Knowledge and Knower Structures – Dilemmas in self-directed learning

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Publication date:
2018

Citation for published version (APA):
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Verner Larsen. Paper presentation at ECER, Bolzano 2018

Slide 1: title – Knowledge and knower structures
Dilemmas in self-directed learning

This presentation is a result of a completed research project, “Self-directed learning spaces in pedagogical practise”. Our focus was on dilemmas in self-directed learning spaces. We conducted our research as a double case study by selecting two different educational programs. We wanted to look especially at problem based learning designs, because here we expected self-direction to be prevalent.

The most extensive of the two cases is a constructing architect educational program, and this presentation draws mainly upon this case.
I will start by illustrating the educational context we are dealing with. We experienced that the physical spaces have great influence on how self-direction takes place in practice. Here we see CATM-students in their classroom, which is their base. Almost every learning activity takes place in that same room. As I mentioned, Problem Based Learning is the main approach, organised as Project work. As you can see, the students are clustered in project groups, each with its own space and furniture, etc. The students carry out one large project, which lasts for the whole semester.
Slide 3 - “Consultancy” - Guidance

One important activity in the CATM-program is guidance from teachers, which also takes place in the classroom. Teacher from various subjects show up in the classroom at different times and offer guidance. They called this guidance for “consultancy” as a sort of reference to the professional world.

The photo shows a poster in the classroom on which the students announce their need for “consultancy”. They put “post its” on the poster, to tell the teacher, that they want help from him or her to discuss issues in their project. The columns with the letters at the top indicate the various subject.

When a teacher enters the room he or she looks at the poster and pick the ‘post it’ at the top. Consultancy is offered for each subject, indicated by the columns.

The teachers generally have an inquiring approach, which the students like, because they basically want a great deal of autonomy and they think it is beneficial for their learning, but if the teachers are too reluctant to give answers to the students questions, the students think they waste their time. The quote above illustrates this dilemma.
Retail Design: To take on a specific role

*(students about team roles)*

“But I have to be honest, this will not be met. If there is a teacher sitting and observing one, then you truly try to obey it, but we are some girls, who know what we want. So we just speak and so...” (Interview with ‘older’ students)

Slide 4 - Retail Design: To take on a specific role
In the second case, Retail Design, PBL is not so widely used, but in two weeks courses each semester. On the other hand, PBL has a stronger framework. It is inspired of the PBL-model at Stenden University. It means - for example - that the students are supposed to perform certain roles in turn within the group of 8 to 10 persons, such as chairperson, board writer, minute maker and regular group member.

However, this provokes another kind of dilemma: On the one side, the roles are made to increase the independence of the students learning, but – on the other side, the roles do not always match the students’ preferences and attitudes.

The quote illustrates the dilemma.
Slide 5- Background

I will now go a few steps back and introduce the background for the project, then the research question and the project design.

First about the background.

Self-direction is not a new trend, because PBL and project work has actually been used for some years in many professional programs, so educators do have experiences in this design and are also aware of some of the dilemmas.

Our aim in the research group was to dig deeper into the paradox, which exits. As we have illustrated, self-direction is something required by the system whether or not it is and individual need rising from the student-subject. It is therefore contradictory in terms of promoting individual autonomy.

Extensive research has been done about self-direction, but most research is focused on motivational aspects. Here we wanted to change the perspective to a sociological view, where the relations between actor and field is crucial.
Slide 6 – Research question
This leads to the RQ for the paper, which we phrased as this:

*What characterize the structuring principles that create self-directed learning spaces in an education practice, how do they appear in the positioning of students and teachers?*

In the examples, we saw how the teachers and students positioned each other. The question is. Can we identify the drivers or mechanisms for such positioning and for such behaviors?
Design – Theoretical framework

- Combination of theories from P. Bourdieu og B. Bernstein:
  - Field theory ⇔ Code theory

- Structuring principles: code-theory developed by
  - K. Maton:
    - Specialisation codes: epistemic Relations (ER) and Social Relations (SR)

Slide 7 - Design – Theoretical framework

In our construction of the theoretical framework, we combined thoughts from both Pierre Bourdieu and Basil Bernstein.

The inspiration from Bourdieu implies:

- A certain combination of theoretical assumptions with empirical referents
- A certain combination of actor and structure
- An interest in different powers between different positions
- An understanding of properties, or things, – not as substantive, but as relational. I.e. they exist only by their relations to other properties or things.
- Another theoretical inspiration comes from Bernstein. Many people know his concepts of classification and framing; Classification as something which delineates one knowledge discourse from another; Framing as something which organizes communication within a knowledge practice.

Karl Maton has developed both Bourdieu’s and Bernstein’s theories into what he termed ‘specialization codes’. The codes represent two different structuring principles for knowledge practices. They are always orientated to something be someone. They are called “Epistemic Relations” (ER) and Social Relations (SR). Briefly told; if ER are strong the educational practice will emphasize a clear object, clear learning goals, certain disciplines, methods and procedures. If SR are strong, individual attributes and traits will be emphasized.
Analytical tools

- Specialisation codes:
- Two structuring principles:
- Epistemic relations
- Social relations

**Slide 8 – Analytical tools**

As we mentioned before: Practices are orientated to something by someone corresponding to the two relations Epistemic and Social relations. Each of these can move on a continuum from stronger to weaker, independently of each other.

Thus, they can form a Cartesian plane showing four modalities: knowledge code if ER is strong and SR is weak. Knower code, if ER is weak and SR is strong. Elite code, if both relations are strong and relativist code if both are weak.

