

Defining Key Terms Related to Digital Learning

Student, Faculty, and Technology Trends

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Bay View Analytics

With the assistance of:



INTRODUCTION

One of the most prominent impacts of the COVID-19 pandemic is the ongoing adoption and desire for technology use in teaching and learning.

To investigate anticipated trends toward technology use and how technologies are being used, WCET (the WICHE Cooperative for Educational Technologies) funded a survey that asked a series of questions about the role of technology in the current higher education landscape. Dr. Jeff Seaman from Bay View Analytics conducted the survey and worked with Dr. Nicole Johnson to analyze the data. WCET and the researchers worked in partnership with the following organizations: the Canadian Digital Learning Research Association (CDLRA), Online Learning Consortium (OLC), Quality Matters, and the University Professional and Continuing Education Association (UPCEA). The participants for this study consisted of 987 higher education faculty and 1,051 administrators, (for a total of 2,038 participants representing 870 different institutions from all fifty states, Puerto Rico, and the District of Columbia.)

The first report in this series focused on survey results regarding agreement with digital learning terms. This second report focuses on survey results regarding technology trends. Find the WCET digital learning definitions work at: <https://wcet.wiche.edu/practice/digital-learning-definitions/>

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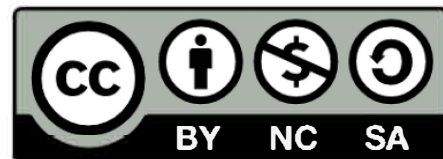
The authors appreciate the leadership of the Online Learning Consortium (OLC), Quality Matters, and the University Professional and Continuing Education Association (UPCEA) for their assistance in encouraging their members to participate in the survey and in promoting the results.

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For related resources, see <https://wcet.wiche.edu/practice/digital-learning-definitions/>

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KEY FINDINGS

The participants for this study consisted of 987 higher education faculty and 1,051 administrators (a total of 2,038 participants representing 870 different institutions from all fifty states, Puerto Rico, and the District of Columbia).

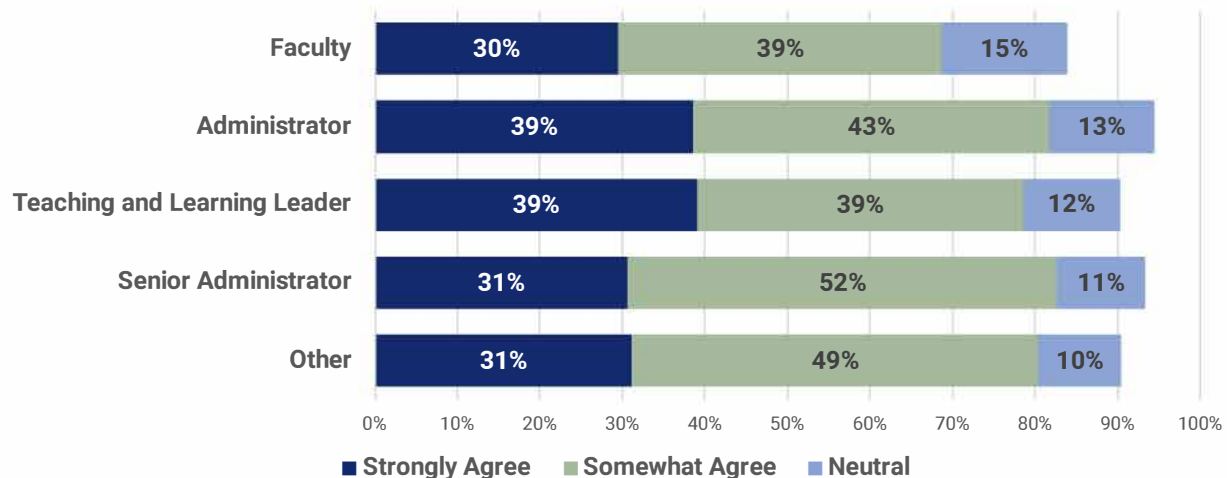
The survey asked participants to indicate the extent to which they agreed with statements regarding the use of educational technologies in their courses. Participants were asked about student perceptions, faculty perceptions, faculty capabilities, and the technologies that they integrated into their instruction.

