OHSU Big Data to Knowledge (BD2K) Open Educational Resources (OERs) Needs Assessment

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Part of our BD2K projects involved carrying out a needs assessment among Oregon undergraduate institutions to determine their interest and needs in the area of biomedical Big Data Science.

The survey was sent to a list of 64 Deans, Department Chairs, and other leaders at 15 institutions in Oregon. The list comes from one we maintain for recruiting purposes for our biomedical informatics graduate program. It includes leaders in life sciences, computer sciences, physical sciences, mathematical sciences, and health professional disciplines.

The survey was administered via Survey Monkey. Each individual on our list received an initial and two follow-up emails. They were asked to pass the link to the survey on to any other faculty or leader in their institution they believed might be interested.

We received 24 responses to the survey.

The majority of respondents taught at the undergraduate level:
- Undergraduate – 95.8%
- Graduate – 16.7%
- Continuing professional education – 8.3%
(No community college or high school teaching)

They subjects taught varied widely:
- Life sciences (e.g., biology, health) – 81.8%
- Physical sciences (e.g., chemistry, physics) – 50.0%
- Computer science – 36.4%
- Mathematical sciences (e.g., math, statistics) – 50.0%
- Business – 22.7%
- Social sciences – 40.9%
- Nursing – 9.1%
- Health administration – 9.1%

There was interest in both of our grant programs:
- Skills short course – 72.8%
- Open educational resources – 95.5%
(Most of the open-ended responses to this question believed the materials would provide value for their existing courses, although some wanted to develop new courses and experiences.)

There was wide interest in all of the topics for which content is being developed:
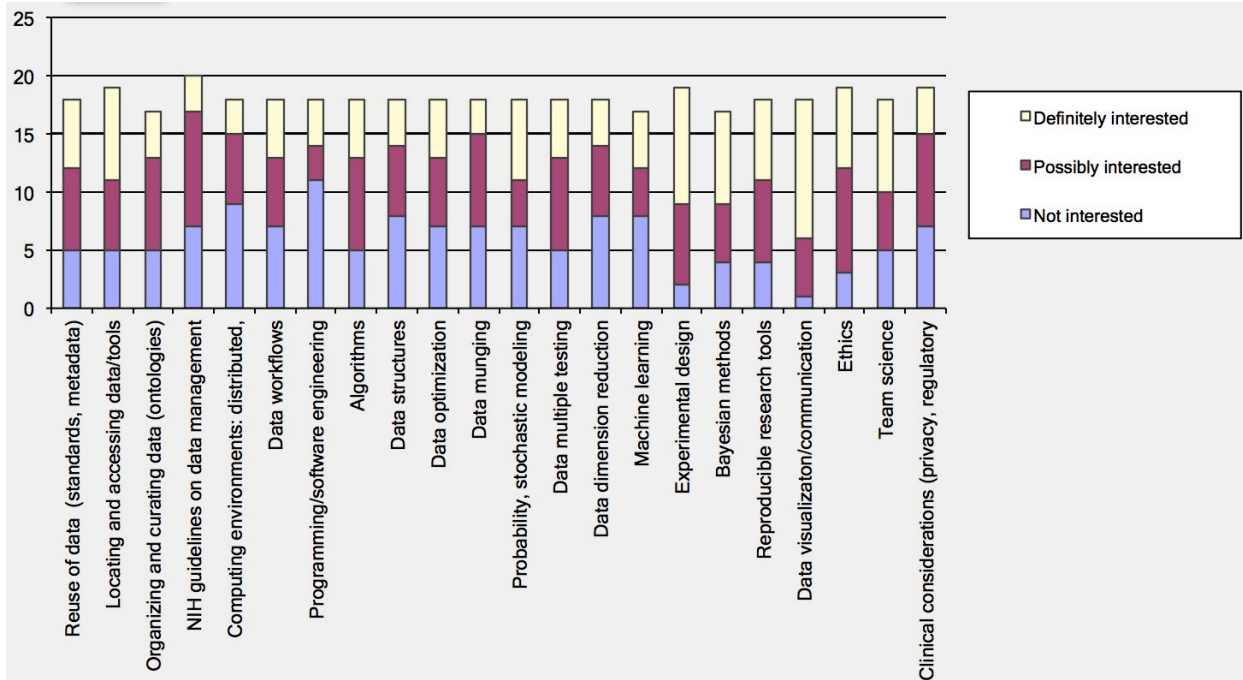
There was also interest in different biomedical application domains:

Domains	Definitely interested	Possibly interested	Not interested
Genomics/metagenomics	8	5	4
Imaging	4	7	7
Electronic health record (EHR) and other clinical data	4	6	9
Clinical and translational research data	4	9	6
Proteomics	4	8	6
Systems biology	8	7	3
Cancer biology	9	5	4
Computer-aided drug discovery	2	8	8

We also about interest a skills course using a data to knowledge approach, where students bring a dataset they are currently working on, and get help on specific approaches to enhance their dataset, with specific focus on provenance, potentially related sources of data, metadata, wrangling, analysis, and communication. They were to rate this approach.

Answer Options	Response Percent	Response Count
Definitely interested	10.5%	2
Possibly interested	63.2%	12
Not interested	26.3%	5