To repeat and summarize:

Strong attention to the acquisition of a particular academic content for each learner and less emphasis on the students’ dispositions express a “Knowledge code”, while weak attention to the academic content and greater emphasis on individual attributes and preferences express a “Knower code”.

A knower code shows the features of what Bernstein (1990) referred to as “invisible pedagogy”, which focuses on the learner internal acquisition procedures rather than performance is according to an external standard (Bernstein, 1990). I will return to invisibility in the conclusion.

The point is however, that the more the educational practice moves towards a knower code, the more space there is for self-directed learning.
We found it relevant to study the structuring principles at three levels:

- First, we looked at the curriculum level focusing on how intentions and expectations of self-direction are expressed.
- Next, we studied how teachers deal with such intentions of self-direction and dilemmas
- And last, how students cope with self-direction and the dilemmas

The three analytical levels call for combining different empirical methods:

- Document analysis at curriculum level, such as directives and syllabuses
- Interviews with teachers and observation of student teacher interaction
- Interviews with students and observation of student to student interaction
Slide 10 - Intentions of self-direction in curriculum

At curriculum level, the learning subject is put into a central position, where individual traits and attributes are emphasized. This appears from the quotes above.

"...Portfolio is used as a tool in which individual learning goals are described".

*(Curriculum p. 48)*

"We expect, that you know your own learning style, and that you have a good understanding of the project based approach to learning" *(Semester plan p. 3)*

Teacher explains:

"We try to teach them not to look so much on the single subjects, but how to approach a problem – how can it be solved? There’s a great difference whether we tell them what to do, or they find out themselves...it’s something they should learn."

The point is that in curriculum the knowledge content of the subjects is not explicitly described. We do not find this until we reach the level of semester-plans and still it is in relatively general terms.

So at curriculum level a Knower-Code is emphasized and thereby opens up for self-direction.
Teacher and Classroom practice

CATM-case

- Space for making own choices concerning learning goals and disciplinary content reduces!
- Certain knowledge forms are framed in teacher-student interaction.
- Code shift from "knower code" to "knowledge code".

Slide 11 – Teacher and classroom practice

In classroom practice, the student’s own dispositions and preferences are backgrounded compared to what was enrolled in the curriculum. Instead, the more detailed knowledge content is made more explicit. This appears mainly in the dialogue between teachers and students during consultancy and it is especially evident in evaluations and exams.

In both cases, it is significant that evaluations and examinations exhibit a relatively strong knowledge code.
In the project-group

- CATM:
- Learning in width or in depth?
- Increase learning outcome or productivity?

Slide 12 — In the project group

The students and their project group is the third analytical level.

Project groups are mostly between three and five students. The group we followed in the CATM case consisted of five members.

When the group plans and organises the project work they run into a very challenging dilemma:

They are told by the teachers that they should distribute the work within the group by themselves, and thereby exploit their strengths and weaknesses. However, at the same time the teachers demand that everybody in the group should know as much as possible about the other group members’ work. It is then up to the group to balance between spending time an effort on acquiring deep knowledge about one’s own individual area or on acquiring knowledge about the others’ areas.

Learning in width or in depth?

I addition to this the students must cope with the question of how to balance effort and time on new learning or being productive. The group may choose to distribute work in such a way that the members carry out, what they are best at. Then productivity would increase, but learning could possibly be harmed. Alternatively, they could do the opposite. All could focus on their weak areas to learn new skills as much as possible, but thereby reduce productivity.

Increase learning outcome or productivity?
The students’ positioning CATM-case

- Capital: Craft knowledge and academic knowledge

- “… when making groups, craftsmen should include high school students in their groups. It might be interesting to put together a group in the first semester of four high school students and see how far they would come and what level they would reach. … We (craftsmen edit) are – to be honest – the ones who are capable of taking care of them and to give them understanding.” (Individual interview with BK students - Carpenter)

Slide 13 - The students’ positioning CATM-case

Another interesting group dynamic is about hierarchies due to different forms of capital.

Different forms of cultural capital give more or less recognition. At the CATM-program, some students have vocational education as artisans, and it is remarkable that it is the craft and technical knowledge and resources that dominate in relation to the upper secondary school background. The high school students acknowledge this. At the beginning of the study, they feel underprivileged in terms of reproducing the right kind of knowledge, but they fit in with this, so a hierarchy forms in the groups. However, everyone agrees that over time the difference in knowledge will even out, mostly because the academic students acquire craft knowledge, not the contrary.
Conclusions

1. Ambiguous codes: Code shift from curriculum to pedagogical practice. A move from knower code to knowledge code, but still invisibility about performance and rewards. This creates dilemmas:
   a) Balance in guidance, giving answers v. relaxed approach
   b) Learning in width v. learning in depth
   c) Learning v. productivity
   d) Group hierarchies based on different capitals - promoting or inhibiting learning?

Important point: Invisibility creates dilemmas, which are part of self-direction and motivating to a certain extent. Thus, invisibility should not be eliminated by stronger framing, but teachers and students should develop a language about what is expected from them within the open frames.

Slide 14 - Conclusions
A brief summary of the findings from our research:

The two cases we studied are characterized by ambiguous codes, which means there is a shift from curriculum to practice, and during the time of the PBL-course. There is a move towards a knowledge code, where the framing of a knowledge content becomes stronger. Still some ‘invisibility’ exists which creates dilemmas, but these are to some extend motivating. The task is not for teachers to eliminate invisibility and dilemmas (as some might tend to think), but to develop a language by which the actors can talk about what is expected from them within the open frames.
Main references:


