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Could a playful approach to teaching be a path to resonant connections? Experiences from teacher education in Denmark

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Creative and playful approaches to teaching in teacher education emerge these years. Due to the increasing focus on performance, pace, visible goals, and efficiency in the educational systems within the Western societies, there seem to be a search for new answers when organising teaching within teacher education—also for the future. Based on empirical material created in a large research project in teacher education in Denmark, this paper analyses how playful approaches can contribute to improving conditions for a holistic approach to education, and how these approaches must be linked to concrete pedagogical actions. By applying a theoretical framework of playful approaches to learning in teacher education based on Rosa, Lennon and Skovbjerg, the main contribution of the paper is to point to both pedagogical directions and clarifications when working with playful approaches in teacher education.

KEYWORDS

teacher education, teaching, organisation, playful, learning

1 Introduction

“I think they all get a deeper understanding of the narrative which is: here, we do not do ‘nice’. Meaning that we work in a space, a space of trust, where our works of art are not judged by an arbiter of taste.” This is how a visual arts teacher describes the kind of experience she intends the students to have in her visual arts class in the teacher education programme. To realise her intentions, she often applies a playful approach to teaching in the class. By doing so, she experiences that competitive performance and result orientation are downsized in the classroom, and experimentation, exploration, and being with others in the present moment are upsized in a meaningful way, without judging what you are currently doing. In the article, we give a more detailed account of her way of working playfully, but for now, we see it as a desire to give students the opportunity to develop their resonant relationship with the world, as the German philosopher and sociologist Rosa (2021) describes it in his book *Resonance*. In the paper, we present evidence that a playful approach holds potential in relation to this endeavour.

Based on empirical material created in the research project *Playful Learning Research Extension* (2018–2023), we investigate how play and playfulness as a form of organisation can enable resonantly abundant, social experiences at the schoolteacher and pre-school teacher educational programme. Our aim is to show how playful approaches to teaching can enable students to form a resonant connection with their education (Rosa and Endres, 2017). Synthesising the concepts of *resonance* from Rosa (2021), the *fleshiness of our existence* from

Lennon (2015), and Skovbjerg (2021a,b) concept of *play practices* enables us to project how teachers may experience resonance in the classroom. With this synthesis, we also want to demonstrate the importance of creating concrete organisational spheres of action where the students work together towards an imagined future (Elkjaer et al., 2021), enabling resonance in the organisational context of education.

In this paper, we see the concept of resonance in relation to playful approaches to teaching as a response to the increasing focus on competition, performance, pace, unambiguous goals, and efficiency in the neo-liberal educational policies (Rosa, 2013; Jensen et al., 2022b). The way to fulfil the neoliberal ambitions of speed and efficiency has been to optimise students' thinking skills, cognition, metacognition, and emotional regulation. However, this way of putting one-sided emphasis on thinking and cognition in education seems to entail risks of overlooking the bodily and sensuous aspects of learning, which again entails a risk of emotional stress, because the body is always there in the classroom no matter if the body's needs are addressed or not. Even broader approaches like educational entrepreneurship (Sjøvoll et al., 2011), 21st Century Skills (OECD, 2019), practical expertise (Jensen et al., 2022a), sustainability pedagogy (Lund, 2020), learning through play (Skovbjerg and Sand, 2022), seem to downplay the role of the body and senses when it comes to higher education. In our research context, the effort to employ playful approaches to learning in teacher education is an example of an educational development in which the students' bodies are instrumental to succeed, which is described in this paper. The playful approach addresses deeper fundamental questions in the education system, as it insists that education is not just about educating for the labour market and academic achievement. Playful approaches aim to educate for a holistic, professional life and professional discretion, and they are thus more closely linked to existential questions, which we also find in educational philosophers (Skovbjerg, 2016; Hammershøj, 2018; Biesta, 2019: 48). The question is whether the necessary pedagogical competences and organisational tools to translate the ideas into educational practice exist at all in today's education of schoolteachers and pre-school teachers. A recent review of research in the field indicated that broad approaches to learning are often applied during short, detached events in educational programmes, otherwise focused on performance and pace. Play is often used for either academic optimisation or for making up for the pressure and competition which the students must endure due to the mechanisms of the absence of bodily and sensuous opportunities for learning in existing educational programmes (Jensen et al., 2022a). These ways of using play instrumentally as compensation for various deficits in teaching (often formulated as deficits in students) fail to challenge or question the educational culture and organisational context that puts pressure on young people.

This paper's central aim is therefore to answer the following research questions: *How can playful approaches to teaching contribute to improving the conditions for resonance as a response to a holistic approach to education of teachers? And how can this holistic approach be made concrete through playful practices linked to the fleshiness of our existence and action?* We are thus pointing to both pedagogical directions and philosophical clarifications.

In the next part of the paper, we unfold the synthesis of the three theoretical concepts in the section on theoretical framework. Next, we present the research context and analysis methodology as well as

three empirical analysis parts. Finally, we close with a discussion and conclusion.

