

POST-PANDEMIC TRENDS IN U.S. HIGHER EDUCATION DIGITAL AND OER TEXTBOOK ADOPTIONS



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BRIAN MURPHY

JULIA SEAMAN

JEFF SEAMAN



PRESENTATION CONTENT

- Introduction
- Data Sources
- Preferences & Perceptions
- Enrollment Trends
- Print or Digital Textbooks?
- Impact on OER Awareness and Adoption
- Conclusions

INTRODUCTION



INTRODUCTION TO BAY VIEW ANALYTICS

Bay View Analytics offers a comprehensive suite of consulting services in survey design and statistical research. Our services build on nearly two decades of research design, sampling, survey design, and statistical analysis expertise.



Julia Seaman, Ph.D.
Director of Research



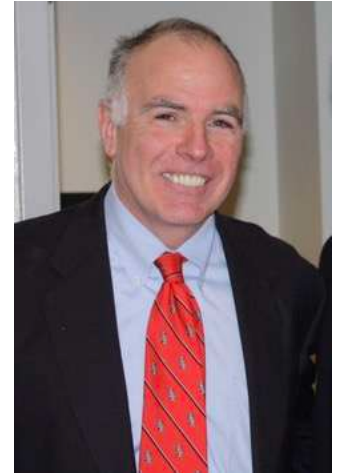
Jeff Seaman, Ph.D.
Director

INTRODUCTION TO BMG INSTITUTIONAL RESEARCH

BMG Institutional Research is a higher education market intelligence provider serving higher education institutional leadership teams and boards.

BMG Institutional Research is the leading provider of historical, trend, and up-to-date curriculum data sets.

Using the **BMG Institutional Research** platform, higher education leadership teams can easily access and analyze valuable information on courses, materials, instructors, and more, all sorted by key factors such as institution name and region.



Brian Murphy
President

<https://www.bmurphygroup.com/bmg-institutional-research/>



DATA SOURCES



PANDEMIC TRENDS ANALYZED FROM TWO SOURCES

Bay View Analytics Surveys

- National surveys on curricula trends
- Performed annually
- Faculty and administrators



<https://www.bayviewanalytics.com/oer.html>

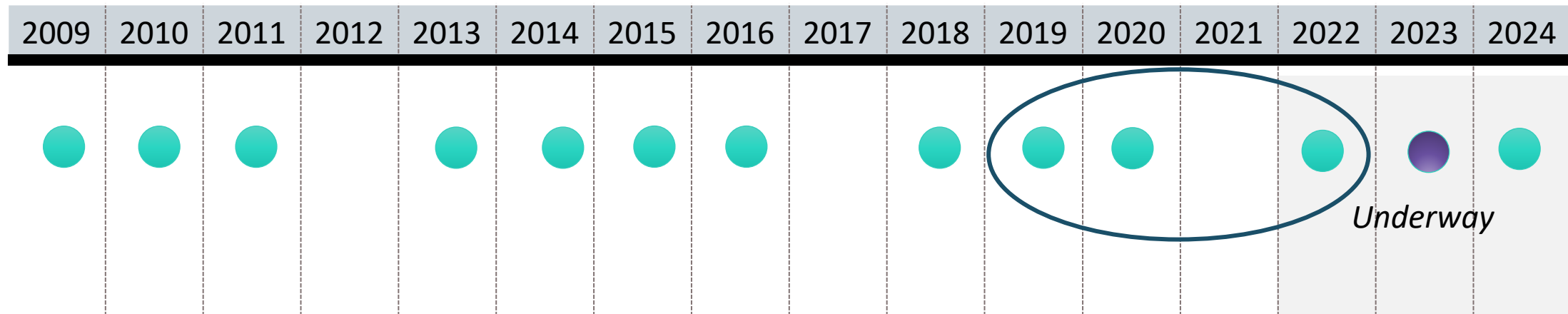
BMG Market Intelligence Database

- Textbook and publisher market share data by course
- Updated every Fall and Spring



<https://www.bmurphygroup.com/discovery/>

WE HAVE CONDUCTED HIGHER EDUCATION SURVEYS FOR OVER A DECADE WITH MORE PLANNED



Over 26,000 respondents from over 11 years of OER surveys

We will be focusing on the 2022 (post-pandemic) survey results plus the 2019 (pre-pandemic) and 2020 (mid-pandemic) survey results.

Project supported by



BRIAN MURPHY GROUP DATABASE IS A VAST SOURCE OF ENROLLMENT AND COURSE MATERIAL DATA

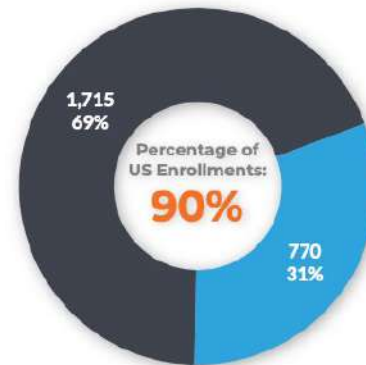
WELCOME TO DISCOVERY

Total Schools	2 Year Schools	4 Year Schools	Other Schools	Total Adoptions	Total Instructors	Unique Emails
2,485	780	1,603	102	14,386,928	2,591,699	1,567,767

	Term	Total Schools	2 Year Schools	4 Year Schools	Other Schools	Total Adoptions	Total Instructors	Unique Emails
+	2023	1,859	568	1,212	79	1,325,608	1,007,721	692,458
+	2022	2,443	776	1,569	98	3,782,075	1,674,467	1,086,138
+	2021	2,070	668	1,317	85	3,505,043	1,408,414	1,028,841
+	2020	2,038	665	1,319	54	3,104,863	1,412,331	1,078,342
+	2019	1,890	605	1,257	28	2,669,339	1,329,771	1,076,167

Database provides product in-use details by institution, course, and instructor over time

We will be using publisher and textbook format market data from Fall 2020, 2021, and 2022 with a focus on Intro level courses.



■ 4-Year Institutions ■ 2-Year Institutions

ISBN 13

Book Title

Publisher

Format

Author

Published Year From

Published Year To

IPED ID

Department

Course Title

Course Subject

School Name

Department Code

Course Number

Course Level

School Year Type

Department Description

Section

Period

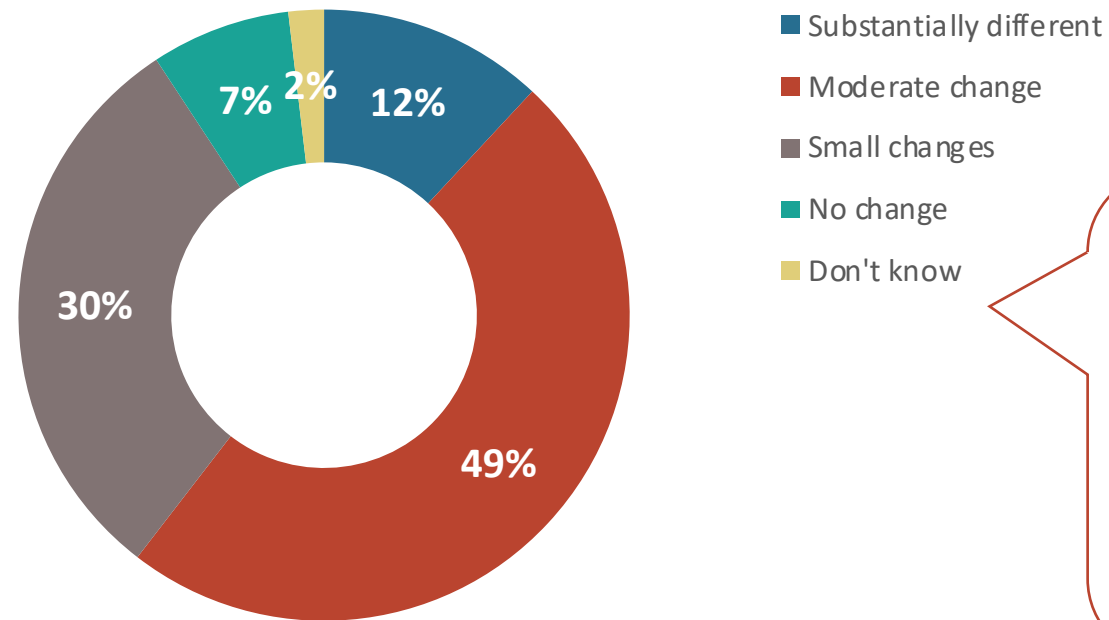


PREFERENCES & PERCEPTIONS



COVID-19 FORCED TEACHING TO CHANGE; THE CHANGES WILL CONTINUE

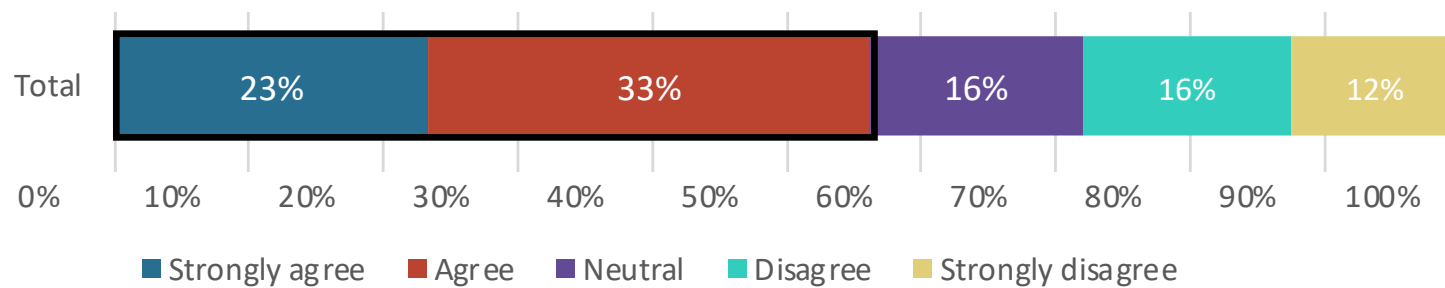
Will your future teaching techniques change as a result of your teaching experiences during the pandemic?