Participant Observations of Student Desires Regarding Educational Technologies

Perceptions of student desires play a critical role in driving institutional decisions about course offerings. It is important to note that the following data regarding student wants reflects the observations and opinions of institutional personnel, not the perspectives of students themselves. In the text below, the wording of a question presented in the survey is supplied followed by statistics on the amount of agreement participants expressed with that position posited in the statement.

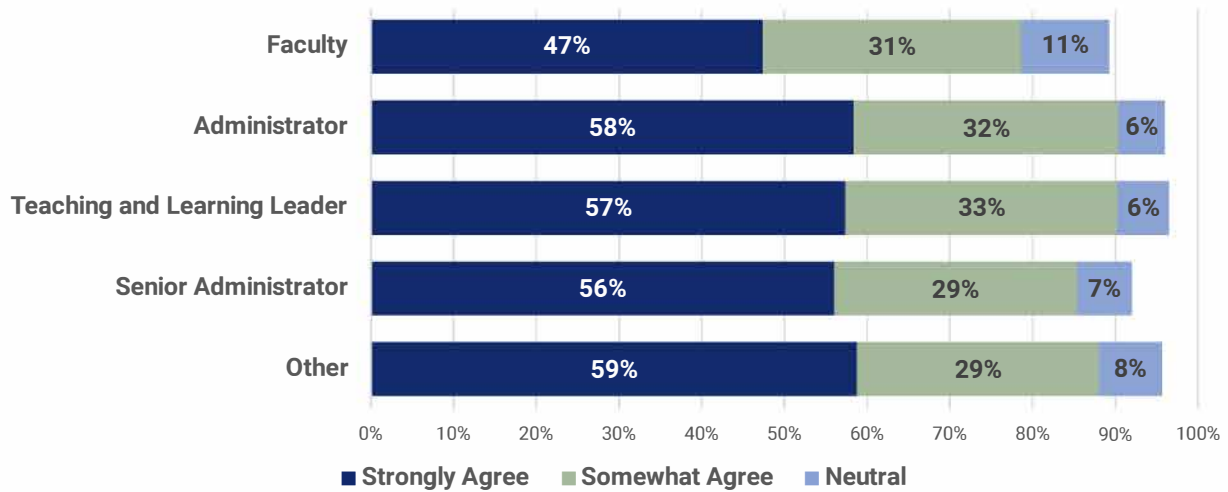
Students want more use of digital educational resources and technology in their courses

The majority of participants largely agreed that students want more use of digital educational resources and technology in their courses. Senior administrators were most likely to agree (83%) with this statement while faculty were least likely to agree (69%).



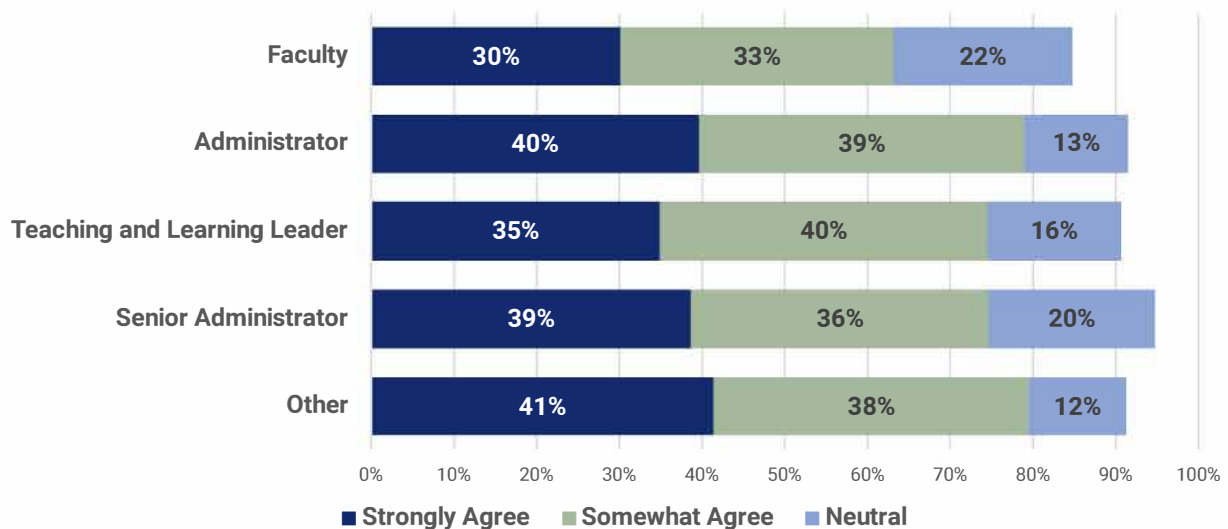
Students want greater choice and flexibility in how they access their courses (e.g., hyflex, comodal, multi-access learning)

