“New Tools for the Toolbox” – Realigning a cross-disciplinary PhD course

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This report describes and evaluates changes that I have made for teaching in an existing course in light of the lessons learned during the University Pedagogics education at the University of Copenhagen in 2025-2026.

About the course: A multifunctional and cross-disciplinary toolbox with some limitations

“Open up your Academic Publishing Toolbox” is a full day in-person workshop for PhD students offered by Copenhagen University Library. It takes place two times per semester and is available for PhD students from all faculties at the University of Copenhagen. There is also a limited number of seats available for PhD students from other universities and for academic staff.

> Participation in the course yields 1 ECTS – equivalent to a maximum of 25 working hours, as agreed between the graduate schools. These hours include preparatory reading and assignments before the course, a homework assignment after the course and classroom activities during the entire workshop day. [1]

We consider this course ‘cross-disciplinary’ – in the sense of bringing together young researchers from all fields around one common theme:

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[1] From the public course description (May 2026): https://kubkalender.kb.dk/event/4509195

> Academic publishing is an essential part in any researcher's work and a cornerstone for the development of an academic career. Through discussions with the course instructors and the fellow PhD students, participants will gain insight into traditions and practices across disciplines and look at academic publishing from different perspectives.[1]

As the title of the course suggests, there is a strong focus on the practical aspects of academic publishing, with the intention of introducing the students to a number of useful tools and teaching them how to use those.

The course is divided into five modules, each addressing one specific topic in academic publishing: 'Copyright', 'Open Access publishing', 'Creative Commons licenses', 'Publication of research data' and 'Scholarly profiles'. Each module is presented by a different teacher, who is an expert in the respective field. A moderator guides the participants through the workshop day by introducing the overall framework for academic publishing and putting the different modules into context. My own module revolves around the publication of research data (according to the FAIR principles).

The course format gives rise to a number of challenges:

- It is a one-off course, which means that we cannot follow the students' progress over a longer period of time. We have to rely mostly on what we observe and experience on the workshop day in order to assess how and what the students learn. And we only have limited time to get to know the students beforehand.
- The group of students is very diverse. They come from all different disciplines, ranging from Law and Theology to Natural and Medical Sciences. They are very international and may have different cultural and educational backgrounds. And they often are at different stages in their PhD education. Some might just have started with their project while others are soon about to hand in and defend their thesis. We often have a few participants from other research institutions, as well (such as from university colleges or academies) – and occasionally even from abroad (visiting PhD students, for example).
- In particular for my own module, I find a large variation in students' existing knowledge of the topic and their own experiences:

While the publication of research data is considered standard in some fields (in life sciences and natural sciences, in particular), even the notion of 'research data' seems alien in others (the traditional humanities, for example).

- The group of teachers is diverse as well, with different levels of experience and pedagogical approaches. Some of us have an academic background ourselves and good insight into research practices, while others are trained librarians specialized in research support.
- Copenhagen University Library is not part of the university itself, but is under the Royal Danish Library and acts as external service provider for the University of Copenhagen. This means that we are not embedded in the PhD schools' regular programs and procedures (though this will hopefully change soon).

The course itself has been running for about 10 years and we are constantly working on improving and developing it further. The group of teachers meet regularly to discuss the abovementioned challenges and other practical matters, and then continually revise the course structure and content. We also frequently observe each other while teaching and provide feedback. About once or twice a year, we select a specific pedagogical theme to work on collectively, sometimes with assistance from external experts, for example from one of the university's teaching and learning centers.

Some loose screws: An unpopular course curriculum and an ineffective homework assignment

The course curriculum comprises mandatory reading for each of the topics and several small assignments for preparation, including:

- A questionnaire probing the students' current level of knowledge and experience with academic publishing, as well as their expectations for the course. Students must submit their answers one week before the workshop day. The submissions are anonymous, but teachers may present selected answers in class.
- A reflection exercise called "Your own Publication Strategy" with a set of questions that relate each of the course topics directly to the

students' own PhD projects. There are no requirements on submitting this assignment before the workshop day.

Within one week after the workshop day, students have to hand in a homework assignment, in which they have to revise their own publication strategy (based on what they have learned during the workshop), and provide peer-to-peer feedback in pairs. We do not grade these assignments.

Furthermore, the students have to fill out a mandatory course evaluation with rankings and open-ended questions regarding the relevance of the course for their studies, their own level of engagement, the atmosphere in the classroom, the overall organization and the perception of the teaching and learning activities.

