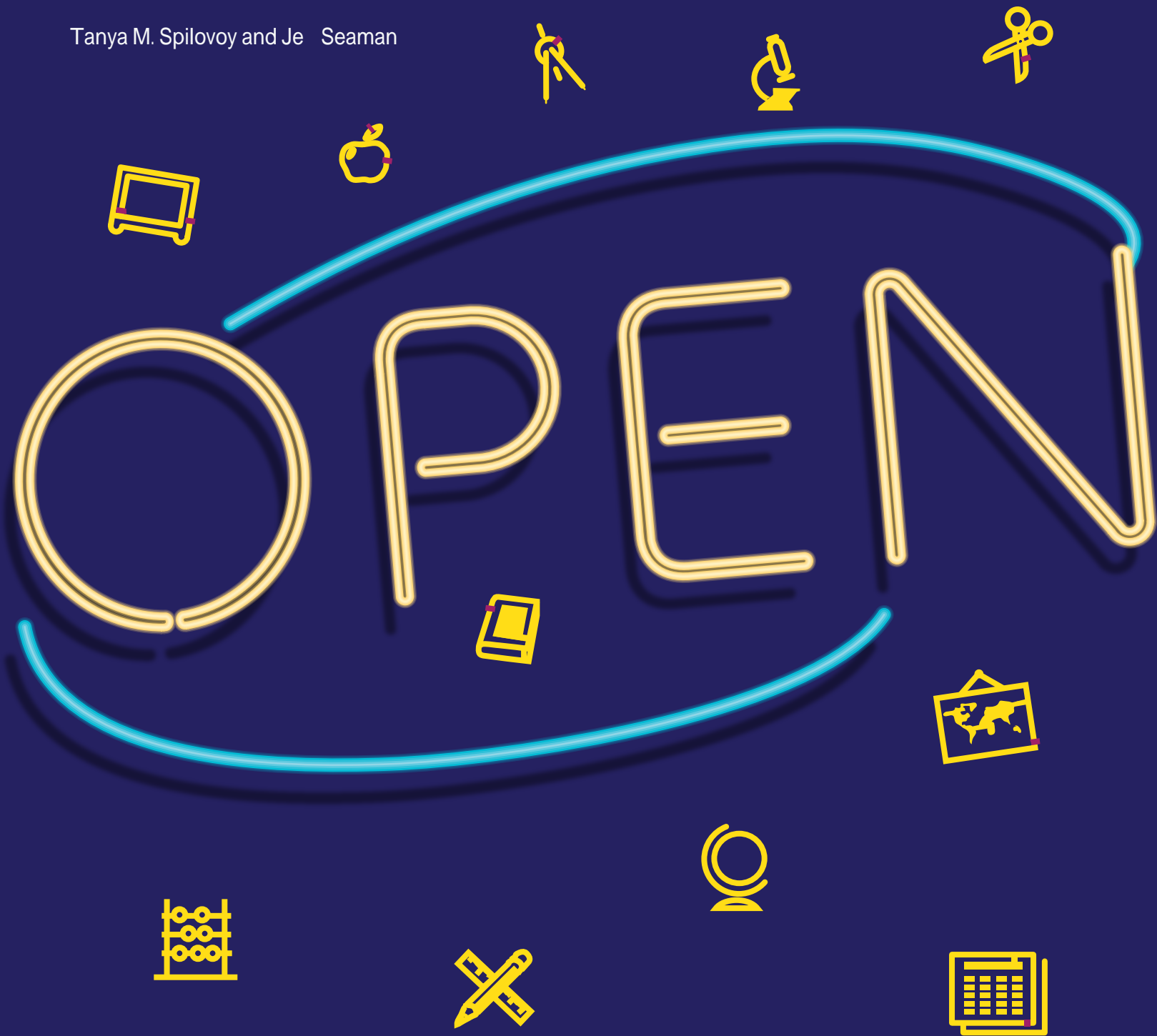


Opening Public Institutions:

OER in North Dakota and the Nation, 2015

Tanya M. Spilovoy and Jeffrey Seaman



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October 2015

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Report available at: www.onlinelearningsurvey.com/oer.html.

ACKNOWLEDGMENTS

This research would not be possible without the assistance of a number of organizations. First, we wish to thank The William and Flora Hewlett Foundation for their considerable help in framing previous projects. Their background and knowledge of open educational resources was invaluable in helping to define the focus for all aspects of the study.

This project is supported by the 64th North Dakota State Legislature and specifically, members of the 2013 Interim Higher Education Funding Committee, a bipartisan group of legislators, who believe that lowering the cost of textbooks will make a positive difference for students. We also want to thank the State Board of Higher Education for including Open Educational Resources in its 2015-2020 strategic plan. Finally, the report presents results derived from North Dakota University System and a national-representative sample of higher education teaching faculty at public institutions.

Thanks must also be given to the organizations that made the national studies, upon which this report is modeled, possible. The Global Healthy Living Foundation provided administration of the Hewlett Foundation grant for the most recent BSRG national study and Pearson provided the resources that allowed the construction of an expansive, nationally representative faculty sample.

Perhaps most importantly, we want to thank the faculty members, both nationally and in North Dakota, who took the time to provide us with their detailed and thoughtful responses. We understand that these dedicated professionals are very busy people, and appreciate their efforts. This report would not be possible without our esteemed teachers, and we hope this report will be useful to them.



Director
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October 2015

EXECUTIVE SUMMARY

A survey of all North Dakota University System (NDUS) faculty was conducted to measure the awareness and adoption of open educational resources (OER) prior to implementing a statewide OER project and faculty training. The definition of open educational resources (OER) used for purposes of this report, and for the North Dakota Open Educational Resources Initiative in general, comes from The Hewlett Foundation:

“Teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge”¹

The NDUS faculty received an identical survey instrument to that was used in a previously published national report “Opening the Curriculum, 2014.”² Because all eleven surveyed North Dakota institutions are public, the NDUS results are not compared to the totality of the national numbers, but rather to the subset of the national data from faculty at US public institutions. While the North Dakota results are similar to the national public institution data, there are some revealing differences.

In the past year, Open Educational Resources have been a focus of policymakers and stakeholders in North Dakota. As a result, NDUS faculty are more aware of the term “OER” than their counterparts in national public institutions and all sectors of higher education. In addition, North Dakota faculty report a higher rate of autonomy in the selection of course materials. While these two findings seem to set the stage for a successful OER initiative, the data shows that NDUS faculty are less aware of Creative Commons, Public Domain, copyright, and licensing than their counterparts nationally. In addition, NDUS faculty reported that there are not enough subject resources (46%) and 39% said OERs are too hard to find. These findings support the need for professional development and the importance of providing access to a comprehensive library of Open Educational Resources.

¹ <http://www.hewlett.org/programs/education-program/open-educational-resources>.

² Allen, I Elaine and Jeff Seaman, Opening the Curriculum, Open Educational Resources in U.S. Higher Education, 2014, Babson Survey Research Group.

Key findings:

NDUS faculty report they are more aware of open educational resources than their counterparts nationally. Depending on the strictness of the awareness measure, between one-third and one half of all North Dakota University System faculty classify themselves as aware of OER. However, in examining open-ended responses it was clear that there was wide variability in what respondents considered to be open educational resources.

Similar to their peers nationally, NDUS faculty are taking the initiative with OER adoption. NDUS faculty report similar barriers to adoption; however, they also report that they are currently using a variety of OERs for instruction (primarily videos). Most faculty are using OER even though they consider them challenging to find. Resource adoption decisions are driven by a wide variety of factors, with the efficacy of the material being cited most often. These decisions are often made without any awareness of the specific licensing of the material, or its OER status.

Faculty are unsure if OER quality is equivalent to that of traditional educational resources. More than half of NDUS faculty and those at national public institutions report that they are not sufficiently aware of OER to judge its quality.

The most significant barrier to wider adoption of OER remains a faculty perception of the time and effort required to find and evaluate it. The top three cited barriers among faculty members for OER adoption all concern the discovery and evaluation of OER materials. Results show that 48% of NDUS faculty and 37% of faculty at public institutions rate the ease of finding OER as “difficult” or “very difficult.” While this perception is a concern for OER advocates, traditional resources do not fare much better, with 23% (NDUS) and 26% (national public) of faculty rating finding these as “difficult” or “very difficult.”

Faculty are the key decision makers for OER adoption. It is hardly surprising that those delivering education play a critical role in deciding what educational resources go into that delivery. Previous results among chief academic officers noted that faculty are almost always involved in an adoption decision and – except for rare instances – have the primary role. Faculty in the current survey echo this view. At the two-year Associates level, North Dakota University System faculty enjoy significantly more autonomy when it comes to the selection of course materials than their peers who teach at the associates level at public institutions nationally.

NORTH DAKOTA OPEN EDUCATIONAL RESOURCES INITIATIVE

The North Dakota Open Educational Resources Initiative is a unique collaboration among stakeholders across the state. The survey data represented in this report is the baseline in a longitudinal data study that will measure outcomes and inform decision-making. The work began with a 2013 Legislative interest aimed at reducing the cost of textbooks for higher education students. There is now widespread support for the increased use of open educational resources statewide.

- The governor's funding budget appropriated funds to support faculty training and OER adoption.
- The 64th ND Legislative Assembly approved OER appropriations.
- The State Board of Higher Education Strategic Plan 2015-2020 aims to "increase the use of open educational resources."
- The North Dakota Student Association has written a resolution in support of OER adoption.
- The NDUS Council of College Faculty has written a resolution in support of OER adoption.
- The North Dakota University System is partnering with the University of Minnesota Open Textbook Network and implementing faculty training across the state beginning Fall, 2015.

Formal initiatives in OER can be traced to the late 20th Century through developments in distance (and now online) learning. The term "open educational resources" was first adopted at UNESCO's 2002 Forum on the Impact of Open Courseware for Higher Education in Developing Countries.³

³ Johnstone, Sally M. (2005). "Open Educational Resources Serve the World". *Educause Quarterly* 28 (3). Retrieved 2012-8-13.
Opening Public Institutions

PREVIOUS STUDIES

This report builds on a number of national Babson Survey Research Group (BSRG) efforts exploring the role of OER in higher education. These efforts began in 2009 with the inclusion of questions about the knowledge, use and opinion of OER among academic leaders in the BSRG annual survey on online education. These questions were continued for 2010 and 2011, and grew to seek the opinions of faculty in higher education and academic technology administrators, in addition to academic leaders⁴. A survey of faculty on their use of social media also asked faculty for their opinions on OER⁵. Highlights from these reports include⁶:

- Most academic leaders were at least somewhat aware of open educational resources (OER).
- Only one-half of all chief academic officers reported that any of the courses at their institution currently used OER materials.
- In 2011, most surveyed academic leaders reported that open educational resources would have value for their campus.
- Nearly two-thirds of all chief academic officers agreed that open educational resources have the potential to reduce costs for their institution.
- Faculty consistently listed the time and effort to find and evaluate open educational resources as the most important barriers to adoption.

The most recent BSRG report focused on the opinions and experiences of teaching faculty⁷. Using a nationally-representative sample of higher education teaching faculty, the research was designed to do two things: determine if the previous results observed among higher education teaching faculty have changed over time, and explore the factors driving these trends in more depth. This study found that:

- Faculty are not very aware of open educational resources. Depending on the strictness of the awareness measure, between two-thirds and three-quarters of all faculty classified themselves as unaware on OER.
- Faculty appreciated the concepts of OER. When presented with the concept of OER, most faculty said that they are willing to give it a try.
- Awareness of OER was not a requirement for adoption of OER. More faculty were using OER than reported that they were aware of the term OER.

⁴ Allen, I Elaine, Jeff Seaman, with Doug Lederman, Scott Jaschik, *Digital Faculty: Professor, Teaching and Technology*, 2012, Babson Survey Research Group.

⁵ Moran, Mike, Jeff Seaman, Hester Tinti-Kane, *Blogs, Wikis, Podcasts and Facebook: How Today's Higher Education Faculty Use Social Media*, Pearson Learning Solutions and Babson Survey Research Group.

⁶ All reports are available at <http://www.onlinelearningsurvey.com>

⁷ Allen, I Elaine and Jeff Seaman, *Opening the Curriculum, Open Educational Resources in U.S. Higher Education*, 2014, Babson Survey Research Group.

- Faculty judged the quality of OER to be roughly equivalent to that of traditional educational resources. Most faculty reported that they are not sufficiently aware of OER to judge its quality, but among those who did offer an opinion, three-quarters ranked OER as the same as or better than traditional resources.
- The most significant barrier to wider adoption of OER was faculty perceptions of the time and effort required to find and evaluate it. The top three cited barriers among faculty members for OER adoption all concerned the discovery and evaluation of OER materials.

The study concluded that faculty awareness and adoption of open educational resources had yet to enter the mainstream of higher education. Most faculty remained unaware of OER, and OER is not yet a driving force in faculty decisions about which educational materials to adopt. The picture did include some promising signals, however. Survey results indicated that faculty found the concept of OER attractive: those who were aware of OER rated it roughly on par with traditional resources, and those who had not yet used OER were very willing to give it a try.

STUDY RESULTS:

North Dakota Compared to the Nation

The goals of the present study are two-fold: to understand how faculty in North Dakota compare to the national results on their knowledge, attitudes and use of open educational resources, and to serve as a baseline for future measurements of the potential impact of the North Dakota Open Educational Resources Initiative.

The approach taken for this study is to replicate, as closely as possible, the methods used in producing the national report. The wording of the study questionnaire, survey invitations and reminder messages follows those used for the national study. The only changes were those necessary to reflect the changes in location and sponsoring organizations. Data coding, file preparation, and analysis are all derived from the approach used for the national report.

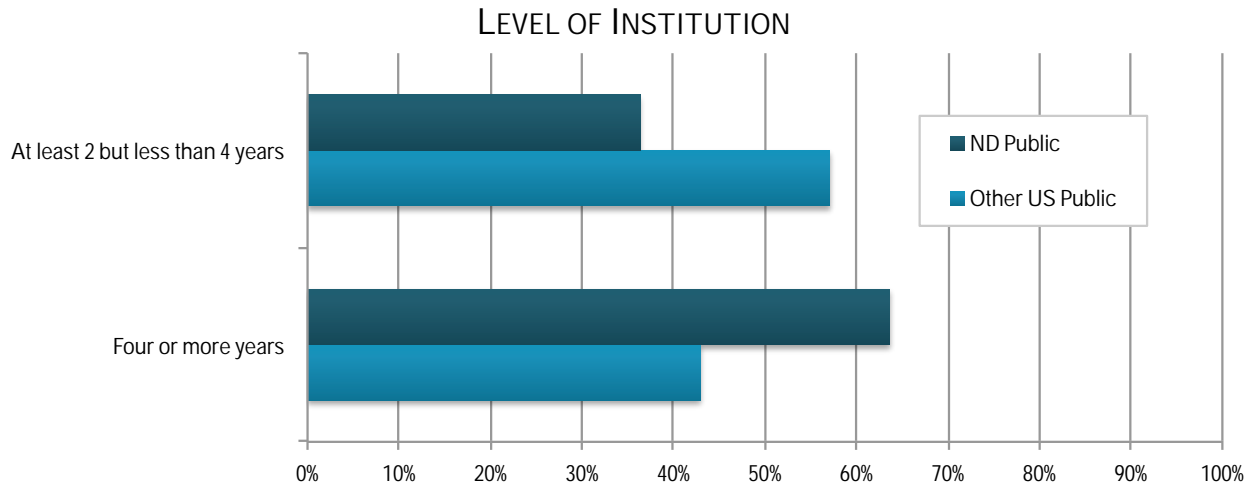
North Dakota results are based on survey responses of teaching faculty at the following institutions:

- Bismarck State College
- Dickinson State University
- Lake Region State College
- Mayville State University
- Minot State University
- University of North Dakota
- North Dakota State College of Science
- Dakota College at Bottineau
- North Dakota State University-Main Campus
- Williston State College
- Valley City State University

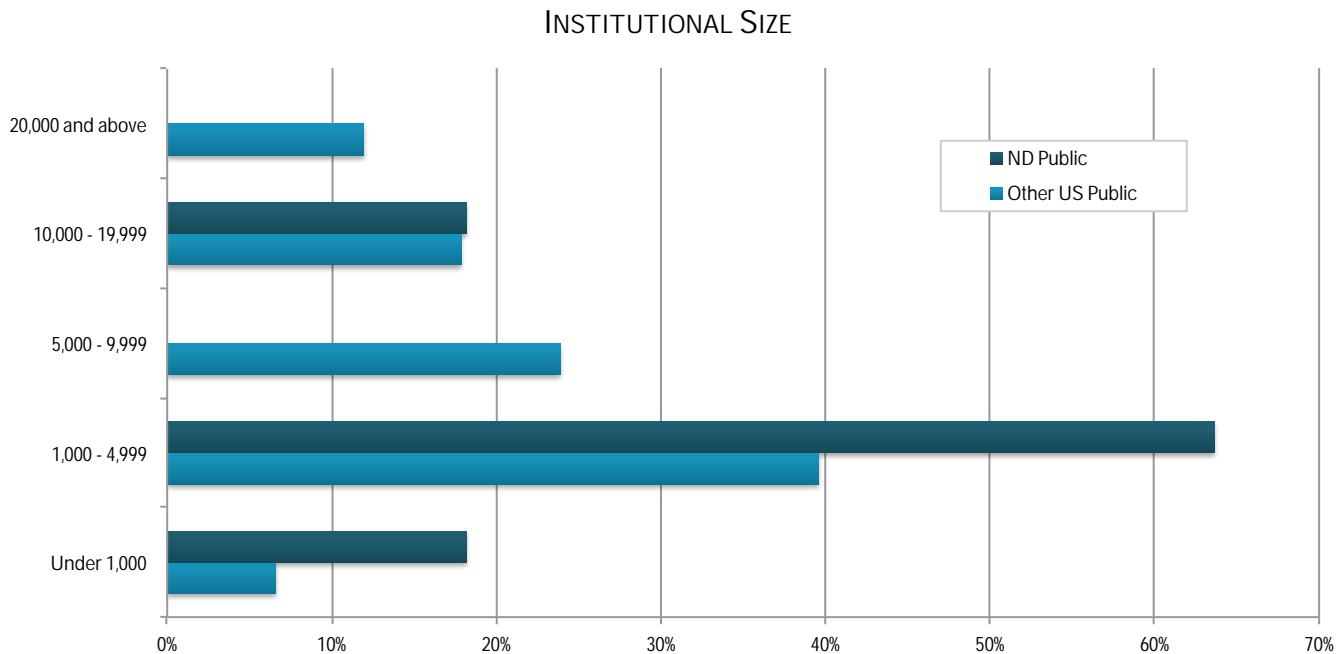
The previously published results in *Opening the Curriculum, 2014*⁸ were based on a representative sample of faculty from all types of higher educational institutions. The North Dakota sample contains only public institutions; there are no private or for-profit institutions included. In order to provide the most relevant comparisons for the North Dakota results, a new set of national tabulations has been produced for this report, one that includes only public institutions. How, then, do the characteristics of the public institutions in North Dakota included in this report compare to the rest of the public institutions nationally?

