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HACKS TO HELP RESEARCHERS PUT WORDS ON THE PAGE

Productivity coaches, boot camps and online meet-ups can assist scientists with getting their writing done. **By Roberta Kwok**

Hannah James started to fret about her unfinished thesis in March 2017. The then-fourth-year PhD student in archaeological geochemistry had to write about 60,000 words on her analyses of human teeth. Every couple of weeks since 2015, she had attended sessions organized by her university's research skills and training group that helped students to focus on writing while holed up in a room on campus for several hours or an entire day.

But James was having trouble clarifying the

main points of her thesis, and needed a longer block of time to concentrate and put her ideas on paper. And it was hard for her to work outside the group sessions – she found herself

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distracted by e-mail or minor details in her graphs. James was hoping to submit her thesis to the Australian National University (ANU) in Canberra in a year's time, but had produced only 10,000 words that seemed usable. “I just hit a point of panic,” she says.

So she signed up for a three-day programme that October called Thesis Boot Camp. For many ANU students who are nearing deadlines, joining the programme signals desperation, says Inger Mewburn, the university's director of researcher development and founder of The

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Thesis Whisperer, a blog about finishing a PhD. “There’s a lot of crying.”

With 27 other participants, James attended classroom sessions that lasted from Friday afternoon to Sunday evening. Mewburn gave the students exercises, such as writing without using the delete key, to discourage perfectionism. A psychologist offered one-on-one consultations and tips for dealing with challenges such as negative thoughts. And students received a large Lego-like block for every 5,000 words that they produced. James, inspired to dump her thoughts out of her head, wrote more than 20,000.

Having achieved that, she continued to attend writing meet-ups. She still had to put back her thesis deadline, partly because she switched to a part-time PhD programme in December 2017, but she submitted her 78,000-word dissertation in February this year. “I found motivation again,” she says.

James’s story will sound familiar to any researcher who has struggled to complete a paper, dissertation, grant proposal or book chapter. When schedules are crammed with laboratory work, teaching or administration, scientists often delay writing. “We basically find ourselves running around and being busy, getting a lot done, but the paper is not getting written,” says Olga Degtyareva, founder of Productivity for Scientists, a company in Dunfermline, UK, that helps researchers to overcome procrastination and be more productive. Even when scientists do have time, they might endlessly delete and revise, let their attention wander, or be so sensitive to potential criticism of their ideas that they are unable to string sentences together on paper.

And yet writing is crucial to propelling careers. PhD students often need papers on their CV to land postdoctoral posts, and publication records and grant funding can tilt tenure decisions. “You need to be able to show you’ve been productive,” says Anna Clemens, a Prague-based editor and writing coach for scientists.

Some researchers, like James, rely on writing at meet-ups. Others use professional services such as classes or coaching. Productive scientists often make an effort to improve their writing process, whether by scheduling weekly times or using mental hacks to focus. Disentangling a paper’s core ideas, breaking a project down into bite-sized tasks and finding the right software (see ‘Kick-start writing’) can ease the pain.

But the first step is to prioritize writing. “It’s very easy to put it last on the list,” Mewburn says.

A personal system

Early-career researchers often struggle with barriers to their writing, according to a 2019 study co-designed by Prolifiko, a company in Leeds, UK, that offers coaching and a digital platform to improve writers’ productivity. In 2018, the firm surveyed 593 academics

KICK-START WRITING

These software tools and resources might boost productivity.

