Recommendations for Collaboration Technology at University of Illinois at Urbana-Champaign

FINAL REPORT OF THE COLLABORATION PORTFOLIO ADVISORY GROUP - JANUARY 2022

EXECUTIVE SUMMARY

The Collaboration Portfolio Advisory Group (CPAG) was charged in January 2021 by the Office of the CIO as an advisory body for planning beyond Microsoft Skype for Business and related campus collaboration technologies.

CPAG has worked to 1) define collaboration in the context of the UIUC campus; 2) assess the current state and community sentiment of collaboration technology; 3) identify strengths and gaps of current practices; and 4) develop recommendations for future collaboration technologies supported by campus.

The overall satisfaction with the current collaboration technology portfolio is positive. The migration away from Skype for Business has already begun, as several units have moved to other collaboration and communication platforms. With few exceptions, UIUC has the tools it needs to collaborate successfully in an increasingly hybrid work environment. However, some challenges exist. Excessive options fragment the ability to develop a focused set of tools and user platforms. The current portfolio lacks stakeholder governance to assess its evolution. Individual tools, while available, aren't supported through in-depth, in-context training for faculty, staff, and student roles. External collaboration also presents unique challenges due to different collaboration tools used by other partners.

With this context as background, we recommend that the appropriate parties implement the following:

- Adopt Microsoft Teams as UIUC's primary communication and collaboration platform.
- Maintain enterprise Zoom Pro licensing in the short term.
- Maintain enterprise Box.com licensing.
- Create an IT Council-sponsored working group to identify a project management tool.
- Create an IT Council-sponsored working group to identify a virtual whiteboarding tool.
- Assign responsibility to a campus governance group to assess and manage the evolution of the collaboration technology portfolio.
- Provide central and unit-level IT teams with resources to deliver consultative technology use training to enhance collaboration.

- Finalize FERPA Certification of Microsoft Office 365, One Drive, Exchange Online, and Teams.

Our full process, analysis, and recommendations follow.

PURPOSE, SCOPE, AND MEMBERSHIP

Purpose

The Collaboration Portfolio Advisory Group (CPAG) was charged in January 2021 by the Office of the CIO as an advisory body to support the planning for what is beyond Microsoft Skype for Business and related collaboration technologies. The purpose of CPAG is to 1) gather campus perspectives and requirements to help shape the collaboration technology portfolio intended to support the entire campus workforce and 2) make recommendations for a collaboration technology strategy and suite of tools that UIUC leadership will seek to acquire, implement, and support.

Membership

CPAG is comprised of faculty and staff from diverse units and functional areas. The complete membership of the group is available in Appendix D (p. 45).

Scope

CPAG worked in four phases between January 2021 and January 2022, which are discussed in detail in the following pages.

- Defining Collaboration (p. 3)
- Assessing Current State and Sentiment (p. 5)
- Identifying Current Strengths and Gaps (p. 13)
- Recommendations (p. 15)

DEFINING COLLABORATION

For the purpose of our efforts and this report, collaboration is defined as **two or more people working together toward a common goal**. We identified three main categories of collaboration.

- **Transactional**: collaborations done through an established workflow as a regular part of administrative operations (e.g., team communications, HR processes, business workflows)
- **Short-term**: collaborations toward a common, defined short-term goal (e.g., event planning, strategic planning, class projects, ideation)
- **Long-term or ongoing**: collaborations over time with common groups (e.g., student organizations, project management, interdisciplinary research, teamwork)

Who collaborates?

We identified the following collaboration participant categories in our discussions.

Internal Collaborators

- Faculty
- Staff
- Undergraduate Students
- Residential Graduate Students
- Online Graduate Students
- Post-Doctoral Students
- Professional Students
- Non-Degree Students
- International Students
- Service Offices

External Collaborators

- Alumni
- Clients
- Community Members
- Corporate Partners
- Funding Partners
- Government Partners
- Professional Organizations
- Prospective Students/Families
- Researchers
- University Partners
- Vendors

What forms does collaboration take?

We identified several major functional areas of collaboration. A detailed list of collaboration forms within these areas can be found in Appendix C (p. 42).

We agree that this list, while not exhaustive, approaches a laundry list of "all the things a university does." We do not intend to expand the scope and definition of collaboration here, but rather want to acknowledge that a significant portion of university functions involve collaboration between faculty,

students, staff, and other parties. The distinction between what is collaboration, and what is not, lacks clear definition. For our purposes, we found it more productive to look at collaboration through the lens of the involved interactions and functions.

What are the major interactions/functions involved collaborations?

We identified the following interactions/functions involved in collaborations that can be enabled by technology.

- Audio Conferencing/Telephony
- Conferences/Networking Events
- Content Sharing/Web
- Data Sharing
- Document Creation
- Document Sharing
- Meeting Management
- Task/Project Management
- Team Collaboration
- Texting/Chat (synchronous and asynchronous)
- Video Conferencing
- Workflow

ASSESSING CURRENT STATE AND SENTIMENT

Current State: Skype for Business and Microsoft Teams Transition

Microsoft Skype for Business is the current telephony tool for the UIUC campus and provides the major functionality (phone/chat) in our Microsoft Unified Communications platform.

Skype for Business Online was retired by Microsoft in July 2021, This product retirement is the primary motivator for the creation of CPAG. In October 2020, Microsoft ended mainstream support for Skype for Business 2015 on-premise implementation. It currently exists with only security updates and limited, costly support. As of now, Technology Services is maintaining infrastructure support for our current system, but that can only be maintained through October 2025 at the latest.

Technology Services formed the Skype2Teams Steering Team to determine an interim solution and an appropriate transition timeline. In Fall 2021, Technology Services announced plans to transition in May 2023 from Skype for Business to Microsoft Teams, Microsoft's next generation telephony and collaboration solution. Campus leadership approved the purchase of upgraded A5 licensing so that UIUC can use Teams for external calling. This licensing also includes access to the Microsoft Power Platform (workflow automation) and Power BI (data visualization) for full-time faculty and staff.

This transition and investment decision necessarily preceded our CPAG recommendations. If CPAG were to recommend exploring a telephony solution other than Microsoft Teams in January 2022, that would trigger a state-mandated RFP. RFPs of this size and scope can stretch 18-24 months before purchase, with another 9-18 months of technical implementation after purchase. Without transitioning to Teams, at least as a stopgap solution, campus would assume a significant risk of a severely limited available telephony solution or none at all. Moving to Microsoft Teams avoids this risk and provides campus with time to include CPAG input in long-term decision making.

Current Sentiment: UIUC Collaboration Technology Survey

In Summer 2021, CPAG created and conducted the UIUC Collaboration Technology Survey to gather input from the university community. We promoted the survey to the entire community through requests in the eWeek newsletter, campus communicators, IT Council, and the CPAG website. The survey aimed to identify collaborative relationships, to assess sentiment related to using collaboration technologies, and to measure use of different collaborative technology tools.

Full survey results can be found in Appendix A (p. 19).

The survey was completed by 1,153 participants, including 264 researchers, 186 instructors, 181 program staff, 500 operations staff, 131 graduate students, 8 post-docs, and 8 undergraduate students.[1]

All major campus units were represented in survey respondents (Figure 1).

There is confidence that the number of responses and diversity of unit and employee type provide reasonably good insight into sentiment and technology use on the UIUC campus. Due to lack of student responses, we targeted students in a second survey in November 2021 .

Who is collaborating?

We asked participants to identify the groups with whom they collaborate (Figure 2). As expected, staff (87.3%) and faculty (77.9%) are the most common groups, followed by

- residential graduate students (46.8%),
- undergraduate students (41.7%),
- student organizations (41.7%),
- international students (38.5%),
- service offices (37.6%),
- university partners (35.9%),
- professional organizations (35.2%),
- vendors (34.8%), and
- external researchers (31.7%).

These responses illustrate that while campus collaborations are more common, our activities often cross campus borders to external collaborators.

How do people feel about collaboration?

We asked participants to rate their agreement with several statements regarding collaboration and collaboration technologies on campus.

- Eighty percent of respondents completely or mostly agree that **it is easy to collaborate in their work**, with an additional 18% who somewhat agree (Figure 3).
- More than a third of respondents feel they **must use different technologies than those the campus supports/provides** to be an effective collaborator (Figure 4).

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[1] Participants can belong to more than one category.

- Nearly one-third of respondents currently **completely have the technology they need to collaborate** and another 48% mostly agree with this sentiment (Figure 5).
- Only half of respondents feel completely or mostly **aware of the available technology** for collaboration (Figure 6).
- Half of respondents completely or mostly **use Skype for Business as a part of their regular job** (Figure 7).
- Just over a third of respondents completely or mostly **use Skype for Business as a collaboration tool** (Figure 8).
- Eighty percent of respondents are completely or mostly **confident using technology to enable collaboration in their work** (Figure 9).
- Slightly over half of respondents completely or mostly **know where to get training on collaboration technologies** (Figure 10).
- Two-thirds of respondents do not agree that **technology is a barrier to being an effective collaborator**. An additional 25% somewhat agree to this statement (Figure 11).
- Eighty-three percent of respondents completely or mostly agree that **technology enables them to be an effective collaborator** (Figure 12).
- Nearly 72% of respondents completely or mostly **have enough IT support to collaborate successfully** (Figure 13).

It's important to note that these percentages related to sentiment vary widely by unit. Sample sizes for some units were small, so caution is used not to draw conclusions from this variance. However, the variance could be explained by differences in technology availability and awareness, training resources, or IT support among units.

What is the current level of collaboration tool use of university-supported platforms?

We asked participants to rate how much they use our current portfolio of campus collaboration tools.

The current portfolio includes tools provided by four primary vendors: Microsoft, Google, Box.com, and Zoom.

The current **Microsoft** contract provides A5 licensing to most faculty and staff at an annual cost of $1,451,970. A5 licensing includes access to Exchange Online (email), Office 365 (document creation and productivity tools), Power Apps (workflow), Power BI (data visualization), One Drive (5TB/user storage), and Teams (external telephony and messaging). Our agreement also includes A3 licensing for students (excludes external telephony, Power Apps, and Power BI) and unlimited A1 licensing for all other UIUC users. The current contract expires in June 2022, and is generally renewed in 3 year increments.

In addition to this licensing, Technology Services currently supports an on-premise instance of Microsoft Skype for Business which is the current external telephony tool.

Google Docs/Sheets is a hybrid document creation and storage platform. All UIUC employees and students have access to Google Workspace for Education Fundamentals, which is free.

Box.com is primarily a storage platform and the most common file storage solution on campus. It is also FERPA-compliant and security-approved for sensitive data within specified guidelines (including PHI data). Some units have moved all primary file storage to Box.com, replacing storage on on-premise file servers. All UIUC employees and students have unlimited storage on Box.com. The current Box.com contract is maintained at the UI System level and runs through 6/30/23. The UIUC annual cost is currently $116,283. The UI System intends to renew this contract for an additional 2 years through 6/30/25.

Zoom is the primary delivery platform for online teaching at UIUC and has been the dominant video-conferencing platform for remote meetings and external conferencing during the pandemic. The current annual cost of Zoom Pro licensing for all faculty, students, and staff is $160,000. A contract renewal is currently being negotiated.

Survey participants reported the following:

Email remains a primary collaboration tool for respondents, with 95% using Outlook or other email applications for collaboration every workday (Figure 14).

Skype for Business and Microsoft Teams are the two primary supported tools used for messaging and audio conferencing at UIUC. Skype for Business was a more popular everyday collaboration choice (41.5%) for respondents than Microsoft Teams (23.4%) (Figures 15 and 16). These percentages vary widely by unit. In units that moved to Teams for internal collaboration and communication to support remote work during the pandemic, the percentage of respondents who reported everyday Teams use is much higher. Nearly 70 percent of respondents have some experience with using Teams.

Almost all respondents reported Zoom use for collaboration, with 52% noting daily use and 86% using Zoom at least a few times a week (Figure 17). Anecdotal evidence suggests that Teams may be slowly assuming a larger share of remote meetings as it becomes adopted more widely.

Nearly 70% of respondents use **Office 365** daily, while 85% use it at least a few times a week. Just 19% of respondents use One Drive at least a few times a week.

Forty percent of survey respondents report daily **Box.com** use, and 90%+ use Box.com at least occasionally. A limited number of researchers have used Box.com to store large quantities of video and

other research data, taking advantage of the unlimited storage available, especially in cases where other large data storage options don't satisfy needs.

Google Docs/Sheets is used less often, with 19% reporting everyday use and an additional 20% using the platform a few times a week. Anecdotally and in free response survey answers, many express a preference for Google's ease of synchronous collaborative editing features.

What non-university platforms are used in significant numbers?

We asked respondents to "list any other technology solutions that you use for collaboration."

Slack was the predominant answer, with 15% of respondents reporting some use of Slack in collaboration. This use ranges from units who have adopted Slack as their primary messaging platform to occasional use to collaborate with other/outside groups that use Slack as their primary communications platform. We conducted three focus groups to understand Slack use. Feedback from these groups indicated that

- Slack provides an easy-to-use interface that is broadly accessible to internal and external collaborators.
- Slack is an industry leader in the messaging application space.
- Slack is commonly used by external collaboration groups.
- Slack includes many native integrations with other collaboration and workflow tools.
- Slack offers ease of entry for their free tier of service. A new user can be added effortlessly to a Slack community.