⁸ Allen, Elaine and Jeff Seaman, *Opening the Curriculum, Open Educational Resources in U.S. Higher Education, 2014*, Babson Survey Research Group.

Both the North Dakota (ND) sample and the national results used in this report represent faculty at public institutions. The characteristics of the ND institutions are not identical to public institutions nationally. Using data from the National Center for Educational Statistics, the characteristics of the ND institutions are compared to their national counterparts. Nearly two-thirds of the North Dakota institutions offer a four-year degree. This compares to only 43% of the national public institutions.



Another area of difference is that the ND schools in the sample are, on average, smaller than public institutions nationally. The majority of ND institutions have a total enrollment of under 5,000 students, with none having more than 20,000. National institutions tend to be larger; only 46.1% have fewer than 5,000 students and over ten percent have greater than 20,000.



Who Are the ND OER Gatekeepers?

"The CCF recognizes technological advances may influence how we traditionally view the educational process, and asks the legislature to proactively support open resource initiatives with funding. The CCF affirms that faculty should be sensitive to the rising costs of textbooks whenever possible. However, the CCF affirms that the choice of textbooks and any other course-related materials must be faculty-based and at the faculty member's discretion for provision of the best course possible; the CCF requests the legislature and the SBHE affirm this statement (North Dakota University System Council of College Faculties Resolution).

"I am STRONGLY AGAINST any sort of mandates that force educators to choose specific products. Let the experts in the fields decide what they need and the best way to attain it. We are trained to make these decisions. Please do not micromanage these decisions so that we cannot do our job effectively." (Full-time Natural Sciences faculty)

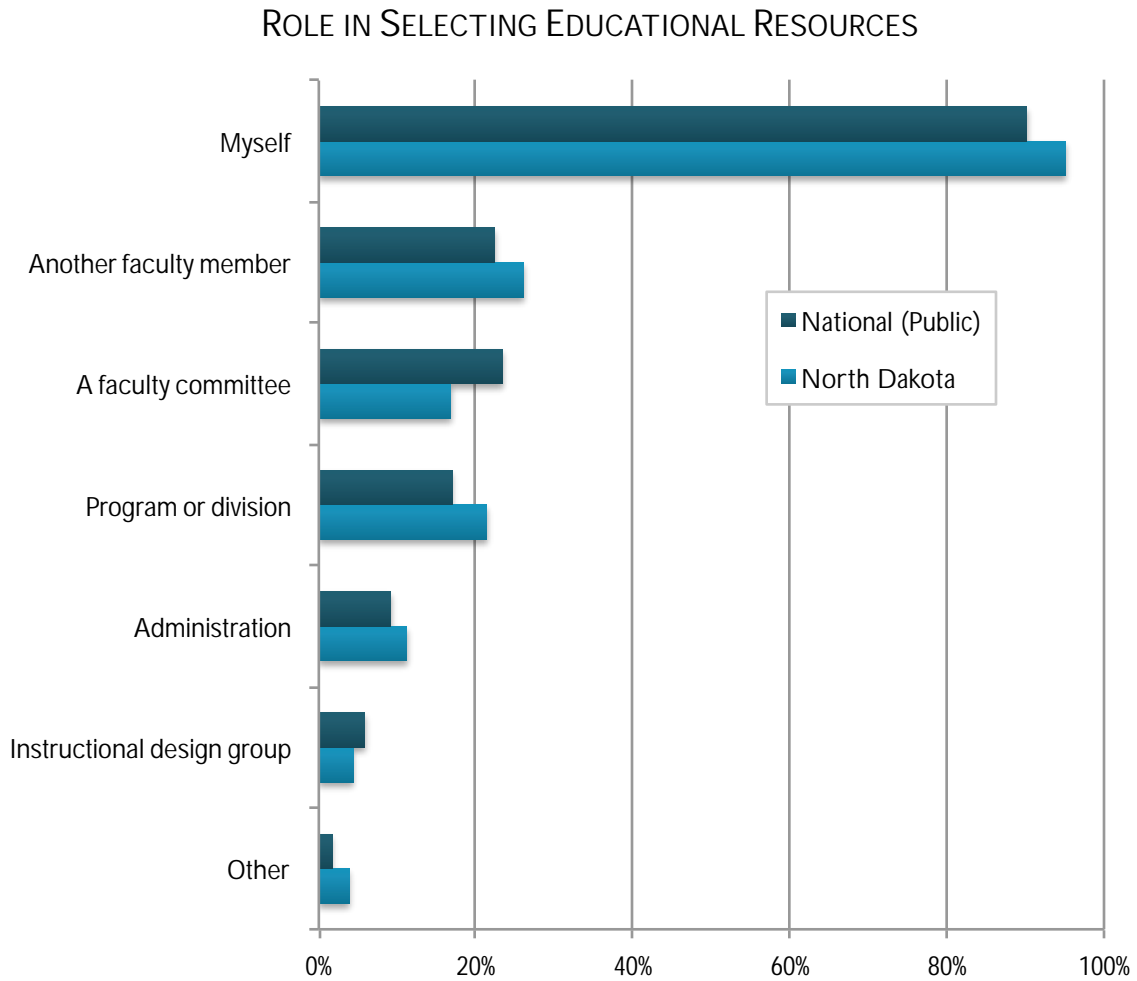
"I use OER in combination with traditional materials since I do not think any one approach alone is the most effective. Different students learn in different ways and trying to use only one approach does not provide sufficient support for the broadest number of individuals. I prefer to gather top quality resources from a variety of sources in order to provide my students with the best possible learning experience." (Full-time Natural Sciences faculty)

"In my opinion, regardless of what materials are used for teaching, the students need to feel engaged and feel that their professor cares that they are learning." (Full-time Natural Sciences faculty)

"Anything we can do to reduce student costs is important. If we can find more ways to cut textbook costs, which can astronomical, I am all for it. I think, though, we need to make sure that whatever we are using works as well as what we are currently using before switching. I think there is a way to do both - use traditional and nontraditional resources to cut student costs. Hopefully, a push for more open resources will force publishers to learn to cut costs as well and therefore help across the board." (Part-time Mathematics faculty)

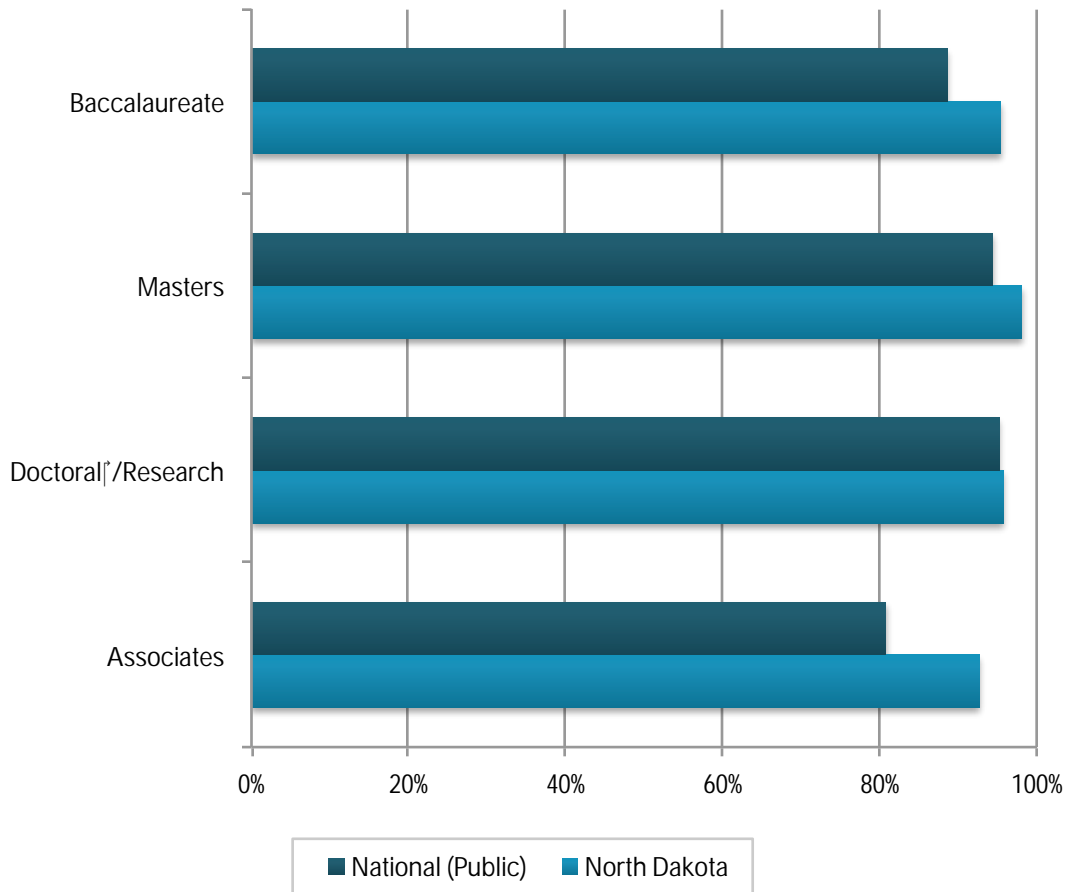
A critical factor examined in previous BSRG studies was the nature of the decision-making process for the potential adoption of educational resources. The number of different players having a role in education resource adoption decisions was rather large. Academic leaders reported that individual faculty developing courses, faculty committees, representatives from programs or divisions, instructional design groups, and the administration all played a role in the decision-making. Not all of these groups had an equal role, however. Many served in an advisory capacity, with the final decisions being made by a much smaller group. The individual faculty member teaching the course was overwhelmingly cited as having the primary role.

The current results for ND reflect a pattern very much like that seen nationally, with a somewhat greater proportion of ND faculty reporting that they have a role in the process. ND results show that 95% of NDUS faculty see themselves as the decision-makers for the use of OER in their courses compared to 90% of faculty at public institutions nationally.



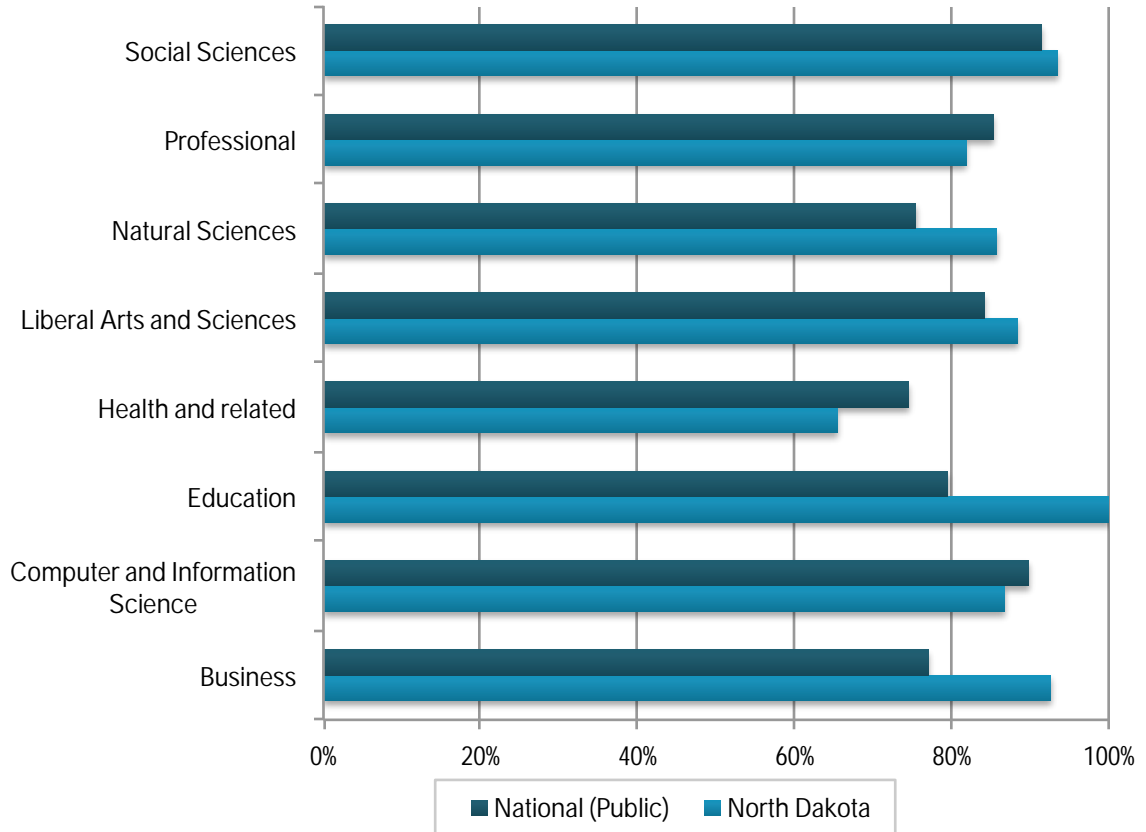
Faculty at Doctoral/Research institutions in ND have very similar results to their national counterparts. Differences between NDUS faculty at the Baccalaureate and Masters institutions show that compared to public faculty nationally, ND public faculty have more control of the curriculum. The data shows even more dissimilarity when comparing responses from faculty at 2-year institutions (Associates) level. The data shows that NDUS faculty have much more autonomy to choose course materials (93%) compared to their peers at national public institutions (81%). This is promising data for the future success of the North Dakota Open Educational Resources Initiative.

ROLE IN SELECTING EDUCATIONAL RESOURCES - MYSELF



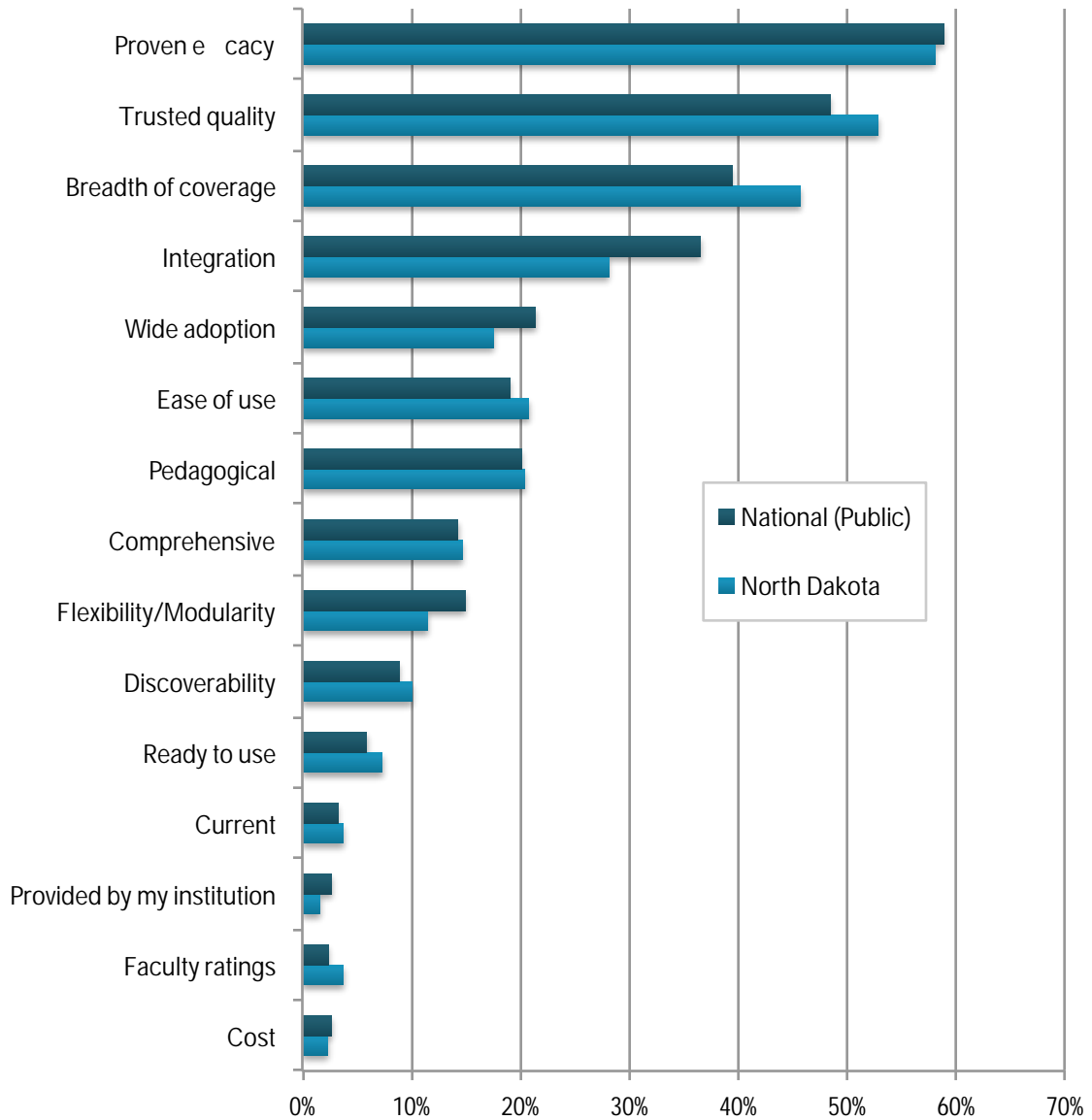
Faculty members across all disciplines have the primary role in selecting educational resources, but the role in some disciplines is greater than others. One explanation for the differing levels of faculty control by discipline is the amount of standardization across courses. A faculty committee, for example, often plans large introductory courses, as many faculty are charged with delivering the same content. Likewise, courses that are required to meet specific credentialing or licensing requirements have far more similarity and central control than advanced courses created and delivered by an individual faculty member.