General feedback from the course participants has been very positive, with many students highlighting the immediate relevance of the course for their own PhD projects. A frequent comment is that our course should actually be mandatory for all PhD students at the university (which signals us that there is a real need for what we are offering). We also have indication that the majority of students does not primarily attend the course in order to receive the ECTS (which could otherwise be an essential motivational factor).

However, there has always been substantial criticism of the course curriculum, which many students describe as too extensive, irrelevant and redundant, since it does not seem well aligned with the teaching activities in class. Example comments from previous course evaluations are:

> "the different sections of the course day were pretty much a 1:1 run through of the many (!) texts, videos, and materials we had already been through in the mandatory course preparations"

> "the extend of the preparation material was not really needed as most of it was also covered in the lectures"

> "either make the reading optional, or include it better during class, or use (less) literature that is more concise than the one used at the moment"

> "less reading and instead more videos or more active kinds of assignments as preparation for the course"
>
> "it would be nice to get a little more in-depth with some of the topics, that were otherwise just repeating the mandatory reading"
>
> "I read the curriculum beforehand as recommended, but it didn't seem like that was the expectation when we actually showed up."

These issues were also reflected in a typically relatively low score in the ranking for to which extent students agree with the statement 'My own preparation for the course was adequate'. That may indicate that they are either lacking motivation for the preparation, or that they do not feel like their efforts for preparation pay off.

Considering how we had designed the course curriculum originally, the negative comments from the students do not come as a surprise:

- Having worked within the field for many years, each of us teachers has accumulated a vast amount of knowledge that we now consider essential and that we urge to transfer to the students. With all the right intentions in mind, we had made the classical mistake of letting the content dictate the curriculum.
- Additionally, we had compiled the list of mandatory reading and assignments primarily for administrative purposes: Knowing the PhD schools' requirements for assigning ECTS, we had to find a way to keep the students occupied for a certain number of hours in addition to the time that they would spend in class on the day of the workshop.
- We had not had a common understanding of the purpose and format of the curriculum. Every teacher would have different expectations to the students, and different ways of communicating those expectations in the course curriculum, which made it difficult to navigate for the students.

Furthermore, the homework assignment had been added later on without being sufficiently integrated into the teaching activities. Thus, it appeared inconsistent, confusing and ineffective to some students. Due to limited resources, we currently do not provide feedback. However, random

checks revealed that many of the submissions were of poor quality and that students seemed to regard the assignment simply as a mandatory deliverable instead of a means for personal reflection before, during and after the course. Peer-to-peer feedback did not appear to be done in a meaningful way either (if at all).

We can fix this: Constructive alignment as the pedagogical tool of choice

The obvious approach for addressing these challenges seems constructive alignment between the learning outcomes, the learning activities and the assessment, as formulated by Biggs (1996):

> "a working version of constructivism can be integrated with instructional design at three crucial points: the curriculum or unit objectives are clearly stated in terms of content specific levels of understanding that imply appropriate performances, the teaching methods require students to be placed in contexts that will likely elicit those performances, and the assessment tasks address those same performances" (p. 361)

and Entwistle (2007):

> "A teaching-learning environment includes all the components experienced by students which are intended to help them learn more efficiently – the various teaching activities, the learning materials made available, the support provided by the tutors or demonstrators, as well as the assignments students are required to complete and the assessment procedures adopted" (p. 8)

The latter extends more broadly to congruence with the importance of "…including the students' backgrounds and aspirations, course organization and management, the curriculum aims, scope and structure, and the learning support provided" (p. 8).

These concepts provide a structured and at the same time very practical framework for improving our course, which I applied in three consecutive steps.

Step 1: Onboarding my fellow teachers (and using them as test subjects)

In early spring 2026, I invited my fellow course teachers to an internal workshop in order to inspect our curriculum and analyze how it aligns with the teaching activities in each module. The aim was to identify weaknesses and initiate relevant changes that would increase the students' motivation for preparation, and help us make better use of their preparation in class.