Similarly, the majority of participants agreed that students want greater choice and flexibility in how they access their courses. Again, faculty were least likely to agree with the statement compared to participants in different roles.



Students want more options for connecting with their professors virtually

Most participants, regardless of role, also agreed that students want more options for connecting with their professors virtually. Although the majority of faculty agreed with this statement, participants in different roles (particularly administrators and teaching and learning leaders) were more likely to agree with the statement than faculty.



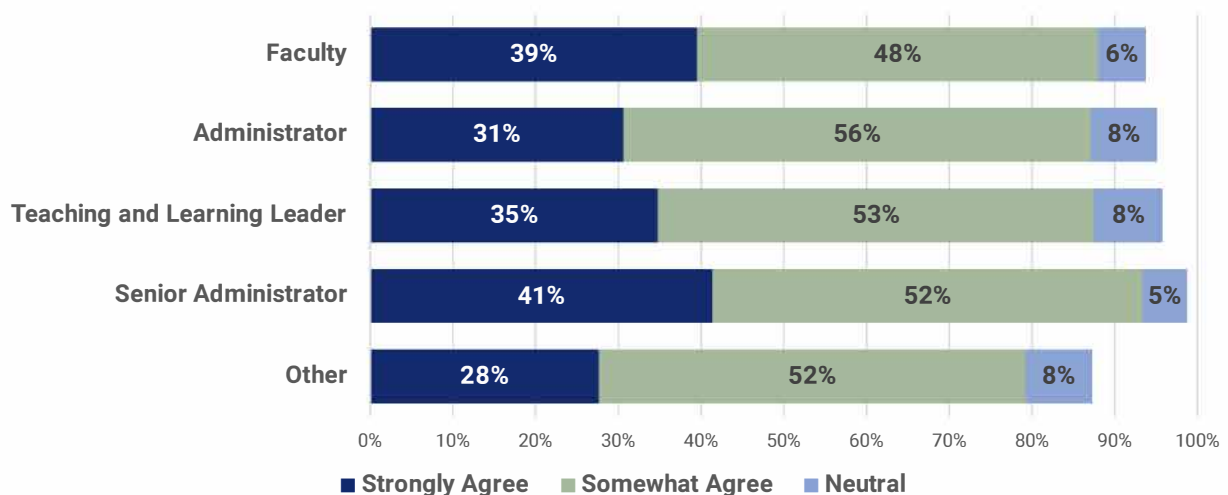
Overall, the findings clearly indicate that there is a common perception that students desire more technology integration into their learning experience. Further, participants sensed that students want technology to permeate all aspects of their learning experience from the types of materials used, to the mode of course delivery, to how they manage day-to-day communications with faculty.

Participant Observations of Faculty Desires and Capabilities Regarding Digital Learning

As faculty are on the front lines of delivering educational experiences and are directly affected by policy changes and decisions to increase technology use, the survey also asked questions about faculty desires and capabilities. The findings reflect the personal perspectives of faculty along with the perceptions of participants in different roles.

