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Promoting Good Scientific Communication Habits by Leveraging the Community of Practice within a Single Research Group

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Graduate studies

What do we expect from students?

- Learn skills specific to their discipline and other transferable skills (ex. communication)
- Plan and manage a research project
- Communicate their research to the community
- And... submit their thesis

How do they learn?

- Going through the curriculum (classes, projects, etc.)
- Supervisors
- Colleagues and members of their research group [1,2,3]

Scientific communication

Methods, processes and channels used to communicate research



Scientific texts



Presentations



Posters



Publications

Graduate students need to have skills for those tasks [4, 5, 6, 7, 8, 9]



Integrating activities on scientific communication within a research group

- Using the existing community of practice
- Support on tasks they already have to do
- Availability of participants
- Habit of regular work

About us



- Montréal, Québec, Canada
- 10 000 students
- Many ESL

Support community of students

- Learning community
- Campus-wide
- Voluntary
- Free

For more info:

- sara.etsmtl.ca
- Presentation at 1:30 in Room 150 G. [10]



Implementation

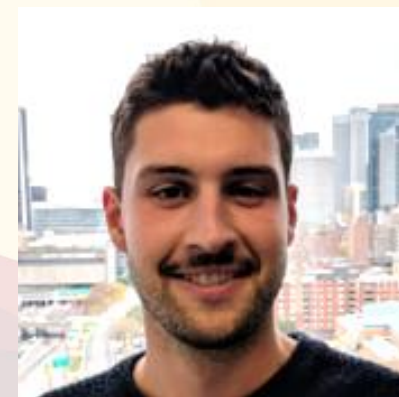


- Hospital environment
- Real patients
- Industrial partners



Jacques De Guise

Ambassador



Jérôme Harrison

Activities



Workshops

Tips and hints

Every week



Writing Blitzes

Write!

Every week



Writing Support Groups

Get Feedback

Once a month



Journal Clubs

Analyze scientific texts

Once a month

Outcomes

- Student appreciation of the activities = Very High
- Student reasons for participation

“By curiosity at first. Then, the collective motivation these activities create. I am more productive in those moments and I feel less alone in this type of activity.”
[Free translation from French]