Along with the invitation, I sent out detailed instructions with several small tasks for my colleagues to do before the workshop:

1. Read an excerpt of course evaluations and comments that I had compiled from the courses held over the last two years. Write down two things that appear particularly remarkable and thought-provoking.
2. Reflect over three short statements drawn from university pedagogics theory on
    - constructive learning – adapted from Piaget's learning theory on Cognitive Constructivism (Dolin, 2015): "*You interpret the new and construct your knowledge on the basis of what you already know". (*p. 63),
    - perceived ownership of learning – adapted from the concept of autonomy in Self-Determination Theory (Ryan et al., 2020): *"SDT suggests that when students experience a sense of choice they feel more ownership of activities and greater autonomy, resulting in an enhanced intrinsic motivation."* (pp. 3-4), and
    - student motivation – adapted from research on approaches to learning (Entwistle, 2009): "*Intrinsic motivation and interest in the subject are more likely to lead to a deep approach."* (p. 35), respectively.
3. Assess the current curriculum based on a set of specific questions:
    a. What are your expectations to the students? What knowledge and skills should they bring to the course day? (inspired by Ulriksen's model of the implied student (Ulriksen, 2009).)

b. What motivates the students? Why is your topic relevant for them? And why is preparation important? (inspired by Ryan's and Deci's description of different types of intrinsic and extrinsic motivation (Ryan et al., 2000).)
c. How does the curriculum relate to your teaching activities? How will you use the mandatory preparation on the course day? And how will you tackle lack of preparation? (inspired by the concept of congruence (Hounsell et al., 2007).)

Summarize your conclusions for presentation during the workshop.

For me, this approach served several purposes: Sharing my experiences from the University Pedagogics course with my colleagues (and thereby reflecting on them myself in a new context), establishing a common ground for further development our course, and trying out new ways of teaching on a small scale before incorporating them in my own module.

In conclusion, being very explicit in my own expectations to the participants and carefully explaining my reasoning behind them turned out to be a huge benefit on the day of the workshop: I found my colleagues to be highly engaged, motivated and efficient – in spite of a very ambitious and tight schedule. During the workshop, I felt much more like a facilitator than a presenter, with the participants doing all the mental work.

The feedback from my colleagues was very positive and when I later asked them again about what they had taken with them from the workshop, they mentioned the importance of:

- Allowing the students to be active in class.
- Using the students' feedback actively in the teaching.
- Understanding the students' backgrounds, expectations and opinions.
- Enabling more time for reflection while reducing the overall amount of content.
- Having a less teacher-centric approach.
- Connecting in-class activities with the preparation material.
- Communicating the relevance of the course topics to the students.

To me, these statements indicate that the workshop evoked new perspectives on planning and conducting teaching among my colleagues, and that it provided them with new tools for implementing the desired changes in practice.

Step 2: Overhauling the curriculum and the homework assignment

My strategy for revising the part of the curriculum that relates to my own module, was to extend the 'what' (content) with the 'why' (context) and the 'how' (instructions):

1. The written curriculum for my module now starts with a short introduction to the topic, with the aim of highlighting its relevance and making it more accessible to all participants – no matter whether they are already familiar with it or not.
2. It explicitly states the Intended Learning Outcomes, using vocabulary corresponding to the unistructural, multistructural and relational levels of the SOLO taxonomy ('identify', 'describe', 'define', 'recognize', 'recall', 'apply'), from (Biggs et al, 2011).
3. It includes a number of guiding questions that should help students relate the contents of the curriculum to their own projects.
4. It has a number of short mandatory readings. For each reference, there is a specific question that should help students focus on the main message.
5. It has suggestions for other reading and e-learning material that students may browse freely. Those are all optional, but the curriculum clearly states the knowledge that I consider prerequisite for the course. This should enable all students to reach the same starting point on the course day.

Overall, I aim to encourage deep instead of surface learning by transforming the curriculum from a checklist – that the students would have to tick off no matter how – into a source of inspiration – a map to a new and exciting world that invites for exploration, so to say. On the course day itself, the students would then have the opportunity to present their discoveries to each other.

In collaboration, we also made some minor modifications to the reflection exercise and homework assignment:

1. We have clarified our expectations on how to work with the publication strategy before, during and after the course.
2. The moderator now uses the publication strategy actively in the beginning of the course day and in between the different modules, and communicates its purpose more clearly:
   - We have allocated time for students to present and discuss their initial publication strategy with each other in a structured manner.
   - We advise students to use the publication strategy on the course day as a template to take notes.
   - We refer to the individual elements of the publication strategy explicitly for each module.
3. The instructions for the homework assignment now include guiding questions for providing peer-to-peer feedback, helping the students to identify gaps, strengths and weaknesses, and providing a starting point for further discussion

These adaptations should make the assignment seem more coherent in itself, and provide a structure for students to turn the lessons learned from each module into practice. While we have previously simply assumed that students would figure out to do the assignment in the intended way, we now give them a proper manual.

