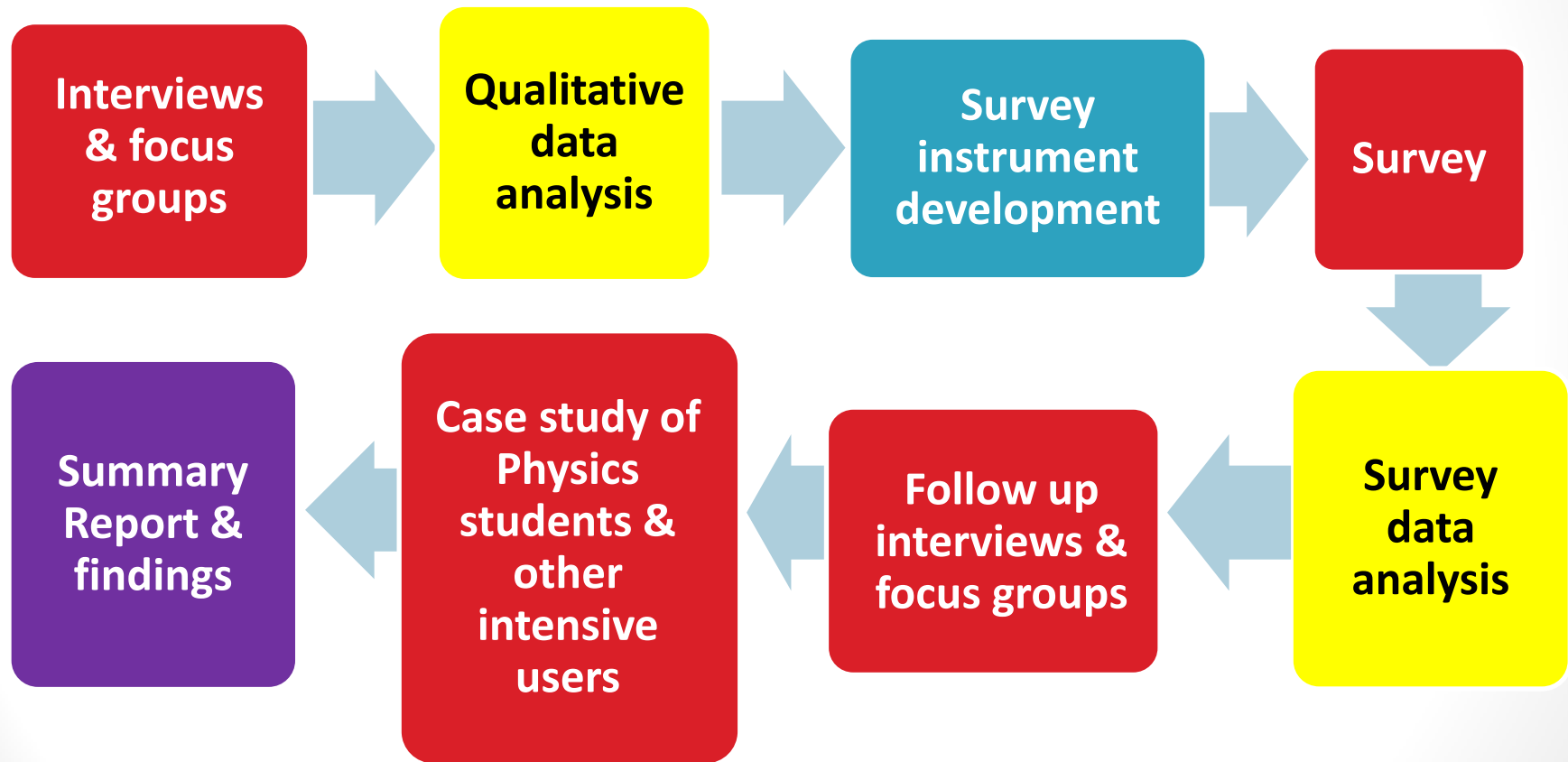
How do students use digital resources in their learning?