We confirmed that Technology Services explored enterprise licensing for Slack, and the cost was considered prohibitive for the toolset. In April 2020, Slack had 12 million users, compared to 75 million users for Microsoft Teams.[2]

We noted that many of the features that survey respondents listed as advantages to Slack use are also available in Teams.

Other general platforms/tools mentioned in considerable numbers include:

- Brainstorming (Miro, JamBoard)
- Document storage (Dropbox)
- Messaging/Conferencing (Discord, WeChat, WhatsApp, WebEx, GotoMeeting)

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[2] https://www.changingsocial.com/microsoft-teams-vs-slack/

- Project management (Asana, Trello, Basecamp, Airtable, Microsoft Tasks by Planner, Smartsheet)
- Scheduling (Doodle)

Where do technology, service gaps, or other obstacles exist?

We asked respondents, "Where do the technology or service gaps exist when it comes to collaboration at UIUC?" and "What non-technology obstacles to collaboration exist at UIUC?"

Commonly raised issues:

- The availability and use of multiple platforms by units and external collaborators lead to confusion, fatigue, and difficulty in developing expertise in any platform. Comments included:
    - "I'm tired of using three different collaboration tools. It'd be great if it was all in one."
    - "It seems like every college does it differently, and sometimes it's even done differently within the same college."
    - "Not everyone is using the same platforms, so it can be a logistical hurdle at the beginning of each project or collaborative venture to decide on tools and make sure everyone has access and adequate training."
    - "There are too many options! Today I wanted to connect with someone and first we had to decide if we would meet on skype/teams/zoom with voice or video. That's 6 options when we used to do a simple phone call."
- There is a lack of awareness of what's available and/or how to use it. Many respondents identified needs where features already exist in available tools..
- There are no virtual whiteboarding or brainstorming tools that are easy-to-use and do an adequate job of in-person approximating person experiences.
- There is no centrally-supported project management tool.
- There is notable variability in the level of IT support provided across units.
- There is a lack of available training on supported platforms.
- Some external collaborators have trouble connecting to UIUC-supported platforms such as Zoom and Teams.
- Unit and funding autonomy and/or lack of central funding lead to technology "haves" and "have nots".

Current Sentiment: Illinois Student Technology Platform Survey

Students were not specifically targeted in the UIUC Collaboration Technology Survey because it was conducted in between spring and fall semesters. Therefore, we worked with Student Affairs to launch a student-centric survey in November 2021 to solicit participation from 5,000 randomly sampled students. The survey was completed by 105 students, including 66 graduate students, 39 undergraduates, 73 residential students, and 31 online students. It is difficult to draw definitive conclusions due to the low response rate but we are providing the results here for reference and insight.

Full survey results can be found in Appendix B (p. 30).

Nearly all major academic units were represented in the respondents (Figure 22).

Who do students collaborate with?

We asked students to identify the groups with whom they collaborate (Figure 23). Faculty (51.4%), online graduate students (48.6%), student organizations (46.7%) undergraduates (46.7%), and residential graduate students (40.0%) are the most common groups, followed by international students(32.4%), staff (30.5%), and community members (14.3%).

How do students feel about collaboration?

We asked students to rate their agreement with several statements regarding collaboration and collaboration technologies on campus.

- Seventy-nine percent of student respondents completely or mostly **have the technology platforms they need to collaborate** (Figure 24).
- Nearly 58% of student respondents do not agree that **technology is a barrier to being an effective collaborator** (Figure 25). Less than 1 in 5 student respondents completely or mostly agree with this statement.
- Half of student respondents report that **technology enables them to be an effective collaborator**. An additional 36% mostly agree with this statement (Figure 26).
- Nearly 52% of student respondents completely or mostly agree that **they have to use different technology platforms other than campus supports/provides to be an effective collaborator** (Figure 27). Just 1 in 4 student respondents disagrees with this statement.
- A strong majority (87%) of student respondents **are completely or mostly confident using technology to enable collaboration as a student** (Figure 28).

- Student respondents were divided when asked if they **know where to get training on collaboration technology platforms**. While 20% agree completely, 28% do not agree at all (Figure 29).
- Notably, nearly 2 in 3 student respondents completely or mostly agree that **they have enough IT support to collaborate successfully**. (Figure 30).

What is the current student level of collaboration tool use?

We asked participants to rate how much they use our current portfolio of campus collaboration tools.

- When it comes to document creation/storage platforms (Figures 31-34), student respondents use Office 365 predominantly (51% every day), followed by Google Docs/Sheets (31%), Microsoft One Drive (27%), and Box.com (18%).
- Eighty percent of student respondents use Outlook every day (Figure 36), and 46% use Gmail daily (Figure 35). For context, all students starting after November 2018 have been issued an Exchange (Office Online) email account. Prior to November 2018, undergraduate students were issued Gmail (Google) email accounts and maintain those accounts through graduation.
- All UIUC students have Microsoft Teams and Zoom accounts via university licensing. Considering that Zoom is the primary delivery platform for online teaching at UIUC, 33% of student respondents use Zoom for collaboration every day, while 12% use Teams daily. Interestingly, 46% of students report never having used Teams, while 99% of students use Zoom at least occasionally.
- Students reported usage of four popular messaging/collaboration platforms not directly supported by campus: Slack, WhatsApp, Discord, and WeChat (Figures 42-45). Three of the platforms had notable everyday use -- Slack (17%), WhatsApp (14%), and Discord (13%) – higher than that of Teams (12%). Campus has not promoted a preferred messaging platform (outside of email), so it is not surprising to see such usage fragmentation.
- Students also reported on their usage of the main UIUC learning management systems (LMS): Compass 2G, Canvas, and Moodle (Figures 39-41). Moodle is offered as a service by the College of LAS and has been adopted by some colleges and academic departments as their primary LMS. Compass 2G has been the predominant campus LMS, but UIUC is currently transitioning to Canvas as the campus-supported LMS. This transition is scheduled to be completed by Summer 2022. The Canvas transition is evident in the student responses. Nearly 47% of student respondents reported everyday usage of Canvas, while 23% use Moodle daily and 18% use Compass 2G. Nearly 78% of student respondents use Canvas at least a few times a week.

IDENTIFYING CURRENT STRENGTHS AND GAPS

Based on the survey results, conversations with service providers, and our group discussions, we have identified the following strengths in the campus collaboration technology portfolio as it exists today.

- Much of the UIUC community has positive sentiment about the state of collaboration on campus. Four in five respondents felt that it is easy to collaborate in their work, that they currently have the technology they need to collaborate, and that they are confident using technology to enable collaboration.
- UIUC was able to move to remote work during the pandemic and maintain business continuity because of the availability of collaboration technology platforms, particularly Zoom.
- A large portion of campus has already started to move away from Skype for Business before its retirement in May 2023. Only half of respondents still use Skype for Business as a regular part of their jobs and just a third use it as a collaboration tool.
- Improving university processes related to vetting the security of new technology platforms have decreased the risk to sensitive data and other data privacy issues.
- Box.com provides both unlimited file storage and campus security for storage of sensitive data.

We also have identified the following gaps in the current campus collaboration technology portfolio.

- State procurement policies and rules hinder the university's ability to be agile in acquiring new technology platforms that support operational excellence. This can create an incentive to maintain existing vendor relationships with contractual agreements or reseller agreements through state-approved vendors. Procuring enterprise-level platforms outside of these existing agreements via RFP can be an 18-24 month process, a timeline that is unacceptable to meet emerging technology needs.
- There is too much variability between units in funding for technology, technology support, and training. This is particularly evident in the adoption of new technologies.
- The current proliferation of platforms and tools creates user confusion, dilutes potential expertise, introduces inefficiencies in collaborative processes, and puts university data at risk.
- There is no coordinated mechanism to govern the decisions surrounding collaboration technology at UIUC.
- Data and workflow integrations between platforms and tools is sporadic and poorly supported, leading to more manual transfer of information between platforms.
- The lack of best practices and standardization in the use of cloud file storage (Box.com, One Drive, and Google Drive) introduces risks to business continuity and organizational ownership of critical information resources.
- Faculty and staff feel they regularly must use technologies outside of campus support to be effective collaborators. Some of this sentiment can be explained by a lack of awareness of

supported tools, but this sentiment is strongest in the campus research community. Nearly 3 in 5 researchers mostly or completely agree that they need to use different technologies than the campus supports/provides to be effective collaborator, due to collaborations with external partners.

- Students frequently use technologies other than campus provides or supports. This could be due to lack of awareness, training, or general willingness to use multiple platforms like those offered/supposed by campus to meet their needs.
- Platform transitions are not well supported, so faculty and staff have trouble adopting new technologies.
- Central training resources lean heavily on written documentation and general workshops, not consultative and/or customized training sessions. This often results in faculty and staff unsure of how to use a tool *within* the context of their own work or unit.

RECOMMENDATIONS

Our recommendations are not intended to be exclusive. No standard and centrally-supported suite of collaboration tools will ever meet all use cases, and innovation and experimentation with new tools is a hallmark of a healthy technology ecosystem. The following recommendations are meant to answer the question: Where should our campus invest resources in technology to ensure that faculty, students, and staff have the tools and training necessary for productive collaborations?

Microsoft Teams and Slack

Adopt Microsoft Teams as the primary communication and collaboration platform for UIUC, including external and internal telephony. This will provide the natural transition from Skype for Business while remaining in the Microsoft ecosystem. Microsoft Teams is an industry-leading collaboration platform with integrated telephony where Microsoft continues to invest resources for improvement. We believe that it can meet the majority of campus collaboration needs and therefore recommend that campus adopts and supports Teams as the center of our collaboration technology portfolio.

Teams is fully integrated into Office 365 (including Exchange Online), which is currently the most used productivity suite on campus. Some campus units like Gies College of Business and College of Education were early adopters of Teams and have been pleased with the transition.

As an interim transitional step, campus leadership approved the purchase of Microsoft A5 licensing to enable external calling in Teams, which allows CPAG the ability to recommend the move to a new collaboration and telephony platform. Based on our findings, we do not believe that recommending an RFP process for a different platform is the right choice for campus. Teams provides a rich and continually improving feature set, ecosystem integrations, and a promising head start on a full campus transition because of early adopters. UIUC's existing relationship with Microsoft also already provides expert consultation and high-quality training resources.

We identified prevailing negatives with Microsoft Teams, which campus will need to address where possible:

- There is a current lack of integration between different Teams tenants (platform instances that generally correspond to organizations). Right now, it is cumbersome for users to be members of more than one tenant, so campus users who may belong to professional organizations or other external collaborations that use Teams must switch back and forth between tenants. In 2022, however, the public roadmap for Teams includes tenant integration in a single interface, which will remove this obstacle.

- Many external (and some internal) collaborations require campus users to use a different platform than Teams. This problem is inescapable, regardless of platform. There will always be external collaborators that use different platforms than our campus uses.
- Member management in Teams is not fully automated. Rosters can be imported via campus Active Directory groups, but not synchronized thereafter. This makes it difficult to manage membership based on role or enrollment. We would recommend that Technology Services investigate and solve this problem to provide more automated member management in Teams.
- There is no standardized process for approving cross-platform integrations with Teams. This issue should be addressed by the portfolio governance group recommended below.

We also identified a related recommendation regarding Slack use on campus. Our conversations with Slack users revealed a passionate community that benefits from using Slack. Many Slack features compare favorably to Teams; however, the platform lacks robust external telephony, full integration with the rest of our standard Microsoft Suite, and advanced levels of security. Therefore, we are not recommending it as the primary messaging platform. We do recommend that the Office of Privacy and Security performs a full security and privacy review of Slack. If this results in a favorable review, we additionally recommend that campus

- allows continued Slack use because of its importance to external collaboration;
- engages the Slack user community to develop best practices around security and privacy; and
- explores the possibility of offering Slack Pro licensing through Webstore for uses/cases where Teams is not a viable option.

Zoom Licensing

Maintain Zoom Pro licensing for all faculty, students, and staff in the short term. Zoom is UIUC's primary virtual education delivery platform and the predominant remote meeting tool for faculty and staff.

Technology Services (or an appropriate governance group) should closely monitor the need for Zoom beyond 2023 as Teams is adopted more widely. It is likely that Teams video meetings will replace Zoom for most remote/virtual meetings as users become more comfortable with Teams. Teams also has large meeting and webinar functionality like Zoom. Technology Services (or an appropriate governance group should conduct an annual assessment of the service redundancy between Zoom and Teams, with a long-term goal of retiring enterprise Zoom Pro licensing if Teams meets campus needs.

While beyond the scope of our recommendations, it's worth nothing that some units are already exploring what is beyond Zoom for the delivery of synchronous educational content. If this materializes into a new virtual education platform for campus, campus could have a faster exit from Zoom.

Box.com and Expanded Integrations

Maintain Box.com licensing, as cost allows or until organizational controls of document storage are more robust in Microsoft One Drive via Teams**.** Box.com is the predominant file storage platform on campus and provides the most robust mechanisms for sensitive data storage and organizational control of document storage. Because Box.com allows for units, rather than individuals, to "own" the document storage hierarchy, it greatly reduces the risks introduced by employee turnover.