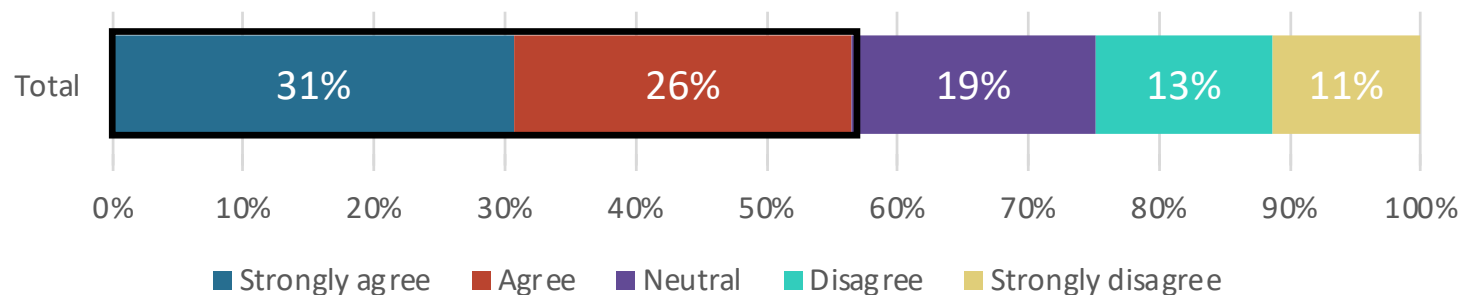
Over 90% of faculty state their will be a change to their teaching techniques from the pandemic

TEACHING MODALITIES: MAJORITY OF FACULTY IN THE COUNTRY WANT AN OPTION TO TEACH ONLINE

I would like to teach some of my courses as a **combination of in-person and online instruction.**

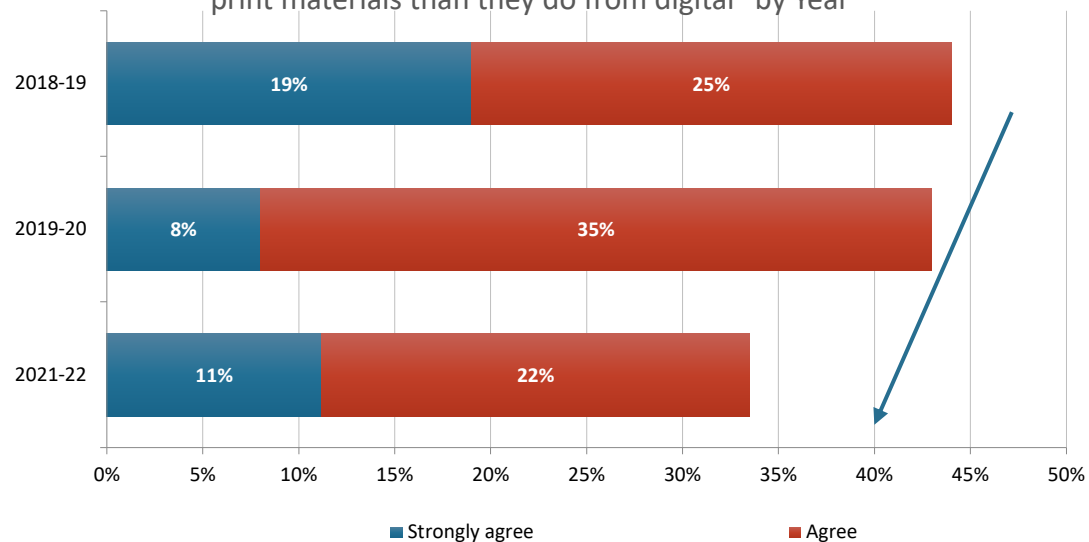


I want the option to teach some of my courses in a **fully online format.**



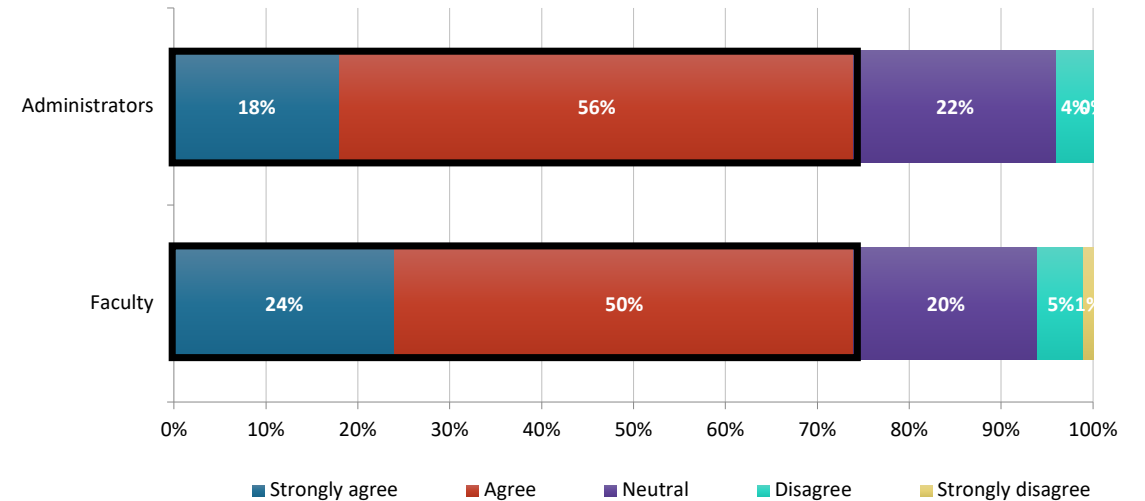
PERSPECTIVES ON DIGITAL VERSUS PRINT: GROWING ACCEPTANCE OF DIGITAL AS LEARNING MATERIALS

Faculty: Agreement with the statement "Students learn better from print materials than they do from digital" by Year



Faculty belief that physical materials are better for learning than digital is declining

Agreement with the statement "Digital materials provide greater flexibility for students."



Both faculty and administrators acknowledge that digital materials offer more flexibility

FACULTY AND ADMINISTRATOR VOICES

*As we are very rural and high poverty, **access to the Internet at home is a real barrier** for our students. Therefore, I never use a digital homework system, since students may not have access when they need it. Also, I won't use a digital textbook with supplements that require always-on Internet access.*

— Advanced Arts & Literature Faculty

*The pandemic taught us that many classes or parts of classes can be taught digitally. Students are so tied to their phones and computers, that **not using digital media is a disservice to them**. Faculty is not changing rapidly enough to digital media to keep up with their students.*

— Intermediate Humanities Faculty



CONCLUSION: PANDEMIC INCREASED DIGITAL PREFERENCES

- The COVID-19 pandemic forces Higher Education institutions to transition online, increasing awareness and use of digital curricula
- Post-pandemic faculty are likely:
 - To want to teach partly or fully online
 - To believe students can learn as well from digital as print
 - To plan to use more digital materials in their classrooms

Have these changes driven an increase in digital materials use?

