

Reflections on Learning in Interdisciplinary Settings

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In the present article, we will reflect on some didactic challenges and possibilities that emerge when teaching in interdisciplinary settings, and we will use and discuss the journey as a metaphor for learning. We argue that teaching in interdisciplinary studies rests on movements between different understandings, and that it gives ample opportunities for beneficial learning processes. This does not only apply to interdisciplinary studies. The metaphor of taking a journey can be used to illustrate the learning process and the dimension of personal change associated with moving between different understandings and discourses of knowledge. Some of the questions we will raise are: In what ways can differing disciplinary backgrounds be of help or create a hindrance? What are the specific didactic challenges one faces? What happens to one's understanding of one's own subject after having been confronted with something new and different?

Becoming Involved in Interdisciplinarity- A Background

The ways in which one becomes involved in interdisciplinary pursuits may vary. In our case, we became involved in such pursuits in our early days as doctoral students, owing to our interest in feminist philosophy and theory. Åsa Andersson's subject was History of Science and Ideas, while Hildur Kalman's subject was Philosophy of Science. We both approached the Centre for Women's Studies at our university to gain access to its courses and seminars. Our involvement there then ran parallel to our doctoral studies and gave us, as well as many others at that time, dual competencies. Early on, both our interests and dual competences led to engagement in teaching at the graduate level, not only at the Centre for Women's Studies but also at the Centre for Interdisciplinary Studies, also part of our university.

When teaching at other faculties and in other contexts, such as the Medical Faculty and Social Services in the public sector, we were increasingly asked to contribute knowledge based on our specific disciplinary competences, i.e., the academic subjects that we were pursuing in our PhD studies. Besides the academic studies we were engaged in at the time, we both had a background in the health care sector, one as a registered psychiatric nurse and the other as a registered physiotherapist. This of course helped to widen the arena in which our multidisciplinary knowledge was in demand, as we were expected to be well-read not only in our current academic subjects but also on issues and questions concerning the health care sector.

Once we had completed our doctoral degrees, we already had a fair amount of experience of teaching in "gender plus something else," which meant that the teaching we could offer was even more in demand. Our educational background in the history of ideas and

gender studies, and philosophy and gender studies, respectively, also led to invitations to hold seminars/workshops for colleagues and doctoral students in different contexts, not only at Umeå University but also at other Swedish universities.

Reconsidering Interdisciplinary Teaching

Encountering groups of undergraduate students and doctoral students with differing disciplinary backgrounds may create didactic difficulties and challenges. In what follows, our aim is to discuss such challenges and difficulties, asking our readers to reconsider common assumptions about interdisciplinary teaching. The assumptions we refer to here concern the notion that teaching interdisciplinary subjects is something problematic and that it entails taking on an extra workload. Some of the questions we will raise are: What are the didactic challenges and benefits one faces as a teacher? In what ways can the differing backgrounds be more of a help than an obstacle in the learning situation? What happens to one's understanding of one's own subject after having been confronted with something new and different?

Didactic Challenges

One of the main challenges to be aware of when teaching in the field of interdisciplinary studies is that the students, as well as you yourself, will have to deal with something unfamiliar. Further, the unfamiliar is not always found in the circumstances or forms one expects to find it. As a teacher, preparing for this involves some additional effort. The effort comprises, for instance, more comprehensive preparation compared with teaching a more academically established subject, where the borders and main questions are supposedly given. To concretize, when preparing to teach, one has to consider the specific

context one is about to teach in as well as the backgrounds of those whom one is about to teach. The canonical tradition and curricula cannot simply be passed on. It is thus of great importance to contextualize the body of knowledge one is about to impart to others. This may be connected to what Ference Marton and Shirley Booth call creating structures of relevance (Marton & Booth, 1997, p. 143 ff).

Another challenge is to reach the students and to raise their awareness of the general issues one is working with in their respective environments. This requires that the teacher take on a very dialogic approach. How then should this key didactic challenge be met? In the main, we suggest two differing approaches. One is an approach that we identify as being, to a certain extent, representative of our educational background in the humanities. The other approach is to look upon the teaching situation as an opportunity for didactic experiment. Both of these approaches aim at enhancing the skill of reading, in the sense of really comprehending, texts from different academic areas.