Research Questions - Students

- What are the circumstances that motivate students to look for DRs?
- Where to students start searching?
- What criteria to students use to assess DRs?
- What barriers to students face in finding & using DRs?
- What kinds of DRs do students prefer?
- Do students value “collections”?



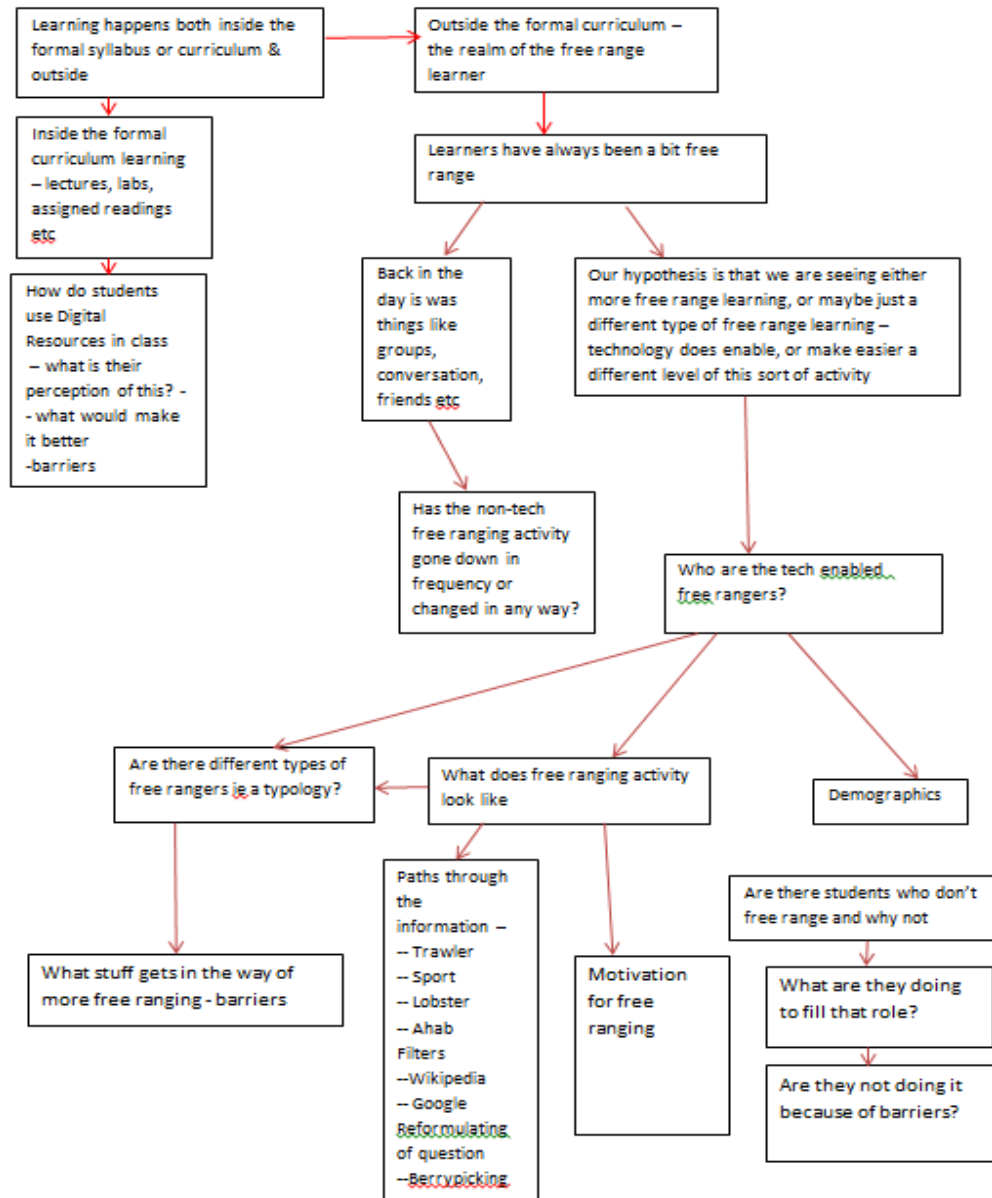
Student Study – 2011 - 2013

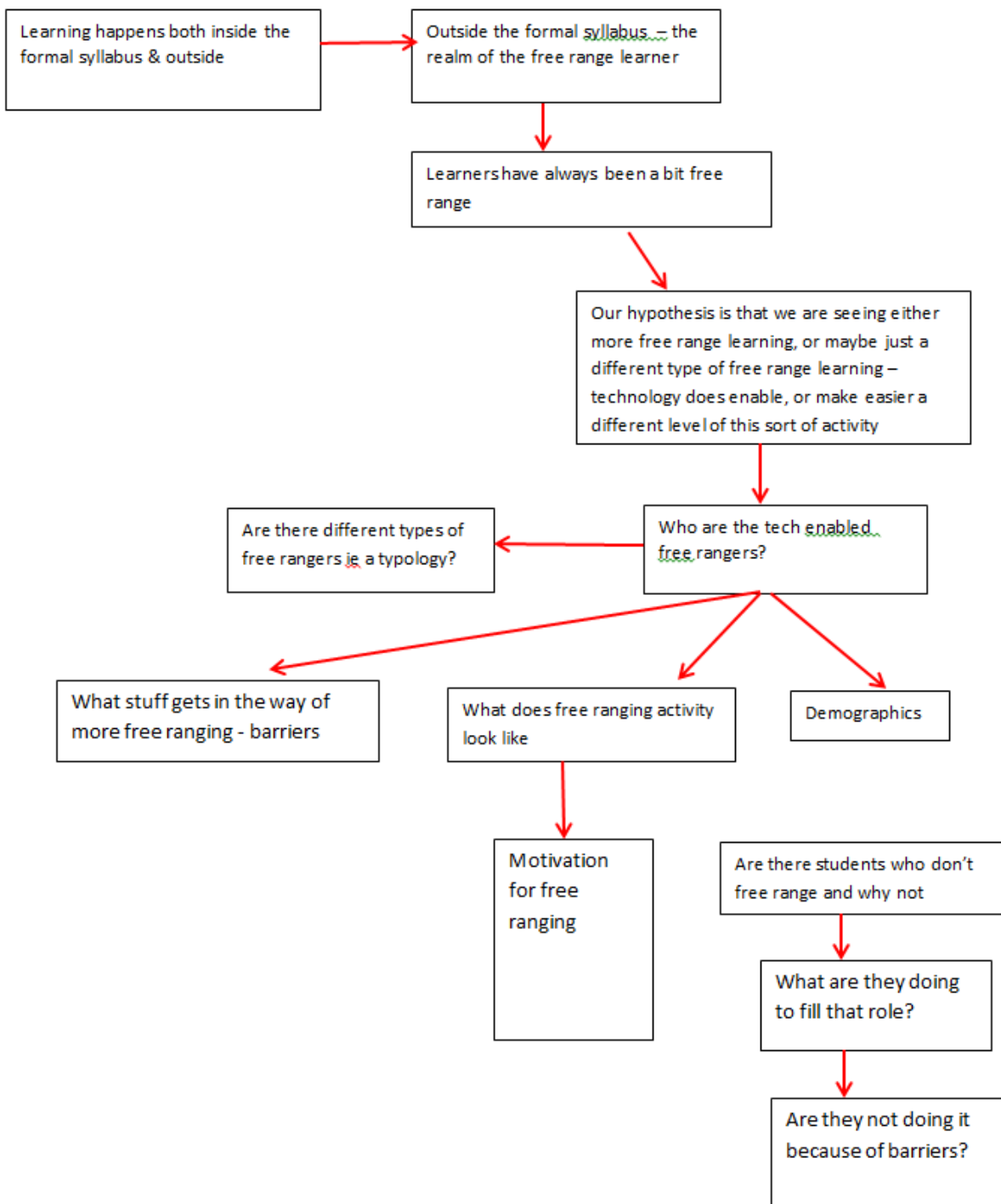


Qualitative Findings

- Students making far more independent use of DRs than anticipated
- Students desire content that is well organized and that teachers teach it to them
 - They seek information/explanation when teachers are doing a poor job of it.
- Students seek video, but it is unclear if they prefer it
 - Differences between recordings of full lectures vs. chunks.
- Students may be turning to new or different content providers faster than we discover them e.g. YouTube channels
- Students may value collections more than their propensity to turn to Google may indicate, especially when directed to 'authoritative' sources