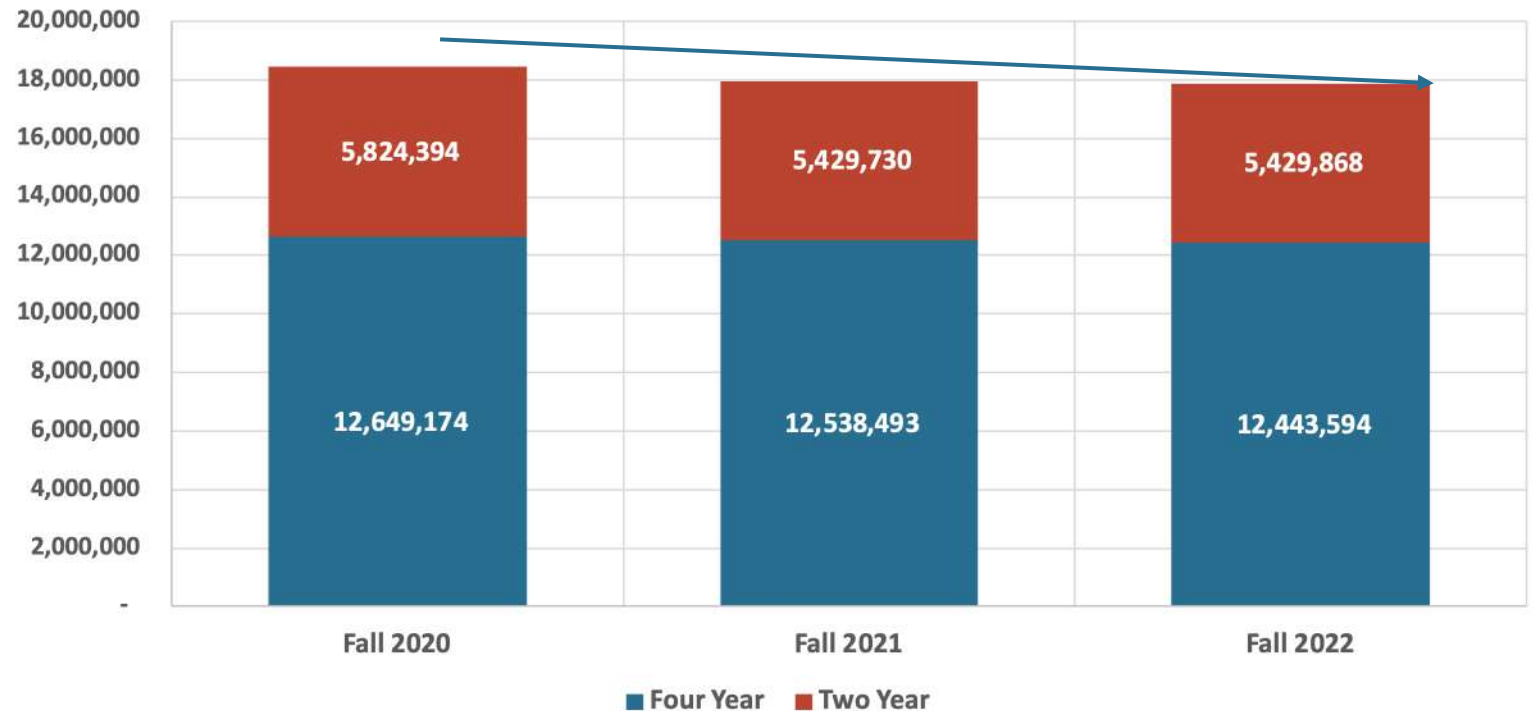
ENROLLMENT TRENDS



HIGHER EDUCATION ENROLLMENT IS TRENDING DOWN

- Enrollments have declined each year
- The declines have been greatest among two-year institutions

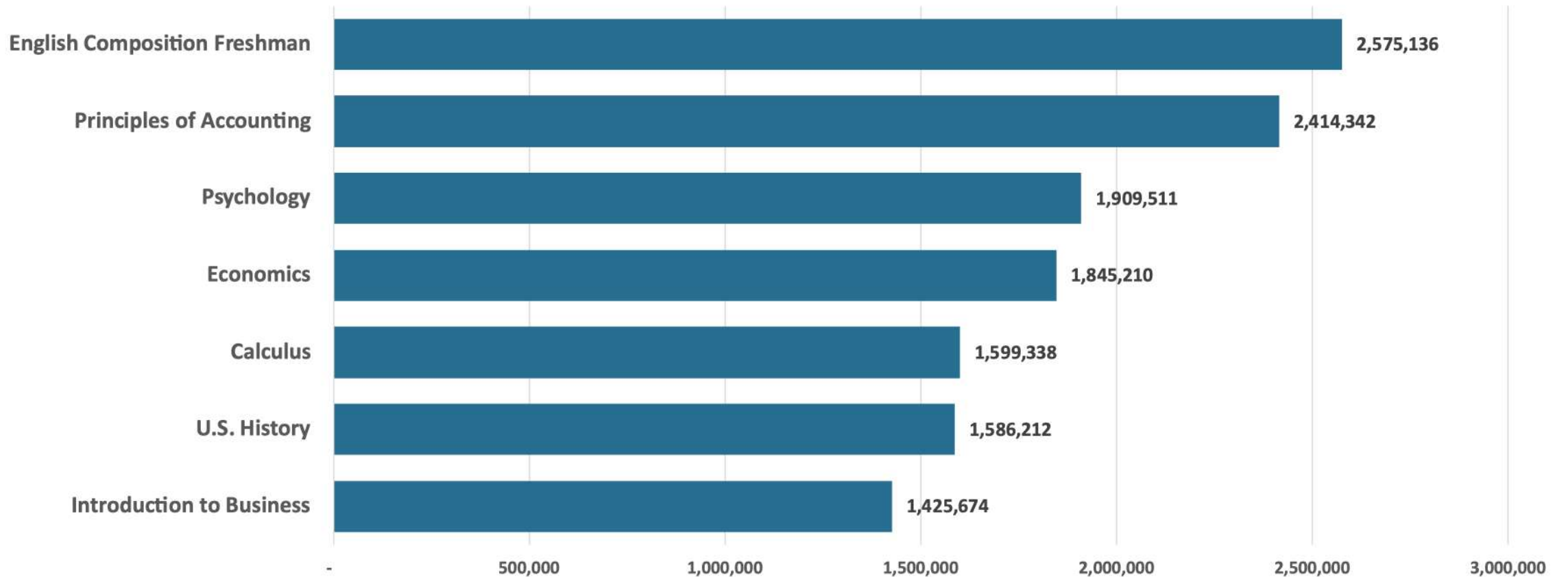
Higher Education Enrollments Fall 2020 to Fall 2022



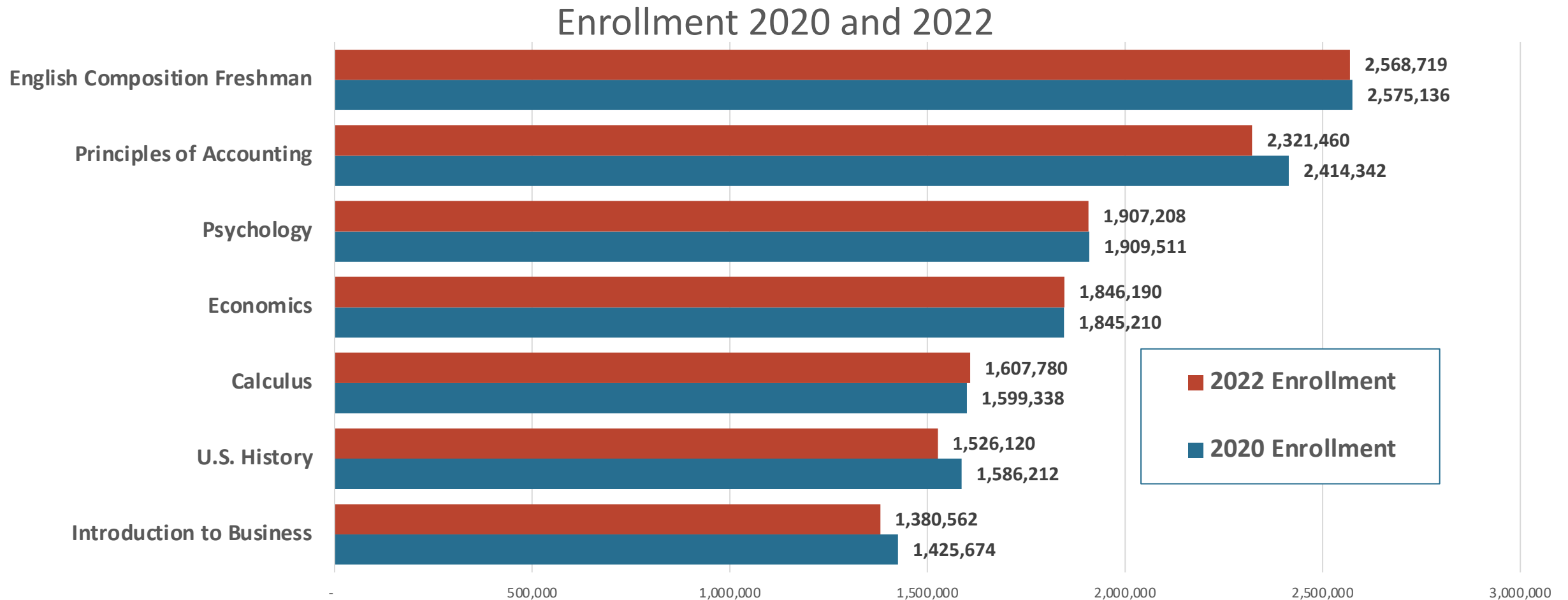
Do enrollment trends differ by course?