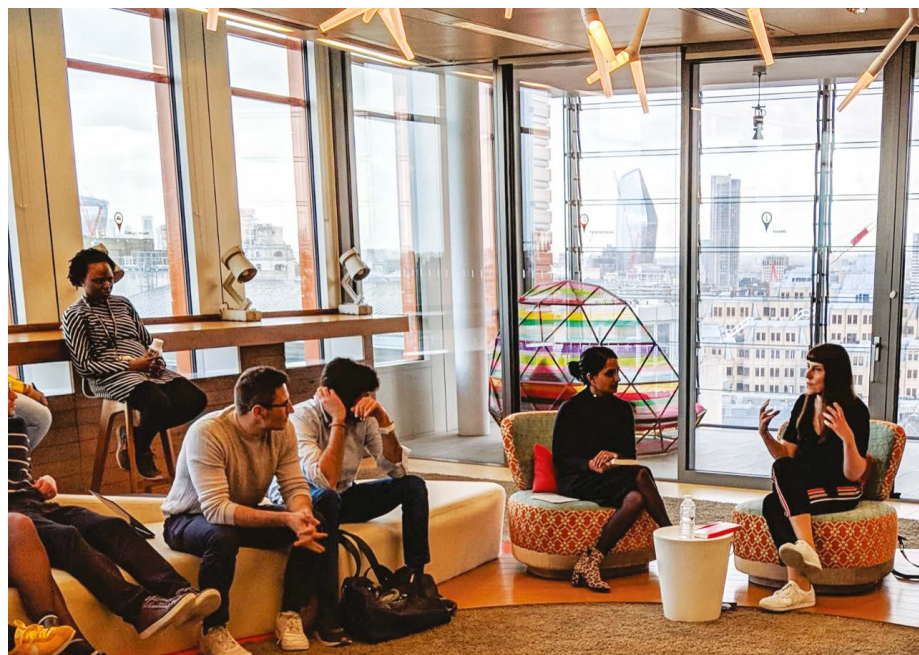
- **Academic Phrasebank.** A website maintained by the University of Manchester, UK, that offers common phrases for academic writing (www.phrasebank.manchester.ac.uk).
- **Scapple.** Software that helps writers to chart connections between ideas.
- **Scrivener.** Writing software that includes features for outlining, dividing a project into sections and tracking word-count targets.
- **Shut Up & Write!** A community of writers operated by the non-profit organization Writing Partners in San Francisco, California, with writing meet-ups in 47 countries.
- **Freedom** and **LeechBlock.** Productivity apps that block distracting websites.
- **TextExpander** and **Typelt4Me.** Software that expands user-specified keywords into longer phrases.

from various disciplines around the world and categorized participants by career stage: early (up to 5 years’ experience), mid (6–15 years), and late (at least 16 years’ experience). When asked to choose from a list of factors that hindered writing and publishing, 46% of early-career researchers picked “feeling overwhelmed with a lack of control”, compared with 33% and 19% of mid- and late-career participants, respectively. Procrastination

was common; one early-career participant responded, “I play chicken with deadlines,” and another reported, “I get sucked into Facebook ... Hours go by and [I’ve] done nothing.” Others struggled with negative thoughts. “Some days I feel physically sick at writing or reading anything that has to do with my PhD,” one researcher said. Meanwhile, mid-career participants were more likely to cite heavy workloads, everyday interruptions and family commitments as barriers.

But career stage wasn’t rigidly linked to writing success. The team found examples of experienced scholars who were ‘miserable and blocked’ and younger researchers who were ‘super productive’, says Chris Smith, co-founder of Prolifiko. What mattered was having a system, such as setting a writing schedule or asking a co-author to hold the researcher to deadlines. People who consistently used certain tactics to push writing forward tended to experience fewer blocks. Sixty-one per cent of them reported feeling very satisfied with their writing, compared with 20% of those who had never thought about a system, Smith says.

Writing systems span many approaches, Smith notes. Although the conventional advice is to write every day, “it’s not the only way”, he says. What’s important is “having a personal system that suits you”. Mid-career researchers were more likely to set aside weekly or monthly slots (a method called time-blocking), perhaps because they were too busy to write each day. Those who wrote daily reported higher levels of satisfaction, but time-blocking writers tended to publish more, Smith says. People who wrote



Bec Evans (far right), co-founder of the writing-productivity company Prolifiko, gives a presentation at Google in London.

CHRIS SMITH

during holidays or sabbaticals were the least satisfied. Smith speculates that they might have felt stressed about completing other work first, or have unrealistic expectations about the amount they could accomplish during their time off.

Daniel Vreeman decided in 2010 that he needed a better system. Vreeman, a biomedical-informatics researcher then at Indiana University School of Medicine in Indianapolis, had been writing during gaps in his packed schedule. But squeezing in half an hour or an hour between meetings was inefficient, he says. So, on his calendar he blocked off half a day per week for writing; if people asked about that slot, he or his assistant told them that he had another commitment. Later, Vreeman increased the block to a full day on Fridays. Although he makes exceptions for travel or unavoidable administrative work, meeting his goal more frequently “is better than not meeting it at all”, says Vreeman, who now works at a satellite office in Fishers, Indiana, for the non-profit research institute RTI International in Research Triangle Park, North Carolina. Each year, he writes on average 4 papers, 6 grant proposals, 8 conference abstracts, 10 blog posts, 10 technical documents, 20 grant progress reports and a book chapter.