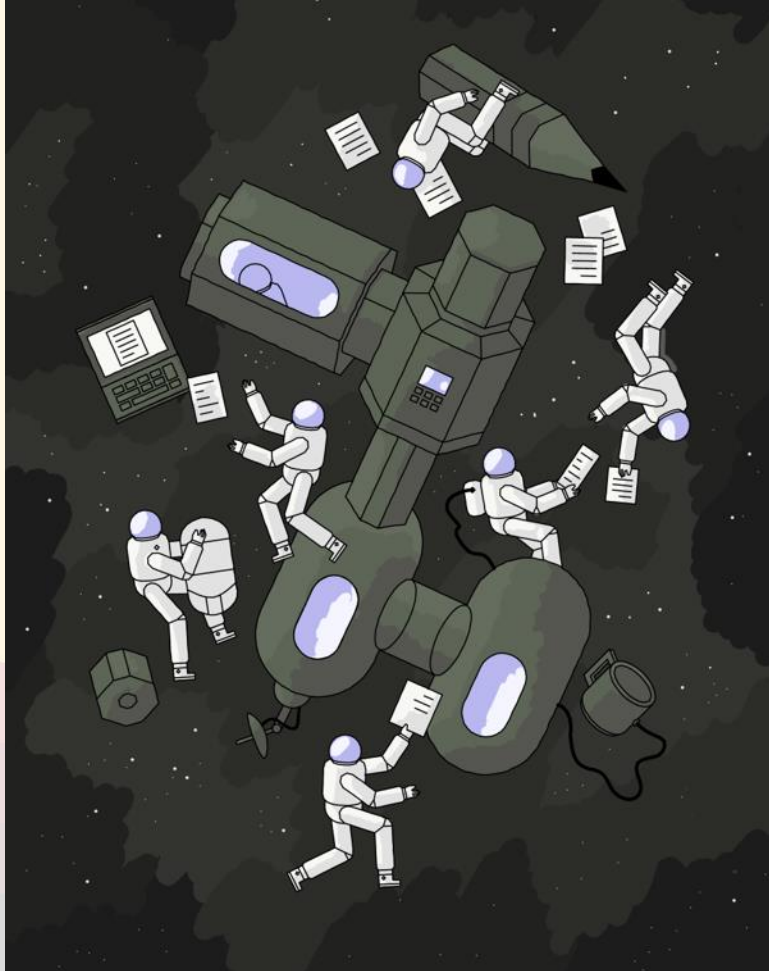
- Professor perceptions

“[These activities] address a pressing need related to the research activities of students and researchers in an original, effective and impactful way” [Free translation from French]

Ongoing and future projects

- Refine activities
- Assembling a toolkit
- Keep interest and motivation over time
- Implemented in a second research group





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{ SARA }

Bibliotech *ÉTS*

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- [10] J. Craig, “Writing Strategies For Graduate Students,” in *2005 ASEE Annual Conference*, Portland, OR, 2005, p. 10.1480.1-10.1480.7.

Outcomes (detailed)

Difficulty	Beginning (June 2017)	Current (January 2018)
Writing efficiently: getting started in writing a scientific text, meeting writing goals, avoiding distractions, etc.	3.17	3.38
Managing time: meeting deadlines, writing regularly, etc.	2.83	3.15
Getting feedback: getting tips and comments from colleagues to help better your scientific text, receiving timely feedback (i.e. quickly and when you need it), etc.	3.50	3.08
Communicating ideas clearly: writing texts with a clear narrative that is easily understood by the target readers, etc.	2.83	2.69
Writing in English	3.25	3.38
Pinpointing the elements to improve in a text: reviewing a colleague's writing, giving pertinent comments and suggestions, etc.	2.75	2.54
Having the opportunity to review scientific writing: having the chance to read the texts of colleagues in order to comment and practice reviewing scientific writing	3.42	2.92
Being up to date on important scientific readings in one's research domain.	3.42	3.85
Giving clear oral presentations to communicate scientific research	2.75	2.85
Getting feedback on oral presentations: giving practice talks in front of colleagues and getting feedback and tips to improve the presentation	2.75	3.23
Discussing all the problems mentioned above in this poll with colleagues: ease in talking about problems related to scientific writing, opportunity to discuss these problems, etc.	3.00	2.92

	How many times have you participated in our activities within the framework of your lab?			
	1	2-5	5+	Overall average
1 - In general, participating in our activities is a good use of your time.	3.50	4.67	4.86	4.58
2 - Our activities address a need in your lab.	4.00	4.33	4.57	4.42
3 - You learned new scientific communication practices by participating in our activities.	3.00	3.67	3.86	3.67
4 - Support and feedback from your colleagues during our activities are useful in helping you better write, revise, and present.	2.50	3.67	3.71	3.50
5 - Our activities let you get to better know your colleagues and/or to break a sense of isolation.	3.00	2.67	3.86	3.42

Students reasons for participation

Below is a list of comments left by students when asked, “What prompted you to participate in our activities?” at the end of the second voluntary survey:

“the fact that you came presented your service directly in the lab”

“learn the knowledge of scientific writing because English is not my mother tongue”

“The collaborative model helps me structure my writing periods.” [Free translation from French]

“By curiosity at first. Then, the collective motivation these activities create. I am more productive in those moments and I feel less alone in this type of activity.” [Free translation from French]

“Having a new and structured writing environment. The fact that the facilitators are pleasant.” [Free translation from French]

“The motivation of the group to focus on a reading or writing”

The possibility of working in a structured manner and to benefit from the group dynamic. The professionalism, enthusiasm and sympathy of the facilitators (Staff and ambassador named)” [Free translation from French]

“It motivates/forces me to write.” [Free translation from French]