I HAVE PRIMARY ROLE IN SELECTING EDUCATIONAL RESOURCES



Faculty at public institutions, both nationally and in ND, report a similar decision-making process when selecting course materials. Only a small number of criteria for choosing educational resources are consistently cited, with proven efficacy (58% ND; 59% nationally) and trusted quality (53% ND; 49% nationally) as most important. Cost (2% ND; 3% nationally), faculty ratings (4% ND; 2%, nationally), and provided by my institution (2% ND; 3% nationally) were reported as least important.

MOST IMPORTANT IN SELECTING TEACHING RESOURCES



Measuring OER Awareness

A critical issue in measuring the level of OER awareness is exactly how the question is worded. Previous BSRG studies demonstrated that many academics have only a vague understanding of the details of what constitutes open educational resources. Some faculty confused “open” with “free” and assumed all free resources are OER. Still others confuse “open resources” with “open source” and assume OER refers only to open source software. Because of these differing levels of understanding, the phrasing of the awareness question needs to be specific. The question should outline enough of the dimensions of OER to avoid the confusion, without being so detailed that the question itself educates the respondent sufficiently enough that they can claim to be “aware.”

The importance of question wording was very apparent for the study of OER awareness among academic leaders. In 2011 nearly all of these leaders reported that they were at least somewhat aware of open educational resources (OER) and over one-half listed themselves as “Aware” or “Very aware.” However, in examining open-ended responses it was clear that there was wide variability in what respondents considered to be open educational resources. Some claiming awareness provided descriptions focusing on content, others focused on software and services (e.g. Moodle). Still others equated “open” with “free” and grouped all free resources as OER or equated open-source computer code with OER. One concept was rarely mentioned at all: licensing terms such as Creative Commons that permit free use or re-purposing by others.

The conclusion from these results was that while most academic leaders were somewhat aware of OER, the level of understanding of the details was seriously lacking. In addition, it appeared that many claiming to be “aware” were confusing OER with other concepts.

To address the misunderstanding evident in the previous work, multiple question wordings were tested for the national faculty study. A question with broad definitions but no examples was more precise than a question just using the term “open educational resources.” Adding a series of detailed examples of OER was far more precise, but proved too leading for the respondents, and artificially boosted the proportion that could legitimately claim to be “aware.” Several versions were tested with different degrees of explanations and examples, but no single wording was ideal: all had their own issues. The version selected (reproduced below) was found to have the best balance in differentiating among the different levels of awareness, while avoiding leading those with no previous knowledge of the concept.

How aware are you of Open Educational Resources (OER)? OER is defined as “teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others.” Unlike traditionally copyrighted material, these resources are available for “open” use, which means users can edit, modify, customize, and share them.

- ! I am not aware of OER
- ! I have heard of OER, but don't know much about them
- ! I am somewhat aware of OER but I am not sure how they can be used
- ! I am aware of OER and some of their use cases
- ! I am very aware of OER and know how they can be used in the classroom

Based on preliminary testing, the results from this question may still overstate the level of OER awareness, but this was considered a better option than leading the respondent. By using a series of additional questions, the results from this question can be adjusted to remove those who might have thought that they were aware of OER, but when probed did not have knowledge of all of the aspects that make up the concept. The first of the additional questions was an open-ended query to determine what specific examples respondents considered as examples of OER:

Please provide some examples of Open Educational Resources that you are aware of.

Because licensing for remixing and reuse is central to the concept of OER, a question about the respondent's awareness of different licensing concepts was asked of all respondents *before* any questions about OER awareness itself:

How aware are you of each of the following licensing mechanisms?

	Unaware	Somewhat Aware	Aware	Very Aware
Public Domain				
Copyright				
Creative Commons				

The full suite of these questions provides a richer understanding of the level of awareness than possible with any single question.

Awareness of Open Educational Resources

"My entire graduate course for teachers working on a master's degree in education is taught using OER materials." There is no textbook. My entire course is taught without the exchange of a single piece of paper. Assignments are given and turned in using various technologies including blogs, Google+ Communities, Edmodo, Twitter, email attachments, shared Google Drive documents, Dropbox, audio recordings, etc. In K-12 schools there are often technology integrators who work with teachers on improving their teaching and learning through the use of technology. This is something that should be done at the university level." (Part-time Education faculty)

"I had not heard of OER although I had been using it. I went to the website to see what it was. This has be a learning tool for me. " (Full-time Education faculty)

"I have no experience with OER's, it seems that if done properly, it could improve classroom teaching." (Full-time Natural Sciences faculty)

Using Backwards Design, I created an 8-week course using only OERs. Once I got started, it was not that difficulty to find what I needed. What I really liked about it was the ability to bring in material on topics often not included (or included at length) in an interpersonal communication textbook (i.e. the Dark Side of communication--bullying, verbal abuse, etc.). (Part-time Other faculty)

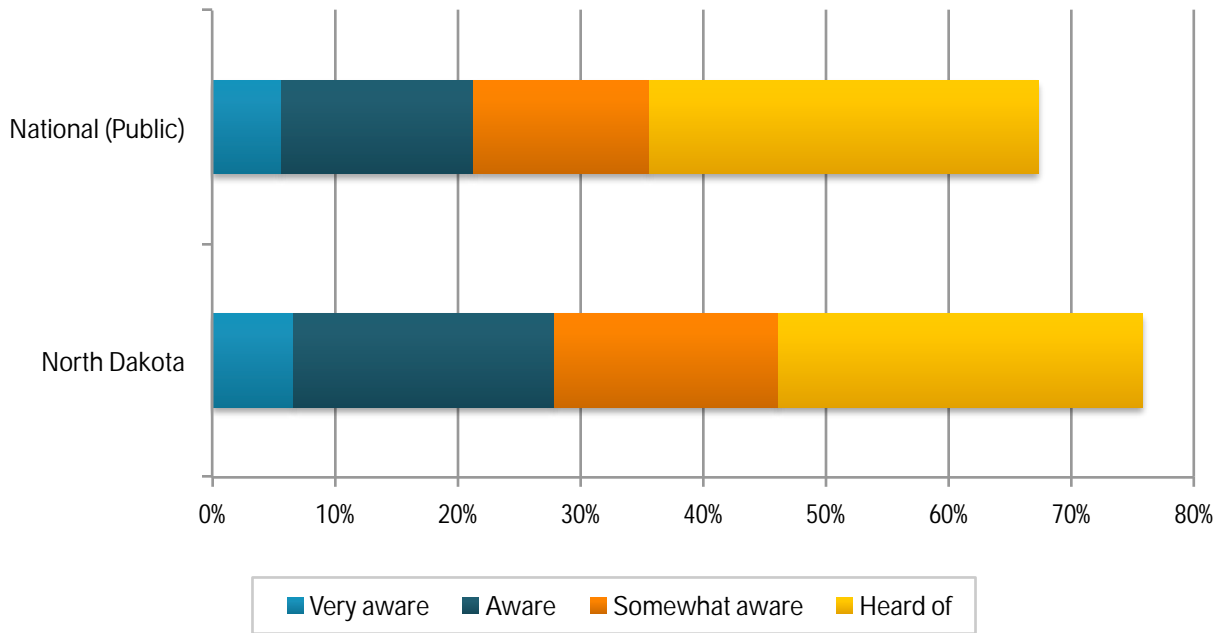
When faculty members were asked to self-report their level of awareness of open educational resources, 46% of NDUS faculty and 36% of public faculty nationally claimed to have some level of awareness. Just over 5% reported that they were very aware with around three times that many saying that they were aware. An additional 14% of faculty nationally and 18% of faculty in NDUS reported that they were only somewhat aware. This left 54% of NDUS faculty and 64% of national public of faculty reporting that they were generally unaware of OER.

Awareness of Open Educational Resources

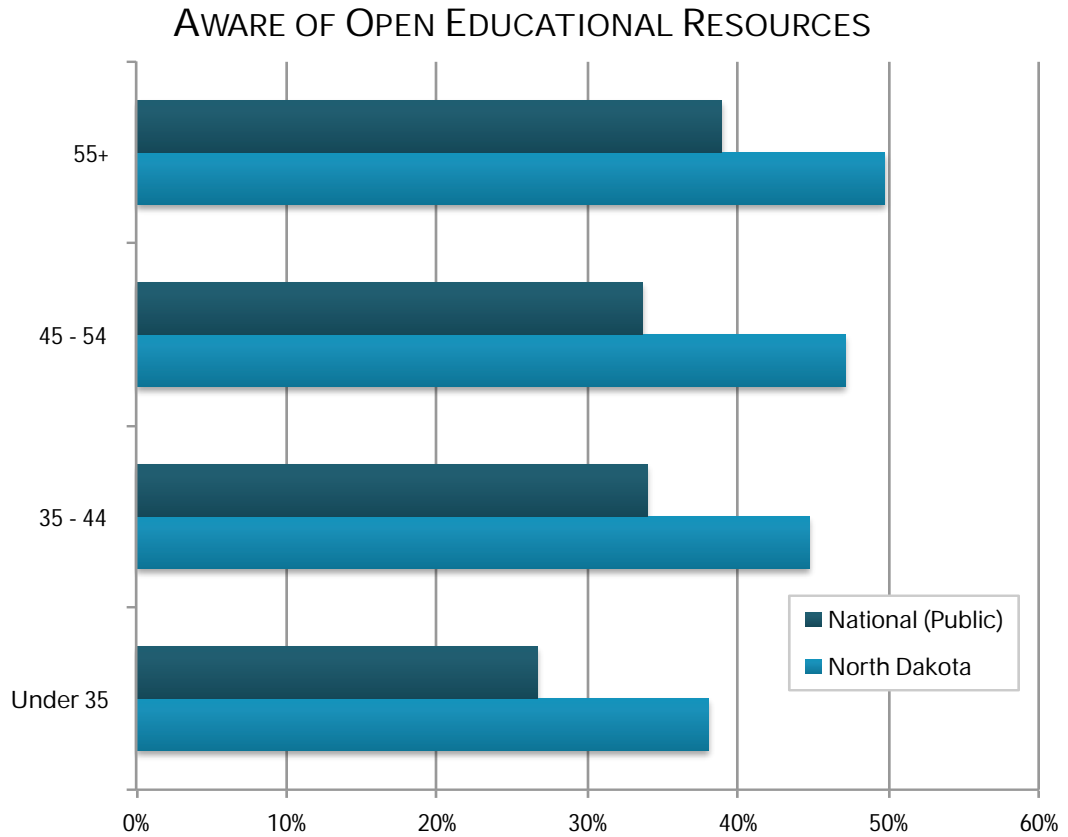
	North Dakota	National (Public)
I am very aware of OER and know how they can be used in the classroom	6.6%	5.6%
I am aware of OER and some of their use cases	21.2%	15.7%
I am somewhat aware of OER but I am not sure how they can be used	18.3%	14.3%
I am not aware of OER	29.7%	31.7%
I have heard of OER, but don't know much about them	24.2%	32.7%

The higher rates of self-reported OER awareness in North Dakota may be somewhat expected. The many activities of the North Dakota Open Educational Resources Initiative mean that OER has been in the news, discussed at faculty senate meetings, and mentioned by the State Board of Higher Education. However, this study was conducted prior to implementing any formal faculty workshops about Open Educational Resources. Faculty reporting that they are “aware of OER” in higher numbers may actually be answering the question “Have you heard of the acronym OER.”

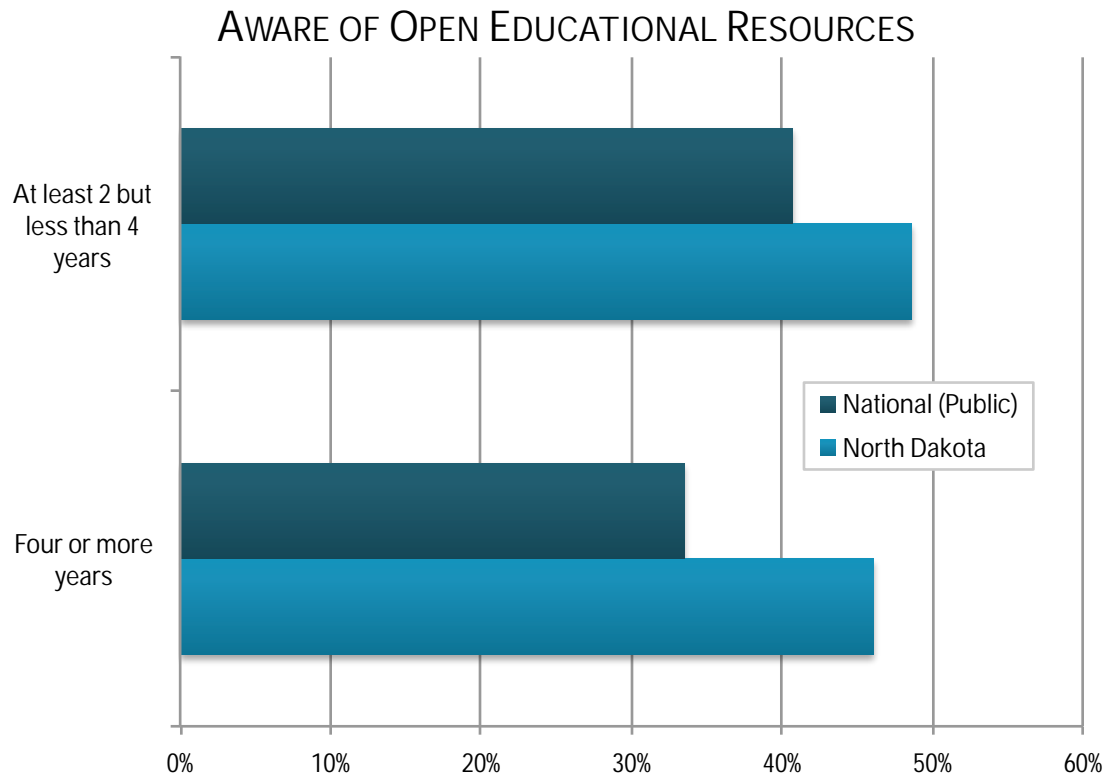
AWARNESS OF OPEN EDUCATIONAL RESOURCES



It has been hypothesized that younger faculty are the most digitally aware and have had the most exposure to and comfort in work with digital resources. Older faculty are sometimes assumed to be less willing to adopt the newest technology or digital resources. However, when the level of OER awareness is examined by age group, it is the NDUS faculty ages 55+ that have the greatest degree of awareness, while the youngest age group (under 35) trail behind.



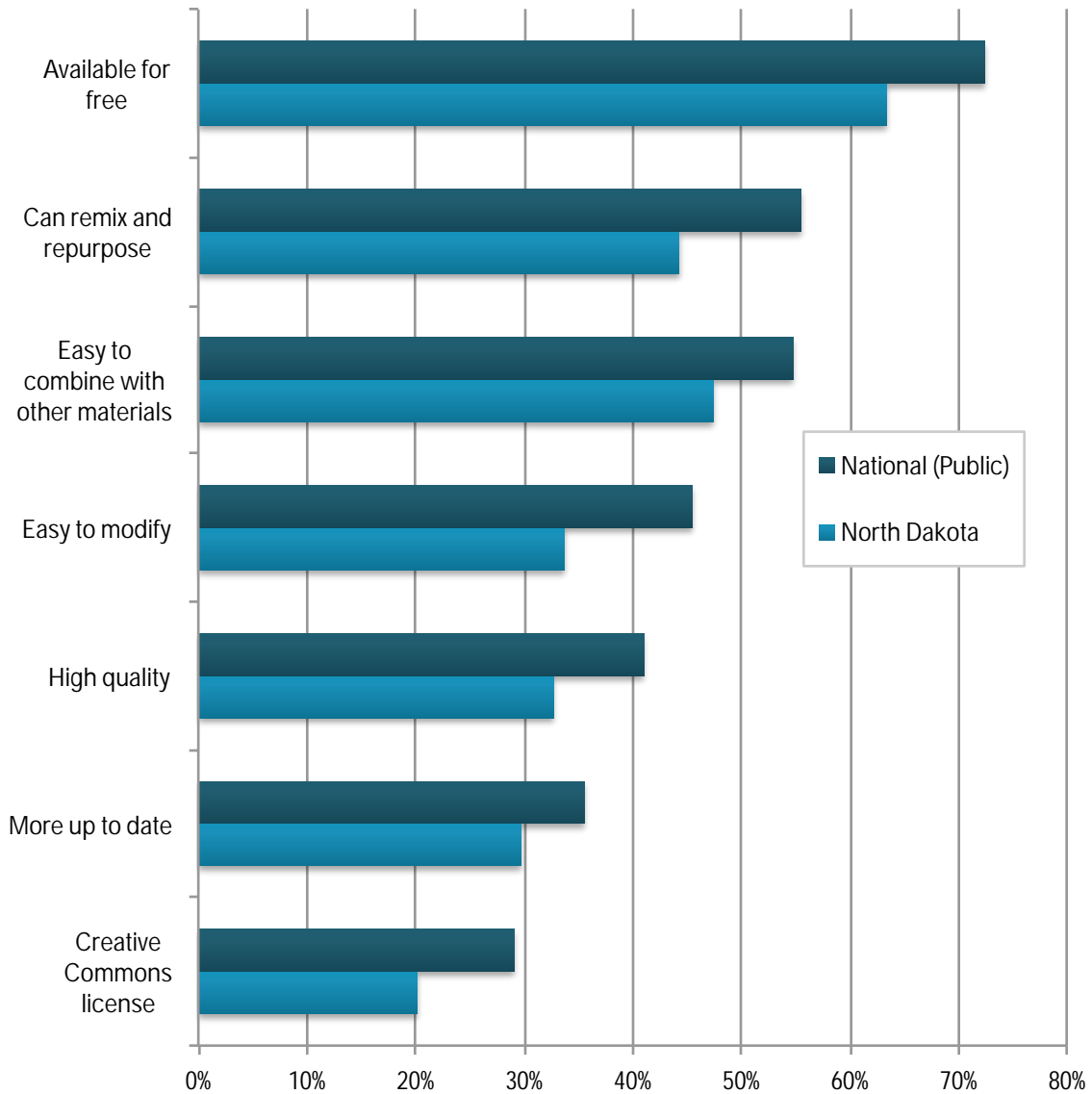
Faculty at two-year institutions report consistently higher level of awareness of OER than faculty at four-year institutions. This pattern is more pronounced at national level (41% report being aware at two-year institutions compared to 34% at four year schools) than it is in ND (where the results show 49% for faculty at two year schools compared to 46% for their four year counterparts). Previous studies found that faculty at two-year institutions, in general, seem to see greater potential for OER in their courses than do faculty at four-year institutions.