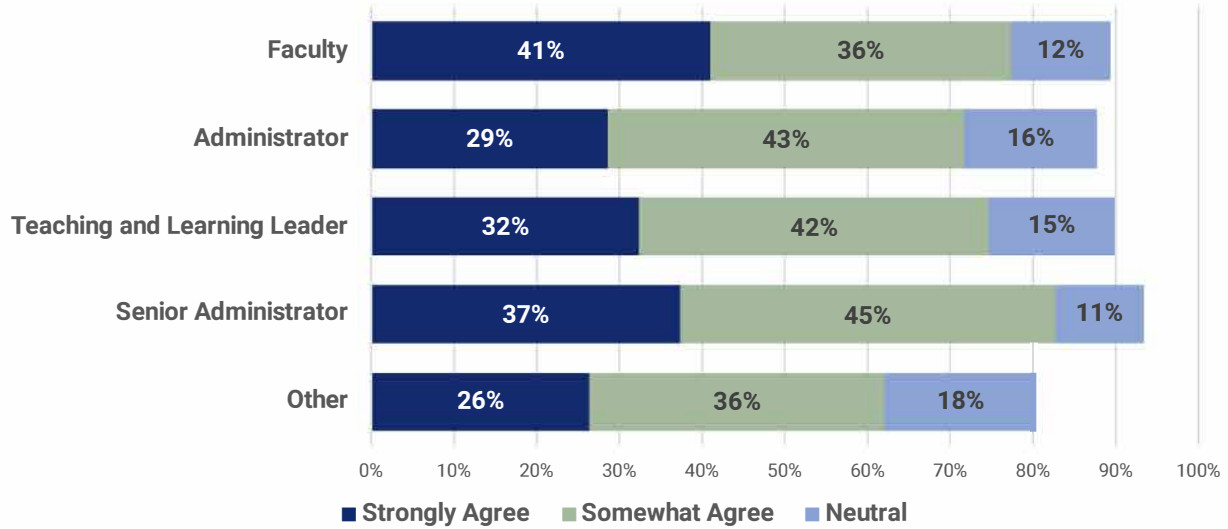
Faculty are increasing their use of digital resources and technology in their courses

When asked whether faculty are increasing their use of digital resources and technology in their courses, participants overwhelmingly agreed that an increase was taking place.



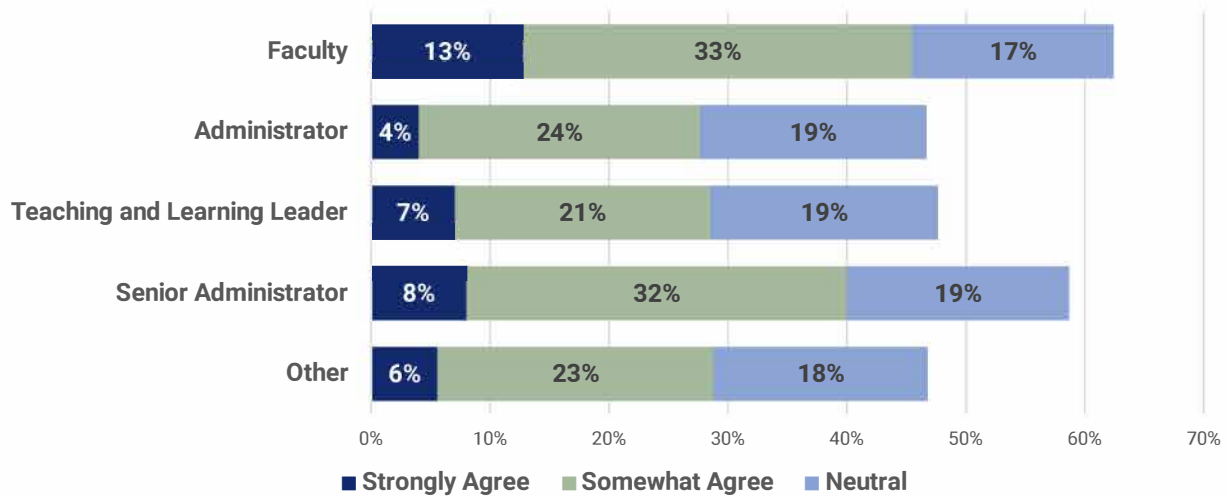
Faculty want more flexibility in how they deliver their courses

Most participants also agreed that faculty want more flexibility in how they deliver their courses. It is important to note that senior administrators and faculty, themselves, were most likely to report agreement about the desire for flexibility.



