# DExC Fall 2022 Faculty Survey Analysis

In December 2022, the Digital Excellence Commitment (DExC) Subcommittee on Teaching and Classroom Practice, in consultation with the Office of Institutional Research, Analytics, and Consulting (IRAC), fielded a four-question survey to Bowdoin College faculty and instructional staff about their first semester of the DExC initiative. The survey opened on Wednesday December 7th and closed on Wednesday, December 14th with a response rate of 47%.[1] The following pages contain an analysis of the responses to both the close- and open-ended questions.

Results from the Close-Ended Questions

Three close-ended questions aimed to better understand the impact of the DExC initiative on faculty and student experiences in the Fall 2022 semester.

Q1 - Reflecting on all the courses you taught this semester (Fall 2022), what type of effect, if any, has DExC had on your teaching?
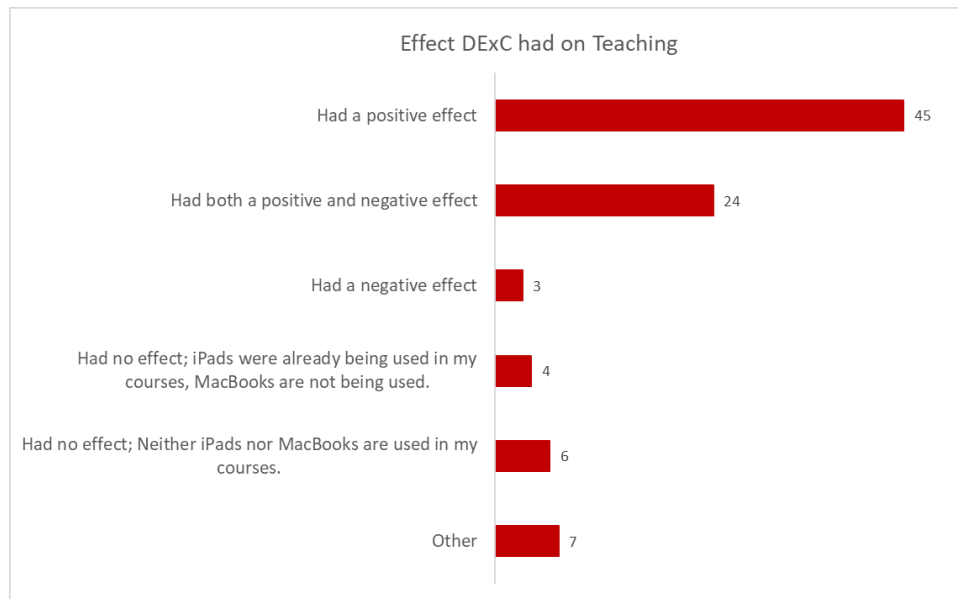
Of the 89 faculty respondents who answered this question, 51% (45 faculty members) reported that the DExC initiative has had a positive impact on their teaching in the Fall 2022 semester. Less than 3% (3 faculty members) reported solely a negative effect and 27% (24 faculty members) reported both a positive and negative effect on their teaching. Lastly, 11% of the respondents (10 faculty members) reported that the initiative had no effect, and 8% of respondents chose "Other; please explain." The following is a list of the "Other; please explain" redacted, open-ended responses.

Open-ended "Other; Please explain:" response for Q1;

I didn't want students to use their devices in class, so I had to make paper workarounds to needing to access readings on devices in the classroom.

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[1] 109 out of 230 faculty members and instructors teaching in Fall 2022

I would say had no effect because the labs in [SCIENCE] use PCs, but I do have concerns about campus support for our PCs over time. Also, students do often choose to use iPads to write up notes and homework. I've no idea how well they are accessing other course resources with the MacBooks.

I think providing these tools to students was beneficial, however the only negative was how small the iPads are. The mini iPadS are very difficult to work with and allow only a small field of view. The second-year students that had the larger sized iPadS had an easier time completing work in my lab.