Allow full Box.com integration with Microsoft Teams. File storage and sharing is a critical part of collaboration, so our file storage solution must be fully integrated with our primary collaboration and communication platform. IT Council should sponsor a technical working group to explore and recommend an implementation path for this integration.

Project Management Tool Identification

Create an IT Council-sponsored working group to identify a project management tool to be centrally-funded and supported. It was beyond our scope to deeply assess project management needs on campus, so we cannot at this time specifically recommend Microsoft Tasks by Planner (integrated with Teams) over any of the other project management tools currently used on campus such as Asana, Trello, Basecamp, and Airtable. Therefore, further analysis is required.

Virtual Whiteboarding Tool Identification

Create an IT Council-sponsored working group to identify a virtual whiteboarding tool, centrally-funded and supported, to replace the physical whiteboard of the past. UIUC's current and future hybrid workforce needs a tool that supports brainstorming, ideation, and design in a virtual environment. Miro and JamBoard are two of the more commonly used tools on campus, but further analysis is required.

Ongoing Portfolio Governance

Assign responsibility to a campus governance group to assess and manage the evolution of the collaboration technology portfolio. The campus community's needs and the technologies available to meet them change rapidly, more than a task force every few years can reasonably address. UIUC is in need of a more iterative and adaptive approach led by a governance group that measures success, identifies and supports innovation, responds to emerging needs, and sees around the corner.

Consultative Training Resources

Provide central campus resources to support Technology Services and unit-level IT teams to deliver consultative training on effectively using technology to enhance collaboration. Current training

resources rely heavily on documentation (the knowledgebase) and generic live or asynchronous training sessions. These general forms of documentation and training are important, but not enough. Consultative training services are closer to campus mission activities, helping groups understand how to leverage technology in their context. It can mean the difference between technology-enabled collaboration and technology-enriched collaboration.

FERPA Certification of Microsoft Platform

Finalize FERPA Certification of Microsoft Office 365, One Drive, Exchange Online, and Teams. Universities are tasked with certifying technology platforms for use with sensitive student data per the Family Educational Rights and Privacy Act (FERPA). UIUC has not completed the FERPA certification process for Microsoft platform tools, despite the regular storage and transfer of FERPA-protected data via Microsoft tools including Exchange email. Other similar universities, including UIC, have completed this certification process. There is no reason why UIUC should not certify Microsoft platform tools; therefore, the responsible parties should complete the process as quickly as possible to ensure compliance.

APPENDIX A.
UIUC COLLABORATION TECHNOLOGY SURVEY RESULTS (N=1,153)

Figure 1. Survey Respondents by Unit

College/Unit	Surveys	% of Surveys	Researchers	Instructors	Program Staff	Ops Staff	Undergrads	Grad Students	Post Doc
OVCR	122	10.6%	45	2	5	66	0	0	0
Grainger College of Engineering	106	9.2%	47	26	11	41	4	15	3
Gies College of Business	103	8.9%	7	10	20	18	0	59	0
College of ACES	95	8.2%	21	16	15	41	0	2	1
Other	88	7.6%	31	3	2	38	0	2	0
Student Affairs	84	7.3%	2	5	40	34	0	4	0
College of LAS	75	6.5%	21	26	16	34	0	5	1
College of Education	64	5.6%	17	13	6	17	4	17	1
Technology Services	53	4.6%	1	1	0	53	0	1	0
College of Veterinary Medicine	43	3.7%	10	9	2	19	0	3	1
School of Social Work	41	3.6%	15	11	4	8	0	3	0
Facilities and Services	39	3.4%	0	0	0	37	0	1	0
School of Information Sciences	36	3.1%	15	18	5	12	0	7	1
College of Fine & Applied Arts	32	2.8%	1	4	12	14	0	0	0
College of Law	32	2.8%	13	19	7	6	0	0	0
Intercollegiate Athletics	21	1.8%	0	0	9	6	0	1	0
College of Media	20	1.7%	4	9	6	5	0	2	0
Graduate College	19	1.6%	1	2	7	3	0	8	0
Carle-Illinois College of Medicine	16	1.4%	0	3	2	10	0	0	0
CITL	15	1.3%	3	1	4	10	0	0	0
University Administration	14	1.2%	0	0	1	12	0	0	0
University Library	14	1.2%	6	5	0	6	0	0	0
	11	1.0%	2	1	4	3	0	1	0
College of Applied Health Sciences	8	0.7%	2	2	2	5	0	0	0
School of Labor and Industrial Relations	2	0.2%	0	0	1	2	0	0	0

Figure 2. Collaboration Partners

898 Faculty	77.9%		**301** Corporate Partners	26.1%
1006 Staff	87.3%		**318** Government Partners	27.6%
481 Undergraduate Students	41.7%		**247** Alumni	21.4%
540 Residential Graduate Students	46.8%		**176** Prospective Students	15.3%
354 Online Graduate Students	30.7%		**406** Professional Organizations	35.2%
444 International Students	38.5%		**331** Community Members	28.7%
278 Professional Students	24.1%		**365** External Researchers	31.7%
481 Student Organizations	41.7%		**291** Funding Partners	25.2%
433 Service Offices	37.6%		**414** University Partners	35.9%
305 Post-Docs	26.5%		**304** Clients/Customers	26.4%
139 Non-Degree Students	12.1%		**401** Vendors	34.8%

Participants were asked to "Please select your level of agreement with the following statements."

Figure 3. Sentiment: It is easy to collaborate in my work.

It is easy to collaborate in my work

Do not agree 1.4%

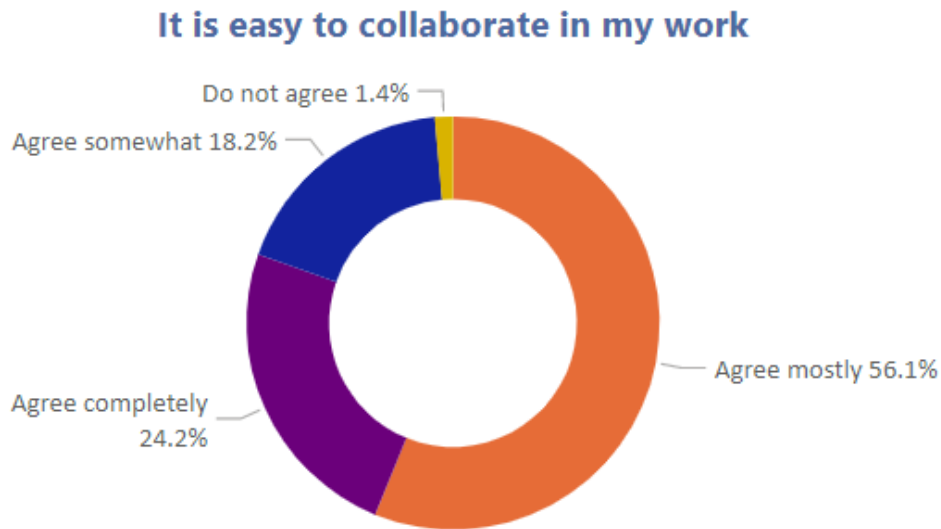Agree somewhat 18.2%

Agree mostly 56.1%

Agree completely 24.2%

Figure 4. Sentiment: I often have to use different technologies other than the campus supports/provides to be an effective collaborator
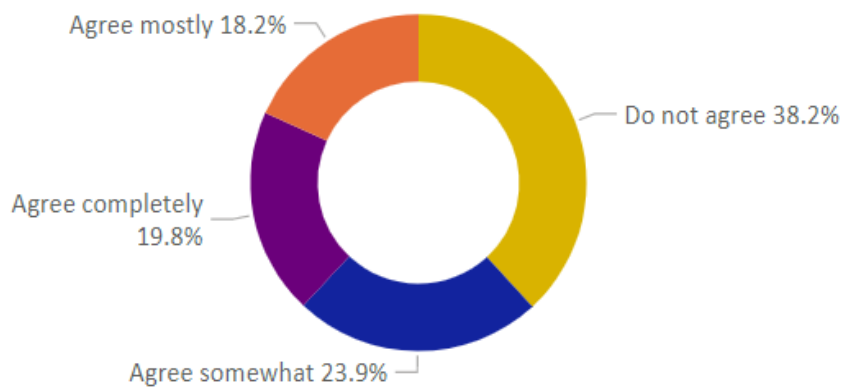
I often have to use different technologies other than the campus supports/provides to be an effective collaborator

Agree mostly 18.2%

Do not agree 38.2%

Agree completely 19.8%

Agree somewhat 23.9%

Figure 5. Sentiment: I currently have the technology I need to collaborate as part of my job

I currently have the technology I need to collaborate as part of my job

Do not agree 2.9%

Agree completely 31.0%

Agree somewhat 18.0%

Agree mostly 48.1%
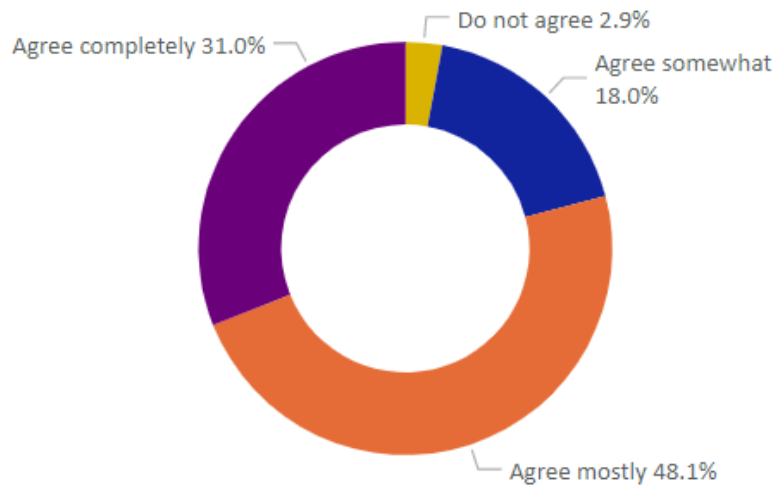
Figure 6. Sentiment: I am aware of all the technologies I have available to me at UIUC for collaboration

I am aware of all the technologies I have available to me at UIUC for collaboration

Agree completely 15.5%

Do not agree 16.3%

Agree mostly 34.5%

Agree somewhat 33.8%

I use Skype for Business as a regular part of my overall job

Agree mostly 16.6%
Agree completely 32.9%
Agree somewhat 17.8%
Do not agree 32.7%
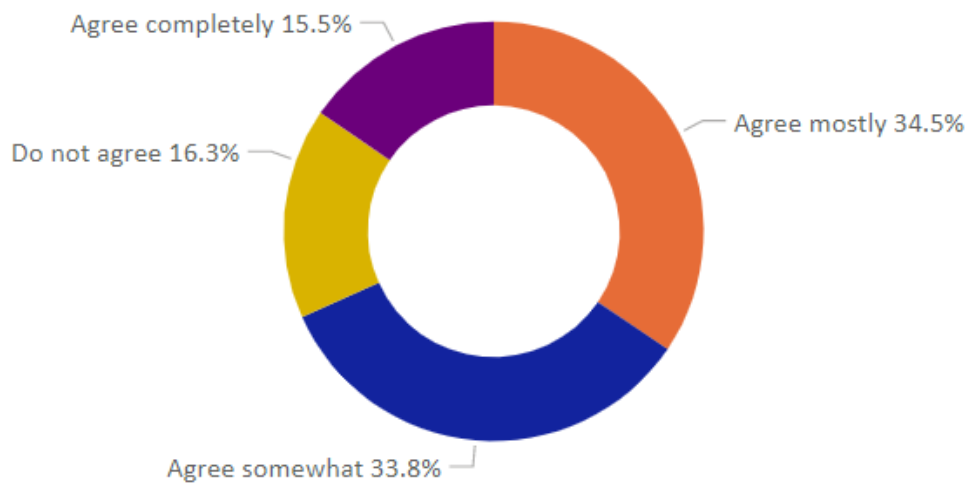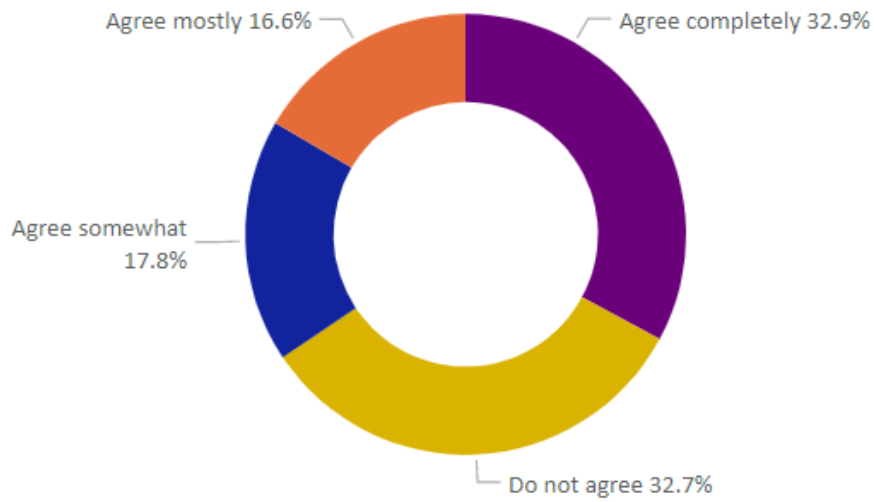
Figure 8. Sentiment: I use Skype for Business as a collaboration tool