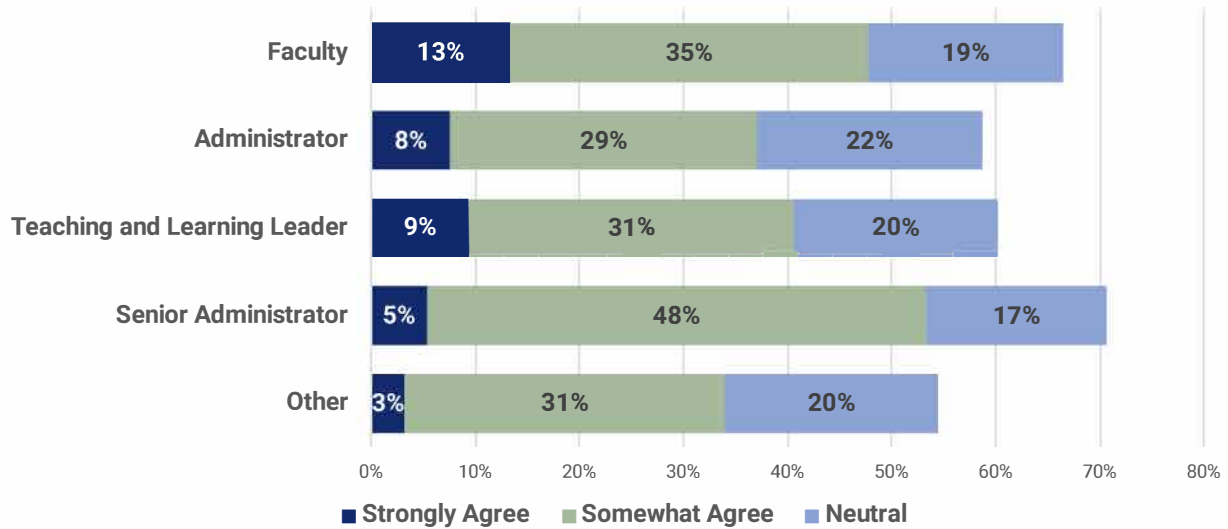
Faculty have the skills and know-how to effectively deliver courses in multiple modes

Despite the increased use of digital resources and technology along with the desire for increased flexibility, most participants did not agree that faculty had the skills and know-how to effectively deliver courses in multiple modes. Faculty were more likely to perceive themselves as having the necessary skills and know-how than participants in other roles.



Faculty are familiar with Open Educational Resources (OER)

Lastly, in relation to the increased use of digital resources and technology, the survey asked about faculty familiarity with open educational resources (OER). Just over half of senior administrators reported that they agreed that faculty are familiar with OER whereas participants in different roles (including faculty) reported lower levels of agreement.