I specifically ask students not to use either of these devices in class, but since the college has distributed iPads to students, I have many more students using them anyway

new faculty no basis for comparison

I think this was helpful for students who did not have a laptop, but not so much for the majority of students who already had laptops.

No effect. Some students use them, some don't. Just like other semesters when they had their own machines.
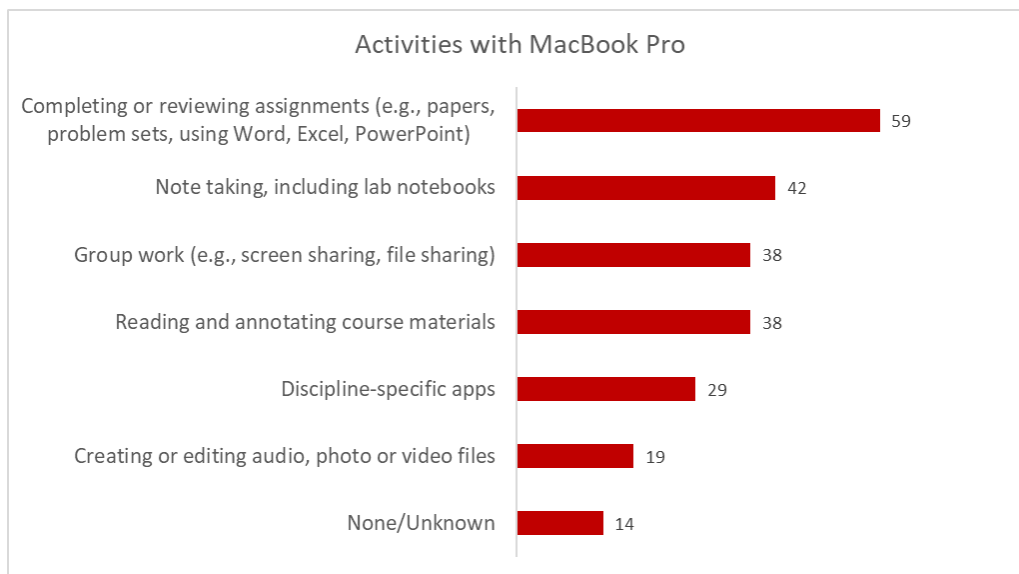
Q2 - Which of the following activities did you ask students to do or observe students doing with iPads in your courses this semester (please check all that apply)?
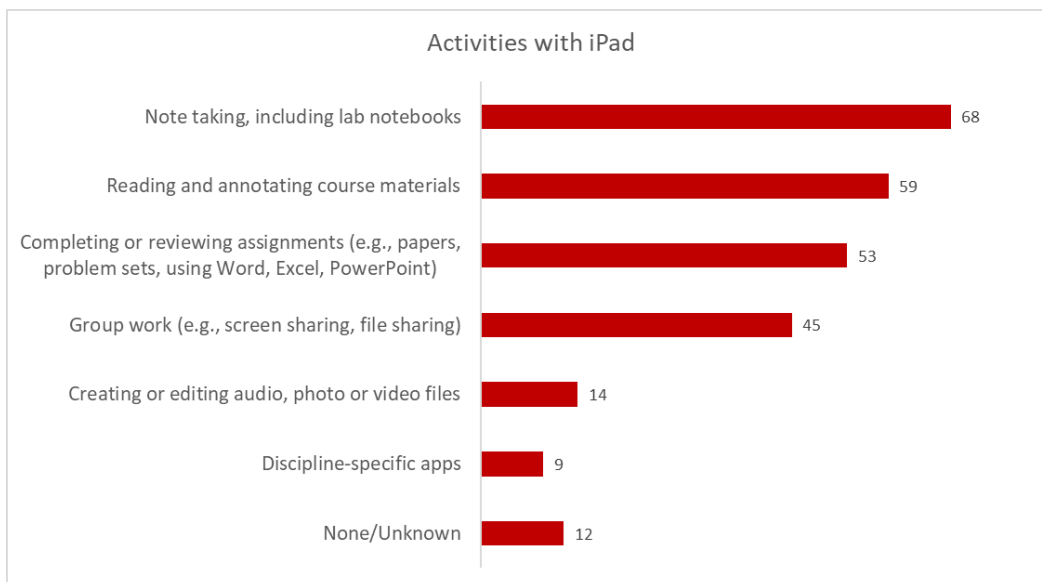
Of the ninety faculty members who completed question two, the majority of faculty members observed their students using their iPads for note taking (76%) and reading and annotating course materials (66%). About half of faculty members noticed students using their iPads for completing or reviewing assignments (59%) and/or for group work (50%). A minority of faculty members observed students using iPads for creating or editing audio, photo, or video files (16%) and discipline specific apps (10%).