2020 ENROLLMENT BY COURSE

Large Enrollment Courses 2020

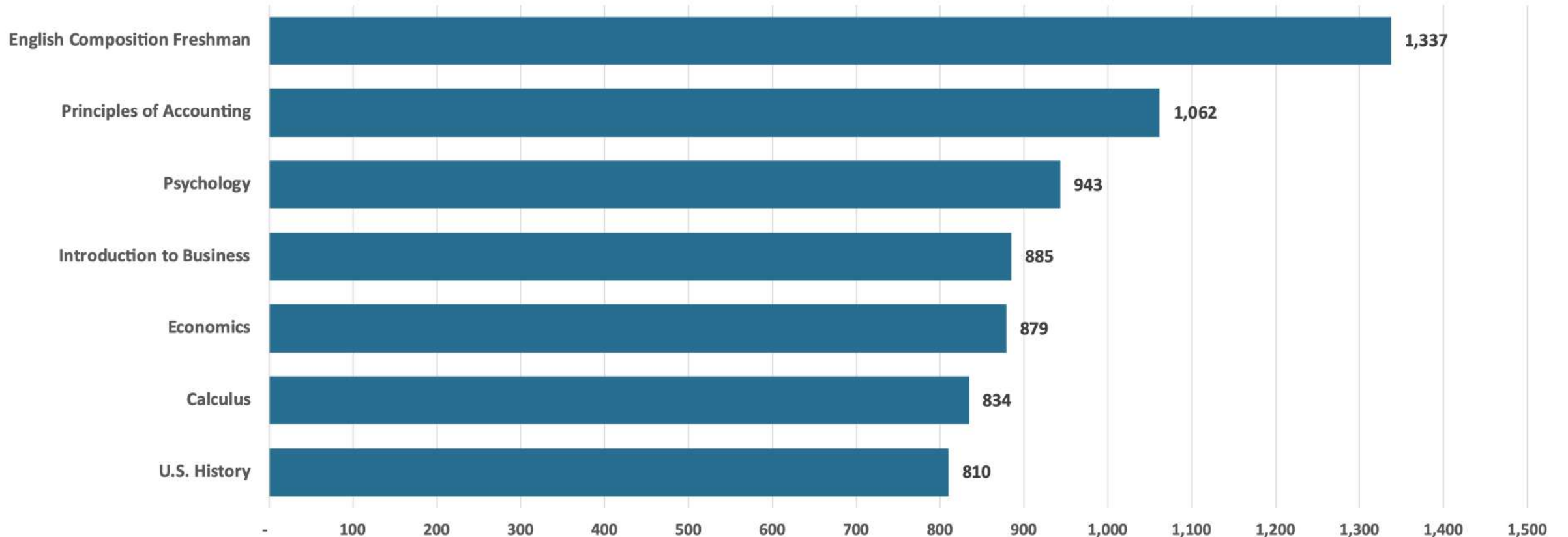


2022 LARGE ENROLLMENT INTRO COURSES ARE SIMILAR OR SLIGHTLY LOWER THAN 2020

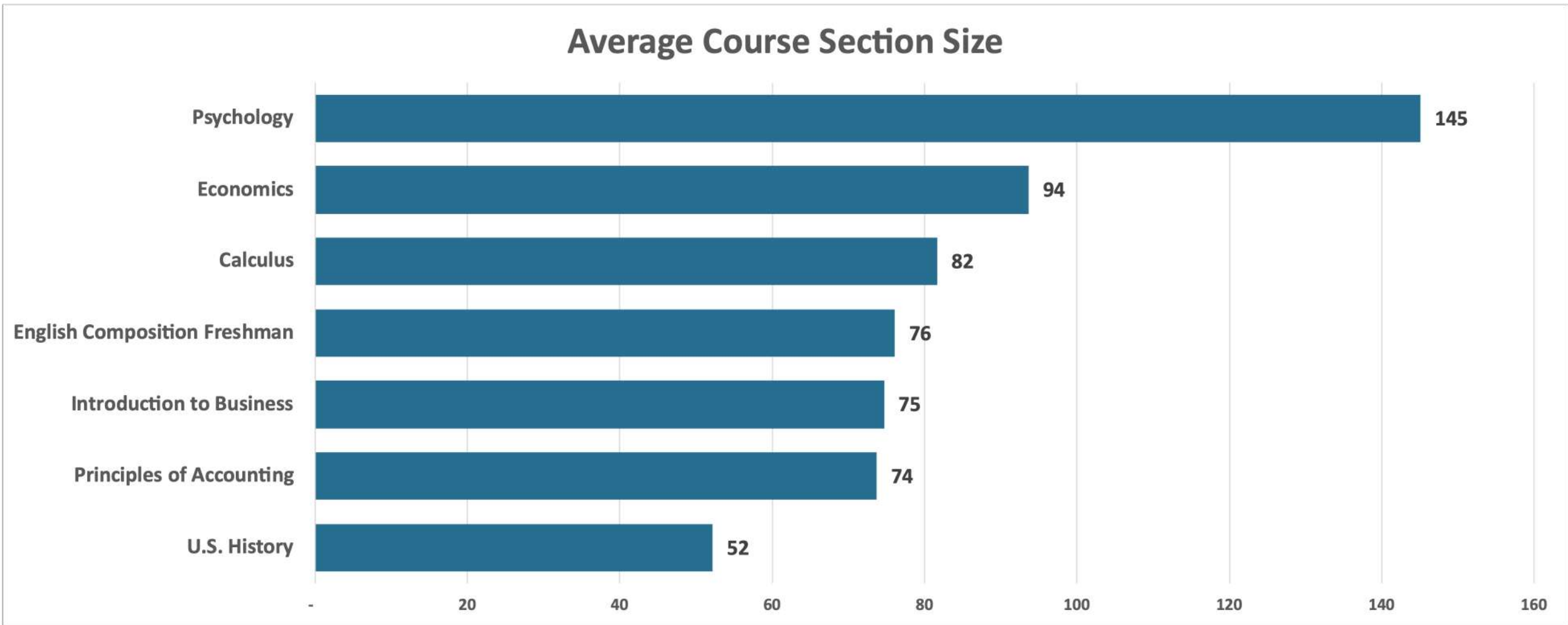


AVERAGE 2022 ENROLLMENT PER SCHOOL FOR INTRO COURSES

Average Enrollment per School



AVERAGE 2022 COURSE SECTION SIZE FOR INTRO COURSES



PRINT OR DIGITAL TEXTBOOKS?

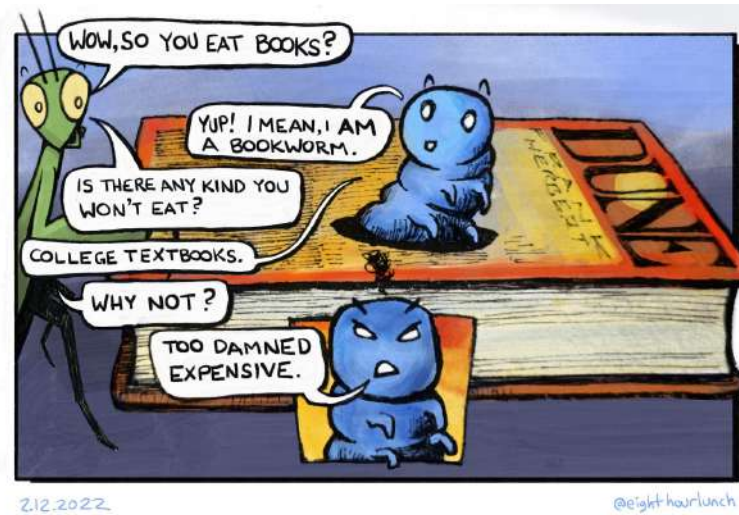


DIGITAL MATERIALS OFFER MULTIPLE BENEFITS

- Multiple access methods
- Quicker to update
- Adaptable and customizable
- Built-in multimedia
- Integration with LMS and testing methods



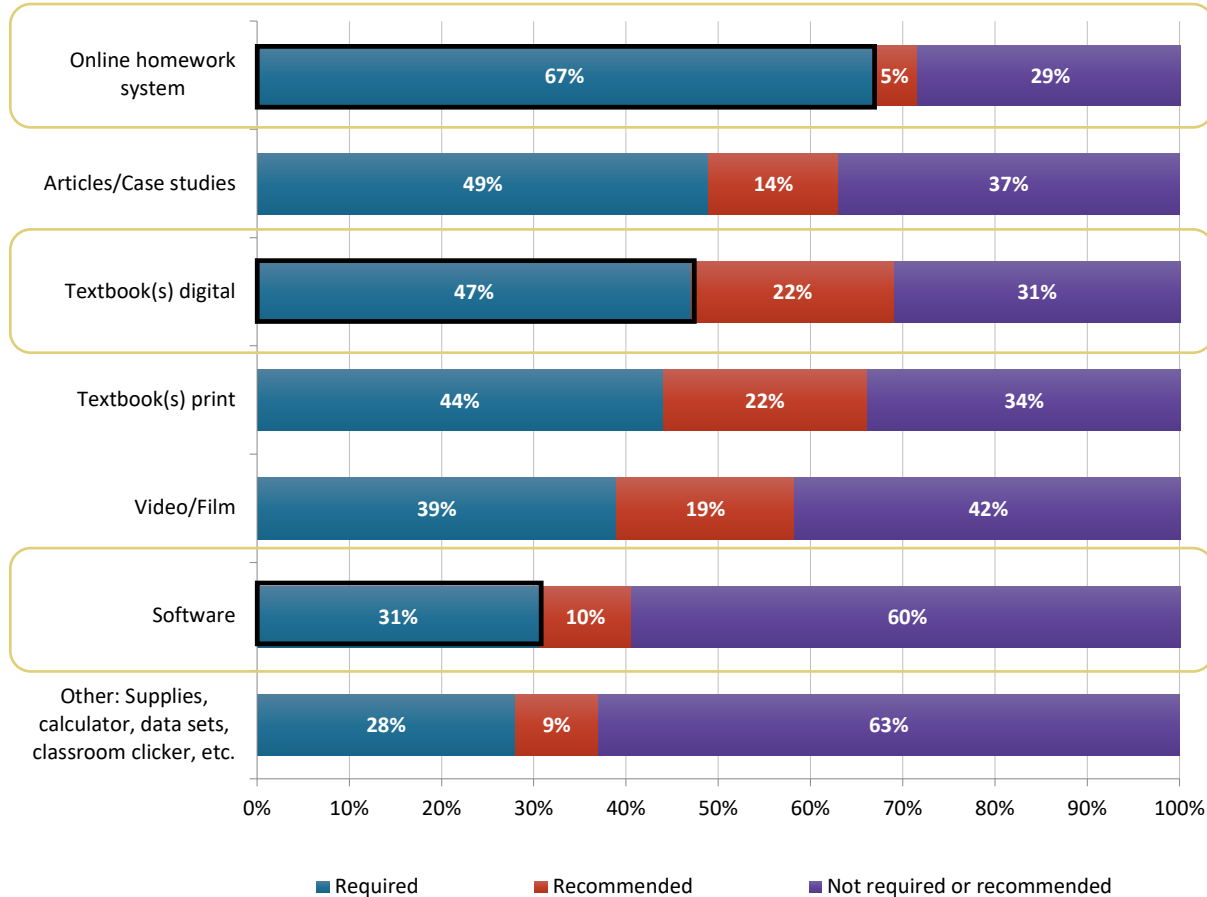
STILL SOME ISSUES



- Cost
- Access – internet/apps/logins
- Access – ownership/longevity
- Access – special needs
- Preferences