I use Skype for Business as a collaboration tool

Agree mostly 14.9%
Do not agree 42.0%
Agree completely 20.0%
Agree somewhat 23.1%
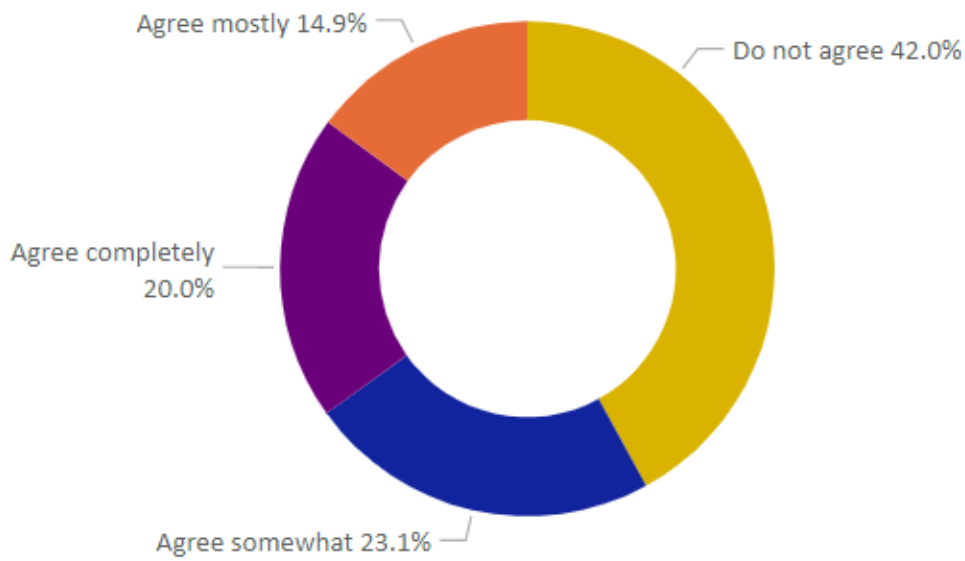
Figure 9. Sentiment: I am confident using technology to enable collaboration in my work

I am confident using technology to enable collaboration in my work

Agree somewhat 17.2%

Do not agree 2.9%

Agree mostly 41.3%

Agree completely 38.7%
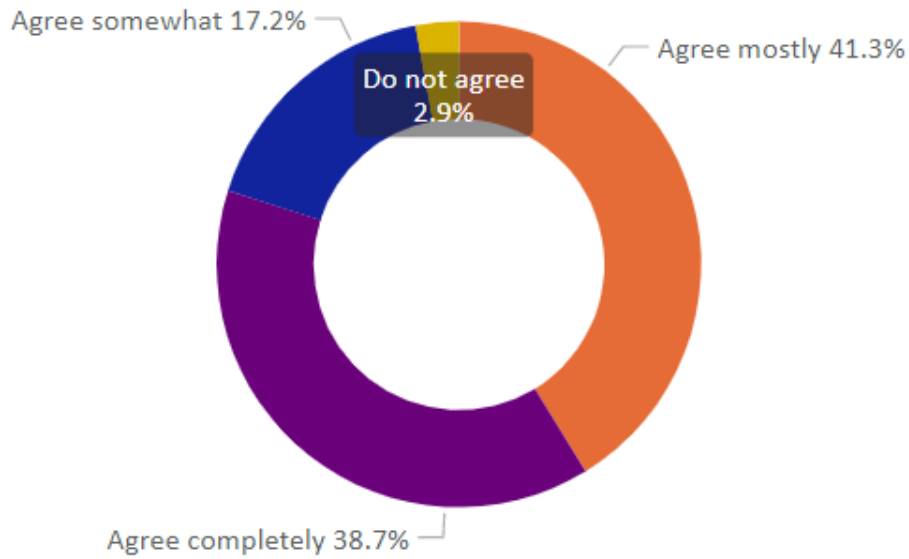
Figure 10. Sentiment: I know where to get training on collaboration technologies

I know where to get training on collaboration technologies

Do not agree 13.7%

Agree mostly 32.2%

Agree completely 22.9%

Agree somewhat 31.2%
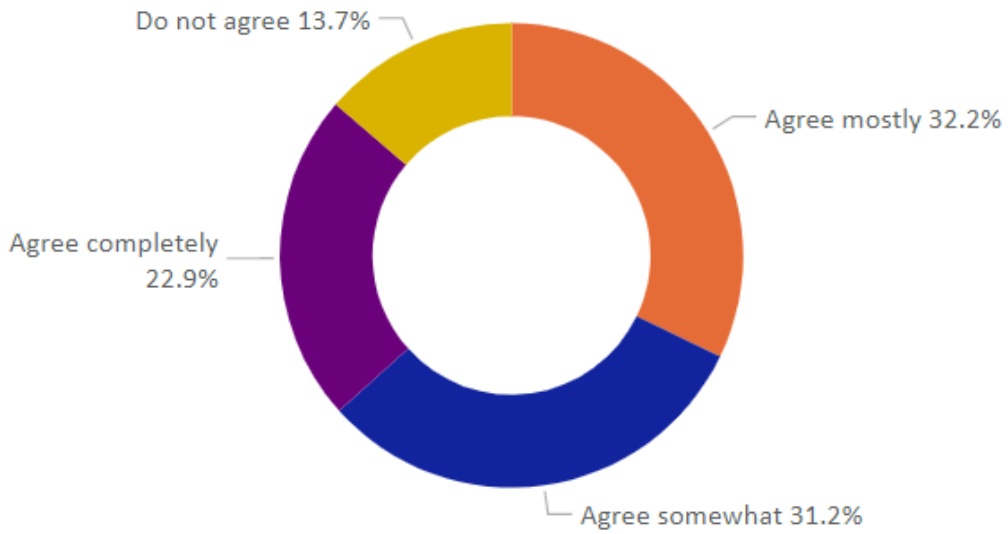
Figure 11. Sentiment: Technology is a barrier to me being an effective collaborator

Technology is a barrier to me being an effective collaborator

Agree mostly 6.4%

Agree completely 2.8%

Agree somewhat 24.7%

Do not agree 66.1%
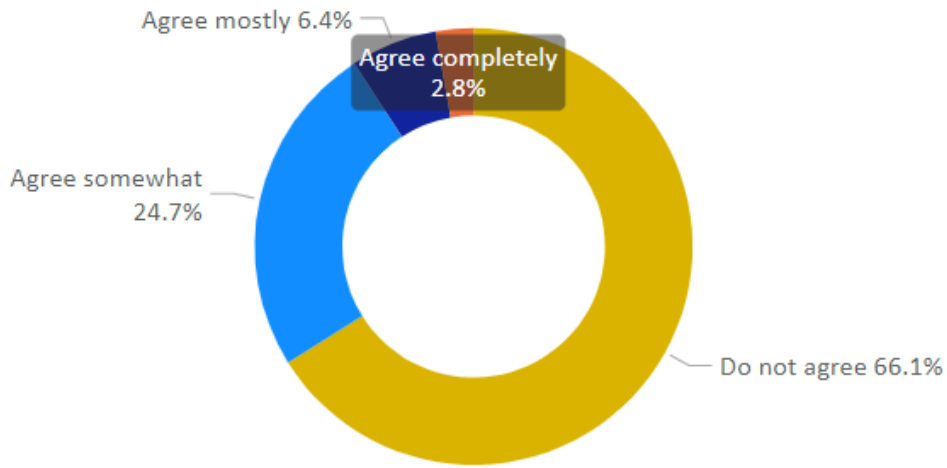
Figure 12. Sentiment: Technology enables me to be an effective collaborator

Technology enables me to be an effective collaborator

Do not agree 1.8%

Agree somewhat 15.3%

Agree completely 43.6%

Agree mostly 39.4%
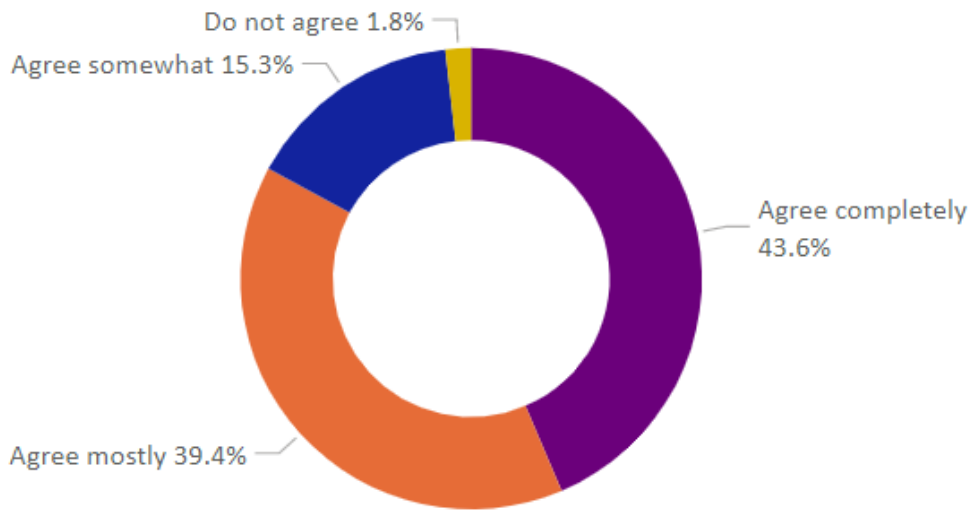
Figure 13. Sentiment: I have enough IT support to collaborate successfully

I have enough IT support to collaborate successfully

Do not agree 6.4%

Agree somewhat 22.2%

Agree mostly 39.3%

Agree completely 32.2%
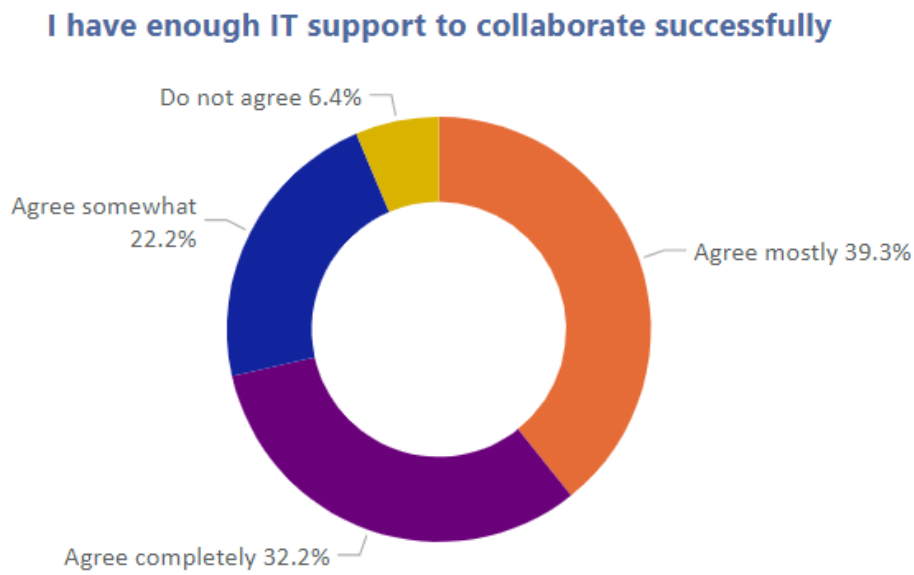
Platform/Tool Usage

Participants were asked "How often do you use these university-provided technology platforms for collaboration?"