Activities with iPads	Respondent #	% of Respondents
Note taking, including lab notebooks	68/90 faculty members	76%
Reading and annotating course materials	59/90 faculty members	66%
Completing or reviewing assignments (e.g., papers, problem sets, using Word, Excel, PowerPoint)	53/90 faculty members	59%
Group work (e.g., screen sharing, file sharing)	45/90 faculty members	50%
Creating or editing audio, photo or video files	14/90 faculty members	16%
Discipline-specific apps	9/90 faculty members	10%
None/Unknown	12/79 faculty member	13%

Q3 - Which of the following did you ask students to do or observe students doing with MacBook Pros in your courses this semester (please check all that apply)?

Activities with MacBook Pro

Activity	Value
Completing or reviewing assignments (e.g., papers, problem sets, using Word, Excel, PowerPoint)	59
Note taking, including lab notebooks	42
Group work (e.g., screen sharing, file sharing)	38
Reading and annotating course materials	38
Discipline-specific apps	29
Creating or editing audio, photo or video files	19
None/Unknown	14

Of the eighty-eight faculty members who completed question three, the majority of faculty members observed their students using their MacBooks for completing or reviewing assignments (67%). About half of faculty respondents noted that students used their MacBooks for note taking (48%), reading and annotating course materials (43%), and/or group work (43%). About a third of faculty members noted students using MacBooks for discipline-specific apps (33%), and about a quarter of faculty members (22%) observed students using MacBooks to create or edit audio, photo, and video files.

Activities with MacBooks	Respondent #	% of Respondents
Completing or reviewing assignments (e.g., papers, problem sets, using Word, Excel, PowerPoint)	59/88 faculty members	67%
Note taking, including lab notebooks	42/88 faculty members	48%
Reading and annotating course materials	38/88 faculty members	43%
Group work (e.g., screen sharing, file sharing)	38/88 faculty members	43%
Discipline-specific apps	29/88 faculty members	33%
Creating or editing audio, photo or video files	19/88 faculty members	22%
None/Unknown	14/88 faculty members	16%

Themes from the Open-Ended Question Responses

One open-ended question provided space for faculty to add comments about their experience with DExC, and fifty-one faculty members opted to write a comment. The following pages contain an analysis of their open-ended responses.

Q4 - Feel free to add any comments about the Digital Excellence Commitment (DExC) below.	# Faculty (n=51)
About a third of faculty members who wrote in a comment worried that MacBooks and iPads negatively impacted students' concentration and focus in the classroom. - Even faculty members who appreciated that their students had access to Bowdoin-issued MacBooks and iPads worried about how much the devices distracted students in their classrooms. Some noted an uptick in students using their devices to do unrelated coursework (for a different course or department) or for personal uses in their classes. *"[Students] are constantly on their machines doing everything else (texting, online shopping, doing work for other courses) BUT paying attention in class. This initiative has forced us to change the way that we teach and the students, because they can't help themselves, are suffering for it." [Bowdoin faculty member]* - Professors from some disciplines, most notably the humanities, worried that the screens and easy access to the internet had decreased the quality of their in-class time and discussions. As one professor explained, "[Art discipline] depends heavily on a shared screen in class, and having multiple personal screens distracts from that shared work." - A few faculty members were more partial to students using the iPads, which can lay flat on their desk, than their MacBooks. *"...Students who preferred using MacBooks in my class were often 'behind a wall' with their screens up. Try as I might to have them take notes on pen and paper, the new tech also meant fewer students travelled with notebooks and pens, which added another layer of complication when I asked them to close their laptops." [Bowdoin faculty member]*	17 Faculty Members
Eleven faculty members stressed the important role of the DExC initiative in leveling the technological playing field for Bowdoin students. *"The iPad / MacBook initiative has leveled the access to technology for all students. I know what all of them have and when asking them to do work in class or at home, my expectations can be clear because all students have the same devices." [Bowdoin faculty member]* *"My course offered next semester will depend on MacBook Pros for all assignments and group work. It is important that students are on the same computing platform." [Bowdoin faculty member]*	11 Faculty Members
About a quarter of faculty members commented specifically on their students' access to software and apps.	12 Faculty Members