MOST FACULTY NOW REQUIRE DIGITAL MATERIALS

Faculty: Curriculum Materials Used in Teaching

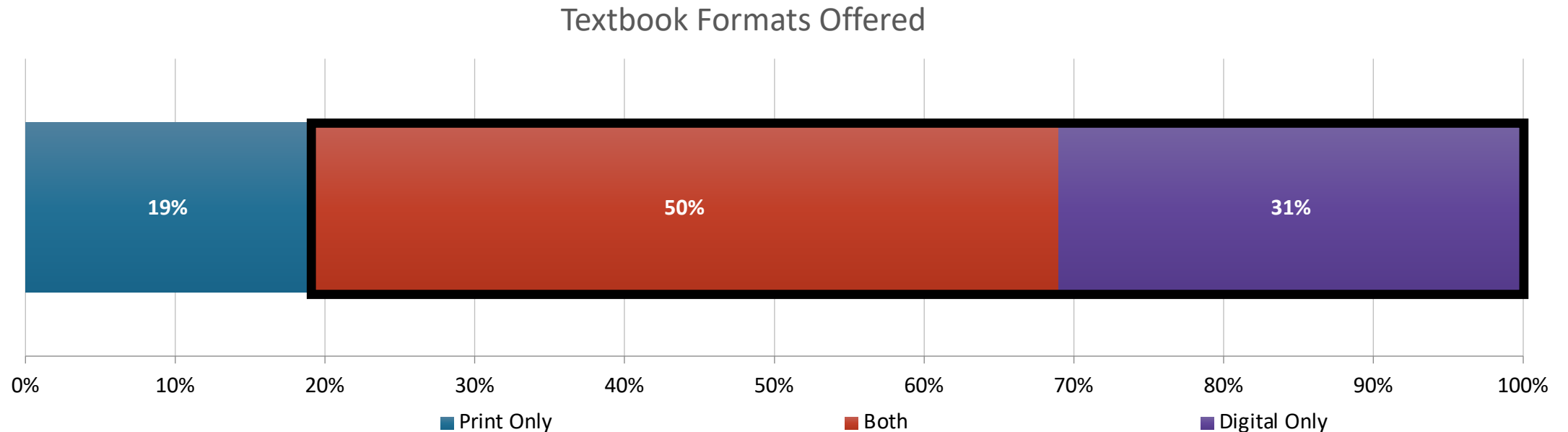


2 in 3 faculty require an online homework system

1 in 2 faculty require a digital textbook

1 in 3 faculty require software

MOST TEXTBOOKS OFFERED ARE DIGITAL



Half of all faculty offer both a print and digital textbook format for their largest enrollment course. Slightly more faculty offer digital textbooks (81%) than print textbooks (69%).

HOWEVER, THE TRENDS VARY BY COURSE

- Looking at a sample of intro courses:
 - 80% require more digital textbooks in 2022 than 2020
 - 20% require more digital textbooks than print in 2022

Example Introductory Courses

Calculus

Introduction to Business

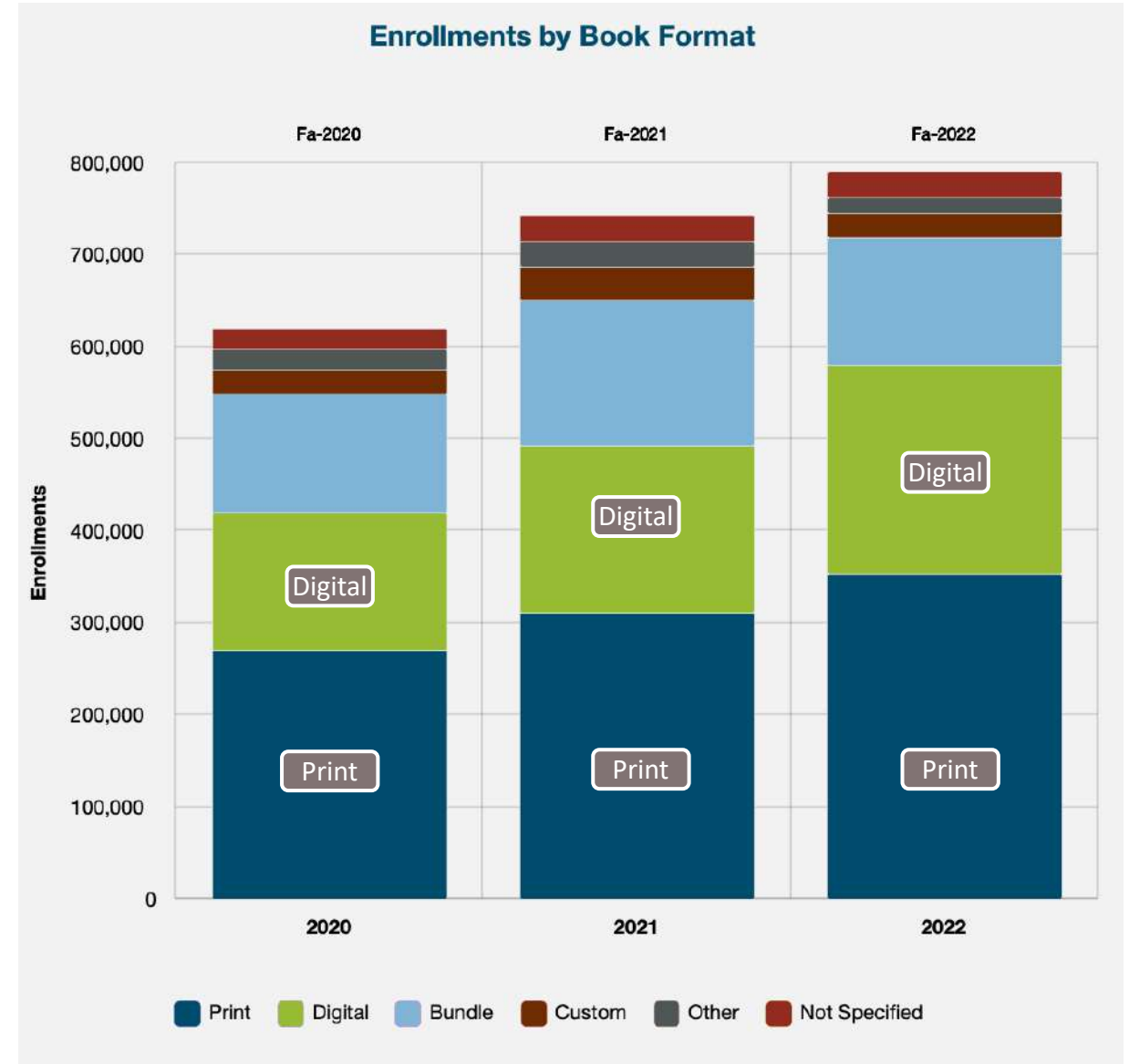
Physics

Psychology

PSYCH: DIGITAL GROWING BUT PRINT LEADS

Both digital and print increased, but digital grew faster than print from 2021 to 2022.

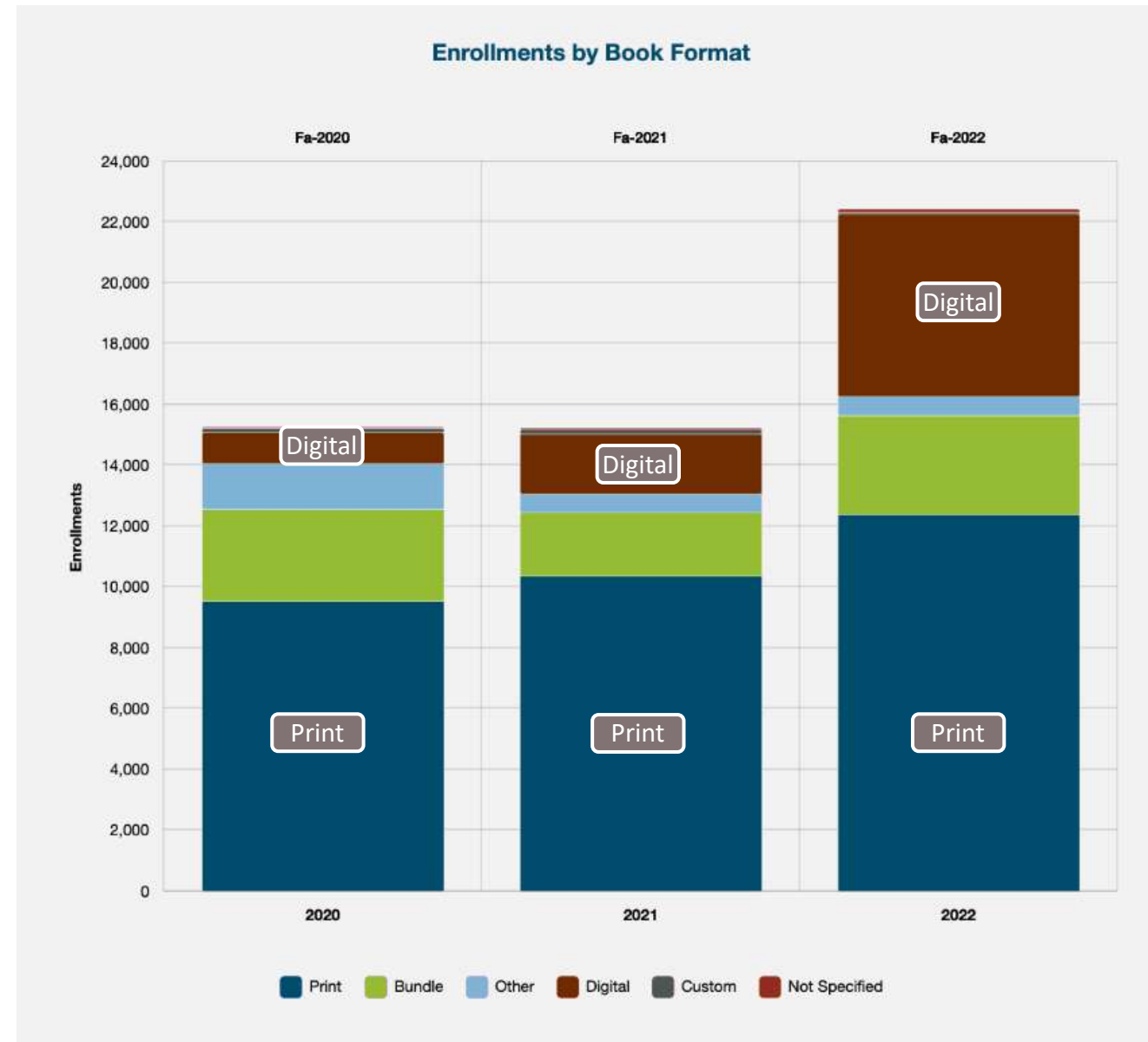
Number of enrolled students grew almost 30%.



