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Motion and Action in Musical and Design Learning: an Epistemological Approach

ECER GENEVA 2021

NETWORK 27: DIDACTICS- LEARNING AND TEACHING

Sub-themes: 1. Professional learning and development / 10. Teacher Education Research / 20. Research in Innovative Intercultural Learning Environments

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Research question(s)

How does knowledge migrate from music and design work to Music and Design pedagogical situations?

- How are skills and capabilities transferred from professional practice to learning situations?
- What is the influence of specific values and beliefs music/design teachers apply to professional practice?
- What is the influence of scientific and specific knowledge of design professional activity on design teachers?

Art education in France (Music and Design)

Music education in primary and secondary schools (“School orchestra” for 9-11 years old)

Design and compulsory courses in technological and vocational training (within French high schools: 15-18 years old)

Theoretical framework: didactics, PCK, practical epistemology and activity theory

Didactics

The situation in which knowledge flows from the teacher to the students and back (what kind of knowledge they pass on (transmission flow)

This flow can be fluid or blocked (Terrien, 2015)

Music and Design PCK

It is mostly coming from music and design professional experts or practitioners (Terrien, 2015; Moineau, 2015)
There can be issues with:
- resources (lack of time, equipment and staff),
- competence and experience (Hultén & Björkholm, 2016)

Practical epistemology

It implies that teachers develop values and beliefs that can blur the knowledge discourse (Güsewell, Joliat, & Terrien, 2017)

Activity theory

- How teachers teach
- What kind of tasks they carry out (training prescription)
- How they manage the situation in which they teach
- With what kind of purpose teachers deal (means they use to achieve goals)

(Champy-Remoussenard, 2005)

Activity theory in artistic education

- How Music and Design teachers teach
- What kind of artistic tasks they carry out
- How they manage the situation
- With what kind of purpose teachers deal (means they use to achieve artistic goals)

Methodology: “adapted clinical activity methodology”

1st step

Video in classes (teachers during courses with students)

2nd step

Transcription of dialogues in verbatims (+ English translations)

3rd step

A priori analysis by researchers of the activity: extrinsic cognitive and semiotic grid

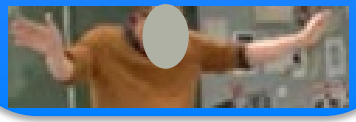
4th step

Self-confrontations with teachers involved in the teaching process

Outcomes: verbatims and pictures from teaching situations

Design teacher A

"[...] You imagine a photographer with a field of vision, like this, that is open (the teacher opens his arms and produces an onomatopoeia to simulate the sound of an object opening). And you wonder where he stood to be able to take this picture (the teacher has kept his arms open and turns, turns around, turns in on himself), where he stood in the room. That's what you have to imagine. That's the first step."



Design teacher B

B. "The vanishing points… that converge towards the center… Okay. What about the floor? To delimit where the ground is?"
Students. Inaudible.
B. "Actually, it has to be parallel …, so parallels, parallels, you know what it is. Parallels, this is when it's…"
Students. "Parallel!"
B. "It's when it's parallel; it's when it's the same, actually. There is a gap. But it's the same way. I mean, it's…"
Student. Inaudible.
B. "It doesn't cross paths. Thank you Logan. Thank you very much."

B. is not visible in the picture

Music teacher A

"So for the 'B flat' I show you, look everyone, there's the thumb on the small key and the index finger, the 2nd finger, and that's it for the left hand, the right hand the thumb it's always placed underneath and we press the little finger, we press the little finger? That's the 'B flat'"

Music teacher B

J'aimerais bien que dorénavant quand on monte sa clarinette, on s'assoit et on évite de faire tout ce bazar. Ça fait longtemps que vous n'avez pas joué, c'est normal que vous ayez envie mais, là, depuis tout à l'heure, on ne s'entend plus. Bien alors… (il regarde sa partition qui est posée au sol)

Outcomes: verbatims from “self-confrontations”

Design teacher A

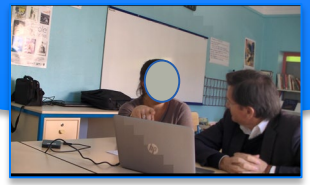
“Ah, why this choice? Because this choice, precisely, uh, uh, uh, shows well the, the students who are especially in difficulty. And they’re in trouble on that point. The point is really the mechanism of mental plan-based projection with the norms of the plan. And, so, so, now, I’m sure… I’m trying to, uh, create this mental mechanism in the student’s head. With several methods, so, uh…”

Design teacher B

“Absolutely! I… For me, it’s really the…, the critical moment when I…, I don’t expect them… at all… to tell me ‘what…’, to define parallels… for me, it’s farsighted, parallels… and, at the same time, I realize that I’m unable to define it clearly. And it’s a student who, at some point, will get me out of this situation by saying “it doesn’t cross’… But, obviously: it doesn’t cross. But, so, yes, uh, it’s… He… Thank you Logan for, so, for this… explanation.”