How and Why Students Use Digital Resources





Formal Syllabus

- Learning happens both inside and outside
- Outside is the realm of the “free range learner”
- Learners have always been a bit “free range”

Hypothesis

- That we are seeing more free range learning – or a different type of free range learning
- Who are the free rangers?
- Are there different types of free ranger?

Free Rangers

- Demographics
- Motivation
- Barriers

Non Free Rangers

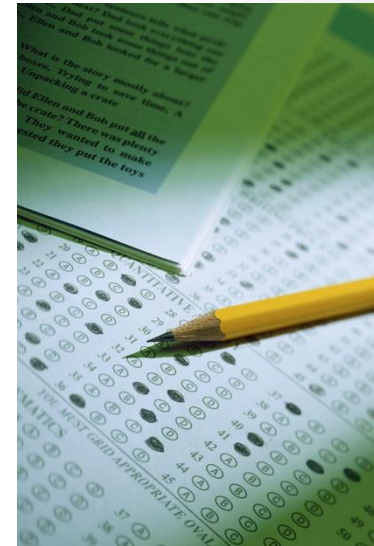
- Are there students who don't free range, and why not?
- What are they doing to fill that role

Survey strategy

Student Survey Lines of Inquiry

- Where do students turn when they run into problems with schoolwork
- Where do students turn when they are interested in a topic
- General motivations for studying and academic work
- Use of digital resources in class and students preferences

Pilot Survey

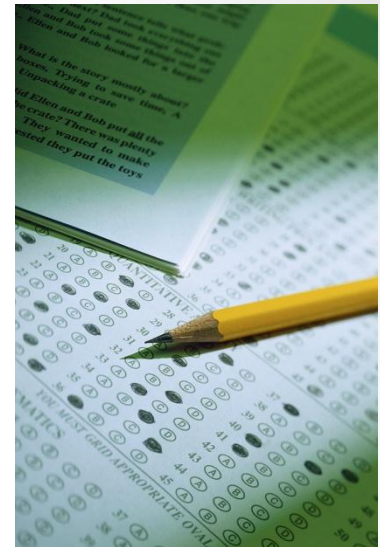


- **Online survey**
- **Conducting pilot**
 - 2 faculty at UCF advertised to their classes
 - ~50 responses
 - Asked students for feedback regarding questions that were confusing

Survey Strategy

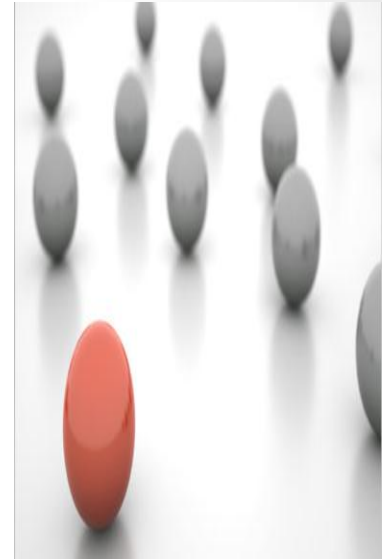
- **Using survey administration company**

- Maintain large database of people
- Can pre-screen on demographics
- National sample
- Removes researcher pressure on participants
- Sample size of 40,000-60,000
- Plan on 5% response rate



Survey Comparisons

- **The nature of this sample is providing us with three comparison groups:**
 - Full & Part-time Students**
 - Former Students
 - Never Been / Not Currently Students



Survey Follow Ups

- **Our Motto is:**
“Explore BIG – Focused Refinement”
- **Possible Follow Ups:**
 - Physics Students
 - UW-Madison / IL Students
 - Others?



Questions

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