Enhancing the Skill of Interdisciplinary Reading

An indispensable cornerstone for developing competence in the field of interdisciplinary engagement is the ability to read and comprehend. This ability is not to be taken for granted, even when working in an academic setting! It so happens that one particular problem has caught our attention: Many students, even doctoral students, are deficient in the skill of reading texts carefully (cf. Lattuca, 2001, pp. 120, 126). How can this be? Our interpretation is that, upon entering university, many students are too hasty in acquiring the so-called critical eye, something that is a constitutive part of the academic tradition. As we understand it, many students acquire this critical eye to such an extent that they become less open and receptive. In the end, this can lead to a loss of critical ability, as one has difficulties comprehending matters that are unfamiliar or not part of the basic standpoint of one's academic subject.

With this in mind, the first approach we suggest is to enhance the capacity for interdisciplinary reading in one's classes, regardless of the academic level of teaching. This can be done by giving students thorough instructions together with some basic principles to apply when reading texts slowly and carefully – regardless of what scientific or cultural field the text emanates from. These principles are then put to common practice. The goal here is to help students read with an open mind and thus become sensitive to the underlying assumptions and the main message of a text. Understanding the errand and the premises is an

essential prerequisite for advancing to the next step, where one might criticize the text. In this connection, we have been inspired by Lancelot R. Fletcher's instructions for slow and empathic reading. Fletcher warns against "a rush to interpretation and judgment strongly encouraged by most of our educational practices" (2007, p. 2).

As regards the second approach, we suggest role play, as we feel it is a fruitful method. Using role play, students are sensitized to the important difference between understanding a text and criticizing the text in question. In a role play situation, one is given the task of defending or criticizing a certain text and its arguments, given its contextual premises – regardless of one's own personal beliefs or preferences. The contextual premises of a text might be factors such as time and space, as well as cultural, scientific or theoretical backgrounds.

The Academic Setting: Working with Presuppositions

It is a well-known fact that every discipline or subject has presuppositions that are taken for granted to the extent that they are very seldom, or indeed never, articulated or clearly spelled out. These presuppositions are not necessarily bad in themselves, but in certain situations it is essential to identify them and make them the focus of attention in order to convey them to others. Otherwise they may become hindrances to understanding for all parties involved. Teaching in a well-established and traditional subject seldom requires such efforts to the same extent. Furthermore, a well-established subject contains and rests on "natural," self-evident or well-known references to which the teacher can relate in a number of ways. However, for the purposes of learning in an interdisciplinary setting, it is of utmost importance to carefully choose one's landmarks and compass bearings so that these can work as clear examples or references for a group of students with a mixed academic background. Of course, in one's position as a teacher, it is important to reflect not only on other academic disciplines and their assumptions but also on one's own discipline. It is, naturally, just as filled with tacit assumptions as any other academic subject.

Enhancing Meta-theoretical Reflexivity

One's academic background, however, may also work to facilitate cross-disciplinary efforts and help create possibilities. A common feature of our own backgrounds is that we have been trained in what could be called the relatively unconditional reading of text. The aim of an unconditional reading is to read with an open mind and try to put the message of the text in focus. We see training in this particular skill as an

important contribution from the academic tradition of the humanities. To give a clear example: If one is reading, say, a text on illness among women that dates from the 19th century, the text must be read with a certain awareness of the gendered medical and biological explanations of that time as well as the debate on women's nature and standing in society at that time (see, for example, Apple, 1990; Drinka, 1984). Transferred to an interdisciplinary setting, this means that neither teacher nor students can ever count on things being "business as usual." As a teacher, one has to stay alert and open-minded and work to help the students contextualize.

However, encounters with the unfamiliar should definitely not be seen as solely problematic. On the contrary, one general experience we have had is that learning in interdisciplinary settings often evokes surprise, recognition, and joy in class. Part of the enjoyment is the growing awareness of the common features and attributes of all scientific knowledge production and the methods by which they are taught, regardless of the fact that they take on different forms of expressions and routes.