PHYSICS: STILL MAJORITY PRINT

Digital proportion greatly increased post-pandemic, accounting for almost all the new growth.

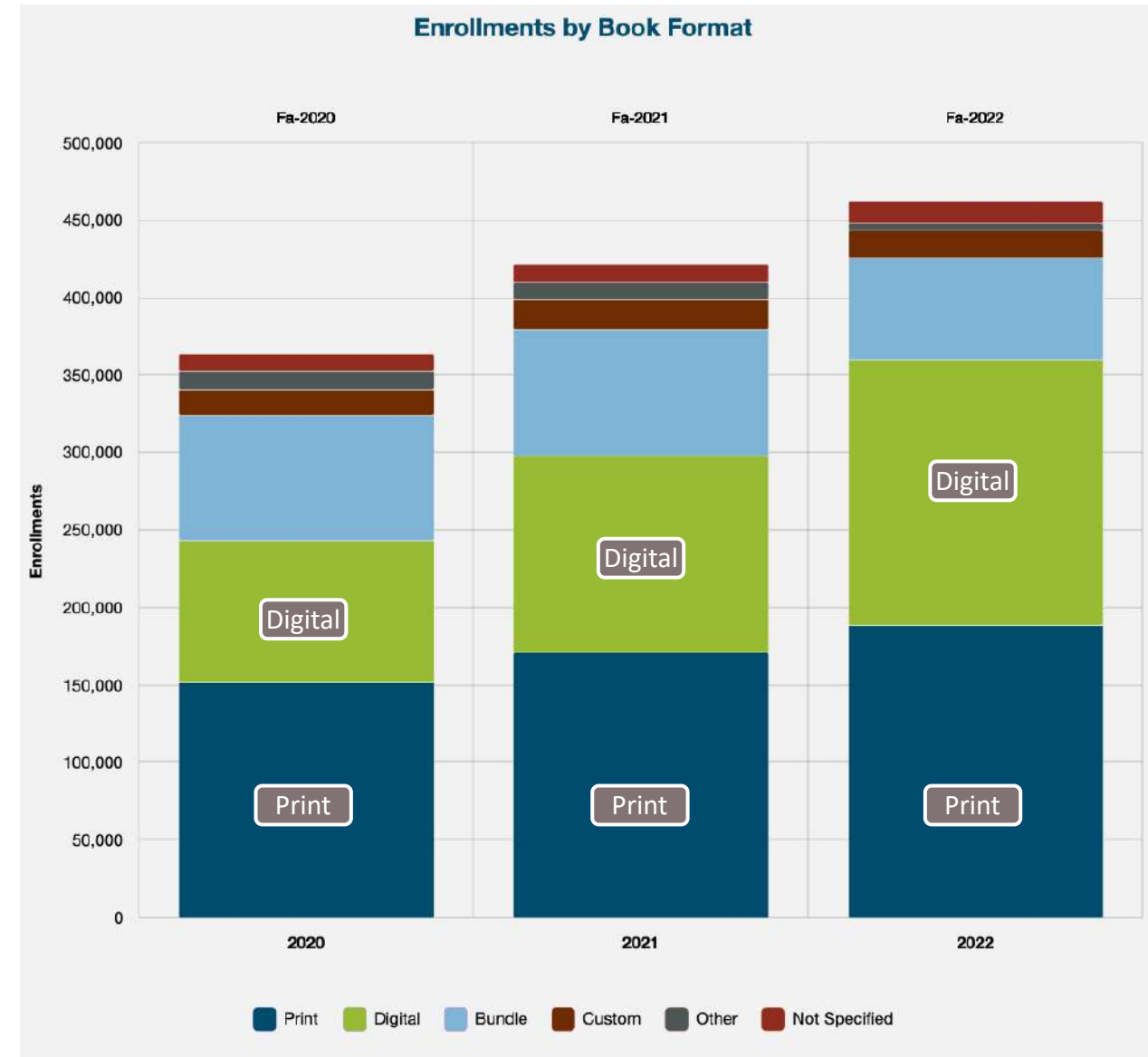
Number of enrolled students grew almost 50% over the three years.



BUSINESS: DIGITAL POISED TO PASS PRINT

Digital proportion grew year over year to almost same proportion as print.

Number of enrolled students grew almost 27%.

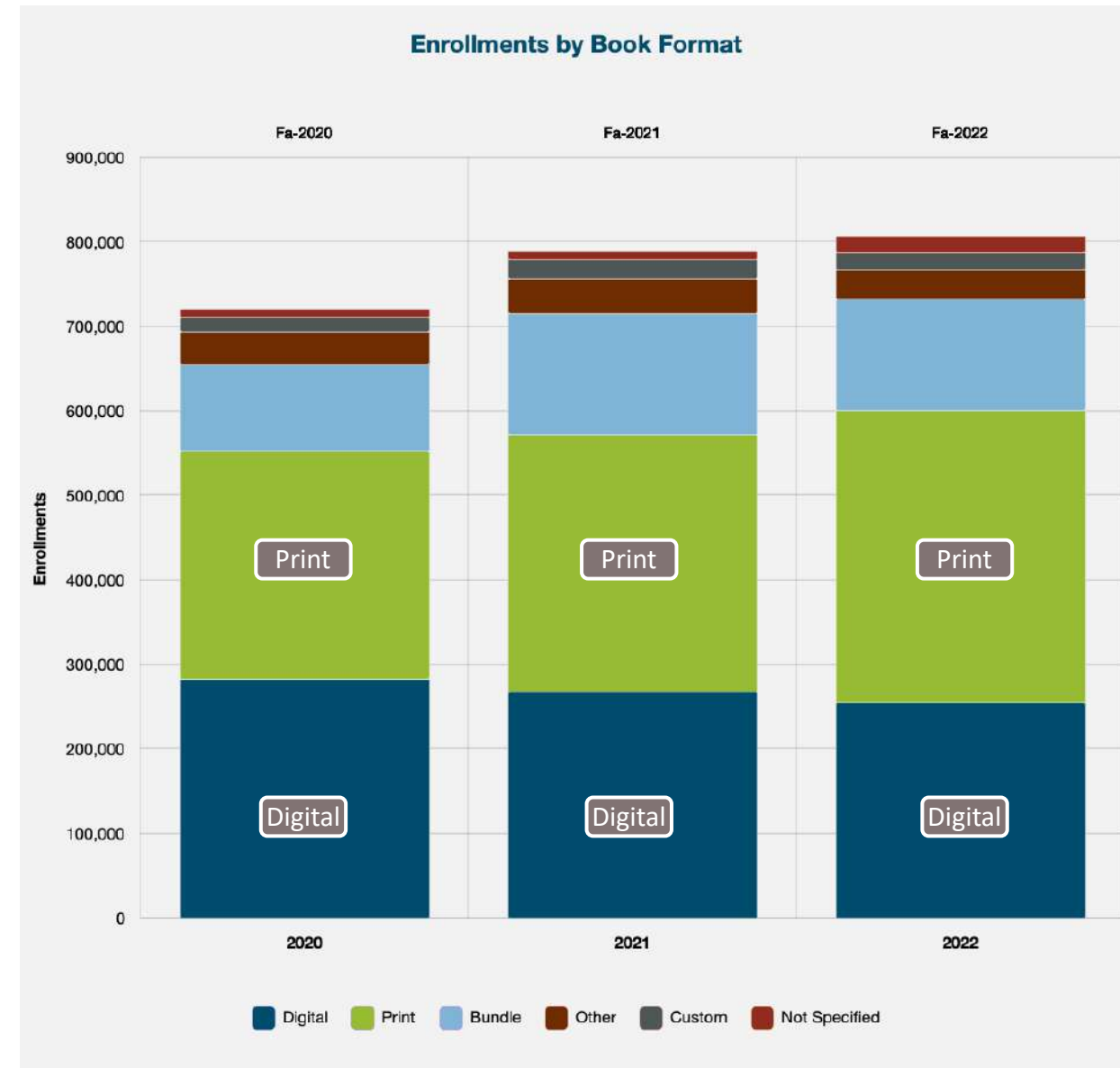


CALCULUS: DIGITAL FALLING BEHIND

Print remains most common type of format, even growing year over year.