All faculty were probed to see what characteristics they considered to be part of OER by answering the question “If you were to describe the concept of open resources for education to a colleague, which of the following would you include in your description?”

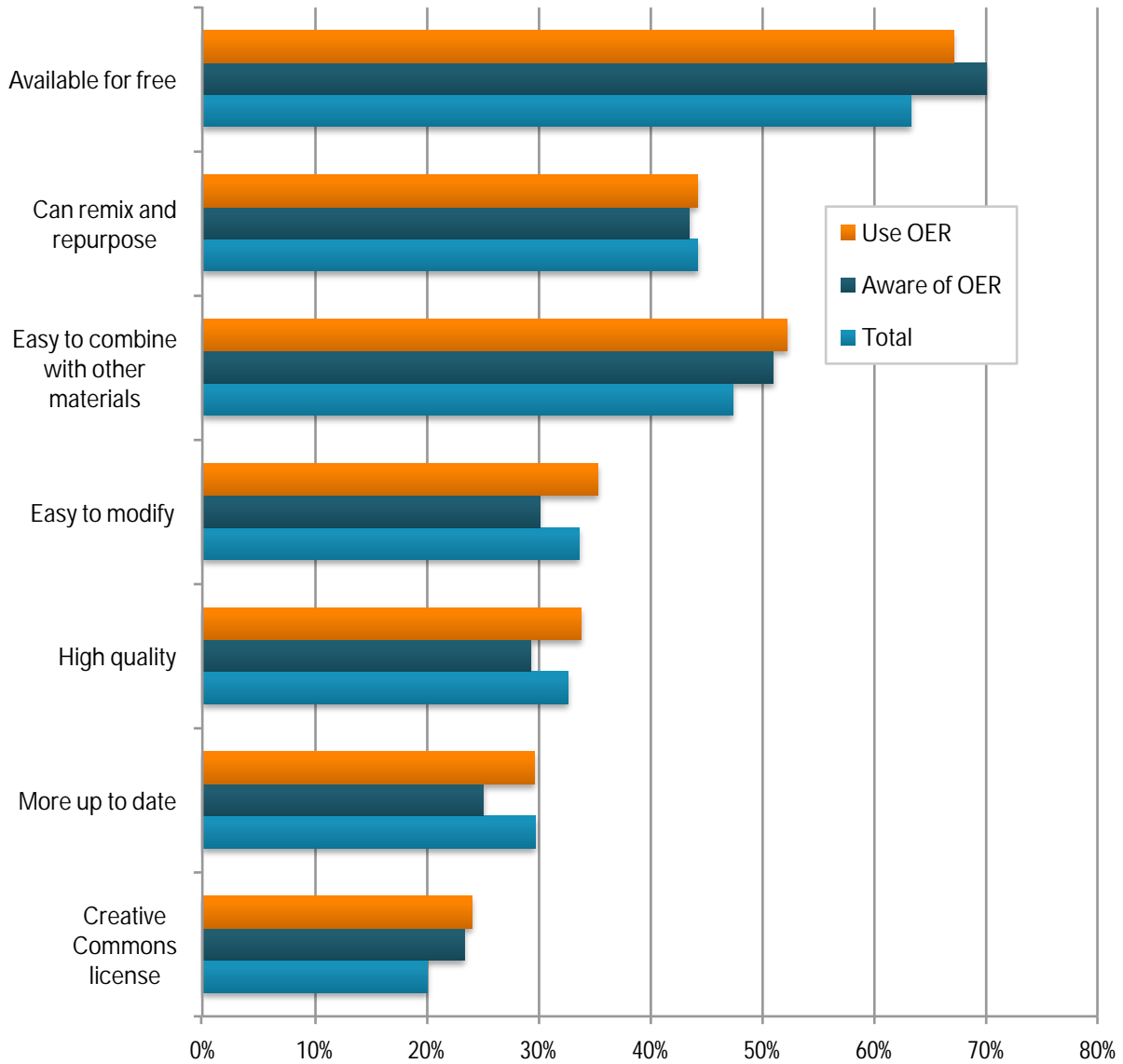
The most common response was that OER was free, which was selected by over 70% of the respondents at public institutions nationally and 63% of public institutions in ND. The ability for OER to be remixed and repurposed and that it could be easily combined with other course materials was the next most common response with 56% (national) and 44% (NDUS) saying they would include this characteristic in a description of OER for a colleague. Other characteristics were selected by less than one-half of the respondents, with Creative Commons licensing being the least common attribute to be selected (20% NDUS; 29% national).

DESCRIPTION OF OPEN EDUCATIONAL RESOURCES



Comparing the pattern of responses among all faculty to those who reported that they used OER and to those who said that they were aware of OER shows that all three groups have very similar views of what constitutes open educational resources. Those who use OER or are aware of OER are slightly more likely to include most of the characteristics in their description, but the differences are minor.

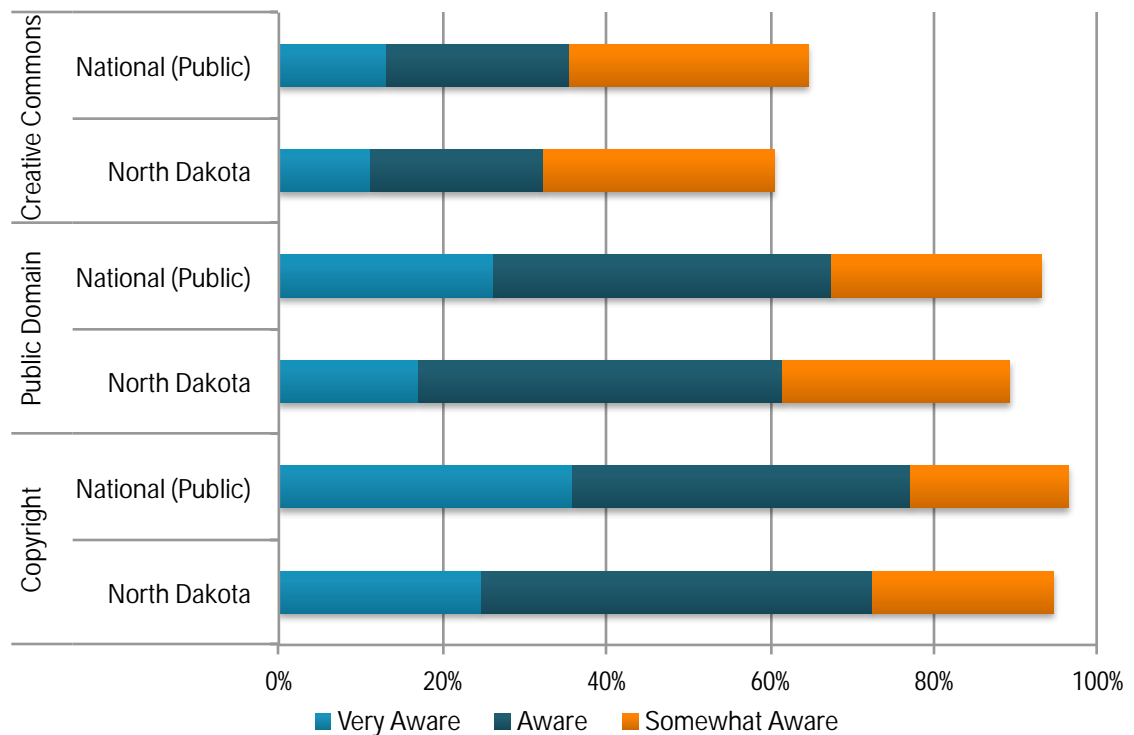
DESCRIPTION OF OPEN EDUCATIONAL RESOURCES - NORTH DAKOTA



Awareness of Licensing of Open Educational Resources

The availability of open licensing and the ability to reuse and remix content is central to the concept of open educational resources. Most faculty in public institutions nationally include the ability to remix content in their descriptions of OER, but less than a half of NDUS faculty include it in their description. Even fewer faculty included Creative Commons license in their description of OER (20% NDUS; 29% national publics). What does this say about how aware faculty are of some of the more common terms for licensing (Copyright, Public Domain, and Creative Commons)? Most faculty report that they are aware of copyright licensing of classroom content (73% of NDUS and 77% of public faculty nationally “Very aware” or “Aware”) and public domain licensing (62% of NDUS and 66% of public faculty nationally “Very aware” or “Aware”) but fall short on awareness of Creative Commons licensing. Less than two-thirds of faculty (61% NDUS; 65% public faculty nationally) report that they are at least somewhat aware of Creative Commons licensing, with the remaining one-third saying that they are unaware (40% NDUS; 35% nationally). In all categories of licensing, NDUS faculty report less awareness of Copyright, Public Domain, and Creative Commons than the faculty at national public institutions. Comparing NDUS to publics nationally, faculty were “Very Aware” of Copyright, at 23% and 36% respectively and “Very Aware” of Public Domain at 17% (NDUS) and 26% (national). This data supports the need for copyright and fair use training across the North Dakota University System.

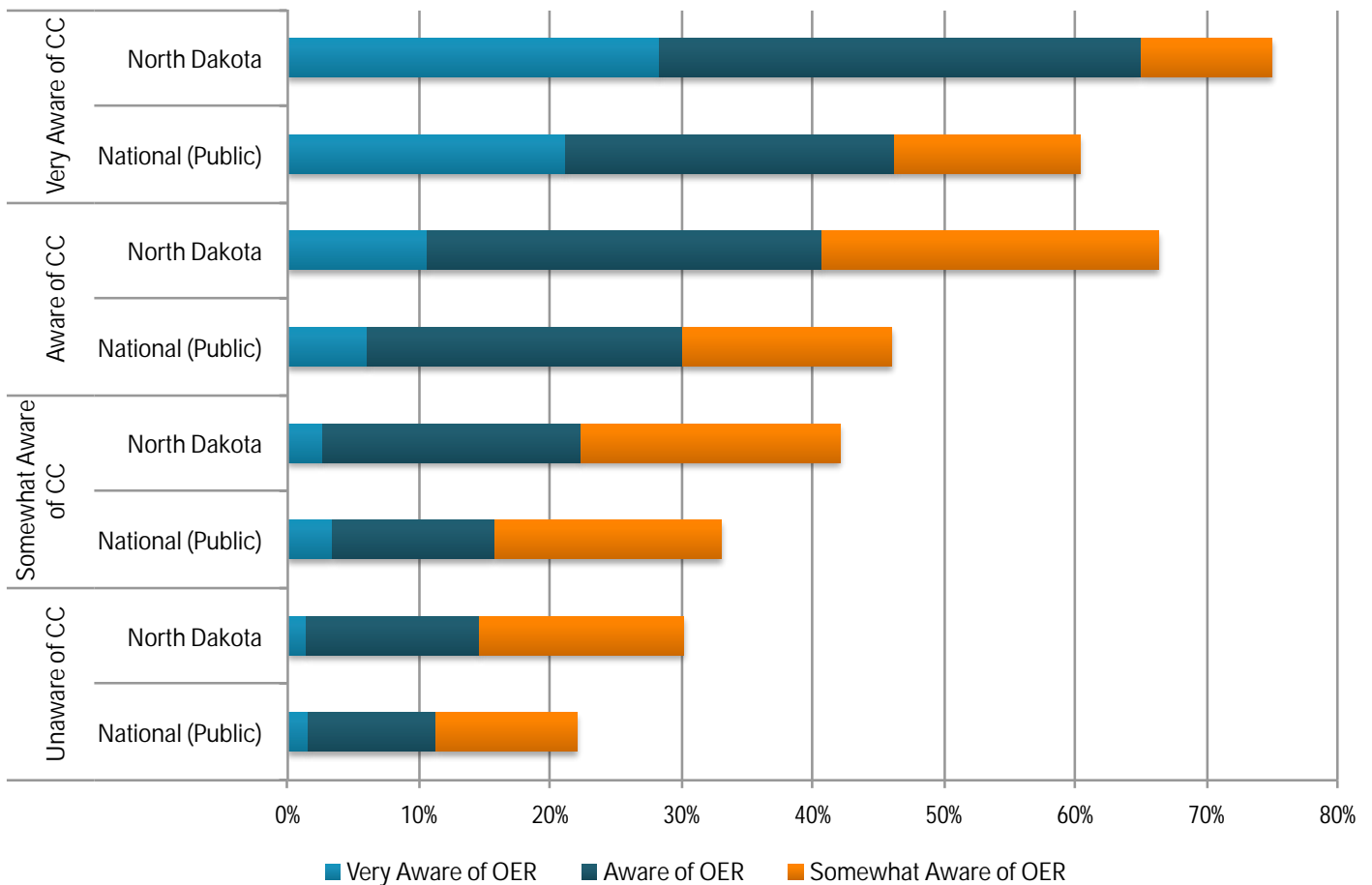
FACULTY AWARENESS OF COPYRIGHT AND LICENSING



While the level of awareness of Creative Commons might lag behind that of copyright and public domain, it is still well above the level of awareness of open educational resources (61% of NDUS faculty say they are aware of Creative Commons, but only 46% claimed to be aware of OER). It appears that faculty have a much greater level of awareness of the type of licensing often used for OER than they do of OER itself. It appears that they do not always associate this licensing with OER.

As might be expected, there is a strong, but not perfect, relationship between awareness of open educational resources and awareness of Creative Commons licensing. Three-quarters of NDUS faculty who report that they are very aware of Creative Commons licensing also report some level of awareness of OER. The proportion reporting OER awareness drops to 66% among NDUS faculty who report that they are “aware” of Creative Commons and to 42% among those “somewhat aware” of Creative Commons. It may be somewhat surprising that many faculty who claim to be very aware of Creative Commons report that they are unaware of OER, while nearly a third (30%) of NDUS faculty who have no awareness of Creative Commons claim to be aware of OER.

FACULTY AWARENESS OF OPEN EDUCATIONAL RESOURCES BY AWARENESS OF CREATIVE COMMONS

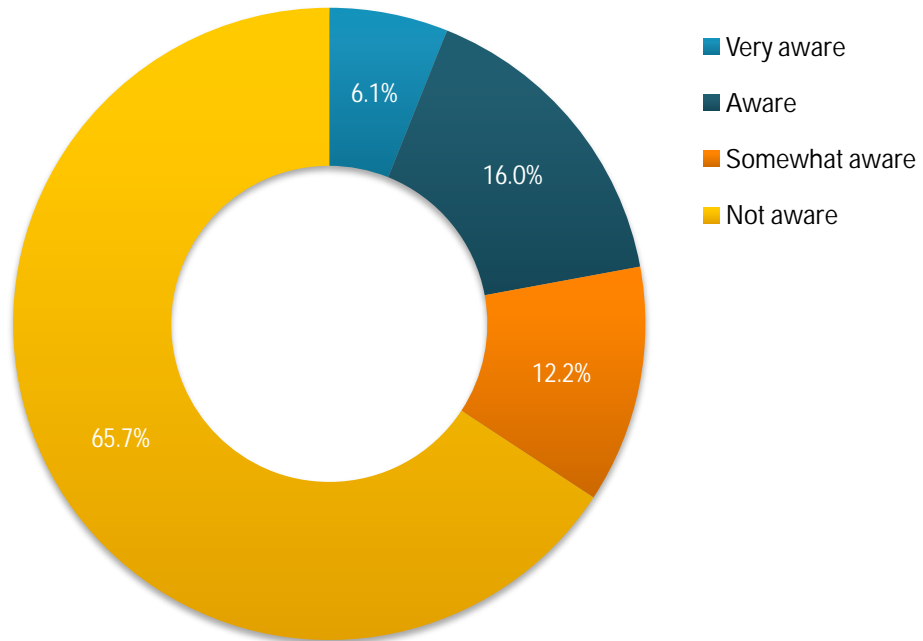


As described above, faculty members may have only a “fuzzy” understanding and awareness of open educational resources. By asking additional questions about the related details, we can

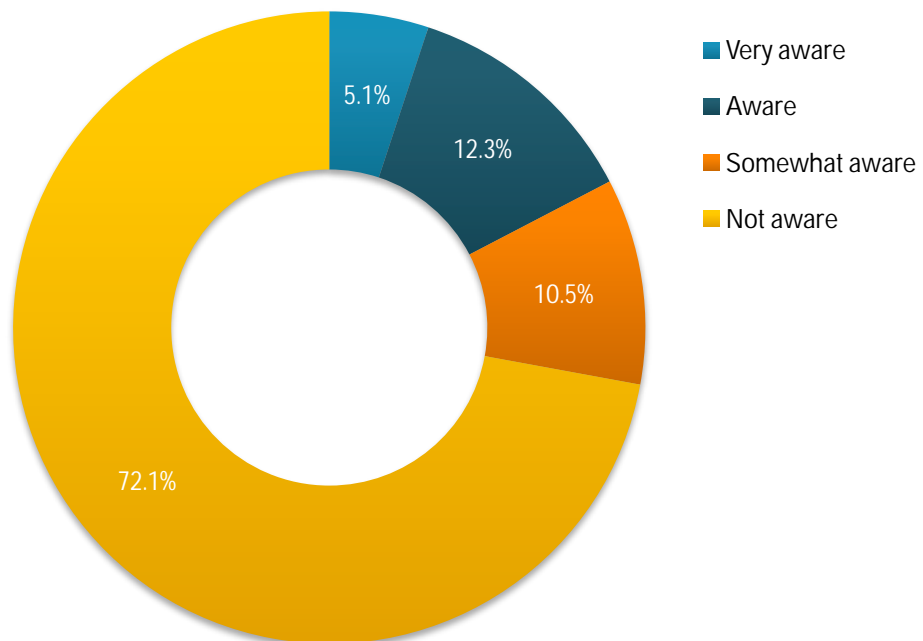
begin to understand how precise that understanding and awareness might be. Since licensing is so critical to the concept of OER, examining the difference between faculty who report that they are aware of OER and faculty who report that they are aware of *both* OER and Creative Commons licensing gives us a good indication of the depth of understanding of OER among faculty members. If faculty who report that they are unaware of Creative Commons licensing are removed for any of the “aware” categories of the measure of OER awareness, we create a much stricter index of OER awareness.

The level of OER awareness drops when we apply this stricter definition, but only somewhat. In North Dakota those classified as “very aware” dips from 5.1% to 4.7%, “aware” from 15% to 12%, and “somewhat aware” from 14% to 10%. The overall proportion classified into any of the “aware” categories changes from 34% when awareness of Creative Commons is not considered to 26% when it is required.