In an optimal learning process in the interdisciplinary setting, one can enhance reflexivity to a meta-theoretical level by introducing the hermeneutic underpinnings of the process of reading and interpreting. Here we are referring to the relationship between the reading subject and the text. In the act of interpreting, the reader partly constitutes the object of interpretation. In other words, understanding always presupposes the "inner voice" of the reader, and in the act of reading, the content of meaning of the text is completed (Gadamer, p. 110; Ricoeur, p. 64). This helps students become aware of how they bring their own academic being with them to their reading of the text.

What Counts as Ways of Establishing Knowledge

Differences in attitudes, especially those that challenge taken-for-granted assumptions, may prove difficult to understand or even accept. We are not referring here to the attitudes of individual students, but rather to the compartments and attitudes that exist in different disciplines as regards what counts as knowledge and what counts as legitimate ways of establishing knowledge. Such general compartments and attitudes are often implicitly present in seminars. On occasions such as these, questions like "Is it possible to do that in your discipline?" may arise.

Academic training largely involves the appropriation and embodiment of ways of thinking, reading and understanding – particularly the ability to recognize what counts as a problem (Polanyi, 1969, p. 148). Such compartments and attitudes are

incorporated into the academic subject, i.e., the student/teacher/researcher, to the extent that questioning or resisting these incorporated ways of thinking is simply dismissed, or perceived as an aggressive attack on one's own discipline and even on one's scholarly and personal identity (cf. Lattuca, 2001, p. 36). In the role of teacher, it is therefore crucial to be aware of the delicacy of these situations, as they represent a challenge both in didactic terms and in terms of putting one's tolerance to the test.

Transforming a Challenge into an Opportunity

Let us assume that, as a teacher, one is faced with such a situation of impending conflict, where different academic backgrounds create tensions and obstruct constructive dialogue. How can such a difficult situation be drawn upon and used as an opportunity? As we see it, the challenge of transforming the situation in a constructive way consists of several steps. First, one has to recognize such situations in order to stop for a moment and readdress the discussion. The next step is to aim at exposing and visualizing the contexts and assumptions from which both parties are proceeding. Through this move, the group is indirectly invited to take a collective step back and, furthermore, to try to identify and visualize in what sense these "threatening" questions could be addressed in a productive manner. We would argue that this is important and even essential in situations that threaten to become destructive. Otherwise, there is a risk that an instructive dialogue will come to a halt prematurely, thereby strengthening or cementing the differing standpoints. If this occurs, only distance has been established between what is perceived as common and uncommon ways of thinking and doing science. The outcome may then be that the goals of learning are simply not achieved. In other words, the task at hand is to make the students distance themselves from the familiar perspectives that they hold to a certain degree and to encourage them to try to align and evaluate the different perspectives on an equal basis.

This task applies to all levels of learning, but it takes on different forms. At lower educational levels, the learning outcomes concern gaining knowledge about and insight into a number of scientific traditions and their differing approaches. At the advanced and postgraduate level, students are expected to be able to assess how different perspectives might influence their own research. At the senior level, there is even more to be added. When senior researchers meet in interdisciplinary seminars, one should not only aim at an awareness of differences and mismatches, but also strive for the ability to relate to the spaces and gaps between different views on knowledge.

Gaps are a reality, and they need to be both identified and assessed. Sometimes one has to admit

that one's tolerance is more than put to the test. This is a crucial point at which one has the opportunity to argue for the importance of tolerating other views, even when one does not agree. However, gaps may also be a tool for understanding and learning about oneself and one's own academic worldview, not only about the views of others. Here we identify what really is the core of the learning process: to move beyond the well known and in some sense to make a journey.