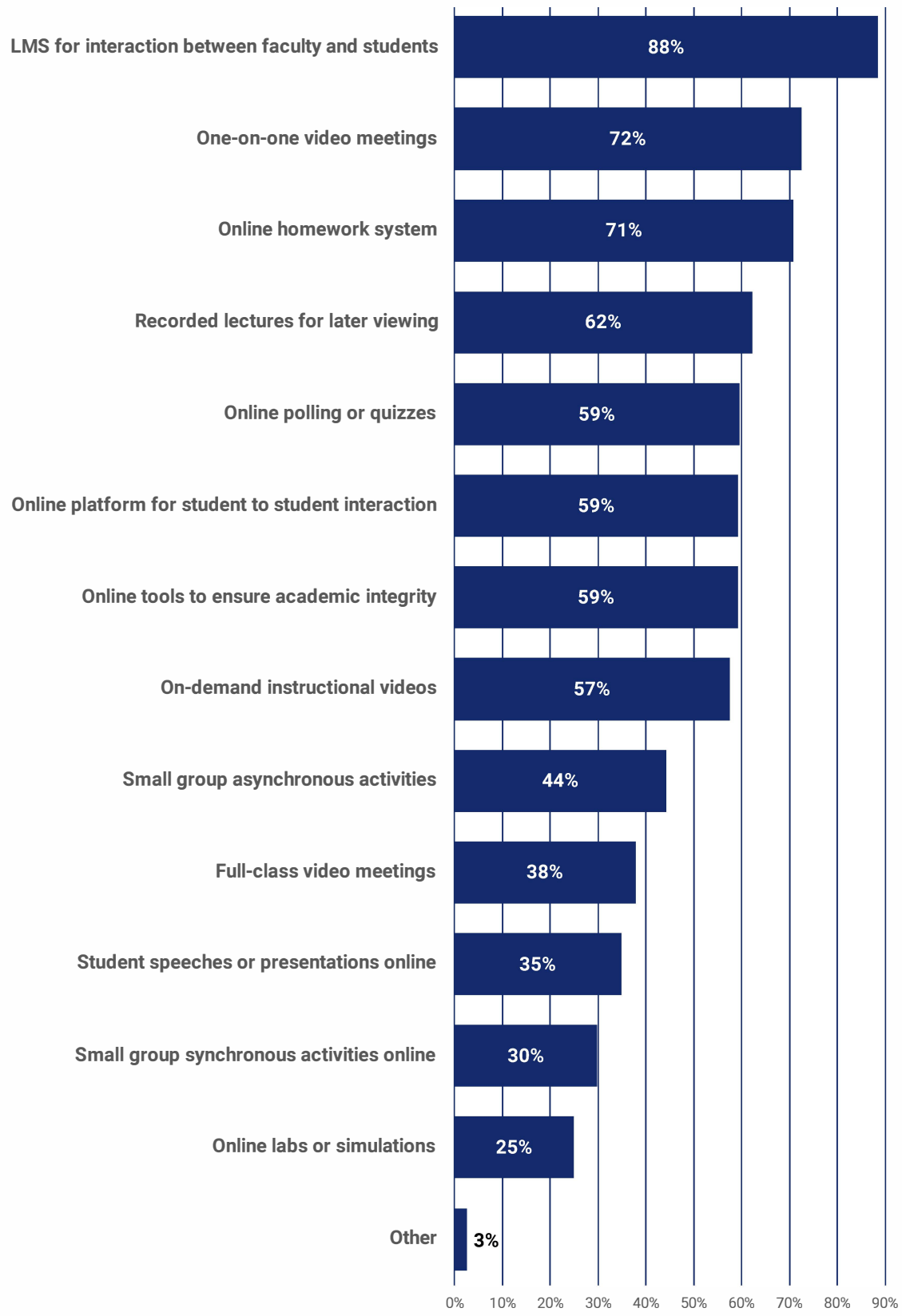
Faculty clearly support greater technology use and flexibility; however, there appears to be a disconnect between their desires and their current capabilities. The findings indicate a need for faculty professional development and training to support multi-modal teaching and effective technology use in their practices. There is also a need to raise faculty awareness of the OER that are available to them.

Technology Integration in Courses

An important objective of the survey was to better understand the types of technologies being used in courses and whether technology use varies by course modality (e.g., online, hybrid, in-person).