Step 3: Reconstructing my teaching and learning activities

Finally, I began implementing several major changes to my teaching material and the planned activities in class:

- Reduce the number of slides drastically and shift focus from lecture to more active learning. I realized that many of my slides had served as checklists or compilations of facts that would not require a teacher in class to read out aloud.
- Allocate more time for activities, where students explore the course content themselves, instead of spending most time listening to me.

- Design the exercises in ways that build upon the knowledge and skills that the students either have beforehand, or that they have acquired in the preparation for the course. Let more advanced students help the others.
- Encourage students to share their own experiences and opinions and be open to different viewpoints. In this way, the diversity of the participants can be a strength rather than a hindrance.
- Communicate clearly what I expect from the students in the different activities and what I hope to achieve.
- Include direct references to the curriculum and the learning objectives.

It was a first attempt of a 'flipped classroom' approach (Stanford Teaching Commons), in which students acquire relevant background knowledge independently as part of their preparation for the course. In class, they can then apply this knowledge by putting it into context, comparing and assessing different interpretations, and addressing gaps and limitations. This aligns with the higher levels of the taxonomy for learning outcomes and should foster deep learning.

My role as teacher would change: From an authoritative distributor of knowledge to an accompanying guide, a tutor who can help the students navigate along their own path. In fact, this had always been my true intention for teaching: Not telling the students what to do and what not, but to provide them with relevant knowledge, skills and competencies, so that they can make their own, informed decisions and act on them accordingly.

The students on the other hand would gain more control of their own learning, which will help them internalize and integrate the lessons, and apply them throughout their own projects.

Inspection and plans for future development

At this point, it is difficult to assess the outcomes of the revisions to our course in a comprehensive way. I think we need more time and experience in order to fully implement all the changes and see their effects. In this semester, we also faced several unforeseen challenges, including

a rather low number of participants, and technical issues with the university's learning platform, which resulted in a much shorter preparation time for some of the students.

Personally, I greatly enjoyed the new format of my module. I think that it gave me a lot more opportunities to listen to the students and let them take over. The students seemed very engaged in interacting with each other and sharing their thoughts. Of course, I still have many things to improve, so that I feel fully confident and competent in my new role. I also need to consider inclusion of more and better feedback mechanisms that allow me to probe the students' progress in class. However, I feel like all the changes that I made have been steps in the right direction. They give me much more freedom and flexibility in my teaching.

Similarly, my colleagues had overall good experiences within their modules – there was better interaction and more focus on the practical aspects instead of theory. In particular those, who had been teaching the same module for a longer time benefited from 'breaking out of the usual routine'. However, this also led to new challenges, for example related to managing discussions effectively ("letting the students steer") and prioritizing contents ("spending more time on fewer things").

Currently, we do not have enough data for a proper comparison of the course evaluations, though none of the respondents had anything negative to say about the curriculum so far, which I take as good sign. Otherwise, many of them gave positive comments on the teaching and learning activities:

> "Good balance between activities and presentations/lectures."
>
> "there was a proper ratio between presentation and student engaging activities"
>
> "The mix between presenting and interacting was fantastic. And the interactions were varied in method which also is nice."
>
> "It covered really well the topics and gave enough space for interactions and activities."
>
> "The amount of small exercises suited me very well."

"I think I can understand all of the material in the course"

Likewise, it is premature to draw in-depth conclusions from the submitted homework assignments on the students' own publication strategy. Those that I could review until now look promising, however. My impression is that many students did manage to connect the contents of the course with the questions in the assignment in a meaningful way, as had been our intention. Compared to previous years, submissions contain more specific and precise answers on average, and students seem generally better aware of the strengths and limitations of their own publication strategy. This might indicate a general improvement of the peer-to-peer feedback procedure. Yet, it remains to be seen, whether our course will have a long-term impact on the students' attitudes on and practices for academic publishing.

I intend to continue along the path of constructive alignment and revise my teaching continuously. For the next semester, I plan to do a 'full flip' of my module by recording my original presentation and include this as mandatory preparation in the curriculum. This will allow me to fully outsource the theoretical parts and focus only on the students in class, giving them more opportunities to work with their own individual challenges regarding academic publishing, and to exchange ideas with each other.

Additional work will be required for revising the assessment procedures of the course, which comprise the third corner in the common model for constructive alignment. As it is now, there is no formal assessment. Though we have made efforts to improve the homework assignment – making it more concise and communicating its purpose more clearly, I think that we still need better ways to measure the intended learning outcomes. Better concepts for providing feedback (teacher-students as well as student-student) may help to achieve that.

I understand that our teacher team commits to continuous learning and improving our course further.

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