The Learning Process as a Journey

It is common to use the journey as a metaphor for learning. One might here mention everything from classical fairy tales and educational novels – the bildungsroman – to philosophical, historical and pedagogical essays (sá Cavalcante Schuback, 2006; Gadamer, 1997; Gustavsson, 2003; Klein, 2005; Liedman, 2001). What is there in the making of a journey that can be associated with the learning process? We suggest that it is the fact that travelling is primarily about moving from the familiar, the well known, to the unfamiliar, the unknown. One has to dare oneself to a certain extent – put oneself on the line – to be able really to see, hear, and incorporate the hitherto unknown. Philosopher Marcia sá Cavalcante Schuback discusses the choice Odysseus made in exposing himself to the song of the sirens, and she thereby also points to what may be experienced as a risky enterprise: that of surrendering to the unknown (2006, p. 90; see also Lattuca, 2001, p. 153). Still, Odysseus chooses to be tied steadily to the mast of his ship in order not to give in completely and abandon himself to the sirens. This relates to a matter we discussed earlier, namely, the way in which one's identity and worldview may be experienced as being put under threat in the process of learning.

Similar ideas are revealed in social anthropologist Gísli Pálsson's discussion of Icelandic metaphors derived from sailing and experiences at sea – images that are used to describe stages and leaps in the process of learning. In these metaphors, critical stages in learning are linked to bodily involvement, where one changes depending on one's experiences of the world. Pálsson claims that this suggests “some kind of othering.” One of the metaphors that has been commonly used across the ages, and is still in use today, is that of “having sailed.” It refers to those who have been abroad and are perceived to have undergone change after having been exposed to, and having first-hand experience of, foreign customs. The experience of nausea is a similarly used metaphor, representing above all else a temporary, transitional and possibly beneficial phase for Icelandic fishermen. The nausea combines emotional and cognitive aspects. Being seasick is to be unfamiliar with the rocking movements of the world.

Recovering from seasickness, Pálsson writes, may be compared to having taken a leap in the learning process: one has acquired “one's sea legs” (Pálsson, 1995, p. 10; cf. Kalman, 1999, pp. 41, 77, 94).

But using the journey to illustrate a learning process is primarily a matter of pointing to a process through which one becomes aware of contrasts. While on home ground, such contrasts are hardly visible. It is not until a person is confronted with the unknown and strange that he or she becomes aware of differences and contrasts. To begin with, he or she may be occupied with regarding the new with curious or even suspicious eyes. At the beginning of such a process, the well known remains self-evident and taken for granted, more often than not in a very normative sense. But by and by, the hitherto well known may, from a distance, come to be seen through somewhat foreign eyes. On returning home, the traveller's gaze not only recognizes the homely and well known, but is estranged to something that has come to be perceived as narrow and limited. Hence, it is only after truly coming into contact with that which was previously foreign that the ways of viewing the “home of one's childhood” may come to change significantly.

Related thoughts may be associated with philosopher Hanna Arendt's reasoning on the importance of contrasts in the process of perceiving existence. In short, her discussion points to how understanding is promoted when human perception makes shifts and distinctions between sameness and difference. This is what makes it possible to perceive and define *the being* (Arendt, 1998, p. 237). We suggest that what follows from this is that the faculty of human understanding benefits from moving between different understandings of the world.

Reciprocity in Learning

To conclude, we wish to stress that the most important cornerstone in interdisciplinary studies is that of reading texts from different traditions. We further claim that the learning process is about contrasts and contextualization, and that the learning process benefits from moving between different understandings. This accounts for the process undergone not only by the students but also by the teachers. Teaching in an interdisciplinary setting is truly illustrative of this reciprocal learning process. This process takes place not only between students but also between students and teachers. Hence, as a teacher one also learns.

Thus, in the long run, engaging in interdisciplinary studies as a teacher does not merely amount to an extra workload. It should also be recognized as a rewarding project with the added value of gaining knowledge (cf. Lattuca, 2001, pp. 134, 160). The knowledge gained is the trained skill of applying a meta-theoretical gaze to

texts from different fields of knowledge and to certain academic disputes. Of course, also of importance is being in an environment that allows for true intellectual dialogue, as educational enterprise in the scientific community rests on there being a benevolent social climate (cf. Hollingsworth & Hollingsworth, 2000). As the Swedish historian of science and ideas Sven-Eric Liedman puts it:

Man is a social creature also when engaged in the learning process. He is learning together with others, spurred on by others, awakened to insight by others, competing with others. The joy of knowledge is about sharing it with others, and also to possess a knowing to impart to others (p. 359, our translation).

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