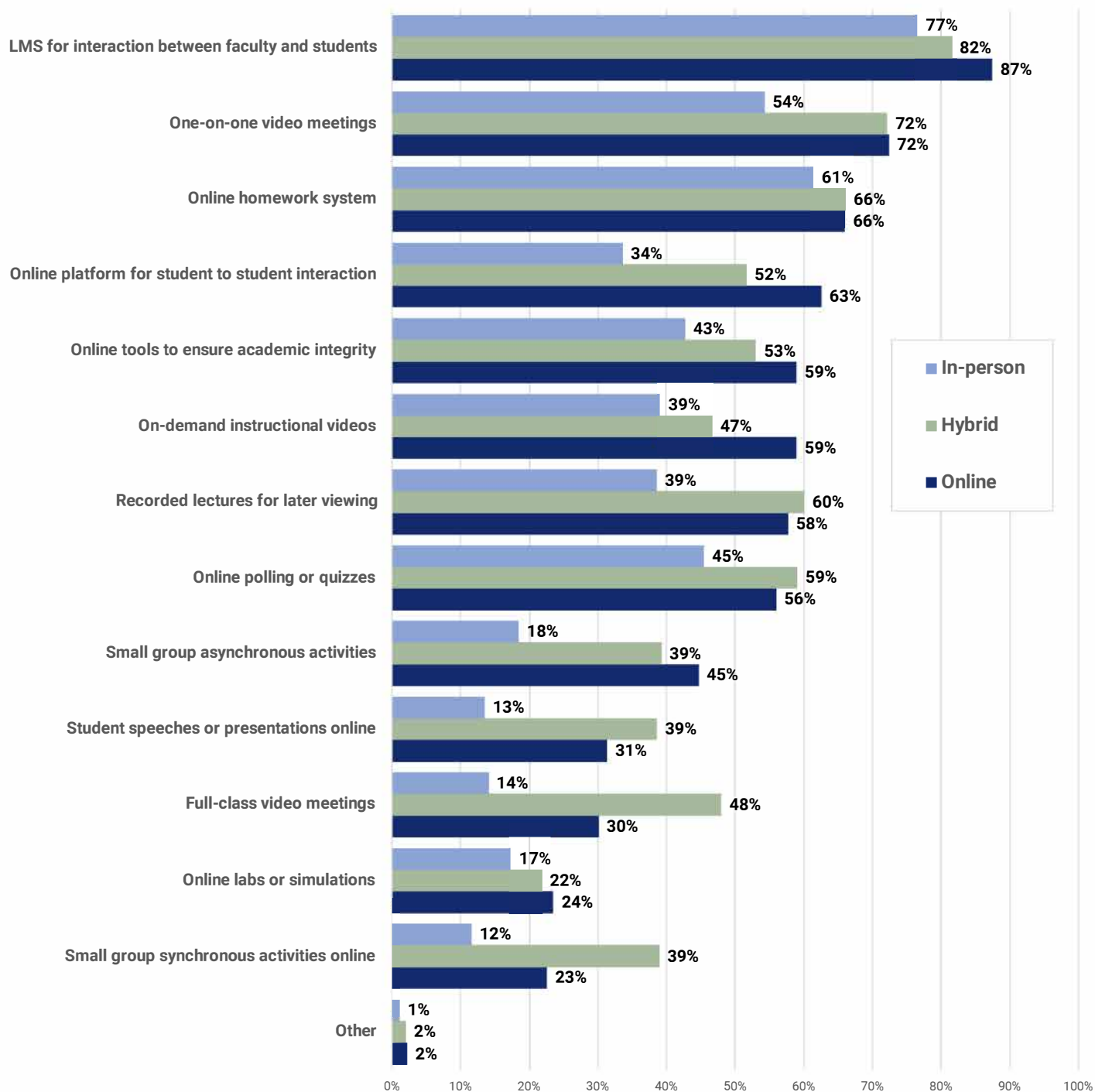
The survey findings showed that the use of a learning management system (LMS) to facilitate interaction between faculty and students was the most commonly used technology. One-on-one video meetings and online homework systems were also popular technologies. Between one-half to two-thirds of respondents also reported that the following technologies were included in courses at their institution: recorded lectures for later viewing, online polling or quizzes, online platforms for student-to-student interaction, online tools to ensure academic integrity, and on-demand instructional videos.

The graphic on the next page highlights the percentage of respondents agreeing that the technology was commonly used in their course.