Figure 14. Usage: Outlook/Email

Outlook/Email

A few times a week 1.9%

Every work day 94.5%
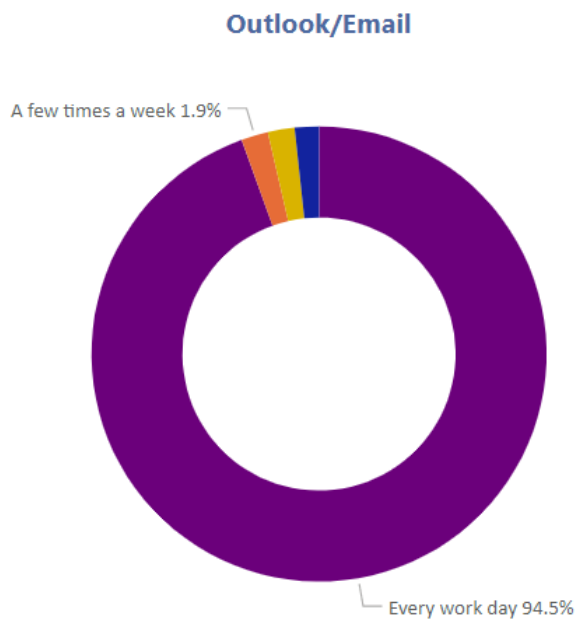
Figure 15. Usage: Skype for Business

Skype for Business

A few times a week 12.9%

Occasionally 22.4%

Every work day 41.5%

Never 23.2%
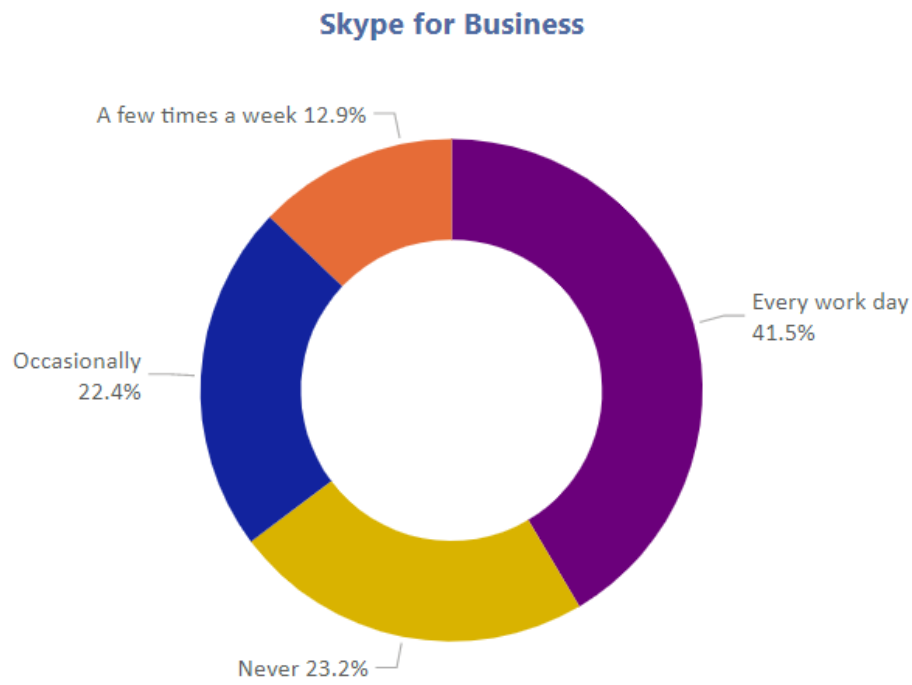
Figure 16. Usage: Microsoft Teams

Microsoft Teams

A few times a week 14.8%

Occasionally 31.6%

Every work day 23.4%

Never 30.2%

Figure 17. Usage: Zoom

Zoom

- Never 0.9%
- Occasionally 13.6%
- Every work day 51.9%
- A few times a week 33.7%

Figure 18. Usage: Box.com

Box.com

- Never 9.3%
- Occasionally 24.9%
- Every work day 39.8%
- A few times a week 26.0%
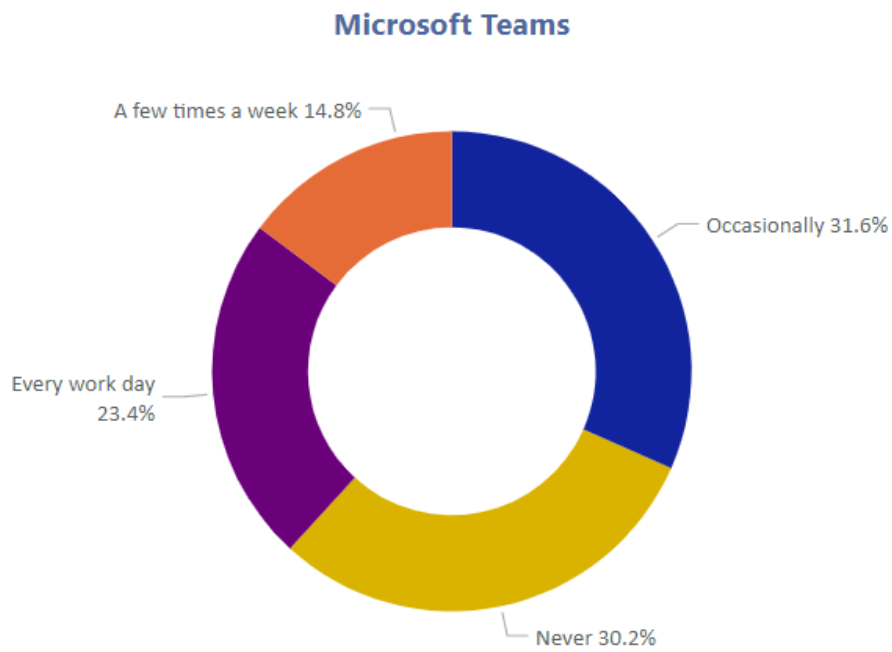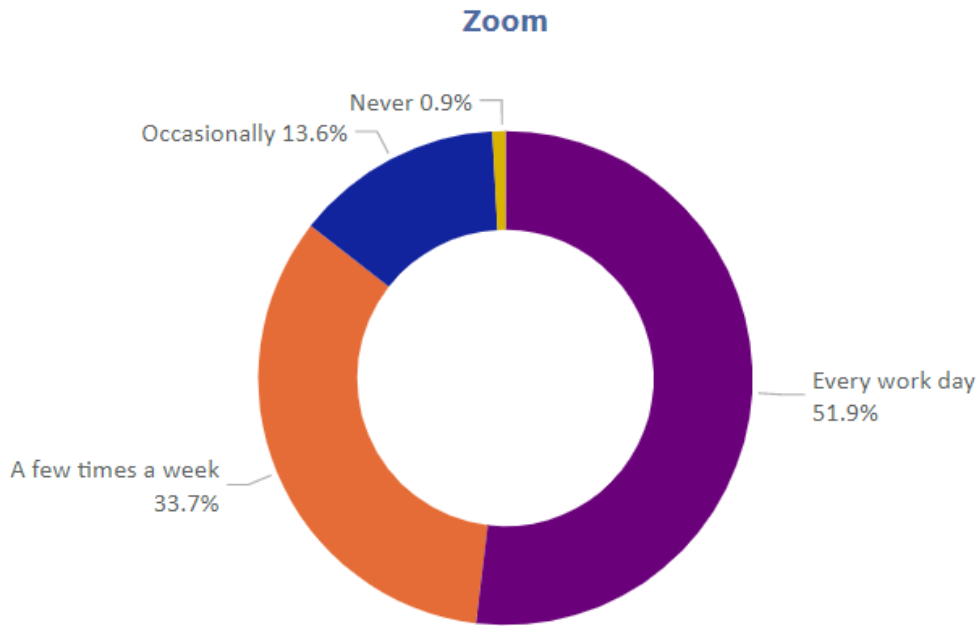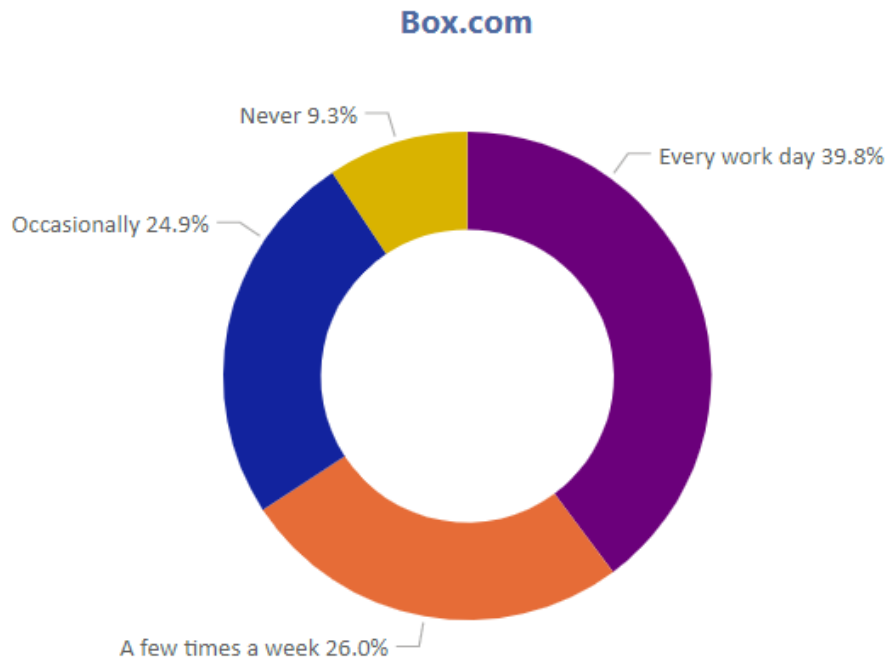
Figure 19. Usage: Microsoft One Drive

Microsoft OneDrive

A few times a week 8.2%
Every work day 10.8%
Never 54.7%
Occasionally 26.3%
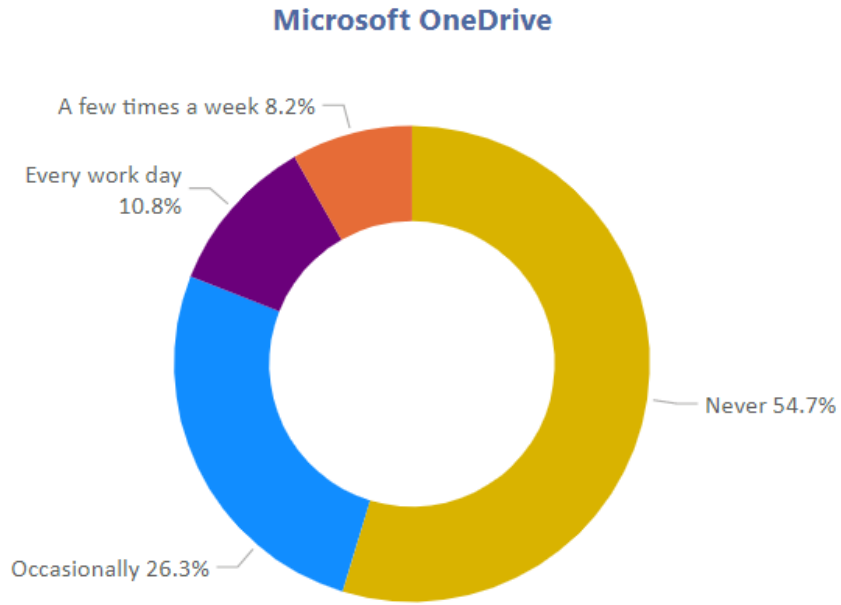
Figure 20. Usage: Google Docs/Sheets

Google Docs/Sheets

Every work day 19.4%
Occasionally 37.9%
A few times a week 20.4%
Never 22.3%
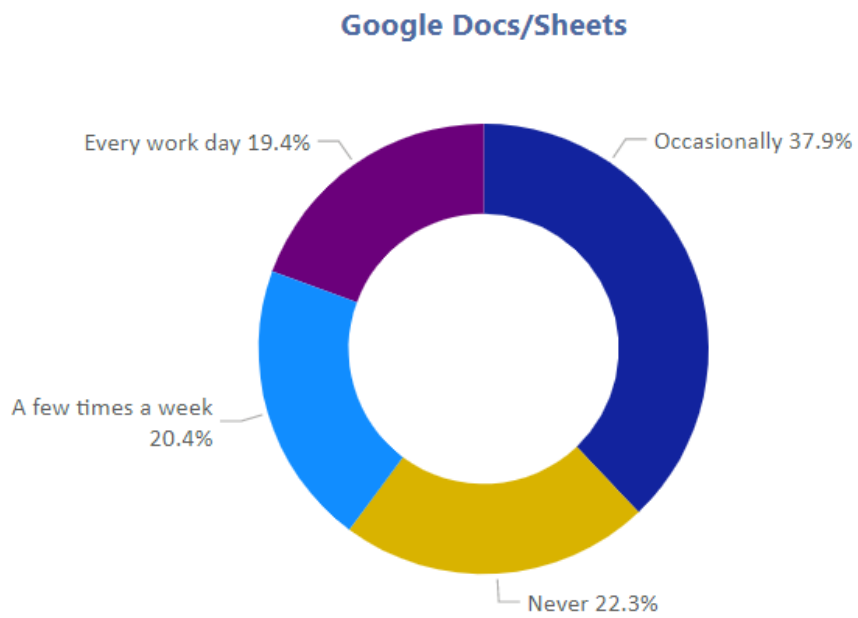
Figure 21. Usage: Office 365

Office 365

Never 3.9%

Occasionally 11.1%

A few times a week
16.0%

Every work day 69.0%
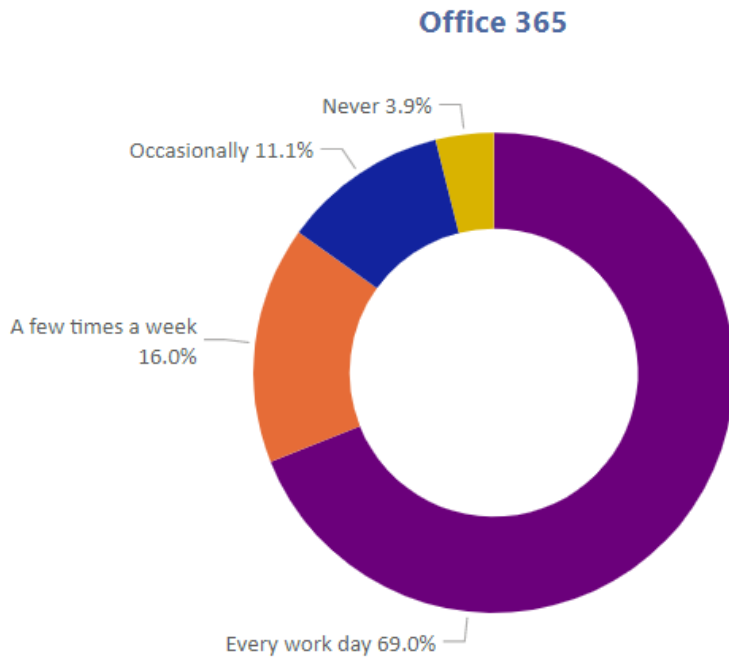
APPENDIX B.
ILLINOIS STUDENT TECHNOLOGY PLATFORM SURVEY (N=105)