Researchers with more harried schedules might find Vreeman’s method unfeasible, but they can still be productive. In early 2014, structural engineer Eva Lantsoght was teaching three new classes at the University of San Francisco de Quito in Ecuador. Scheduling more than a 2-hour block for writing papers was often “impossible”, she says. So Lantsoght broke each paper into small tasks and tackled them during 1- or 2-hour slots. For motivation, she sometimes used the ‘pomodoro’ time-management technique, which involves doing 25 minutes of focused work at a time. In this way, Lantsoght published eight papers based on her dissertation over the following two years.

After learning to deal with overwhelming demands during her physics research career, Degtyareva set up Productivity for Scientists in 2011. In her online courses, she provides her students with productivity strategies, such as telling them to choose a target journal and download the guidelines and manuscript template. “You can literally start filling in the blanks,” she says. Students must complete one task per day, and other participants hold them accountable.

In 2013, Marina Cortès, then a postdoc in cosmology at the University of Edinburgh, UK, was feeling uninspired. She would make herself try to write a paper by “brute force” even when she was tired. After seeing a presentation by Degtyareva, Cortès signed up for the writing class, which, she says, helped her to prioritize rest and well-being. She started

sleeping more and working with greater focus for shorter periods. Cortès, now a cosmologist at the Perimeter Institute for Theoretical Physics in Waterloo, Canada, wrote three papers over the course of those classes. One was highlighted in a viewpoint article that year in the online magazine *Physics*, and another won the 2014 Buchalter Cosmology Prize.

Some researchers feel motivated to write by participating in meet-ups. Shut Up & Write!, a community operated by the non-profit organization Writing Partners in San Francisco, California, runs free writing meet-ups year-round in 47 countries. And academic researchers can join an online event called AcWriMo every November to set themselves ambitious writing goals and tweet about their

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progress. PhD students can look for thesis boot camps offered by their institution or local facilitators; for example, freelance writer and facilitator Peta Freestone, based in Edinburgh, designed an early version of the ANU boot camp and has since run many such programmes in Europe and Asia.

Find the story

Sometimes, the problem is not time or motivation, but a lack of focus. Degtyareva advises clients to choose one paper – say, the easiest of the ones they wish to write. And Clemens says that scientists should work out the problem that the paper addresses and the key message before tackling a draft. “I don’t think the best strategy is to just sit down and start writing,” she says. When Clemens edits papers by researchers who haven’t done this preparation, she sometimes deletes entire paragraphs that aren’t relevant.

Diagramming ideas can help, Mewburn says. She recommends using software called Scapple to create ‘mind maps’ – concepts connected by lines. Mewburn also suggests constructing a literature-review matrix, a table in which each column is a relevant paper and each row a theme; scientists should fill each cell with what that paper says about that theme. Seeing whether each study leaves one or more themes unaddressed helps researchers to identify gaps on which their study could shed light, Mewburn says.

Communicating research is fundamental to scientists’ jobs, notes Clemens. “If you’re a scientist, you’re a writer,” she says.

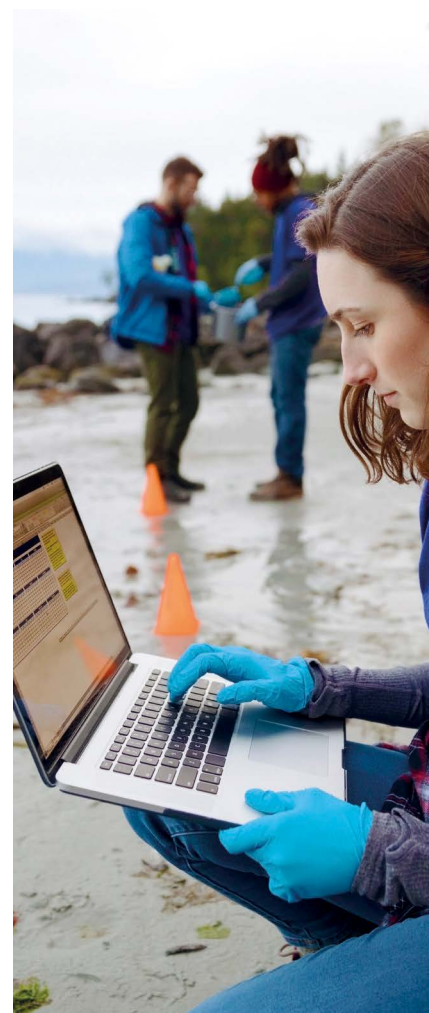
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