• Seven faculty members wrote about the benefits of the DExC initiative in terms of students accessing software, sometimes finding that students utilizing software on their own computers enhanced faculty members' ability to teach. • Five faculty members cited challenges with software, specifically noting that students had trouble with using Microsoft Office (Word, Excel) and, in one case, a challenge with licensing software for students. *"It *very much* enhances my teaching (in math) to know the students all have access to a variety of different math-specific software (some on iPad, some on MacBook)." [Bowdoin faculty member]* *"The MacBooks were useful for lab and lecture because it allowed students to install GraphPad Prism and have individual access to that app instead of having to use a lab computer to complete statistical analyses with that program..." [Bowdoin faculty member]* *"Office does not come installed on the computers! It took some of my students weeks to finally click into the realization they needed to download this, the whole Office package and not just use the web version. Then they didn't know how to save docs at all..." [Bowdoin faculty member]*	
About a quarter of faculty members wrote in about the benefits and challenges their students had when using their Bowdoin-issued devices for taking notes. • Half of these faculty members felt students' ability to take notes on their iPad was a positive development and, in a couple cases, "transformative" for students. • Others felt that digital notetaking for students was not as effective or in one case, noted that "students who try to take notes with an iPad cannot keep up, while those taking notes with pen and paper are fine." *"I see many students making excellent use of the note taking capacity of the iPads; we almost always have their iPads or MacBooks open (and very often both) when the students come to office hours, and several students have told me how much the iPads help them stay organized." [Bowdoin faculty member]* *"I find the increasingly sophisticated student use of iPads for note taking and writing to be both fascinating and disturbing. For me, it's an e-reader or an increasingly good (but not great) substitute for a computer..." [Bowdoin faculty member]* *"I see a lot of students using the iPads to take screen shots of the boards in class. I'm not sure that this is a good substitute for active note taking, but I haven't banned it." [Bowdoin faculty member]*	12 Faculty Members
Eight faculty members weighed in on how DExC impacted Bowdoin students completing their course readings. • Though a couple of faculty members liked their students could access textbooks and course materials through their devices, five faculty members worried that students	8 Faculty Members

were choosing to use pirated e-books over purchasing textbooks and/or applying less critical thought and focus to their readings. *"I really appreciate that [students] all have access to our textbook online and since it's multimedia and they've generally got tablets with them in class, they can always pull up literally ANY course material... I love that Bowdoin makes these (very expensive) devices accessible to all students!" [Bowdoin faculty member]* *"The problem I face is that student iPad use seems to encourage the use of pirated electronic forms of texts which are either reproduced shoddily or have incorrect page numbers. Money for texts would be more useful for my low-tech discussion-based humanities classes." [Bowdoin faculty member]* *"Fancy computers do nothing to enhance skills of close reading and deep analysis or to support the core mission of intellectual engagement at the heart of the humanities, even if they can be utilized in new ways to produce new knowledge." [Bowdoin faculty member]*	
Seven faculty members commented on why they currently restrict or have previously restricted technological devices in their classrooms. ▪ A few faculty members noted that the DExC initiative made them feel like they could no longer ban technology from their classrooms. *"I forbid the use of iPads and computers in my classes. I want the students to engage deeply with the words on the page and with each other instead of with their devices." [Bowdoin faculty member]* *"The downside is the reason I used to ban laptops from the classroom - something I don't feel I can do anymore. The move away from books and to Canvas readings also makes it harder to expect substantial reading." [Bowdoin faculty member]*	7 Faculty Members