When examining the use of technology by teaching mode, the most important finding is that significant technology integration is occurring in all modes of course delivery. Further, a variety of technologies are being used in each mode of delivery. Although the use of each type of technology is slightly less for in-person courses, compared to online and hybrid courses, multiple technologies are clearly being used within in-person learning contexts.

Technology use by course delivery mode



CONCLUSIONS

- There is widespread agreement that students and faculty desire more flexibility in how they access and teach their courses.
- There is a strong perception that students want more use of digital resources and technology in their courses.
- Faculty are increasing their use of digital resources and technology in the courses they teach.
- A variety of technologies are used in teaching and learning, regardless of course modality (e.g., online, hybrid, in-person).
- There is a gap between the desire for flexibility in course delivery and faculty skill and know-how to deliver courses in multiple modes effectively.

In summary, technology use in higher education is desired and is increasingly prevalent. Students and faculty, alike, appear to want more digital resources, technology use, and flexibility in the way they access and deliver courses. At present, a variety of technologies are being integrated into learning experiences across all course modalities. Faculty may require additional professional development to better support their desire to teach in multiple modalities.

METHODOLOGY

Participants

The data for this report comes from survey results of two complementary national samples of higher education administrators and teaching faculty. The primary sample for the study used email lists from a commercial source, Market Data Retrieval. The sample selection process was multi-stage, beginning with selecting all records that matched the criteria for this study (faculty teaching at least one course and academic administrators). Individuals were then randomly selected from the master list to match national proportions by the institution's size, control of institution, and Carnegie Classification to produce a second-stage selection of teaching faculty and academic administrators representative of the higher education universe.

Additionally, a second sample was constructed from open calls for participants sent to the memberships of WCET, OLC, Quality Matters, and UPCEA. Each organization was provided with a survey link shared through member communications and newsletters. Only responses where the stated institutional affiliation matched the National Center for Educational Statistics' IPEDS database and where the respondent email address matched the correct pattern for that institution were included.

General personal information (such as name, email address, and IP address) was removed from all survey responses prior to analysis. Only the lead researchers holding human subject research certification had access to the survey responses—they were not shared with other researchers, sponsors, or other organizations.

Open-ended survey responses are quoted if and only if the respondent explicitly granted permission. All such responses were reviewed and edited to ensure that no personally identifiable information was included.

The final analysis file included a total of 987 faculty and 1,051 administrators. The respondents represent the full range of higher education institutions (two-year, four-year, all Carnegie classifications, and public, private nonprofit, and for-profit). Respondents represent 870 different institutions from all fifty states, Puerto Rico, and the District of Columbia.

Survey Questionnaire

The questionnaire was intentionally kept short to encourage the broadest possible participation; the median time to complete was 5.25 minutes. Respondents could skip any question they wished, with question skip rates of 0.5% to 1.5%, depending on the question. Data were collected from May 11th to June 3rd, 2022.

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About the Canadian Digital Learning Research Association

The Canadian Digital Learning Research Association (CDLRA) conducts applied research to advance knowledge about digital learning strategies, policies, and practices in close collaboration with Canadian post-secondary institutions and affiliated organizations. Visit <http://www.cdlra-acrfi.ca/> for more information.

About Bay View Analytics

Bay View Analytics is a statistical research firm focusing on survey design, implementation and analysis. Formerly known as the Babson Survey Research Group, the scope of Bay View Analytics' consulting engagements includes scientific statistical analyses, clinical trial statistics and survey designs for a range of topics, with a particular focus on online education. Bay View Analytics has been conducting research and publishing annual reports on the state of online education in U.S. higher education for thirteen years. Visit www.bayviewanalytics.com for more information or contact us at info@bayviewanalytics.com.

About WCET

WCET – the WICHE Cooperative for Educational Technologies, is the leader in the practice, policy, & advocacy of digital learning in higher education. WCET is a member-driven nonprofit which brings together colleges, universities, higher education organizations, and companies to collectively improve the quality and reach of digital learning programs. Learn more at <https://wcet.wiche.edu/>.