Figure 22. Student Respondents by Academic Unit

College	Completed Surveys	% of Surveys	Undergrads	Grad Students	Residential Students	Online Students
	2	1.9%	0	2	0	2
College of ACES	7	6.7%	2	5	7	0
College of Applied Health Sciences	5	4.8%	3	2	5	0
College of Education	13	12.4%	2	11	8	5
College of Fine & Applied Arts	4	3.8%	3	1	4	0
College of LAS	15	14.3%	11	4	15	0
College of Media	3	2.9%	3	0	3	0
Division of General Studies	1	1.0%	1	0	1	0
Gies College of Business	25	23.8%	3	22	4	20
Graduate College	9	8.6%	0	9	7	2
Grainger College of Engineering	14	13.3%	10	4	14	0
School of Information Sciences	7	6.7%	1	6	5	2

Figure 23. Collaboration Partners for Students

54 Faculty	51.4%		**3** Corporate Partners	2.9%
32 Staff	30.5%		**3** Government Partners	2.9%
49 Undergraduate Students	46.7%		**10** Alumni	9.5%
42 Residential Graduate Students	40.0%		**0** Prospective Students	0.0%
51 Online Graduate Students	48.6%		**0** Professional Organizations	0.0%
34 International Students	32.4%		**15** Community Members	14.3%
13 Professional Students	12.4%		**0** External Researchers	0.0%
49 Student Organizations	46.7%		**0** Funding Partners	0.0%
3 Service Offices	2.9%		**0** University Partners	0.0%
6 Post-Docs	5.7%		**0** Clients/Customers	0.0%
7 Non-Degree Students	6.7%		**0** Vendors	0.0%

Students were asked to "Please select your level of agreement with the following statements."

Figure 24. Student Sentiment: I currently have the technology platforms I need to collaborate as a student

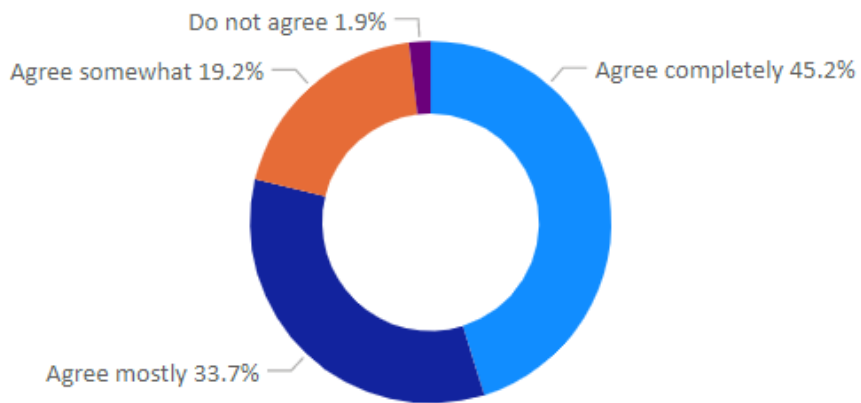## I currently have the technology platforms I need to collaborate as a student

Do not agree 1.9%
Agree somewhat 19.2%
Agree completely 45.2%
Agree mostly 33.7%

Figure 25. Student Sentiment: Technology is a barrier to me being an effective collaborator

Technology is a barrier to me being an effective collaborator

Agree completely 5.8%
Agree mostly 13.5%
Agree somewhat 23.1%
Do not agree 57.7%
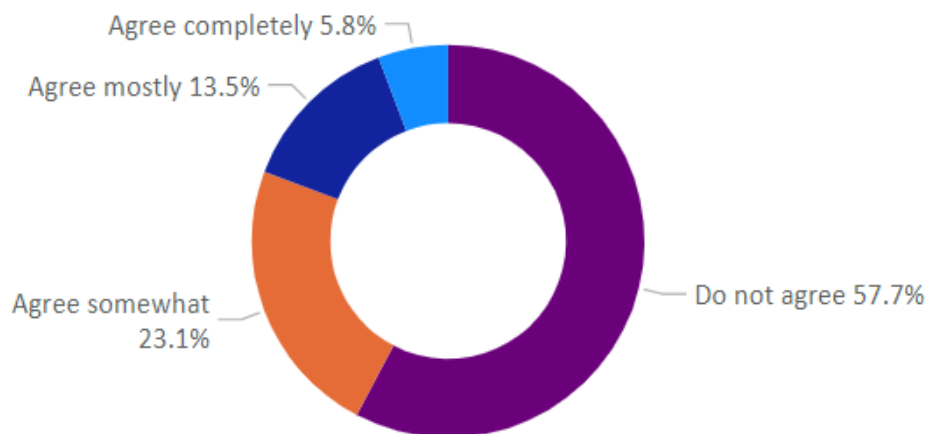
Figure 26. Student Sentiment: Technology enables me to be an effective collaborator

Technology enables me to be an effective collaborator

Agree somewhat 13.5%

Agree completely
50.0%

Agree mostly 35.6%
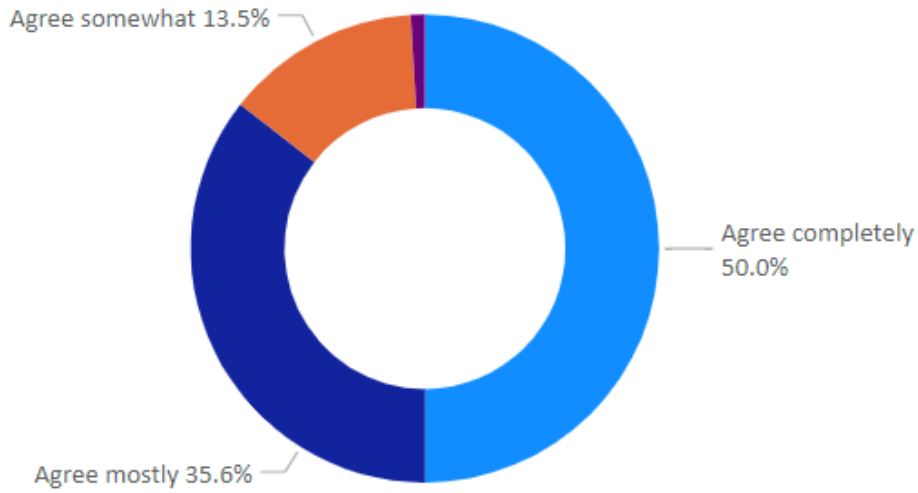
Figure 27. Student Sentiment: I often have to use different technology platforms other than the campus supports/provides to be an effective collaborator

I often have to use different technology platforms other than the campus supports/provides to be an effective collaborator

Agree somewhat 23.1%

Agree completely 26.9%

Do not agree 25.0%

Agree mostly 25.0%

I am confident using technology to enable collaboration as a student

Agree somewhat 10.7%

Agree mostly 29.1%

Agree completely 58.3%

I know where to get training on collaboration technology platforms

Agree completely 20.2%

Agree somewhat 29.8%

Agree mostly 22.1%

Do not agree 27.9%

I have enough IT support to collaborate successfully

Do not agree 6.7%

Agree mostly 33.7%

Agree completely 28.8%

Agree somewhat 30.8%

Platform/Tool Usage

Students were asked "How often do you use these university-provided technology platforms for collaboration?

Figure 31. Student Usage: Box.com

Box.com

I am not aware of this platform/tool
14.3%

Occasionally 25.7%

A few times a week
17.1%

Every day 18.1%

Never 24.8%
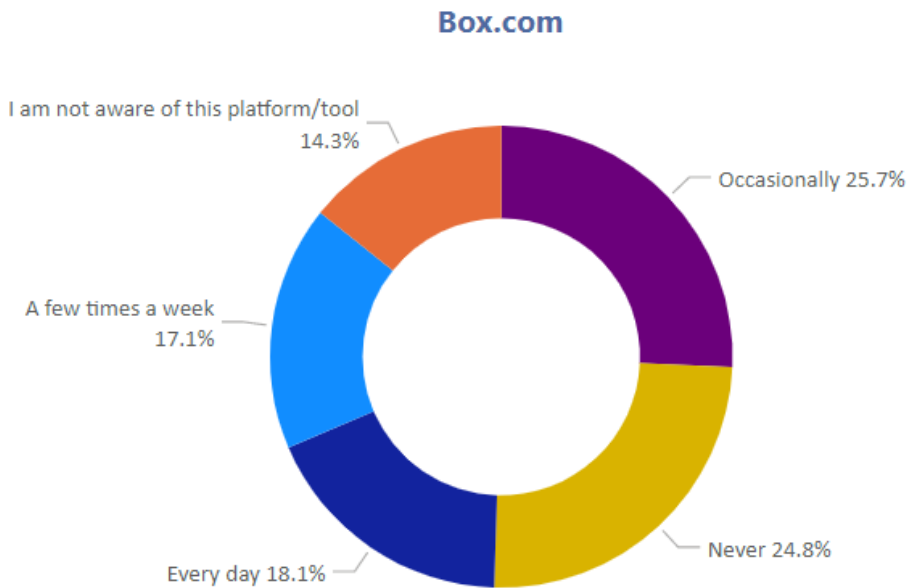
Figure 32. Student Usage: Google Docs/Sheets

Google Docs/Sheets

I am not aware of this platform/tool 5.7%

Never 9.5%

Every day 31.4%

A few times a week 25.7%

Occasionally 27.6%
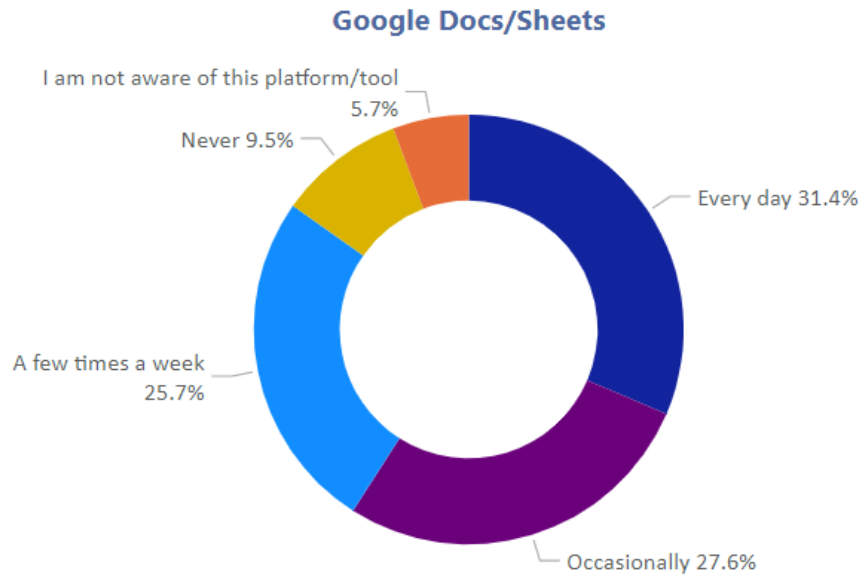
Figure 33. Student Usage: Microsoft One Drive

Microsoft OneDrive

I am not aware of this platform/tool 4.8%

A few times a week 15.2%

Never 29.5%

Occasionally 23.8%

Every day 26.7%
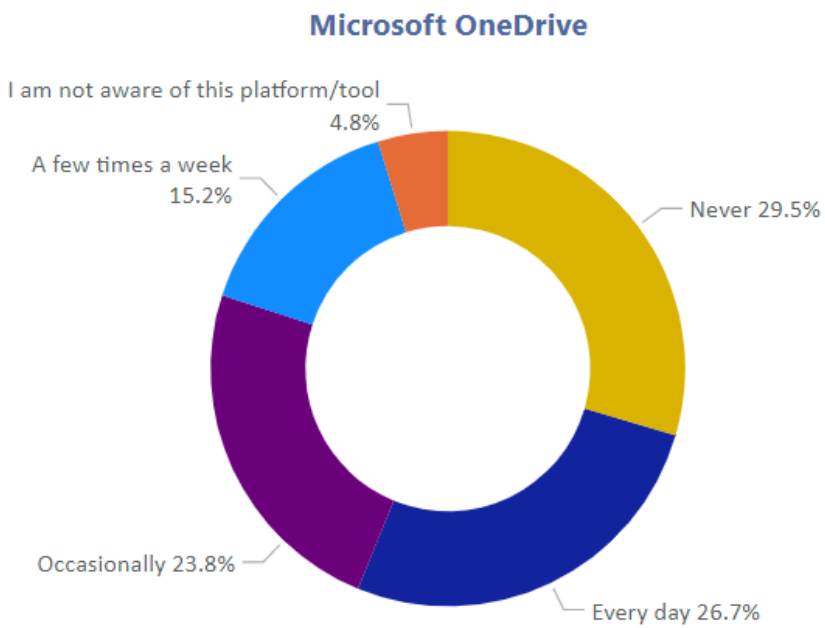
Figure 34. Student Usage: Office 365