A small group of faculty members recommended that Academic Technology develop training modules or user experiences to strengthen students' abilities to use their devices effectively.
    ▪ These faculty members specifically requested trainings that focused on "show[ing] students how much their learning suffers when they multi-task" and how to annotate readings and classroom materials and leverage Microsoft Word and OneNote to their full capabilities.
    ▪ A couple faculty members asked for student-centered trainings focused on file management best practices.
    ▪ In some cases, the faculty members noted that they tried to assist and train their students on the above topics but found it time-consuming and difficult to do so.
 	
"I keep imagining a self-evaluative test so that [students] can see the impact for themselves. I need them to use computers in my course, but I really wish that they could practice some of the digital hygiene that would help them to both succeed at academic tasks and be less
	6 Faculty Members

device dependent when their minds should be wandering far from screens..." [Bowdoin faculty member]

"...If we are going to give every student these tools, we should require an academic orientation to them that focuses on how to annotate readings well using digital tools, for example, or how to annotate instructor PowerPoints effectively to increase comprehension and recall of key facts." [Bowdoin faculty member]

"Recognizing [my students'] need for additional help, I reinforced the basics of using Word (formatting, footnoting, track changes, file saving conventions, etc.) throughout the semester. I understand that workshops were offered to students during orientation, but it shouldn't surprise us that many did not attend. Perhaps training can be a requirement for students to pick up their devices next fall, thus moving us closer to equity in digital competence?" [Bowdoin faculty member]

- In addition to recommendations for student trainings, a few additional faculty members recommended that faculty be provided with laptops, that DExC continue to collect data from faculty in upcoming semesters about their experiences and needs, and that Bowdoin emphasize that Mac devices are not "automatic[ally] endorsed" in every classroom.

"I am very grateful to the committee for soliciting our responses to this program but feel that such a survey cannot begin to account for the effects that computers and iPads are having on our students and classrooms. I believe a larger discussion (ideally a longer format faculty forum) is truly necessary to gage the nuanced effects that this decision, made with little faculty input, has had on our pedagogies, classrooms, teaching, student expectations, etc." [Bowdoin faculty member]

Five faculty members commented on how DExC impacted their students' group work in both positive and negative ways. *"Knowing that all of my students have new MacBooks has made it very easy to do certain kinds of work in the classroom, for example: group presentations on the fly, with each group simply plugging in a laptop to share their work via the projector." [Bowdoin faculty member]* *"...I found that for group work in which students had to submit a jointly completed document, they all worked together on a google doc and they no long talked to each other. Kind of an unexpected down-side in my mind of group work. They tended to divide up the assignment and each person does a bit of it with no crosstalk about the individual parts." [Bowdoin faculty member]*	5 Faculty Members
A small group of faculty members, seemingly from science departments, emphasized that Apple Computers are not always the best tools for their disciplines. ■ They noted that certain scientific equipment does not work well on Apple devices and that even the Mac version of Microsoft Excel, which requires different formulas than the Windows version, has proved challenging for their students to adapt to.	5 Faculty Members

"…I feel like this initiative is encouraging a unified Apple work environment, which is not a good choice for all scientific uses. Reviews of the emulation environments for older instrumentation are pretty poor." [Bowdoin faculty member] *"I'm strongly in favor of making sure every student has a laptop. I just wish they weren't Macs, which are giving us bunch of bizarre platform issues with the Apple CPU architecture."* [Bowdoin faculty member] *"A good deal of scientific equipment does not run on software that is supported by Macs. Macs also lack most of the useful ports that are used to connect computers to things. I found myself having to go out and buy a wide range of different adaptors to make the MacBooks even remotely useful."* [Bowdoin faculty member]	