Digital format declined.

Number of enrolled students grew around 10%.



CONCLUSIONS

- Indeed, there is an overall trend to more digital materials following the pandemic
- However, the trends vary widely by discipline
 - Courses that are more likely in-person (e.g., for hands-on laboratory in physics) may not pick up digital as quickly
 - Digital options and quality may vary widely by discipline
 - Personal preferences
 - Institutional preferences

IMPACT ON OER



SURVEY QUESTIONS & DEFINITIONS

Similar questions are asked year to year to allow trends to be examined.

Definitions used in surveys

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.*

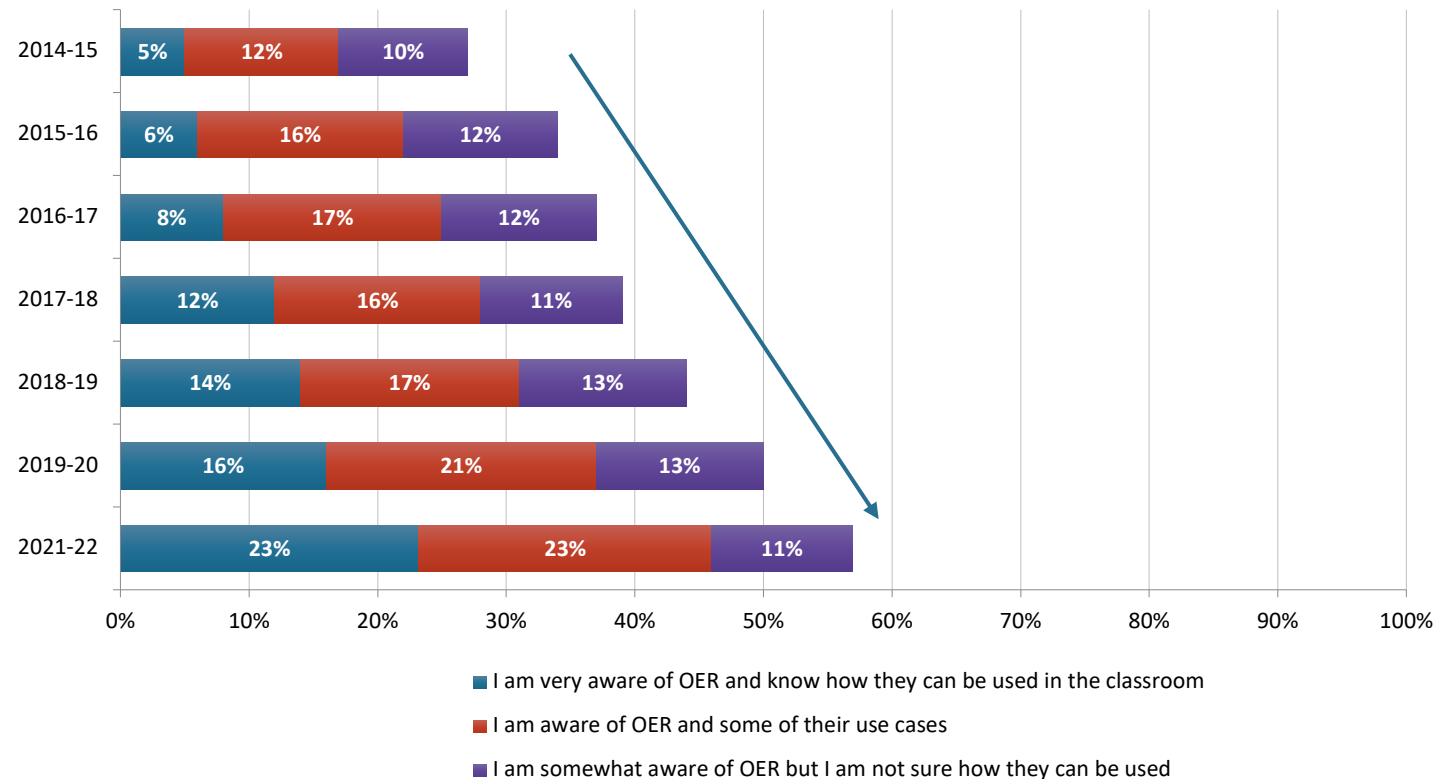
Licensing Types

Public Domain: *A designation for content that is not protected by any copyright law or other restriction and may be freely copied, shared, altered, and republished by anyone.*

Creative Commons: *Open license that gives everyone from individual authors to governments and institutions a simple, standardized way to grant copyright permissions to their creative work, provided by Creative Commons.*

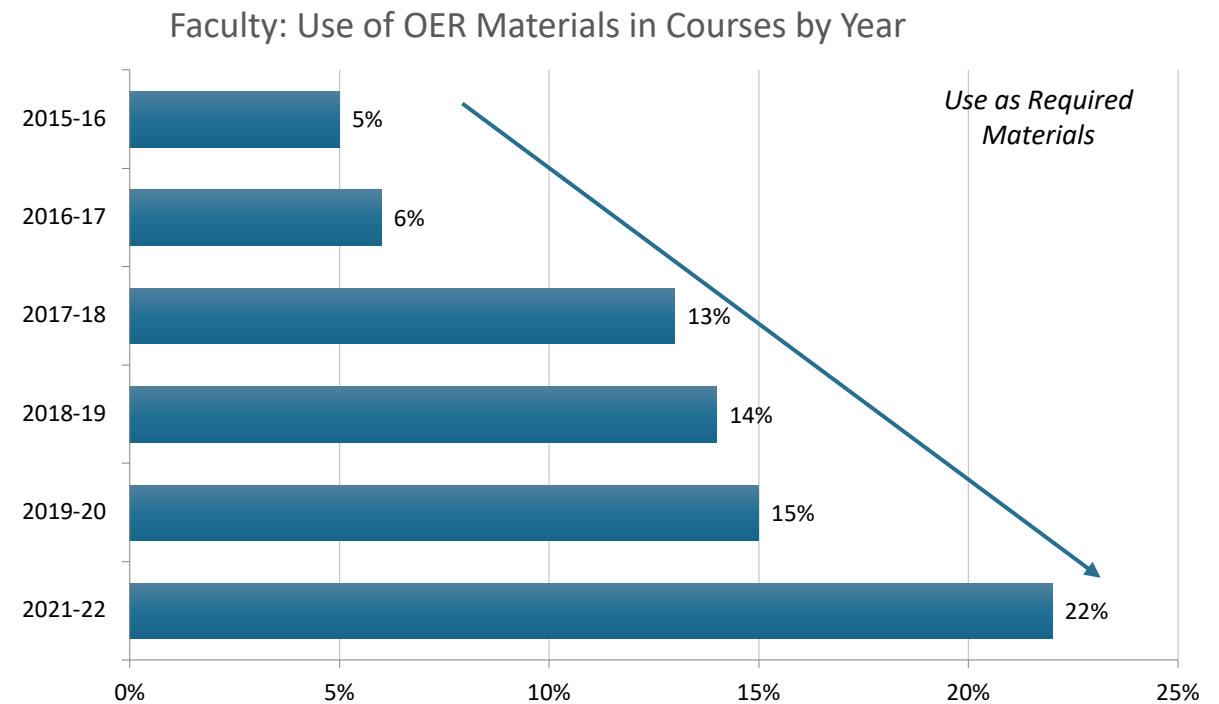
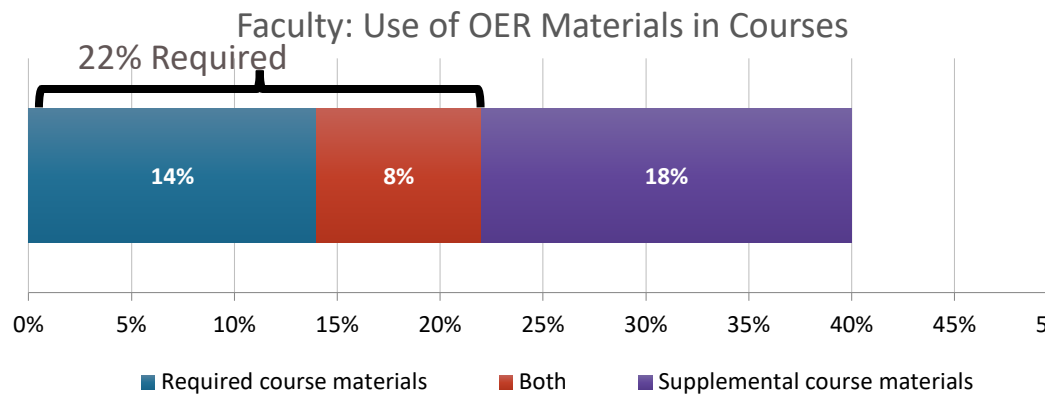
OER AWARENESS: GROWING YEAR OVER YEAR

Faculty: OER Awareness (Strict) by Year



- For the first time in our surveys, **over half of all faculty have some level of awareness of OER.**
- OER awareness has grown by 7% since 2020.
- Since 2014-15, OER awareness has more than doubled.