Office 365

Never 9.5%
Occasionally 16.2%
Every day 51.4%
A few times a week 22.9%
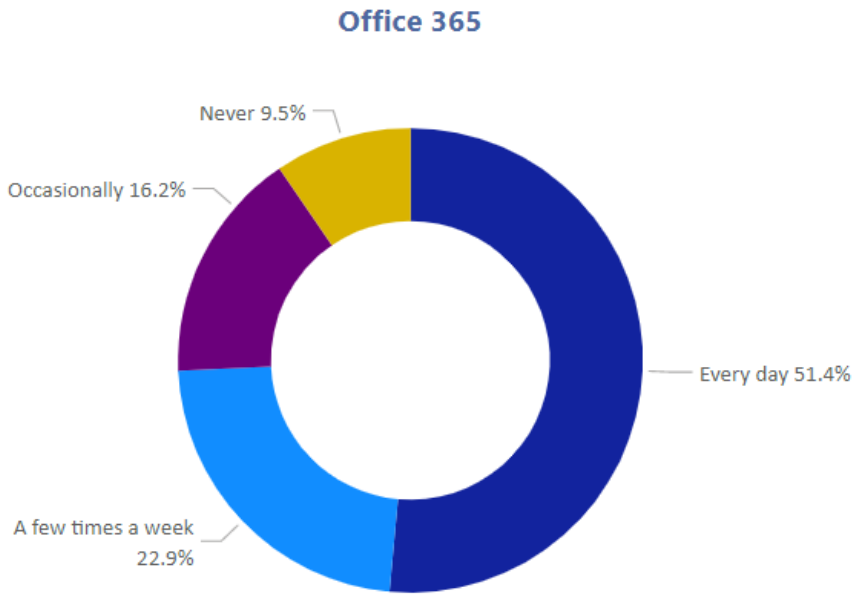
Figure 35. Student Usage: Gmail

Gmail

I am not aware of this platform/tool 6.7%
A few times a week 10.5%
Never 16.2%
Every day 45.7%
Occasionally 21.0%
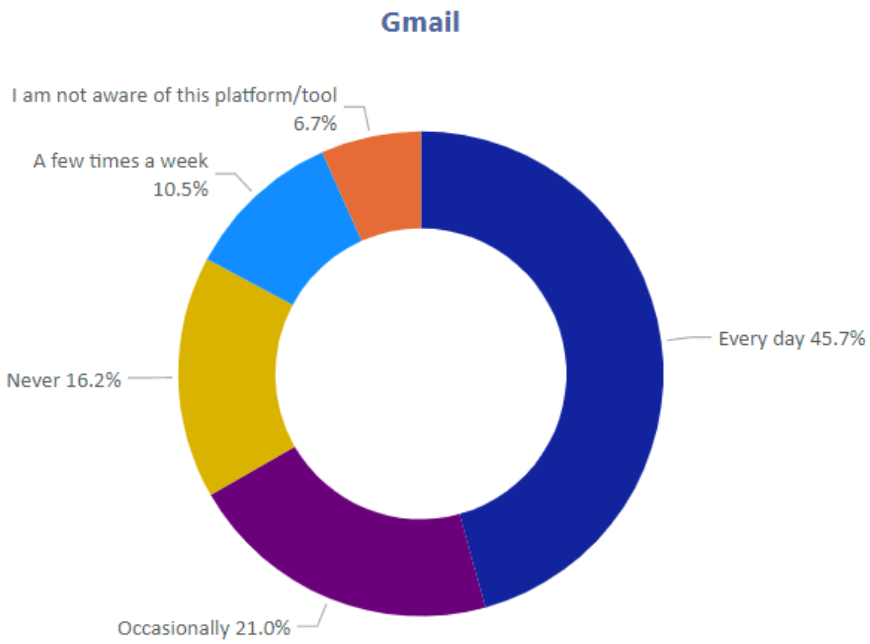
Figure 36. Student Usage: Outlook

Outlook

Occasionally 3.8%

A few times a week 14.3%

Never 1.9%

Every day 80.0%
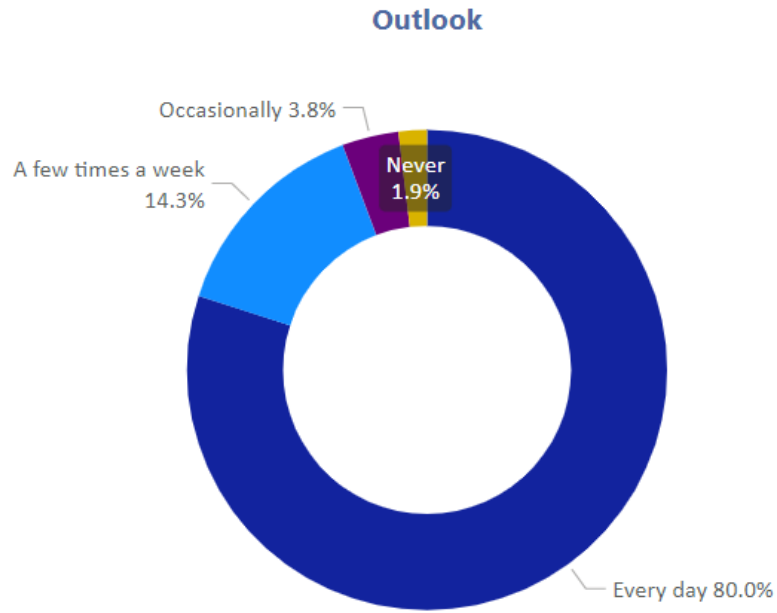
Figure 37. Student Usage: Microsoft Teams

Microsoft Teams

A few times a week 11.4%

Every day 12.4%

Never 45.7%

Occasionally 26.7%
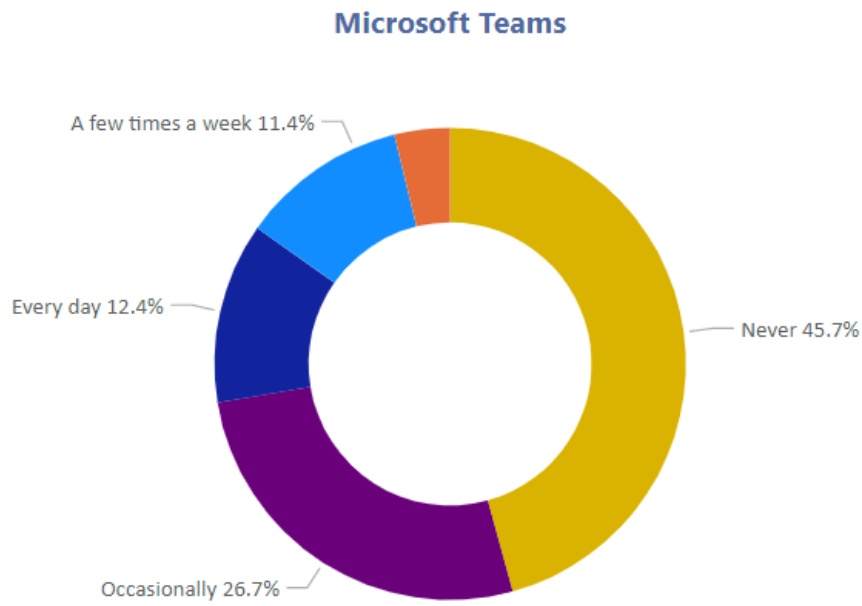
Figure 38. Student Usage: Zoom

Zoom

Never 1.0%

Occasionally 13.3%

A few times a week 52.4%

Every day 33.3%
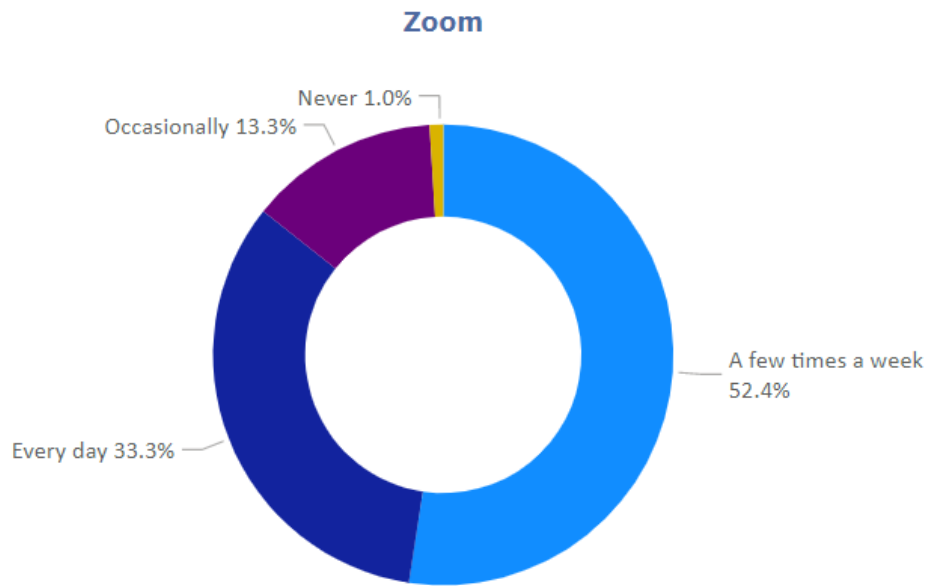
Figure 39 Student Usage: Compass 2G

Compass 2G

I am not aware of this platform/tool 1.9%

Every day 17.3%

Never 36.5%

Occasionally 21.2%

A few times a week 23.1%
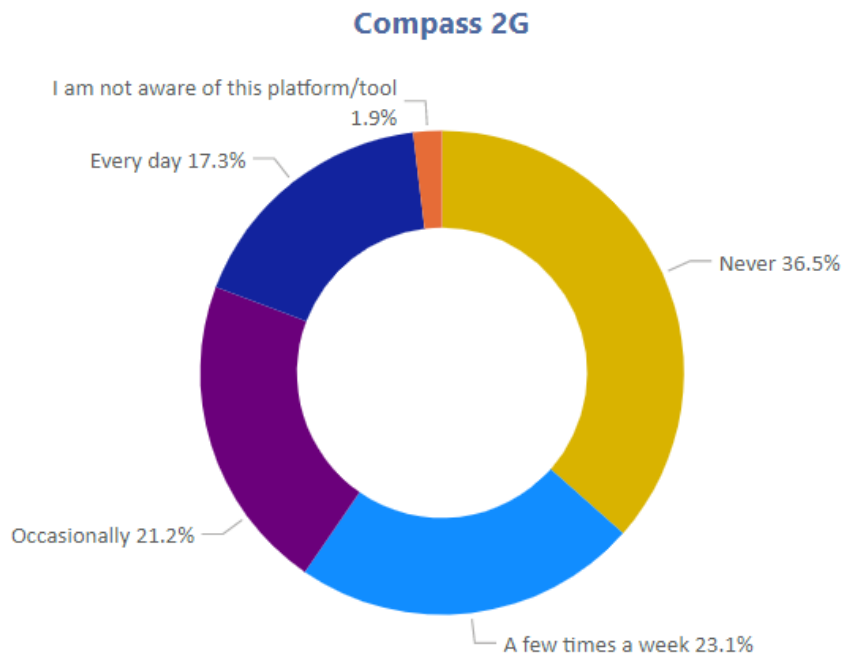
Figure 40. Student Usage: Canvas