AWARENESS OF OPEN EDUCATIONAL RESOURCES AND CREATIVE COMMONS - NORTH DAKOTA



AWARENESS OF OPEN EDUCATIONAL RESOURCES AND CREATIVE COMMONS - NATIONAL PUBLIC INSTITUTIONS



Use of OER

"I have posted all of my course materials on the web for nearly 15 years. I am ready to be a provider more than a user." (Full-time Other faculty)

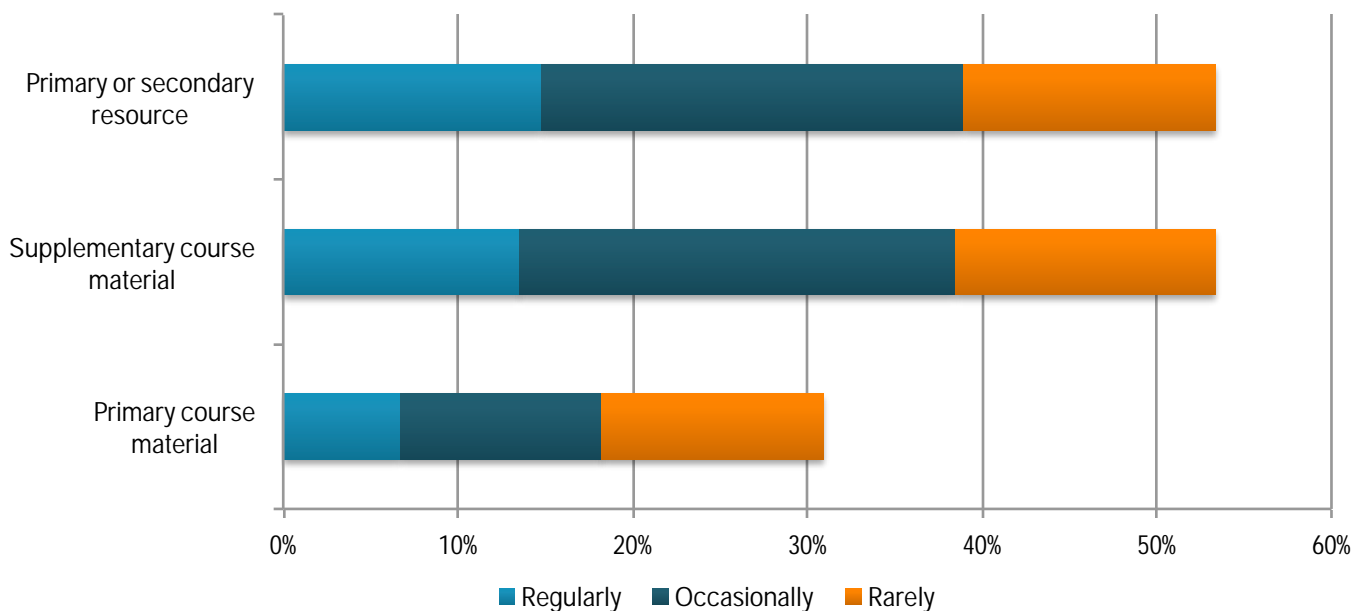
"I frequently use material available on websites with some degree of success, depending upon student interaction and motivation which is always uneven. I think I am at a disadvantage because of limited resources and training available for my four-year institution." (Full-time Arts and Literature faculty)

"My knowledge and experience in using open educational resources is very limited." (Full-time Career and Technical Education faculty)

Faculty members at public institutions (95% NDUS; 90% nationally) are central to the decision making process for the selection and adoption of educational resources. As noted above however, they also suffer from a less-than-perfect understanding of exactly what is and is not OER, so these individuals will not always be able to give complete and accurate answers.

While NDUS (46%) and national public (35%) faculty members claim to be aware of open educational resources, more than one-half report that they use OER. There are even some faculty who said that they were not at all aware of OER who report that they have used it once the concept is explained for them. This seeming contradiction appears to derive from two causes: the (lack of) faculty understanding of the term of "Open Educational Resources," and the fact that faculty often make resource choices without any consideration to the licensing of that resource.

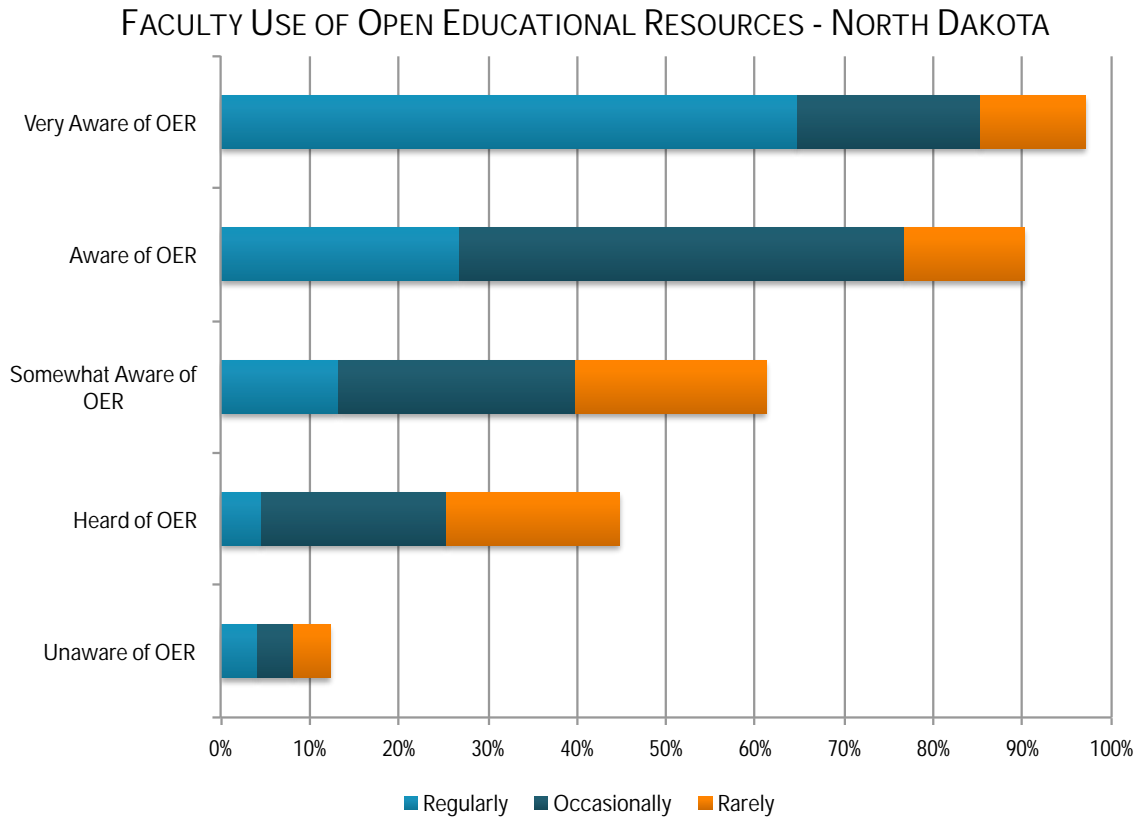
FACULTY USE OF OPEN EDUCATIONAL RESOURCES - NORTH DAKOTA



In what ways might faculty be over-reporting their use of OER? Faculty have a good understanding and appreciation of the concepts of OER (e.g., open licensing, free, reuse and remixing), but many do not associate these aspects with the term OER. The issue is not so much that faculty have a different understanding of OER, but rather that they make resource decisions unaware of these issues. Adopting a “free” resource, unaware of its licensing terms, may easily be classified as OER in their mind. That resource might be OER, or, depending on its licensing terms, it might not be.

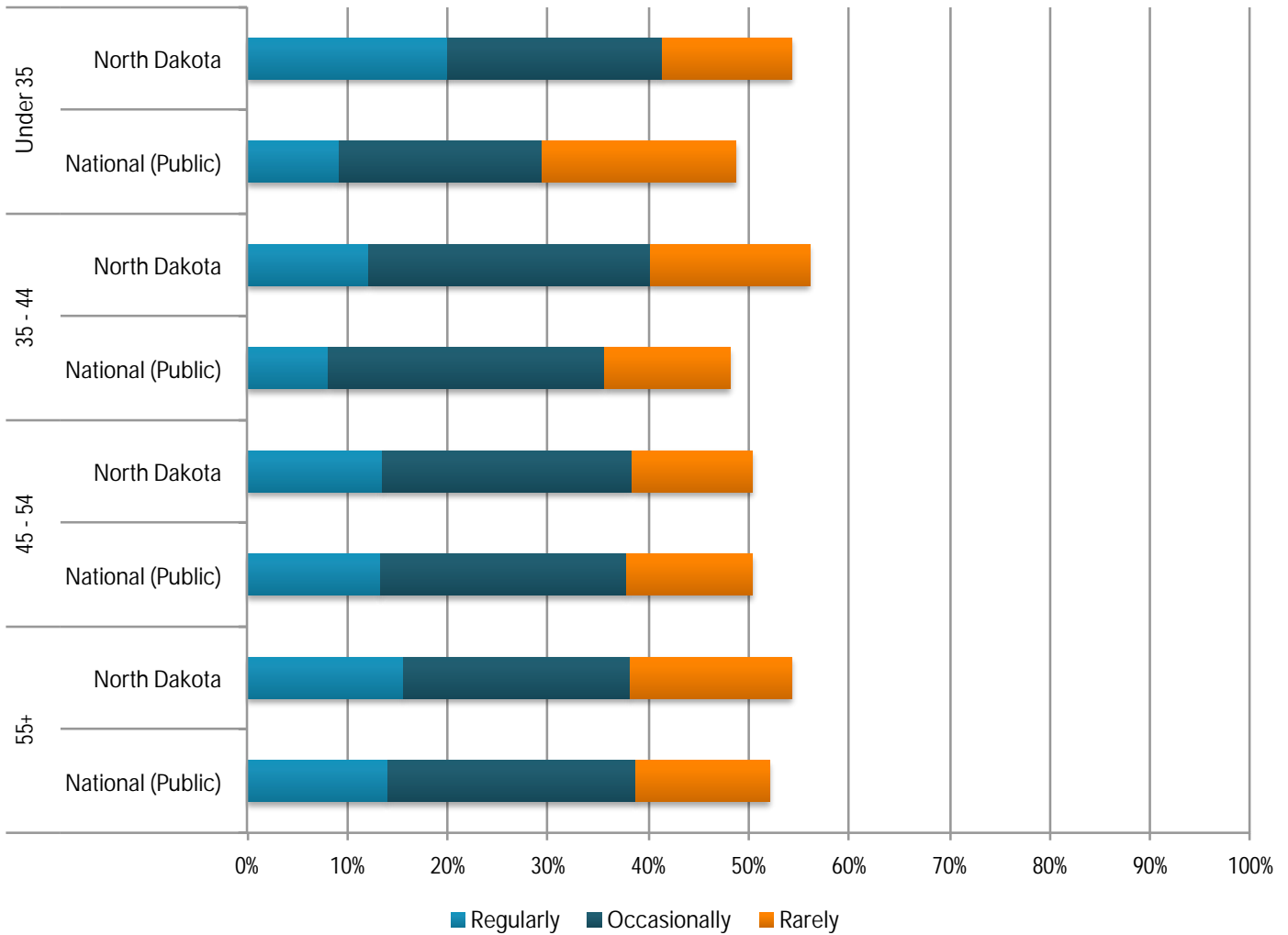
Roughly one-half (54% NDUS; 51% nationally) of faculty report using OER as supplemental course material, with 30% saying that they use it as primary material.

Among NDUS faculty who reported that they were very aware of OER, 97% say that they use it in some capacity. More surprising is that 45% of faculty who said they have only heard of OER report that they use OER. Faculty appear to be aware of OER as a term, but once presented with a definition and explanation, greater numbers say that they are making use of these resources.



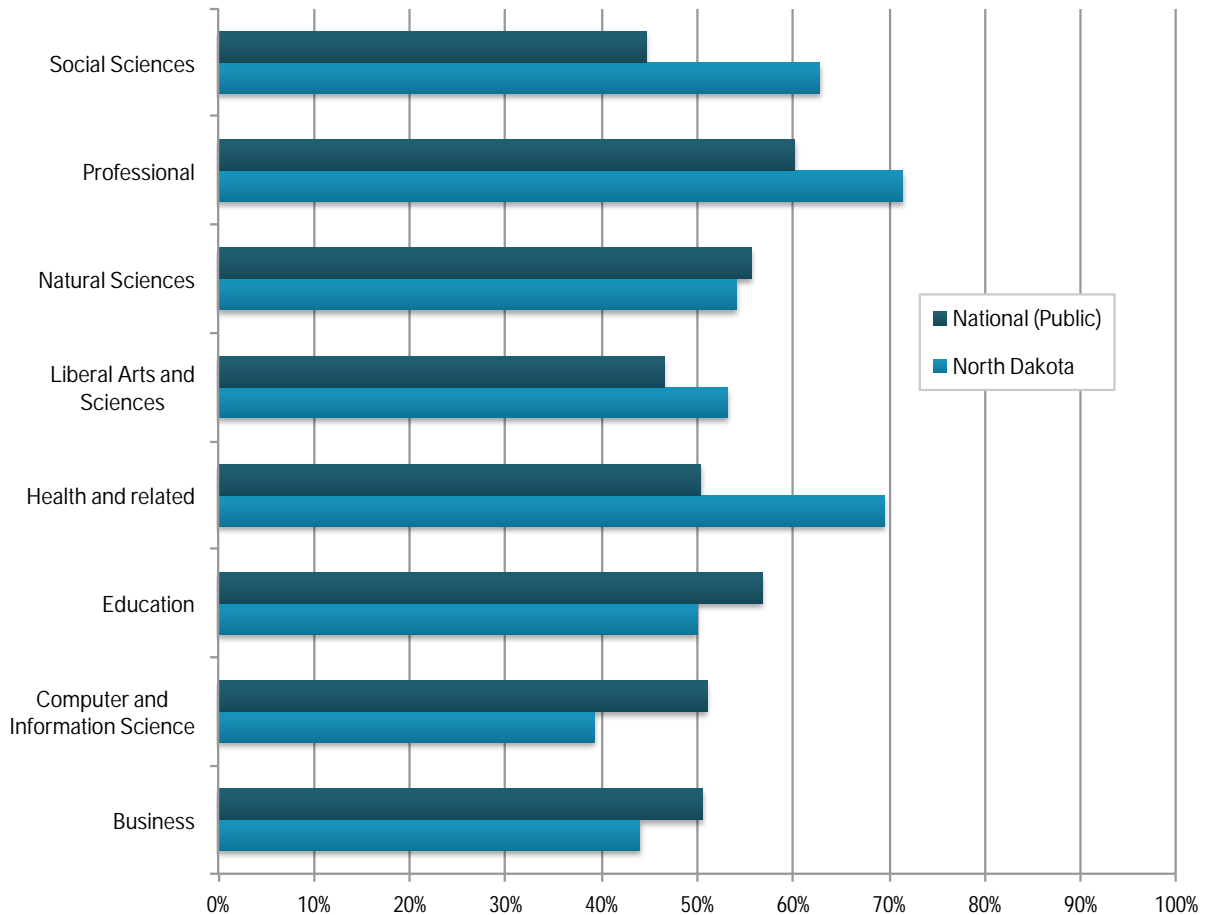
The pattern of Open Educational Resource use by age does not follow the same pattern as was observed for awareness of OER by age, where there was a strong relationship of older faculty having greater levels of awareness. In North Dakota the oldest faculty have the same overall rate of reported OER use (54%) as faculty in the youngest age group. However, the proportion who say they use OER regularly is higher among the younger faculty (15% for those under 35 compared to 9% for those aged 55+).

FACULTY USE OF OPEN EDUCATIONAL RESOURCES BY AGE



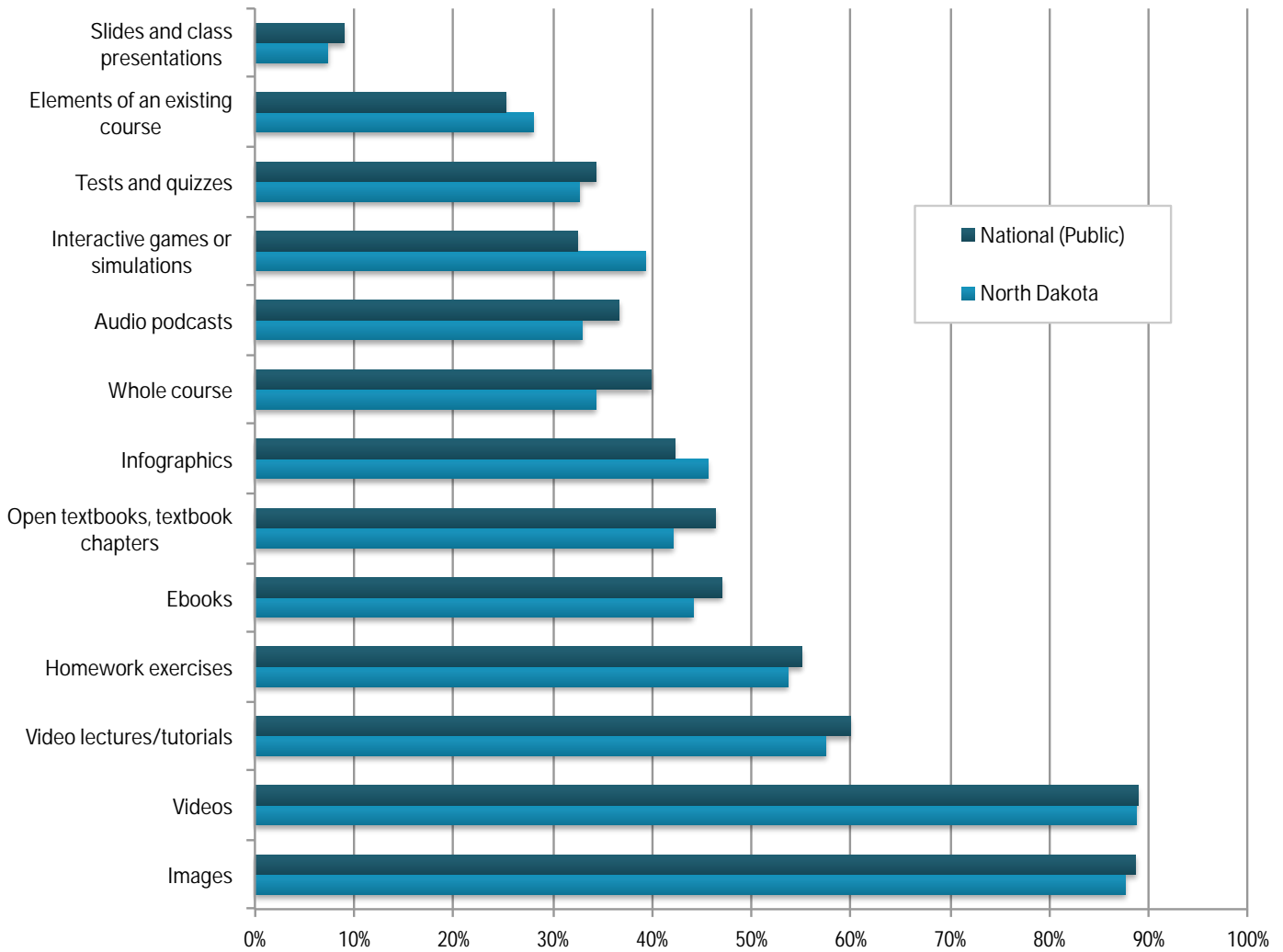
Use of open educational resources by discipline shows some interesting differences in North Dakota as compared to the national pattern. North Dakota faculty in the Social Sciences, Health and related fields, and Professional disciplines report greater levels of OER use than their national counterparts. NDUS faculty in Computer and Information Science, on the other hand, report a lower rate of OER use than those nationally.