OER USE CONTINUES TO GROW: ALMOST HALF OF FACULTY REPORT USING OER IN THEIR COURSES



1 in 5 faculty require OER materials for their largest enrollment course, up from 1 in 20 in 2015-16

OPENSTAX ADOPTION AS A MEASURE OF OER

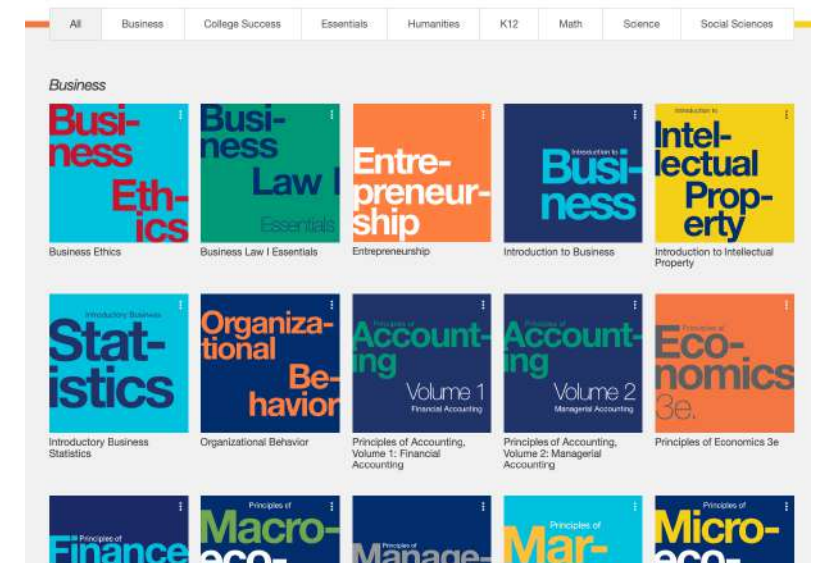
- Openstax – an OER curricula provider – is a top 10 publisher competing with McGraw, Pearson, Cengage, Macmillan, Norton and others
- Offer 80+ textbooks across 7 subjects and multiple languages
- Most popular for large intro courses



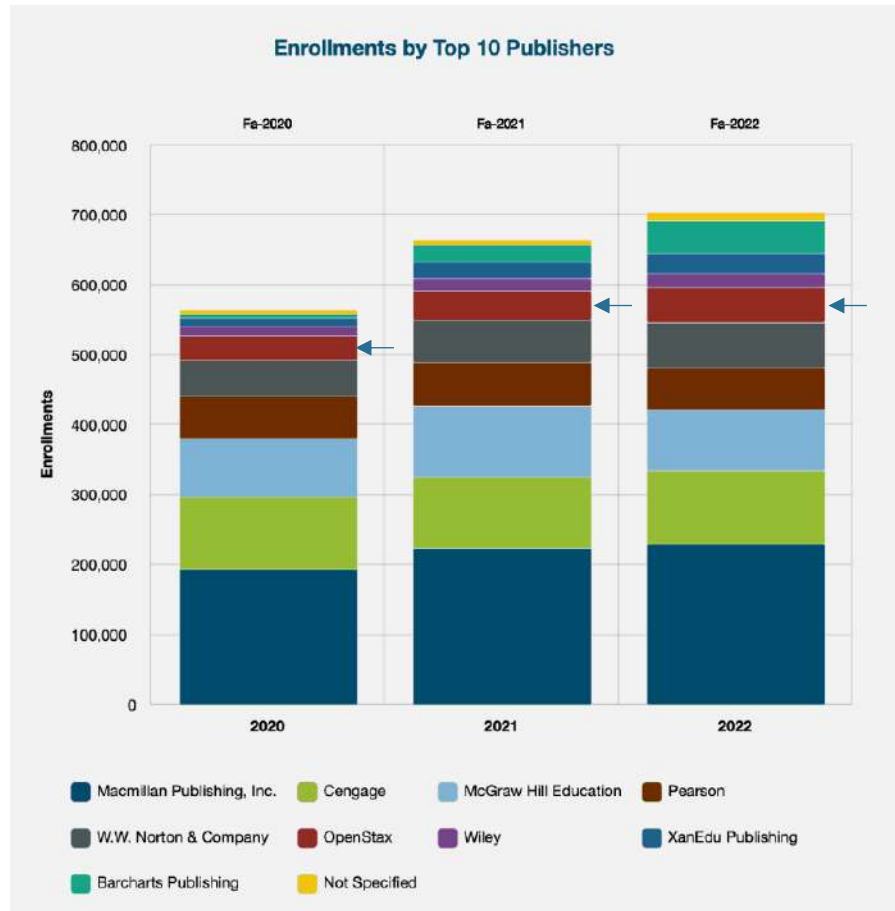
🌐 We have textbooks in English and Spanish

Peer-reviewed. Openly licensed. 100% free.

And backed by additional learning resources. Review our OpenStax textbooks and decide if they are right for your course. Simple to adopt, free to use. We make it easy to improve student access to higher education.

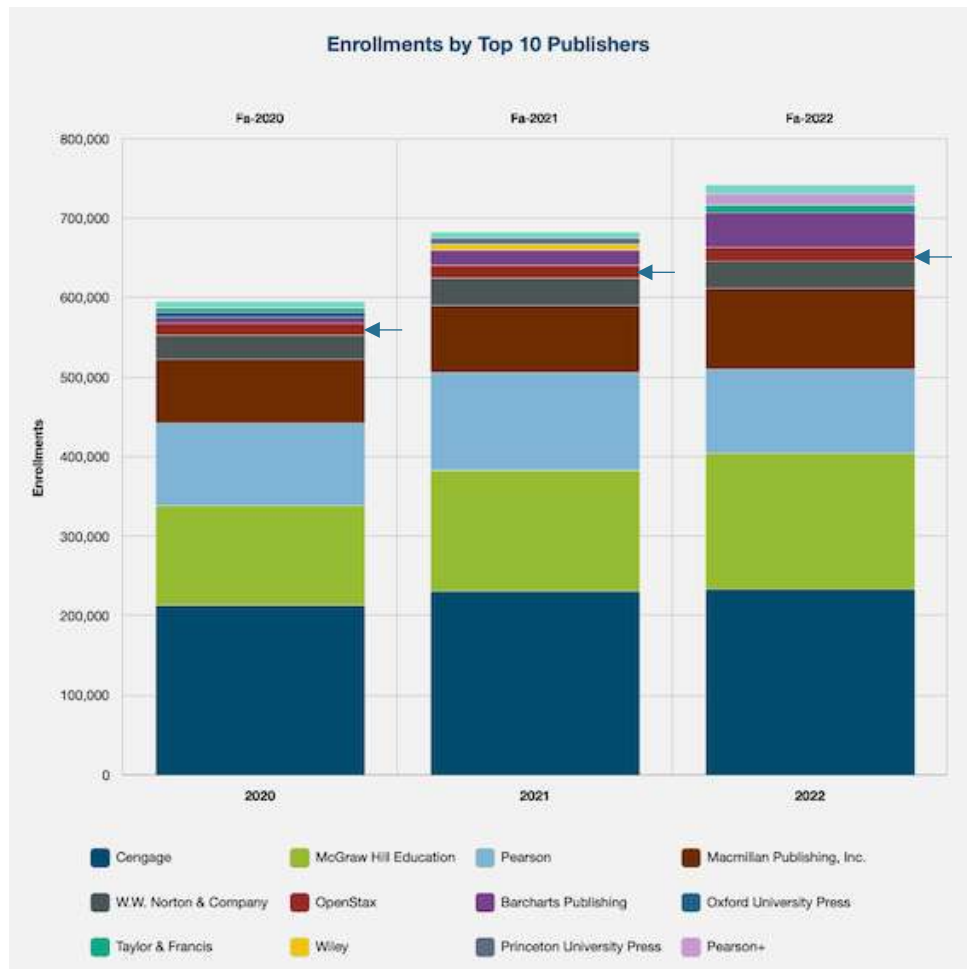


OPENSTAX EXAMPLE: PSYCH



- OpenStax is 5th most popular publisher
- Market share increased from 3.9% in 2020 to 5.6% in 2022, a growth of 33,000 student enrollments

OPENSTAX EXAMPLE: ECONOMICS



- OpenStax is 6th most popular publisher
- Market share maintained from 2.0% in 2020 to 2.2% in 2022

AUDIENCE QUESTION

What OER trend is most likely in the next 3 years?

- A. OER continues to grow a lot as more faculty learn about it and more options become available
- B. OER continues its slow and steady growth
- C. OER use doesn't change or even falls in the face of newer commercial competitive options (e.g., Inclusive Access)

CONCLUSIONS



CONCLUSIONS

- Pandemic had a large impact on digital materials in higher education
 - Increased faculty exposure and use to digital materials
 - Faculty preferences for digital and online teaching improved
 - Courses are more likely to offer digital materials now
 - Textbooks are more likely to digital-only formats, though varies by discipline
- Parallel to the digital growth, OER awareness and adoption has grown year over year
 - OpenStax maintained or saw growth in its use across its subjects
- However, trends can vary by discipline, institution, and region – digital adoption has not been uniform.

Q&A

THANK YOU!

BRIAN.MURPHY@BMURPHYGROUP.COM

INFO@BAYVIEWANALYTICS.COM