Canvas

Occasionally 10.5%

Never 11.4%

Every day 46.7%

A few times a week 30.5%

Figure 41. Student Usage: Moodle

Moodle

I am not aware of this platform/tool
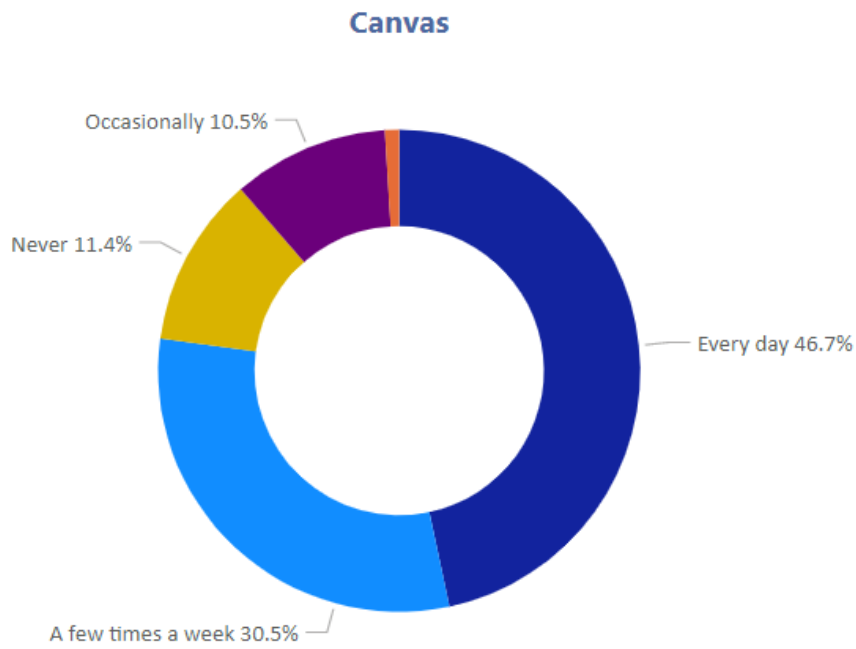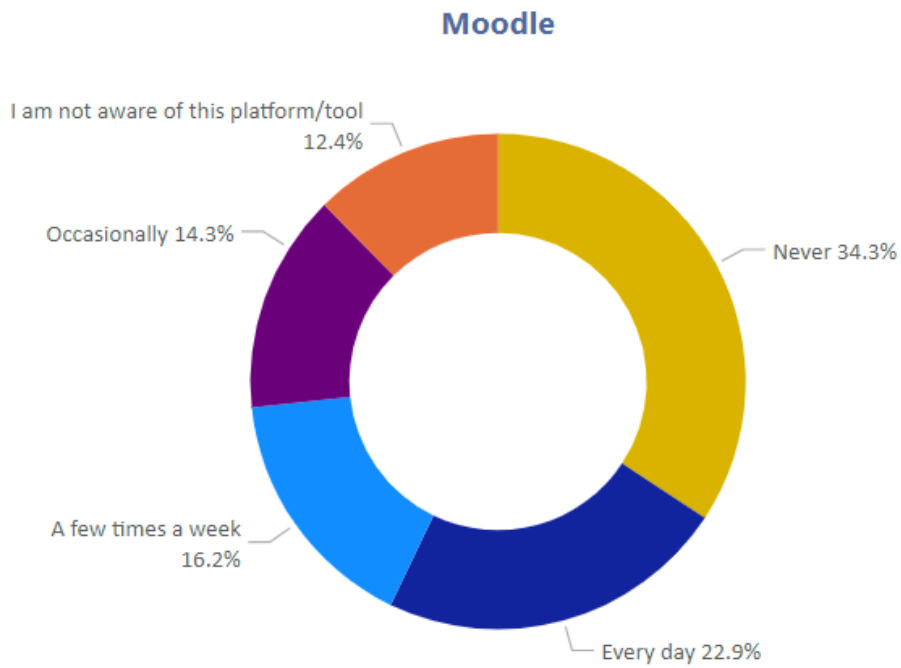12.4%

Occasionally 14.3%

Never 34.3%

A few times a week
16.2%

Every day 22.9%

Students were asked "How often do you use these university-provided technology platforms for collaboration?
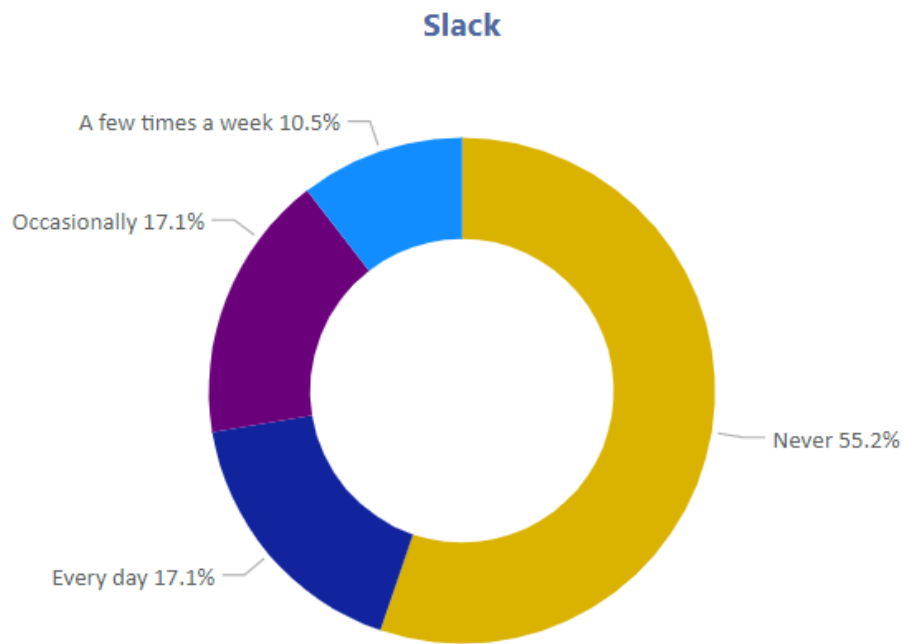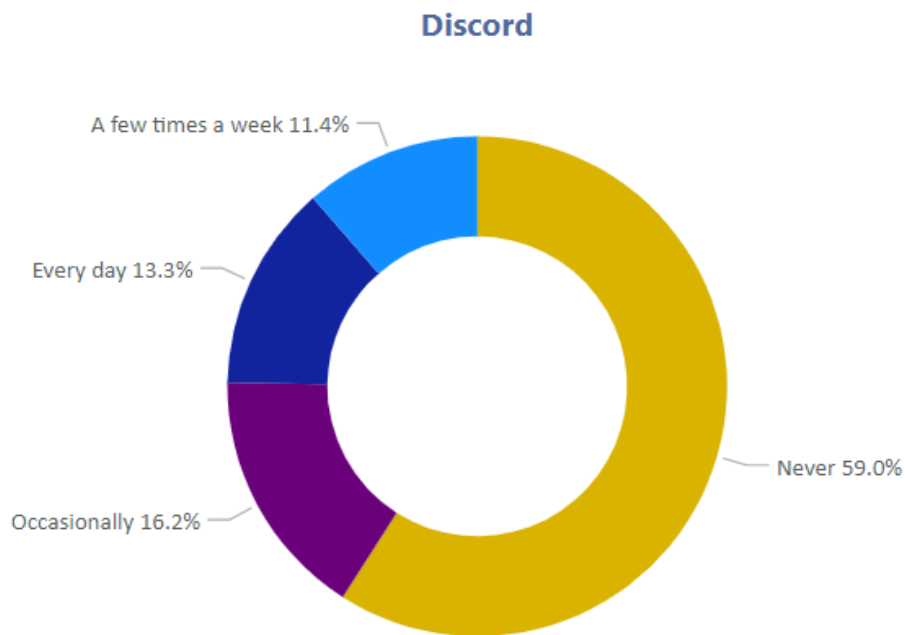
Figure 42. Student Usage: Slack

Slack

A few times a week 10.5%

Occasionally 17.1%

Never 55.2%

Every day 17.1%

Figure 43. Student Usage: Discord

Discord

A few times a week 11.4%

Every day 13.3%

Never 59.0%

Occasionally 16.2%

Figure 44. Student Usage: WhatsApp

WhatsApp

A few times a week 7.6%

Occasionally 9.5%

Every day 14.3%

Never 68.6%

Figure 45. Student Usage: WeChat

WeChat

Occasionally 4.9%

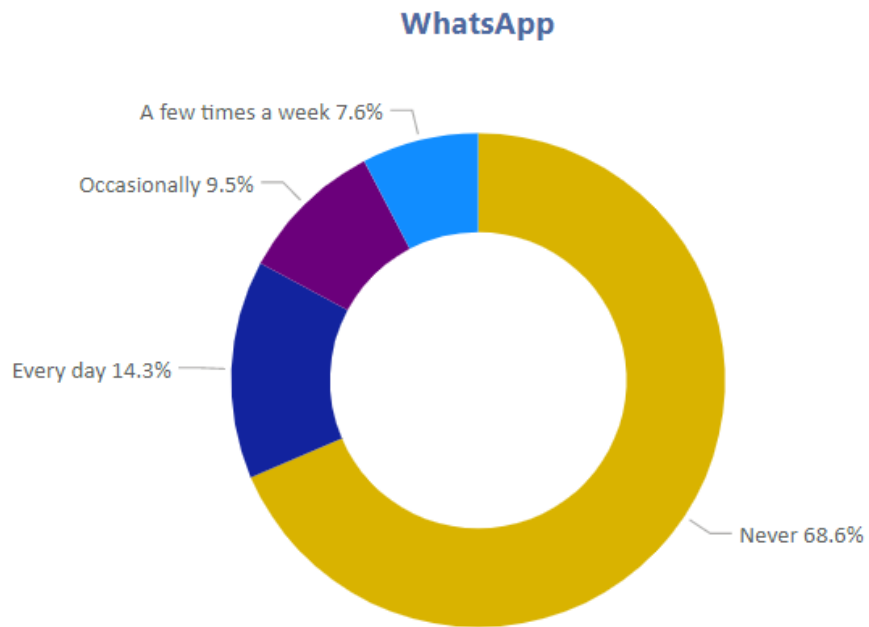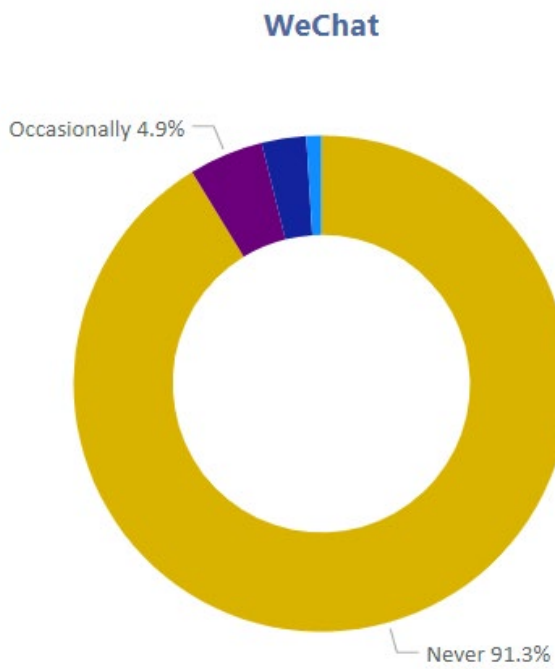Never 91.3%

APPENDIX C. FORMS OF COLLABORATION

- General
  - Exchange/sharing of information
  - Brainstorming/ideation
  - Committees
  - Event planning
  - Conference planning
  - Meeting management
  - Communications
  - Public relations
  - Legislative affairs
  - Goal setting
  - Marketing
  - Scheduling
- Academic Life
  - Lab sections
  - Discussion sections
  - Coursework (instructor-to-student)
  - Group projects
  - Study groups
  - Peer tutoring
  - Advisors
  - Instructor-to-student interactions
  - TA-to-student interactions
  - Guest speakers/lecturers
  - Remote speakers/lecturers
  - Team teaching
  - Exam development
  - Office hours
  - Papers/publications
- Advancement/Alumni
  - Alumni boards
  - Fundraising/donor relations
  - Engagement tracking
  - Sponsor/speaker requests (with and without advancement's support)
  - General alumni engagement

- Student life
  - Registered student organizations
  - Orientations
  - Networking
  - Mentoring
  - Student government
  - Student-to-student services
  - Campus-to-student services
  - Extra/co-curricular activities
  - Social groups
  - Career services
  - Student employment
  - Civic engagement
- Grant Development and Management/ Research Management
  - Grant seeking
  - Proposal writing
  - Fund management
  - Cross-disciplinary work
  - Problem identification
  - Data sharing
  - Paper writing
  - Resource management
  - Corporate partnerships
  - Applied research programs
  - IP/patents/technology transfer
  - Regulatory requirements
  - Tech commercialization tracking
- Team Management
  - Conflict management
  - Productivity management
  - Operations
  - Team-building
  - Staff management/development
- Professional Lifecycle/Development
  - Networking
  - Mentoring
  - Birds of a Feather groups
  - Recruitment

- - Evaluation
  - Promotion & Tenure
  - Onboarding
  - Search committees
  - Visa/sponsorship
  - Employee group negotiations
  - Workshops/Trainings
  - Coaching
- Program Management
  - Cross-unit workflows
  - Program meet-ups
  - Governance
  - Customer/client interactions
  - Course scheduling
- Infrastructure and Support
  - Space management
  - IT Support
  - EdTech Support
  - Capital project development
  - Procurement
  - Remote work management
  - HR workflows
  - Budget management
  - Asset management

APPENDIX D. MEMBERSHIP

CPAG was comprised of the following members:

- Chris Tidrick, Senior Director of Information Technology Partners, Gies College of Business, CHAIR
- Greg Anderson, Assistant Dean, Budget and Resource Administration, College of Fine and Applied Arts
- Charlotte Bauer, Assistant Dean of Communications and Strategic Planning, Graduate College
- Douglas Fein, Assistant Director, National Center for Supercomputing Applications
- Kim Gudeman, Communications Director, Coordinated Science Lab, Grainger College of Engineering
- Catharine Ingram, Coordinator of Student Innovation and Entrepreneurship Programs, Grainger College of Engineering
- Sarah McCarty, Director, Engineering Human Resources, Grainger College of Engineering
- Annette McCoy, Associate Professor, Equine Surgery, College of Veterinary Medicine
- Paul Redman, Associate Dean for Administration, College of Fine and Applied Arts
- Elaine Robbins, Operations Manager, Information Technology Partners, College of Education
- Vishal Sachdev, Clinical Associate Professor, Business Administration, Gies College of Business
- Alejandro Suñé, Senior Associate Director for Student Engagement & Assistant to the Associate Vice Chancellor for Student Success and Engagement, Student Affairs
- Brad Trankina, Director of IT Services, Facilities and Services
- Staci Wagers, Director of HR, College of Liberal Arts and Sciences