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## **Research Ethics and Integrity Training for Doctoral Candidates: face-to-face is better!**

by Catherine Tessier

### **The University of Toulouse and Inria have set up face-to-face training in research ethics and integrity for doctoral candidates based on debates about their own theses.**

In order to meet the requirements of 2016 French legislation about doctoral studies, face-to-face training in research ethics and integrity for doctoral students has been conducted at Toulouse University since 2016 and at Inria since 2017. The training programme is based on the work [1] of CERNA, the French ethics committee for research in ICTs.

Based on the conviction that doctoral candidates should be able to express themselves and question and discuss issues of research ethics and integrity that directly concern themselves and their own theses, the training is organised as a single-day (i.e., six to seven hours) session with a maximum of twenty doctoral candidates per session. The originality of the approach lies in the fact that, on the one hand, classes can be multidisciplinary since they are open to doctoral students from any doctoral school; and on the other hand that the training is facilitated by two trainers preferably with different backgrounds.

The training material includes a set of slides, a collection of dilemma exercises and a trainer's guide [2]. The trainers commit to respecting the structure of the course i.e., to using the slides, supervising a dilemma exercise, asking each participant to write an ethical or integrity issue about their thesis and hosting class discussions about the issues that are put forward.

The slide-based lecture includes headline news examples of cases raising ethical or integrity issues, information about laws and codes of ethics, philosophical and historical background of ethics in science and useful vocabulary and concepts. The doctoral candidates' issues are collected and organised by the trainers in three topics: research integrity, publication and research ethics. Each set of issues is discussed by the whole class, and the trainers refer to the relevant available slides as the discussion goes along e.g., best research practices and misconducts, relationships with thesis supervisors (research integrity), authors, reviewers, citations (publications) and value conflicts during the thesis (research ethics). The slides are sent to the doctoral candidates after the training so that they can refer to them and visit the numerous links that are provided to relevant documents.

In order to increase the size of the pool of trainers, the training of trainers is done *in situ*, i.e., most often a pair of trainers includes an experienced trainer and a "new" trainer who may in turn train another colleague during a future session. The side effect of this structure is that the people involved as trainers are actually made aware of the issues of research ethics and integrity.

After more than two years' experience and over 1000 trained doctoral candidates, the following points are worth highlighting:

- It is not necessary for a trainer to be an ethics "expert". Nevertheless they must become familiar with the concepts, ask themselves about their own research practice and pay

attention to scientific news and associated issues. Indeed a trainer enriches the course with their own experience and thinking.

- A trainer should not be afraid of disturbing issues, difficult situations, conflicting points of view, and where appropriate should be able to cope with emotion. Indeed sensitive issues are likely to be raised by doctoral candidates.
- Classes must be composed exclusively of doctoral candidates so that the issues that they raise can be addressed without the pressure of "senior" colleagues.
- In order for doctoral candidates to talk freely, it should be announced at the beginning of the session that everyone (both the trainers and the doctoral candidates) should commit to confidentiality; furthermore a doctoral candidate may remain anonymous when raising an issue about their thesis (questions are put down in writing on stickers provided by the trainers).
- Trainers should announce that some issues - especially research ethics issues – do not have simple black and white answers and that the main point is to become familiar with ethical thinking and deliberation.
- Computers and cell-phones should be banned so that everyone can be involved in the debates.

Feedback from doctoral candidates about the training includes some very isolated but interesting comments:

- The dilemma exercise, which aims at creating ethical deliberation through the confrontation of moral values, can be regarded as aggressive and provoke rejection. On the contrary, it can be judged irrelevant because it is considered as being far from reality or pointless.
- Philosophical and historical references can provoke sharp or even hostile reactions, depending on each person's culture and beliefs.

Nevertheless, the overwhelming majority of feedback is positive, strengthening the pedagogical approach that has been adopted i.e., a face-to-face doctoral training in research ethics and integrity, in small classes, based on debates that are focused on the issues that are raised by the doctoral candidates themselves. Most doctoral candidates report that they have become aware of best practices concerning publications and experiments, that they have learnt to consider their work from an ethics point of view, and that they have appreciated being able to raise issues about their own theses. Clearly this costs money and the recruitment and remuneration policy of the trainers is an integral element of the (ethical) debate about this kind of training.

References :

[1] Commission de réflexion sur l'éthique de la recherche en sciences et technologies du numérique d'Allistene (CERNA), "Proposition de formation doctorale - Initiation à l'éthique de la recherche scientifique", 2018. [Online]. Available (in French): [http://cerna-ethics-allistene.org/digitalAssets/55/55709\\_Cahier\\_CERNA\\_FormationDoctorale2018.pdf](http://cerna-ethics-allistene.org/digitalAssets/55/55709_Cahier_CERNA_FormationDoctorale2018.pdf)

[2] Formation Doctorale "Éthique de la recherche et intégrité scientifique": une formation proposée par l'école des docteurs de Toulouse, 2017. [Online]. Available (in French): <https://hal.archives-ouvertes.fr/cel-01452867v2> (version 3 to come)

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