

5 TIPS TO ENGAGE AND EDUCATE YOUR SCIENCE STUDENTS



It can be difficult to get science students out of the lab and into the library. Yet, these students have as much of a need for your library's resources as any other patron.

No one librarian can help every early-career scientist: success requires contributions from the entire library staff, the faculty, and the students themselves.

At JoVE, our mission is to work with librarians to advance scientific learning and research. So here are 5 tips to better engage and educate the undergrads, graduate students, and postdocs who need your help.

- 1. Tailor messaging for mobile phones
 - 2. Find allies and engage students on their turf
 - 3. Meet faculty halfway or 99% of the way if that's what it takes

4. Your strategy for graduate students and postdocs



5. Be aware of unique needs of international students





1. Tailor messaging for mobile phones

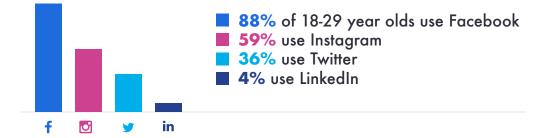
If you're communicating with students, assume they'll be seeing it on their smartphone. Today, 70% of all web traffic comes via mobile phones, and that holds true for Facebook and YouTube too.

Emails and social media posts with videos, eye-catching images and big text are great for mobile phones: use free online tools like <u>Canva</u> or <u>Pablo</u> to quickly create messaging that makes an impression but doesn't take too long to read.

Which is likely to get more attention when they're placed side-by-side: an invitation to learn more about the library's eResources, or a video of adorable cat hijinx? Cats at play will get more screen time; anything more than a few key ideas from the library is likely to get passed over and forgotten. Social media is a good tool but it's not the entire solution, so use it as a part of a bigger strategy, not as the strategy.

Did you know?

According to the Pew Research Center:



- 70% of web traffic is from mobile; assume students will see content on their phones.
- Keep messaging short and concise
- Use eye-catching imagery or media
- Adopt the most relevant social media networks, but have a bigger strategy

2. Find allies and engage students on their turf



Word of mouth has long been the most powerful marketing tool for any product or service. Your biggest asset will be students who understand the library's value, so develop those relationships and have a plan to use their enthusiasm as productively as possible.

Invite your student allies to host an event at the library, paid out of your budget. They'll likely know who among their peers are also campus influencers, so leverage this knowledge to expand your pool of influence. They'll also know which topics will draw best; have your allies teach workshops themselves if they're willing.

If you can't bring the students to the library, bring the library to the students. Go to the cafe, quad or student center: wherever you can make connections with students and get a flyer into their hands and put a friendly face in mind when they think of the library.

Libraries have reported success attracting students with:

- 🖞 Yoga classes
- Chamber music



- Speaker series
- Scavenger hunts

- Word of mouth is the best marketing tool
- Recruit engaged students to lead events
- Bring your message to where students hang out
- Make use of vendor offers for in-person demos & tutorials

3. Meet faculty halfway - or 99% of the way if that's what it takes



It shouldn't come as a surprise that students are most engaged when they're in the classroom, so do whatever it takes to present to them there.

Ask every faculty member you meet for the opportunity to speak in front of their class, or bring the whole class to an in-library information literacy workshop during scheduled class time.

If at all possible, schedule this time 3 or 4 weeks into the semester, and not the first week of class. The start of every semester is a whirlwind of new experiences and competing priorities for students, so you'll want to let them settle in before speaking with them.

Build on the small wins you've achieved.

After the first 2 or 3 faculty members agree and you're able to present, take those positive outcomes to more faculty members and build on the small wins you've achieved.

Once you've established a good rapport with the faculty, go big: ask department chairs if you can build tutorials of the library's resources directly into the classwork every semester.

- Get in front of students during class time; wait a few weeks to present
- Take your successes to faculty members on the fence
- Embed resources if possible, but strive for face-to-face chats

4. Adapt your strategy for graduate students and postdocs



Science-focused graduate students have little time to escape from the research lab, respond to social media posts, or show up for food and fun events.

They're likely more career-focused than undergrads, too. Graduate students undertake literature review during several points along their degree, and are expected to publish research papers in journals. Resources like reference managers, tips to avoid accidental plagiarism, and ideas for potential publication avenues are more relevant.



Don't forget about postdocs! They're considered staff by university administration because they work as lab researchers and aren't enrolled in classes, but they often need similar support for specialized resources as graduate students.

Most science departments have seminars every week that are mandatory for graduate students; talk to department chairs to get on the schedule. Host workshops and career seminars in the library focused specifically for grad students and postdocs; students focusing on research are often around in the summer, unlike undergrads.

- Graduate students have critical need of your library's research related resources; don't forget about the postdocs
- Researchers need help and resources for writing and publishing
- Get a speaking slot at departmental seminars; chairs often need speakers

5. Be aware of the unique needs of international students



International students earn 11.6% of all doctorates conferred by U.S. colleges and universities, according to a 2015 report from the Pew Research Center, but they receive a much higher percentage of doctorates in STEM fields.

Based on 2012-2013 data from the National Center for Education Statistics, the Pew study found foreign-born students received:



- 57% of engineering doctorates
 - 53% of Ph.D.s in computer and information sciences
- 50% in mathematics and statistics
- 40% physical sciences and science technologies

Leverage your campus' international student services center for up-to-date contact information for the international students at your institution, as well as assistance in delivering resources and information to these students.

Seminars on researching and writing in the sciences, citation best practices and tools, as well as reference management systems like RefWorks, BibTex and EndNote are vital to these student populations.

Finally, international student understanding of what does and doesn't constitute plagiarism may be impacted by historical and cultural assumptions. Therefore, make sure to reach out to educate them about your institution's definition and policies concerning plagiarism.

- The sciences and adjacent fields have significant populations of foreign-born students
- Leverage your campus international student services center
- International students may be especially susceptible to unintentional plagiarism

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