FACULTY USE OF OPEN EDUCATIONAL RESOURCES BY DISCIPLINE



Faculty that reported any OER use (regularly, occasionally, or rarely) were asked detailed questions about the type of OER materials that they were using. Results of this study mirror those previously published in "Opening the Curriculum." Almost 90% of faculty using OER reported that they use images (88% NDUS; 89% national) and videos (89% NDUS; 89% national). These were followed by video lectures/tutorials and homework exercises. Most of the remaining resources types were used by between 30% and 50% of faculty who used any OER. Least likely to be used were slides and class presentations (9%).

TYPE OF OPEN EDUCATIONAL RESOURCES USED



Comparison of OER to Traditional Resources

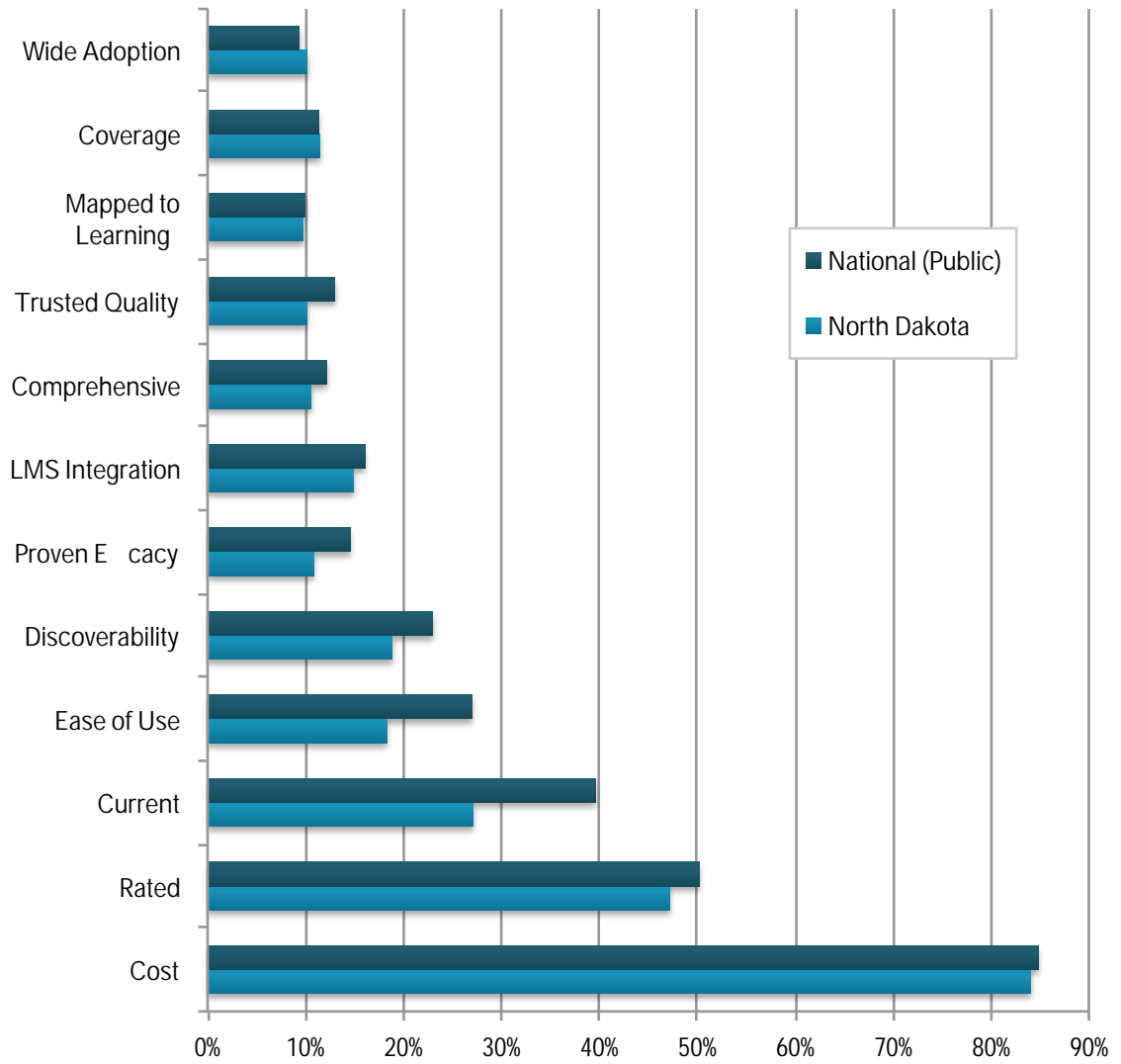
"If we get rid of traditional textbooks, where is the incentive for people to design them? After a while there will be very little new material available. Textbooks have it put together for you; no need to go searching for things. I don't mind doing some of that, but it's nice to have a textbook as a starting point." (Full-time Social Sciences faculty)

"I know nothing about how open resources will be maintained but I can't see how the material can compete for quality with professional publishers. The professional publishers are up-to-date on pedagogy. The material has been edited professionally, and the information has been reviewed by peers. I like the things that come with professional publications such as test banks, videos and graphics. My field is one that is constantly changing. How could open resources be up-to-date when not funded by a business model?" (Full-time Psychology faculty)

"I understand that some textbooks are more expensive than they need to be, and I have often thought about using free materials." (Full-time Natural Sciences faculty)

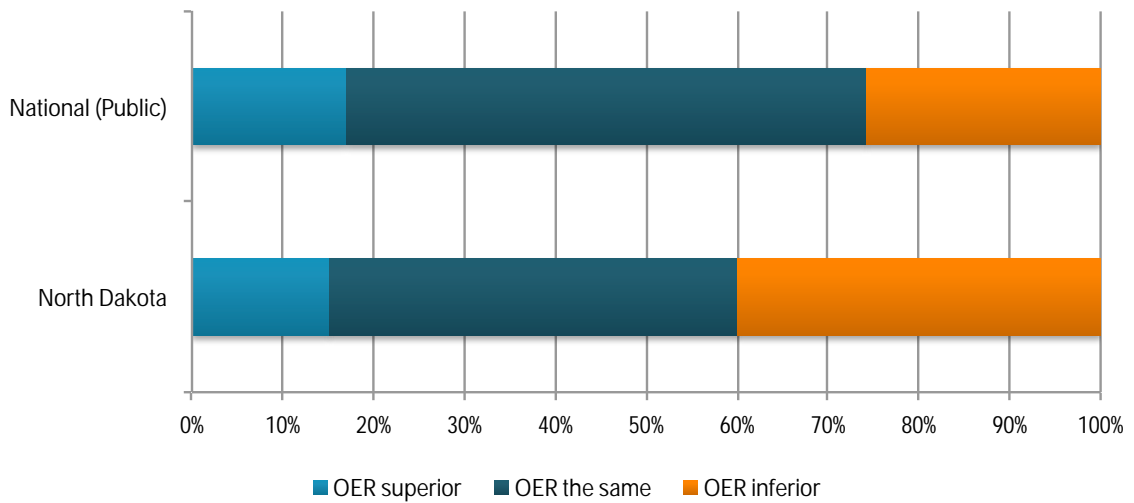
Faculty were asked to compare OER to traditional resources along a number of dimensions, where they could rate OER as superior, traditional resources as superior, or say they "were about the same." The one clear area where faculty rated OER as superior to traditional resources is the dimension of cost, where 84% of NDUS and 85% of national public faculty considered OER to be superior. Faculty also ranked OER higher than traditional resources in the category "Materials are rated by faculty or editors (47% NDUS; 50% nationally). In most dimensions, including "Current (is up to date)," "Ease of Use (is easy to use)," "easy to find and select," "proven efficacy," and "works with LMS," OER were rated roughly equal to traditional resources. Traditional resources were seen as superior for the remaining dimensions: "mapped to learning outcomes," "trusted quality," "range of materials," "range of subjects," and "wide adoption." NDUS faculty are split between traditional and OER when rating "Materials cover a wide range of subjects." They also reported OER to have greater deterrents in the areas of "Not enough subject resources," and "not comprehensive." This faculty feedback comes before NDUS plans to launch a comprehensive OER training program and partnership with the Open Textbook Network at University of Minnesota. When this survey is again deployed in a year's time, it'll be interesting to see how these numbers will be affected.

OPEN EDUCATIONAL RESOURCES SUPERIOR



Comparing the ratings of faculty for both traditional and open educational resources shows how faculty rank each type of resource relative to the other. Only a minority of faculty (45% ND, 42% nationally) could provide a rating for the quality of OER materials, so this comparison is only possible for this subset of faculty members. NDUS faculty are less pleased with OER quality than their national counterparts, with fully 40.0% of those who provided a response saying that OER quality was inferior to that of traditional resources. This compares to 26% among the national sample. For the subset of faculty with sufficient exposure to both traditional and OER, it appears that there is preference for the quality of traditional resources. This preference is not large for the national sample, but is considerable among the NDUS faculty.

RELATIVE QUALITY OF OER VERSUS TRADITIONAL RESOURCES



Potential Barriers

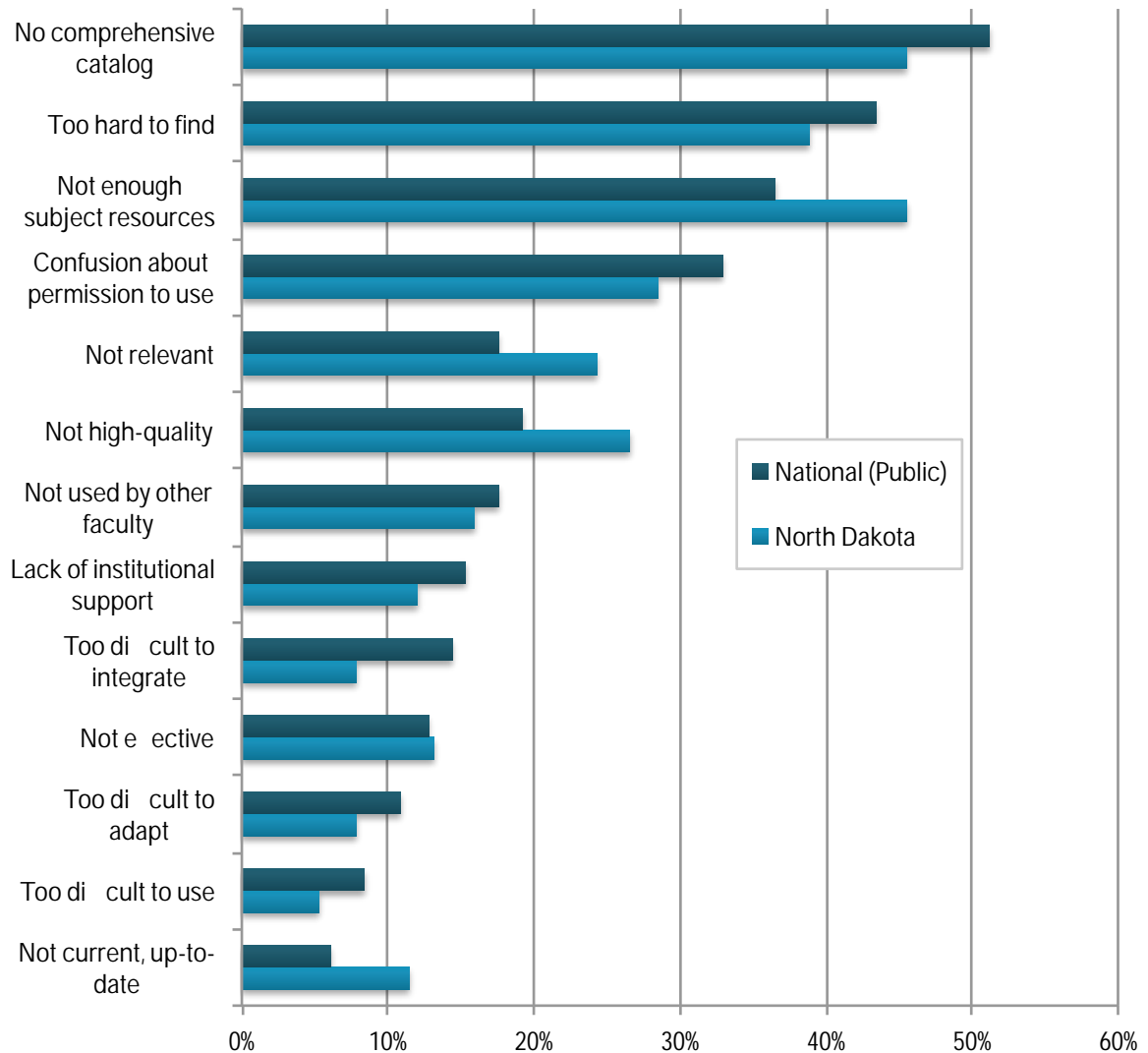
"I am not sure that high quality OER's exist for my subject matter, especially the upper level courses." (Full-time Natural Sciences faculty)

"When OERs were first introduced in the NDUS, I looked at the list of topics and materials. While there were many general topics, there was nothing specific to teaching children with disabilities. I have no objection to using OERs, but have not found any that meet the needs of my students for the specific classes I teach. If some were available AND covered essential material using good pedagogy, I would gladly use OER materials." (Full-time Education faculty)

"I would use more OER if there were a good clearing house of similar service to help me find what I need. I have not used a textbook for most of my classes in over 6 years." (Full-time Education faculty)

Current results for NDUS public faculty members mirror the concerns of public faculty nationally. Nearly half of the faculty aware of or using OER report that the difficulty finding resources is a barrier to OER use. The lack of a catalog (46% NDUS; 51% national), not enough subject resources (46% NDUS; 37% national) and the difficulty of finding what is needed (39% NDUS; 43% national) are the most often cited barriers. All three of the most mentioned barriers are related to the ease of finding appropriate material. This corresponds very closely to previous findings, where faculty listed the time and effort to find and evaluate these resources as the most important barrier to adopting OER. A majority of faculty reported that difficulty in searching and the lack of a comprehensive catalog on OER materials were important barriers to their use of OER.

DETERRENENTS TO USING OPEN EDUCATIONAL RESOURCES



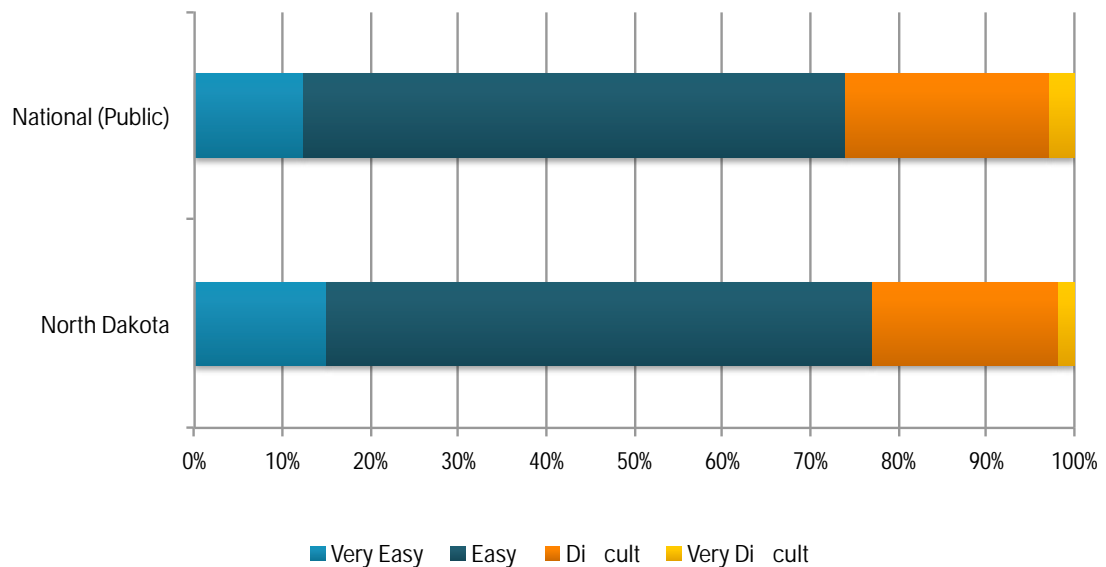
Concern about licensing and its constraints on potential use and adaption was the fourth most mentioned barrier to OER adoption. The level of concern drops considerably after these top four issues. Most faculty that are aware of OER report that they have little concern that OER is up-to-date, easy to use and edit, or easy to integrate into the technology they are currently using.

Discoverability

Given that the top three barriers that faculty cite impacting their adoption of open educational resources are related to the ease of finding and selecting the appropriate resource, it is important to understand how this dimension compares to ease of finding and selecting the more traditional resources that faculty are already using. How much more difficult is the search and adoption process for OER? To address this question, faculty were asked to rate how difficult it was to search for traditional resources using a four-point scale, and then asked the same question relative to searching open educational resources.