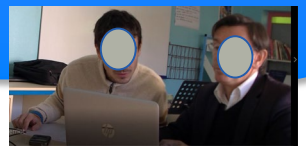
Music teacher A

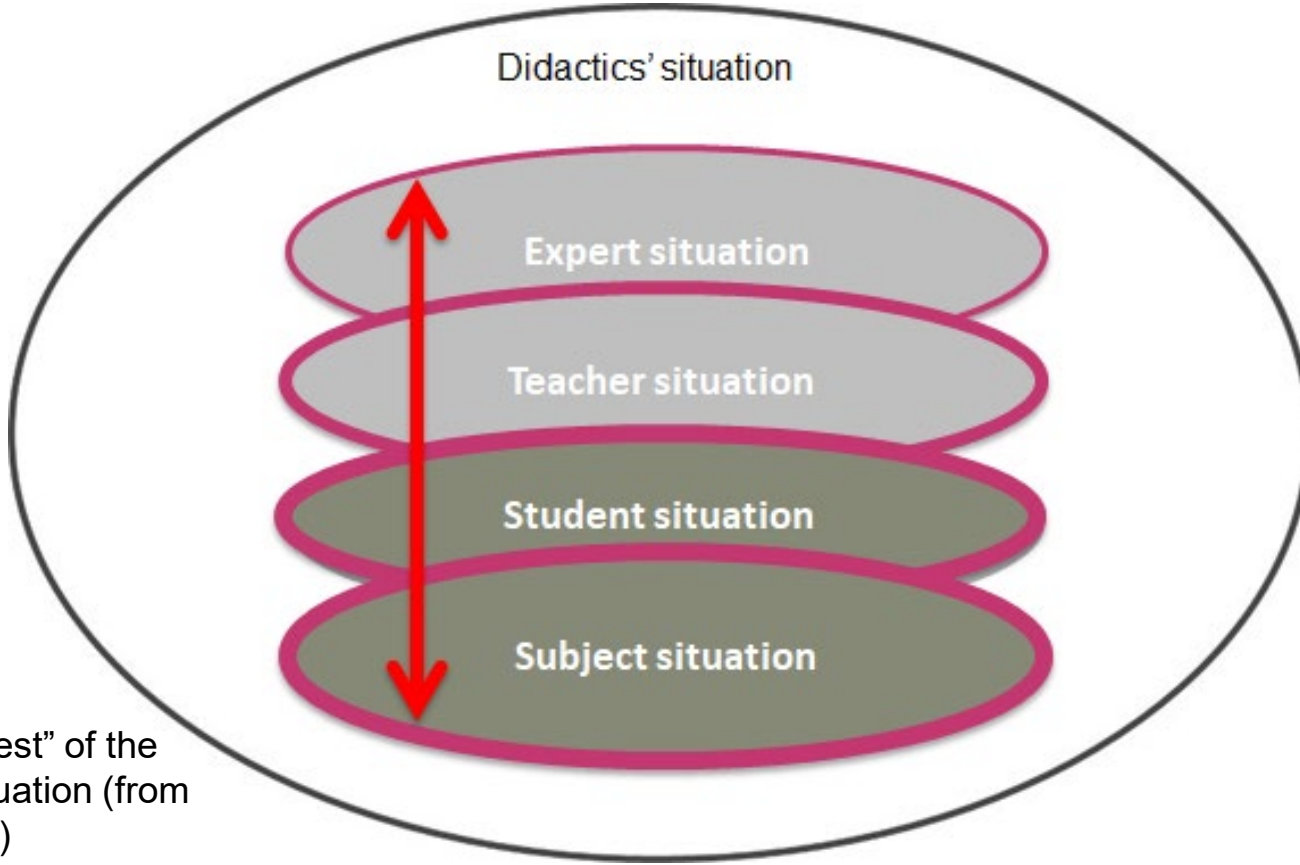
“Because I realized, [...] and that typically there, we see Virgile and Quentin who wonder about the fingerings, who ask questions, at the same time Virgile tries to call me, I… I don’t answer him clearly, I keep going, on my way, [...] and that’s it.”



Music teacher B

“Let’s start at 6 minutes, because before that it was the assembly of the instruments and during those 6 minutes I was never with the group. From 5’30 onwards, I think I’m seen tinkering in a corner.”





The "palimpsest" of the "didactics' situation (from Terrien, 2017)

Discussion: differences between technical and practical epistemology

Teaching-learning situations modify the pedagogical content knowledge of both teachers and learners (de Oliveira, 2017; Simons, 2017). How?

This study tries to find indicators that allow understanding the foundations of representations on teaching knowledge.

Depending on the complexity of the teaching situation and on these representations, teachers and students have trouble making connections with a body of knowledge contained in the activity at hand.
Three levels of the influence of such representations on teaching appear quite clearly like a “palimpsest” (Terrien, 2017) in which the relationship to knowledge evolves.

Conclusion: practical epistemology blocking real work on technical epistemology

Practical epistemology leads teachers to be directive preventing students' actions and, in return, leading teachers to use representations on didactical framework.
The understanding of teachers' impediments foster efficiency in pedagogical situations.
This study allows to highlight differences between technical epistemology and practical epistemology.
A technical epistemology approach could shape the knowledge involved in a pedagogical situation.

The perspective of this research is to observe other teaching situations in order to better understand and characterise the phenomena in technical epistemology.

Thank you for listening

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