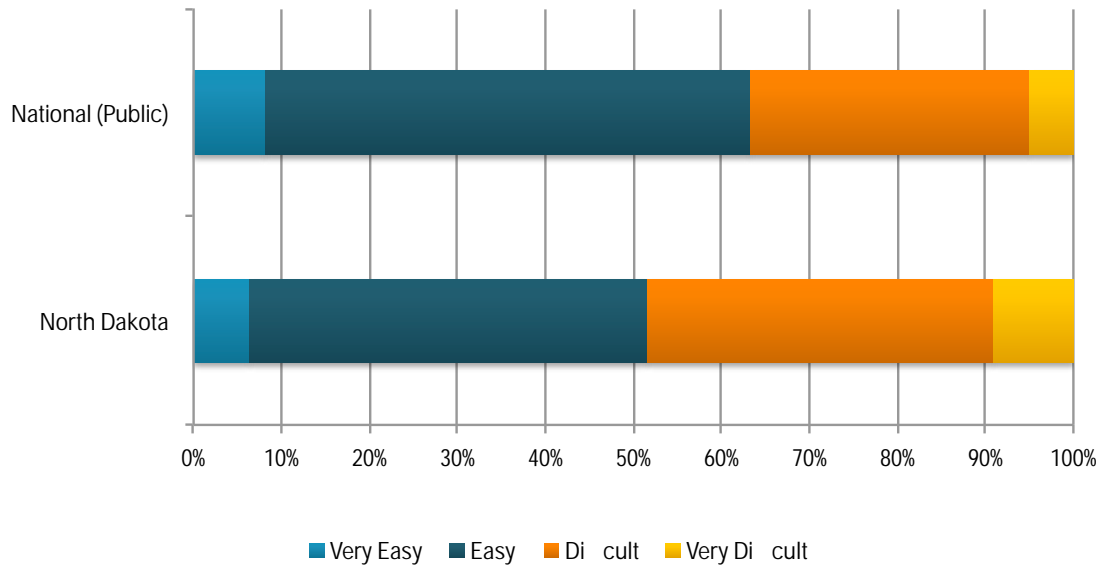
Nearly three-quarters of faculty reported that searching for resources from traditional publishers was “easy” or “very easy” (77% NDUS; 74% national) with one-quarter saying it was “difficult.” Only very few faculty (2% NDUS; 3% national) considered the ease of search for resources from traditional publishers to be “very difficult.”

EASE OF SEARCHING TRADITIONAL PUBLISHERS



While a majority of faculty considered the ease of searching open educational resources to be “easy” or “very easy” (52% NDUS; 63% national), this is still less than the proportion who rated traditional publishers in these categories. More NDUS faculty reported that it is “difficult” to search OER (39% NDUS; 32% national), compared to the one-quarter who gave traditional publishers this rating. The proportion rating ease of searching OER as “very difficult” is lower for national public faculty at 5% compared to 9% of North Dakota University System faculty, compared to only 3% (national public) and 2% (NDUS) who rate searching of traditional publishers as “very difficult.”

EASE OF SEARCHING OPEN EDUCATIONAL RESOURCES



The level of effort in searching for OER reported by faculty is only slightly more difficult than the effort that they perceive in searching for traditional resources, so why is it that issues of finding and evaluating OER tops faculty’s list of potential barriers for OER adoption? The answer appears to be that faculty see barriers for the adoption of *any* new teaching resource – OER or traditional. The effort to find and evaluate new resources (of any kind) and integrate them into the curriculum is substantial. Over a quarter of faculty see this as “difficult” or “very difficult” for traditional resources – even with their well-established mechanisms and considerable faculty experience with the process. Moving to an OER, where the faculty member is far less familiar and the cataloging and search mechanism less well developed, only make this issue more important. It is perhaps more surprising how close faculty rate the discoverability of OER as compared to traditional resources than it is that discoverability and evaluation are the most-cited barriers.

Future Use

*"I'm more than happy to use open source materials and remove myself from the racket that is the traditional textbook publishing machine. I cringe every time I examine textbook prices."
(Full-time Natural Sciences faculty)*

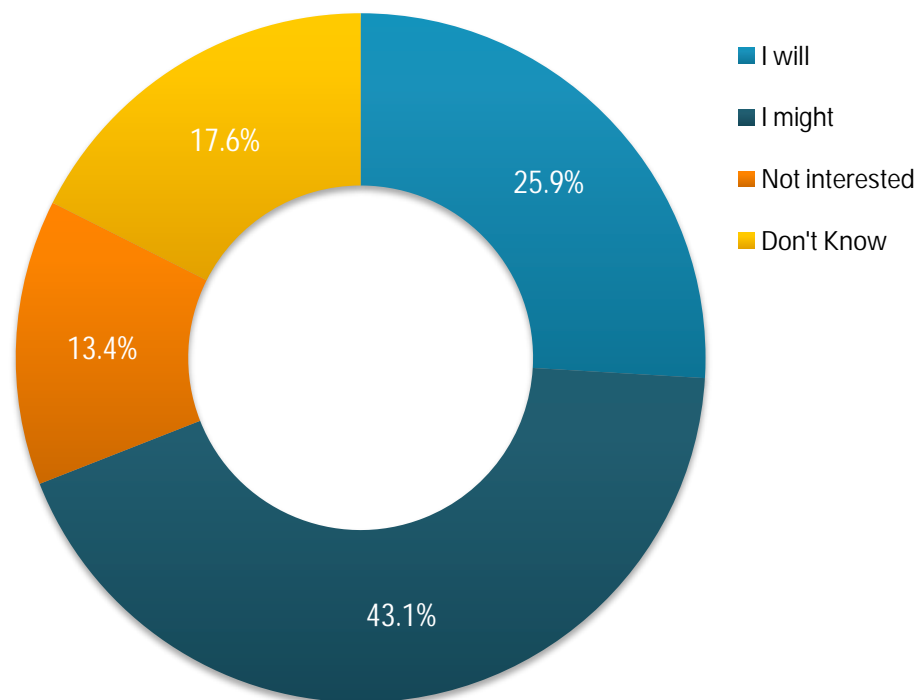
"Only recently have good quality open resource products become available for the courses I teach so only now can a realistic discussion begin..." (Full-time Other faculty)

"I'm clinical faculty at the med school and am not in to all of this." (Part-time Medicine faculty)

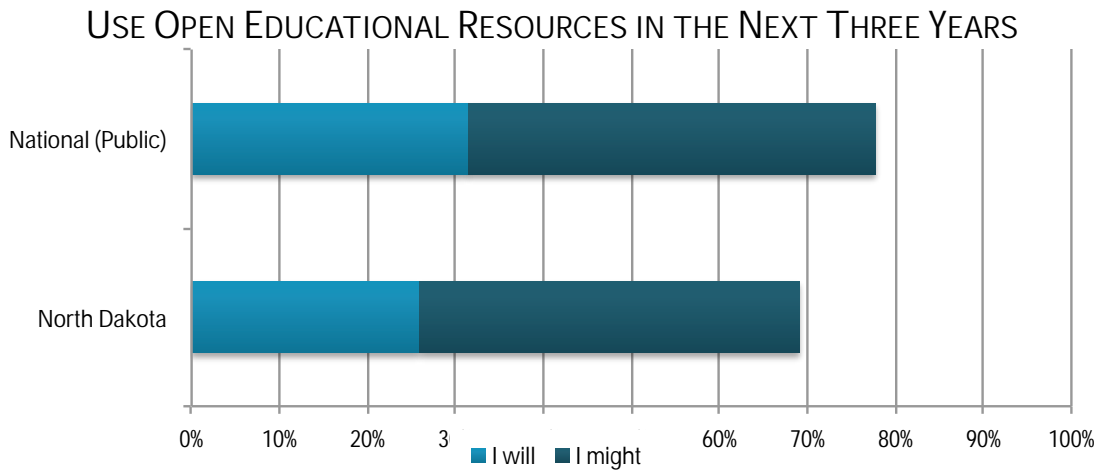
*"I would really need to research more OER sources before I chose them for our students."
(Full-time Education faculty)*

Based on the results of the survey, the use of OER may potentially increase greatly over the next three years. When faculty members that are not current users of open educational resources were asked if they expected to be using OER in the next three years, a majority (69% NDUS; 78% nationally) reported that they either expected to use OER or would consider using OER.

USE OPEN EDUCATIONAL RESOURCES IN THE NEXT THREE YEARS -
NORTH DAKOTA



NDUS faculty are somewhat less likely to report that they are willing to try OER in the next three years. More than two-thirds of both the NDUS faculty and their national counterparts report that they might or will try OER (the percentage saying “I Will” is 26% ND compared to 32% nationally) and those who “might” (43% in ND, 46% nationally).



What this means for the ND OER Initiative

This report serves as baseline data for the North Dakota Open Educational Resources Initiative. . This study and report is essential to the system office and institutions as they plan and implement strategies that will support faculty. The NDUS joined the Open Textbook Network at the University of Minnesota. Fall, 2015 marks the beginning of system-wide campus and faculty training sessions on the use and adoption of Open Educational Resources. At the time of publishing, efforts to implement the ND OER Initiative will have just begun. In October, 2015, North Dakota faculty will have the opportunity to attend workshops, conduct peer reviews of open textbooks, and access and contribute to the collection of textbooks at the Open Textbook Library. Future surveys will show the effectiveness of the ND OER Initiative and the overall impact faculty training, adoption, and peer reviews have on the cost of textbooks for NDUS students.

SURVEY METHODOLOGY

Two data sets were collected, analyzed, and compared for this report: faculty responses from public institutions collected in the nationally representative faculty sample used in *Opening the Curriculum, 2014*, and a sample of faculty responses from the North Dakota University System. All quotes used in this report were taken from the ND faculty survey.

The national data set employed a multiple-stage selection process in creating a stratified sample of all teaching faculty. The process began by obtaining data from a commercial source, Market Data Retrieval⁹, which has over one and a half million faculty records and claims that its records represent 93% of all teaching faculty. All teaching faculty (defined as having at least one course code associated with their records) were selected for this first stage. Faculty were then randomly selected from the master list in proportion to the number contained in each Carnegie Classification to produce a second-stage selection of teaching faculty members. This sample was then checked against opt-out lists, as well as for non-functioning email addresses. Approximately 12% of all email addresses were removed at this stage. The number of email addresses that were still receiving mail but no longer actively being used by the individual being addressed (e.g., moved or retired) is unknown. Spam filters at both the institution and the individual level also captured an unknown proportion of these emails.

A total of 2,144 faculty responded to the national survey, representing the full range of higher education institutions (two-year, four-year, all Carnegie classifications, and public, private nonprofit, and for-profit) and the complete range of faculty (full- and part-time, tenured or not, and all disciplines). Almost three-quarters of the respondents report that they are full-time faculty members. Just under one-quarter teach online, and they are evenly split between male and female, with 28% having taught for 20 years or more. For the purposes of this study, only the public faculty data was used.

The North Dakota University System utilized faculty's email addresses stored in Peoplesoft, (full- and part-time faculty, tenured or not, and all disciplines). In order to ensure surveys were not sent to multiple addresses, only faculty members' self-identified preferred email account were used. Spam filters were adjusted to allow survey delivery. Of the 5,705 NDUS faculty surveyed, 748 responded for a 13% response rate.

Institutional descriptive data come from the College Board Annual Survey of Colleges and from the National Center for Educational Statistics' IPEDS database¹⁰. After the data were compiled and merged with the College Board Annual College Survey¹¹ and IPEDS database, responders and nonresponders were compared to ensure that the survey results reflected the characteristics of the entire population of schools. The responses were compared for 35 unique categories based on the 2005 Carnegie Classification of Institutions of Higher Education.

⁹ <http://schooldata.com/wordpress/wp-content/uploads/2014/06/MDR-Education-Catalog.pdf>

¹⁰ <http://nces.ed.gov/ipeds/datacenter/>

¹¹ Portions of the data used for this report were collected by The College Board as part of the Annual Survey of Colleges and is Copyright © 2013-2014 The College Board.

APPENDIX TABLES

North Dakota Compared to the Nation

LEVEL OF INSTITUTION

	<i>North Dakota</i>	<i>National (Public)</i>
Four or more years	63.6%	42.9%
At least 2 but less than 4 years	36.4%	57.1%

INSTITUTIONAL SIZE CATEGORY

	<i>North Dakota</i>	<i>National (Public)</i>
Under 1,000	18.2%	6.6%
1,000 - 4,999	63.6%	39.5%
5,000 - 9,999	0.0%	23.9%
10,000 - 19,999	18.2%	17.9%
20,000 and above	0.0%	11.9%

Who are the OER Gatekeepers?

ROLE IN SELECTING EDUCATIONAL RESOURCES

	<i>North Dakota</i>	<i>National (Public)</i>
Myself	95.1%	90.1%
Another faculty member	26.1%	22.4%
A faculty committee	16.8%	23.3%
Program or division	21.4%	17.0%
Administration	11.2%	9.2%
Instructional design group	4.4%	5.9%
Other	3.9%	1.7%

I HAVE THE PRIMARY ROLE IN SELECTING EDUCATIONAL RESOURCES

	<i>North Dakota</i>	<i>National (Public)</i>
Business	92.6%	77.0%
Computer and Information Science	86.7%	89.8%
Education	100.0%	79.5%
Health and related	65.4%	74.5%
Liberal Arts and Sciences	88.4%	84.2%
Natural Sciences	85.7%	75.4%
Professional	81.8%	85.3%
Social Sciences	93.5%	91.4%

MOST IMPORTANT IN SELECTING TEACHING RESOURCES

	<i>North Dakota</i>	<i>National (Public)</i>
Proven efficacy	58.1%	58.9%
Trusted quality	52.9%	48.5%
Breadth of coverage	45.7%	39.5%
Integration	28.1%	36.5%
Wide adoption	17.6%	21.4%
Ease of use	20.8%	19.1%
Pedagogical	20.4%	20.1%
Comprehensive	14.7%	14.3%
Flexibility/Modularity	11.5%	15.0%
Discoverability	10.0%	8.9%
Ready to use	7.3%	5.9%
Current	3.8%	3.3%
Provided by my institution	1.6%	2.7%
Faculty ratings	3.8%	2.4%
Cost	2.3%	2.7%

Awareness of Open Educational Resources

AWARENESS OF OPEN EDUCATIONAL RESOURCES

	<i>Very aware</i>	<i>Aware</i>	<i>Somewhat aware</i>	<i>Heard of</i>	<i>Not aware</i>
North Dakota	6.6%	21.2%	18.3%	29.7%	24.2%
National (Public)	5.6%	15.7%	14.3%	31.7%	32.7%

AWARE OF OPEN EDUCATIONAL RESOURCES

	<i>North Dakota</i>	<i>National (Public)</i>
Under 35	38.0%	26.7%
35 - 44	44.7%	34.0%
45 - 54	47.1%	33.7%
55+	49.8%	38.9%

AWARE OF OPEN EDUCATIONAL RESOURCES

	<i>North Dakota</i>	<i>National (Public)</i>
Four or more years	46.1%	33.5%
At least 2 but less than 4 years	48.6%	40.7%

DESCRIPTION OF OPEN EDUCATIONAL RESOURCES

	<i>North Dakota</i>	<i>National (Public)</i>
Available for free	63.3%	72.4%
Can remix and repurpose	44.3%	55.5%
Easy to combine with other materials	47.4%	54.8%
Easy to modify	33.7%	45.5%
High quality	32.7%	41.0%
More up to date	29.7%	35.5%
Creative Commons license	20.1%	29.1%

DESCRIPTION OF OPEN EDUCATIONAL RESOURCES - NORTH DAKOTA

	<i>Total</i>	<i>Aware of OER</i>	<i>Use OER</i>
Creative Commons license	20.1%	23.5%	24.1%
More up to date	29.7%	25.1%	29.7%
High quality	32.7%	29.3%	33.8%
Easy to modify	33.7%	30.2%	35.4%
Easy to combine with other materials	47.4%	51.0%	52.3%
Can remix and repurpose	44.3%	43.5%	44.2%
Available for free	63.3%	70.1%	67.2%

Awareness of Licensing of Open Educational Resources

FACULTY AWARENESS OF COPYRIGHT AND LICENSING

		<i>Very Aware</i>	<i>Aware</i>	<i>Somewhat Aware</i>
Copyright	North Dakota	24.7%	47.8%	22.1%
	National (Public)	35.8%	41.4%	19.3%
Public Domain	North Dakota	17.0%	44.5%	27.7%
	National (Public)	26.3%	41.2%	25.6%
Creative Commons	North Dakota	11.1%	21.2%	28.2%
	National (Public)	13.2%	22.3%	29.2%

FACULTY AWARENESS OF OPEN EDUCATIONAL RESOURCES BY AWARENESS OF CREATIVE COMMONS

		<i>Very Aware of OER</i>	<i>Aware of OER</i>	<i>Somewhat Aware of OER</i>
Unaware of CC	National (Public)	1.6%	9.7%	10.8%
	North Dakota	1.4%	13.2%	15.6%
Somewhat Aware of CC	National (Public)	3.4%	12.3%	17.3%
	North Dakota	2.6%	19.7%	19.7%
Aware of CC	National (Public)	6.1%	24.0%	15.9%
	North Dakota	10.6%	30.1%	25.7%
Very Aware of CC	National (Public)	21.1%	25.1%	14.1%
	North Dakota	28.3%	36.7%	10.0%

AWARENESS OF OPEN EDUCATIONAL RESOURCES AND CREATIVE COMMONS

	<i>Very aware</i>	<i>Aware</i>	<i>Somewhat aware</i>	<i>Not aware</i>
North Dakota	6.1%	16.0%	12.2%	65.7%
National (Public)	5.1%	12.3%	10.5%	72.1%

Use of OER

FACULTY USE OF OPEN EDUCATIONAL RESOURCES - NORTH DAKOTA

	<i>Regularly</i>	<i>Occasionally</i>	<i>Rarely</i>
Primary course material	6.7%	11.5%	12.7%
Supplementary course material	13.5%	25.0%	14.9%
Primary or secondary resource	14.8%	24.2%	14.4%

FACULTY USE OF OPEN EDUCATIONAL RESOURCES - NORTH DAKOTA

	<i>Regularly</i>	<i>Occasionally</i>	<i>Rarely</i>	<i>Never / NA</i>
Very Aware of OER	64.7%	20.6%	11.8%	2.9%
Aware of OER	26.8%	50.0%	13.4%	9.8%
Somewhat Aware of OER	13.3%	26.5%	21.4%	38.8%
Heard of OER	4.5%	20.8%	19.5%	55.2%
Unaware of OER	4.1%	4.1%	4.1%	87.7%

FACULTY USE OF OPEN EDUCATIONAL RESOURCES BY AGE

		<i>Regularly</i>	<i>Occasionally</i>	<i>Rarely</i>
Under 35	North Dakota	20.0%	21.4%	12.9%
	National (Public)	9.2%	20.3%	19.2%
35 - 44	North Dakota	12.1%	28.0%	15.9%
	National (Public)	8.1%	27.5%	12.6%
45 - 54	North Dakota	13.5%	24.8%	12.0%
	National (Public)	13.3%	24.5%	12.6%
55+	North Dakota	15.6%	22.6%	16.1%
	National (Public)	14.0%	24.8%	13.3%

FACULTY USE OF OPEN EDUCATIONAL RESOURCES BY DISCIPLINE

	<i>North Dakota</i>	<i>National (Public)</i>
Business	44.0%	50.5%
Computer and Information Science	39.3%	51.0%
Education	50.0%	56.8%
Health and related	69.6%	50.4%
Liberal Arts and Sciences	53.1%	46.5%
Natural Sciences	54.1%	55.6%
Professional	71.4%	60.2%
Social Sciences	62.8%	44.7%

TYPE OF OPEN EDUCATIONAL RESOURCES USED

	<i>North Dakota</i>	<i>National (Public)</i>
Images	87.6%	88.7%
Videos	88.7%	88.9%
Video lectures/tutorials	57.5%	59.9%
Homework exercises	53.7%	55.0%
Ebooks	44.1%	47.0%
Open textbooks, textbook chapters	42.1%	46.3%
Infographics	45.6%	42.3%
Whole course	34.4%	39.9%
Audio podcasts	33.0%	36.7%
Interactive games or simulations	39.3%	32.5%
Tests and quizzes	32.7%	34.4%
Elements of an existing course	28.0%	25.3%
Slides and class presentations	7.4%	9.0%

Comparison of OER to Traditional Resources

OPEN EDUCATIONAL RESOURCES ARE SUPERIOR

	<i>North Dakota</i>	<i>National (Public)</i>
Cost	84.0%	84.8%
Rated	47.1%	50.2%
Current	27.1%	39.6%
Ease of Use	18.3%	26.9%
Discoverability	18.8%	23.0%
Proven Efficacy	10.8%	14.6%
LMS Integration	14.9%	16.0%
Comprehensive	10.6%	12.2%
Trusted Quality	10.1%	13.0%
Mapped to Learning Outcomes	9.8%	10.0%
Coverage	11.5%	11.3%
Wide Adoption	10.2%	9.4%

RELATIVE QUALITY OF OER VERSUS TRADITIONAL RESOURCES

	<i>OER superior</i>	<i>OER the same</i>	<i>OER inferior</i>
North Dakota	15.1%	44.9%	40.0%
National (Public)	17.0%	57.3%	25.7%

Potential Barriers

DETERRENENTS TO USING OPEN EDUCATIONAL RESOURCES

	North Dakota	National (Public)
No comprehensive catalog	45.5%	51.2%
Too hard to find	38.8%	43.4%
Not enough subject resources	45.5%	36.5%
Confusion about permission to use or change	28.5%	32.9%
Not relevant	24.3%	17.6%
Not high-quality	26.5%	19.2%
Not used by other faculty	15.9%	17.6%
Lack of institutional support	12.0%	15.3%
Too difficult to integrate	7.8%	14.4%
Not effective	13.1%	12.8%
Too difficult to adapt	7.8%	10.9%
Too difficult to use	5.3%	8.4%
Not current, up-to-date	11.5%	6.1%

Discoverability

EASE OF SEARCHING - TRADITIONAL PUBLISHERS

	Very Easy	Easy	Difficult	Very Difficult
North Dakota	15.0%	61.9%	21.2%	1.8%
National (Public)	12.3%	61.7%	23.2%	2.8%

EASE OF SEARCHING - OPEN EDUCATIONAL RESOURCES

	Very Easy	Easy	Difficult	Very Difficult
North Dakota	6.4%	45.2%	39.3%	9.1%
National (Public)	8.1%	55.1%	31.7%	5.1%

Future Use

USE OPEN EDUCATIONAL RESOURCES IN THE NEXT THREE YEARS

	I will	I might	Not interested	Don't Know
North Dakota	25.9%	43.1%	13.4%	17.6%
National (Public)	31.5%	46.3%	7.0%	15.3%

APPENDIX: QUESTIONNAIRE

Welcome.

Thank you for participating in our study on the role of technology in teaching in U.S. higher education.

Primary support for this research comes from The William and Flora Hewlett Foundation. The survey is being conducted in collaboration with Babson Survey Research Group (BSRG) at Babson College. Only aggregated data will be reported and no contact information is shared with other organizations. Report sponsors do not have access to individual-level responses.

All respondents will receive copies of the study reports.

Please tell us a bit about yourself. Note: This information is used only to classify the survey responses. No individual-level data will be released. Information that you provide in this survey will not be used to target you for any marketing.

Your status:

Gender

- " Male
- " Female

Teaching Status

- " Part-time
- " Full-time

Number of Years Teaching

DROPDOWN LIST:

- Less than 1
- 1 to 3
- 4 to 5
- 6 to 9
- 10 to 15
- 16 to 20
- More than 20

Tenure Status

DROPDOWN LIST:

- N/A
- Tenured
- Tenure track, not tenured
- Not tenure track

Your primary discipline
 DROPDOWN LIST:
 Arts and Literature
 Business Administration
 Computer and Information Science
 Economics
 Education
 Engineering
 Humanities
 Law
 Linguistics / Language
 Mathematics
 Medicine
 Natural Sciences
 Philosophy
 Psychology
 Social Sciences
 Other

Your Age
 " Under 25
 " 25 - 34
 " 35 - 44
 " 45 - 54
 " 55+

Which of the following have you taught during the most recent academic year?
 Please use the following definitions:

- *Face-to-face Course: A course where all meetings are face-to-face, may use a learning management system (LMS) or web pages to post the syllabus and assignments.*
- *Blended/Hybrid Course: A course where sufficient content is delivered online to create a reduction in the number of face-to-face class meetings.*
- *Online Course: A course in which all, or virtually all, the content is delivered online. Typically have no face-to-face class meetings.*

Please check all that apply.

	<i>Face-to-face course</i>	<i>Blended/Hybrid course</i>	<i>Online Course</i>
Graduate level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Undergraduate level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How often have you done each of the following?

Used digital materials such as simulations and videos in course presentations.

" Never / NA " Rarely " Occasionally " Regularly

Assigned material available only in eTextbook format.

" Never / NA " Rarely " Occasionally " Regularly

Assigned books for which eTextbooks and traditional formats are both available.

" Never / NA " Rarely " Occasionally " Regularly

Published digital scholarship (beyond publishing an online version of a traditional scholarly paper).

" Never / NA " Rarely " Occasionally " Regularly

Used social media to interact with students.

" Never / NA " Rarely " Occasionally " Regularly

Used social media to interact with colleagues.

" Never / NA " Rarely " Occasionally " Regularly

What is your opinion about the nature of support that you have received from your institution? My institution...

Respects teaching with technology (in person or online) in tenure and promotion decisions.

" Strongly Disagree " Disagree " Neutral " Agree " Strongly Agree " Don't Know

Has a fair system of rewarding contributions made to digital pedagogy.

" Strongly Disagree " Disagree " Neutral " Agree " Strongly Agree " Don't Know

Has strong policies to protect intellectual property rights for digital work.

" Strongly Disagree " Disagree " Neutral " Agree " Strongly Agree " Don't Know

Provides support and flexibility in understanding and choosing intellectual property policies

" Strongly Disagree " Disagree " Neutral " Agree " Strongly Agree " Don't Know

Who has a role in selecting educational resources for use in the courses you teach?

(Select all that apply.)

- Me
- Another faculty member
- A faculty committee
- Program or division
- Instructional design group
- Administration
- Other

Who has the PRIMARY role in selecting educational resources for use in the courses you teach? (Select only one response.)

- " Me
- " Another faculty member
- " A faculty committee
- " Program or division
- " Instructional design group
- " Administration

" Other

When selecting resources for your teaching, which of the following factors are most important to you? (CHOOSE THREE) Please drag the three most important factors to the box on the right (the order in which you drag the three factors is not important).

Three Most Important Factors (in any order)

- Cost
- Proven to improve student performance
- Easy to find
- Includes all the materials I need
- High-quality and factually correct
- Covers my subject area sufficiently
- Works with my institution's Learning Management System (LMS)
- Mapped to learning outcomes
- Current and up-to-date
- Easy to use
- Used by other faculty members
- Provided by my institution
- Ready to use
- Adaptable/editable
- Any other factor

How aware are you of each of the following licensing mechanisms?

Public Domain " Unaware " Somewhat Aware " Aware " Very Aware

Copyright " Unaware " Somewhat Aware " Aware " Very Aware

Creative Commons " Unaware " Somewhat Aware " Aware " Very Aware

How aware are you of Open Educational Resources (OER)? OER is defined as "teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others." Unlike traditionally copyrighted material, these resources are available for "open" use, which means users can edit, modify, customize, and share them.

- " I am not aware of OER
- " I have heard of OER, but don't know much about them
- " I am somewhat aware of OER but I am not sure how they can be used
- " I am aware of OER and some of their use cases
- " I am very aware of OER and know how they can be used in the classroom

Please provide some examples of Open Educational Resources that you are aware of.

If you were to describe the concept of open resources for education to a colleague, which of the following would you include in your description?

Is available for free

" Not Included " May or May Not Include " Would Include

Has the ability to remix and repurpose

" Not Included " May or May Not Include " Would Include

Is provided with a Creative Commons license

" Not Included " May or May Not Include " Would Include

Is easy to combine with other course materials

" Not Included " May or May Not Include " Would Include

Is of high quality

" Not Included " May or May Not Include " Would Include

Is more up to date than textbooks

" Not Included " May or May Not Include " Would Include

Have you used open educational resources in either of the following ways? I have used OER as...

Primary course material (main class material used by teacher and students)

" Never / NA " Rarely " Occasionally " Regularly

Supplementary course material (supporting material to enhance teaching or as further reference for students)

" Never / NA " Rarely " Occasionally " Regularly

Ask if
 I have used OER - Rarely Is Selected
 Or
 I have used OER - Occasionally Is Selected
 Or
 I have used OER - Regularly Is Selected

Have you used any of the following types of open educational resources?

	Yes	No
Videos	"	"
Audio podcasts	"	"
Images	"	"
Infographics	"	"
Interactive games or simulations	"	"
Video lectures/tutorials	"	"
Tests and quizzes	"	"
Open textbooks, chapters from textbooks	"	"
Homework exercises	"	"
Slides and class presentations	"	"
Whole course	"	"
Elements of an existing course e.g. a module/unit	"	"
Lesson Plans	"	"
Any other type	"	"

Ask if
 I am very aware of OER and know how they can be used in the classroom Is Selected
 Or
 I am aware of OER and some of their use cases Is Selected
 Or
 I am somewhat aware of OER but I am not sure how they can be used Is Selected

How would you compare the quality of open resources to that of traditional resources on the following dimensions?

	Open Resources Superior	About the Same	Traditional Resources Superior	No Opinion/ Don't Know
Cost	"	"	"	"
Proven to improve student performance	"	"	"	"
Easy to find	"	"	"	"
Includes all the materials I need	"	"	"	"
High-quality and factually correct	"	"	"	"
Covers my subject area sufficiently	"	"	"	"
Works with my institution's Learning Management System [LMS]	"	"	"	"
Mapped to learning outcomes	"	"	"	"
Current and up-to-date	"	"	"	"
Easy to use	"	"	"	"
Materials are rated by faculty or editors	"	"	"	"
Adaptable/editable	"	"	"	"

Ask If
 I have used OER as... Primary course material - Never / NA Is Selected
 And
 I have used OER as... Supplementary course material - Never / NA Is Selected

Do you think you will use Open Educational Resources in the next three years?

- " I am not interested in using Open Educational Resources
- " I might consider using Open Educational Resources
- " I will consider using Open Educational Resources
- " No opinion /Don't know

How would you rate the quality (factually correct, up-to-date, well-written, organized, effective) of Open Educational Resources and material from traditional publishers?

Traditional publishers

" Poor " Average " Good " Excellent " Don't Know

Open Educational Resources

" Poor " Average " Good " Excellent " Don't Know

Ask If

I am very aware of OER and know how they can be used in the classroom Is Selected

Or

I am aware of OER and some of their use cases Is Selected

Or

I am somewhat aware of OER but I am not sure how they can be used Is Selected

How would you rate the ease of searching for educational resources for your courses?

From traditional publishers

" Very Difficult " Difficult " Easy " Very Easy

Open educational resources

" Very Difficult " Difficult " Easy " Very Easy

Ask If

I am very aware of OER and know how they can be used in the classroom Is Selected

Or

I am aware of OER and some of their use cases Is Selected

Or

I am somewhat aware of OER but I am not sure how they can be used Is Selected

Or

I have heard of OER, but don't know much about them Is Selected

What are the three most important deterrents to the use of Open Educational Resources in your courses? Please drag the three most important deterrents to the box on the right (the order in which you drag the three deterrents is not important).

Three Most Important (in any order)

___ Too difficult to use

___ Too hard to find what I need

___ Not enough resources for my subject

___ Not high-quality

___ Not current, up-to-date

___ Not relevant to my local context

___ No comprehensive catalog of resources

___ Not knowing if I have permission to use or change

___ Lack of support from my institution

___ Too difficult to change or edit

___ Too difficult to integrate into technology I use

___ Not effective at improving student performance

___ Not used by other faculty I know

Do you believe the following statements about Open Educational Resources (OER) are true?

Use of OER leads to improvement in student performance.

Strongly Disagree Disagree Neutral Agree Strongly Agree No Opinion

Use of OER leads to improvement in student satisfaction.

Strongly Disagree Disagree Neutral Agree Strongly Agree No Opinion

The open aspect of OER creates different usage and adoption patterns than other online resources.

Strongly Disagree Disagree Neutral Agree Strongly Agree No Opinion

Open educational models lead to more equitable access to education, serving a broader base of learners than traditional education.

Strongly Disagree Disagree Neutral Agree Strongly Agree No Opinion

Use of OER is an effective method for improving retention for at-risk students.

Strongly Disagree Disagree Neutral Agree Strongly Agree No Opinion

OER adoption at an institutional level leads to financial benefits for students and/or institutions.

Strongly Disagree Disagree Neutral Agree Strongly Agree No Opinion

Use of OER leads to critical reflection by educators, with evidence of improvement in their practice.

Strongly Disagree Disagree Neutral Agree Strongly Agree No Opinion

We welcome your comments. Please let us know your thoughts on any of the issues covered in this survey.

May we quote your response? Published comments will only include attribution of the discipline of the faculty member and if they are full- or part-time ("Full-time Natural Sciences Faculty", "Part-time Mathematics Faculty"). No personal identifiable information will be included.

Yes

No <preselected>

May we contact you with follow-up questions?

Yes

No <preselected>

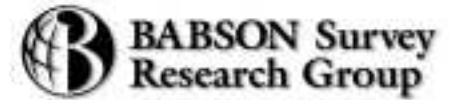
Thank you.

This is the end of the survey - pressing the ">>" button below will record your responses.

Note: Do not press ">>" until you are sure you are finished - once your survey has been recorded you will no longer be able to edit your responses.

BABSON SURVEY RESEARCH GROUP

The Babson Survey Research Group conducts regional, national, and international research, including survey design, sampling methodology, data integrity, statistical analyses and reporting.



<http://www.onlinelearningsurvey.com/>

Babson Survey Research Group provides the following services:

Survey Design: Overall design of survey projects, including preliminary testing, instrument validation, testing for response time, and clarity of questions.

Sample Selection: Identification of the survey population and selection of the sample of interest for the survey. Creation of sample files for survey invitation and preloading response database.

Survey Administration: Sending survey invitation messages, tracking of all responses by time, date, and all multiple independent variables, and sending reminder messages specifically tailored for each class of respondent. Response monitoring by subgroups, date and time email sent, wording of invitation message, and multiple independent variables.

Response Rate and Bias Analysis: Analysis of survey responses by multiple characteristics to discover possible patterns in response rates and sources of response bias and examination of response patterns for multiple independent sub-samples. Creation of sample weights for analysis of the data as needed.

Data Cleaning: Complete analysis of all data items – including assignment of missing values (structural missing, no response to question, partial response to question), data integrity check for each data element based on range and allowable values, the relationship of individual data elements in the survey to each other, the relationship of data elements to responses from previous surveys, and the relationship of data elements to those from other data sources.

Database Design: Design of analysis database, including missing data imputation, internal and external data integrity testing, and merging of data from multiple sources. This often includes merging files for multiple years of a survey for longitudinal analyses.

Statistical Analysis: Creation of analysis files for statistical software (SPSS, SAS, Stata, R), design of analysis plan, choice of statistical technique, creation of all tables and analyses, statistical testing as appropriate.

Report Creation: Creation of research reports for a survey, including design, layout and printing or creation of a downloadable pdf.

OPEN

A survey of North Dakota University System (NDUS) faculty was conducted to measure the awareness and adoption of open educational resources (OER) prior to implementing a state-wide OER project and faculty training.

Key findings:

NDUS faculty report they are more aware of open educational resources than their counterparts nationally. Depending on the strictness of the awareness measure, between one-third and one half of all North Dakota University System faculty classify themselves as aware of OER.

Similar to their peers nationally, NDUS faculty are taking the initiative with OER adoption. NDUS faculty report similar barriers to adoption, however, they also report that they are currently using a variety of OERs for instruction (primarily videos).

Faculty are unsure if OER quality is equivalent to that of traditional educational resources. More than half of NDUS faculty and those at national public institutions report that they are not sufficiently aware of OER to judge its quality.

The most significant barrier to wider adoption of OER remains a faculty perception of the time and effort required to find and evaluate it. The top three cited barriers among faculty members for OER adoption all concern the discovery and evaluation of OER materials.

Faculty are the key decision makers for OER adoption. It is hardly surprising that those delivering education play a critical role in deciding what educational resources go into that delivery. Previous results among chief academic officers noted that faculty are almost always involved in an adoption decision and – except for rare instances – have the primary role.



Opening Public Institutions: OER in North Dakota and the Nation, 2015 is licensed under a Creative Commons Attribution 4.0 International License. Report available at: <http://www.onlinelearningsurvey.com/oer.html>.