2 Theoretical framework

In this section, we present the paper's theoretical framework. We start with the concept of resonance in Rosa (2021), then the idea of the fleshiness of our existence, a social, imaginative body in Lennon (2015), and finally the concept of play practices in Skovbjerg (2021a,b). The reason for selecting these three perspectives is that Rosa provides us with a metaphor of how teaching should be organised, Lennon points to the importance of being in a culture *in the flesh* (here in an educational and organisational context) while Skovbjerg's play perspective can combine with the two other perspectives, transforming them all into something specific and action oriented.

2.1 The concept of resonance in Rosa

To Rosa, resonance describes a way of relating to the world that allows for an experience of meaningfulness and a physical, sensuous, and social connection with the world one is part of. The meaningfulness and connectedness arise in and through a relationship with a counterpart and are therefore, according to Rosa, not an inner psychological concept, but a "relationship mode", i.e., a way of describing connections (Rosa, 2021: 174).

Resonance can thus arise in the *relationship* to a counterpart or to the world, which at the same time "speaks with its own voice". As Rosa (2020) writes in his book *The Uncontrollability of the World*, the world has, so to speak, its own character, an inner logic that remains unruly and uncontrollable no matter how hard we try (Rosa, 2020: 44). In his book *Resonance* (Rosa, 2021), Rosa explains his understanding of resonance by using a turning fork as a metaphor—or rather two turning forks, where one makes the other resound by "matching" the other's frequency, making them vibrate together. Since they are two different turning forks, they also have two different "voices," but when their voices vibrate at each other's frequencies, they are in harmony—but still diverse. Translating this metaphor to human, subjective experience, resonance should be seen as something setting the individual's inner reflection or representation of the world or the other person into motion in the interplay with the actual or imagined another world. It should be understood as an experience of being put into vibrant motion, but others or something else, in way that allows one to sound out in response to the other, but in such a manner that one's own voice is liberated and heard, both by oneself and the other person (Rosa, 2021: 124). In this light, resonance implies a liberating and transgressive understanding of our embodied, social, and spatial situatedness in the world. This allows resonant relationships to form, when the individual's voice vibrates with the voices of others or something else. In addition, resonance also insists on the possibility that contradictions, potential conflicts, otherness, and dissonance can be accommodated in the same situation; in Rosa's words, it can create "sizzling" in the collective room, which is felt and processed by the individual subject (Rosa and Endres, 2017). This means that allowing space for contradictory vibrations alongside harmonic resounding can help counteract conformity and compliance, which Rosa refers to as echo chambers (Rosa and Endres, 2017). We consider this way of

looking at resonance, i.e., as a liberating, vibrant space, to be essential for understanding an educational organisational reality in which many voices form the social reality together—not to achieve harmony, but to achieve an organisational context, in which there is space for the individual, and for the diversity and conflicting vibrations and resounding.

At the individual level, an important point for Rosa is that you can only experience resonance if you stay open to the surroundings which you are a part of. In doing so you must be open and ready for Rosa phrases as “let yourself be called for,” and to be ready for being reached for by something outside myself. This means that to Rosa, for the resonance relationship to occur, you listen, stay open to what you hear, and that you accept listening for this call. According to Rosa, one of the ways to provide optimum conditions for the resonance relationship to arise is that I can let myself be called on by being present, by focusing on exactly this moment in which I am present, and that I keep my attention focused on this moment instead of focusing on what will happen in an hour.

The German educational philosopher Wolfgang Klafki influences Rosa’s thinking on pedagogy, which expresses itself in his thoughts on pedagogical dialectics of the subject (the student) and the object (the academic content or the world at large). Rosa, like Klafki, talks about opening the student to the academic material and opening the academic material to the student, which according to Rosa can happen in a resonant relationship between the student and the academic material (Rosa and Endres, 2017). Rosa continues Klafki’s idea of a pedagogical dialectic by pointing out that this state of letting the material call out is related to our embodied situatedness in the world, and to being able to experience the world through the body. The body is thus the instrument allowing us to enter a resonant relationship with the world through the body’s senses and movements. In an educational organisational context, this means that teachers and students are not merely social participants in an educational culture, they are also embodied participants. In the following, we draw on this point in a understanding of the cultural (organisational) body.

2.2 Lennon’s social body in the fleshiness of our existence

Rosa may point to the body’s connection to the world as a condition of possibility for the resonant relationship to arise and be maintained, but at the same time it is constructive to give it more ‘flesh’ (Gilbert and Lennon, 1988: 32) drawing inspiration especially from Lennon. British philosopher Kathleen Lennon finds the flesh, the corporeal and the social imaginative practices to be fundamental to our connection to the world—that is, that the corporeal is what enables a resonant relationship. As Lennon puts it: “The imaginaries in terms of which we encounter the world are anchored in our bodily presence within but also on the social context in which we are placed” (Lennon, 2015: 32). According to Lennon, it is through the body’s temporal and social presence in relation to the bodies of others that our sensuous interpretation of the connections to our surroundings is realised and translated into notions and bodily expressions (Lennon, 2015: 120). This means that our physical bodies (the flesh) may be understood as a sensory system of interpretation. Depending on how expressions are influenced by and influence others, we are always and already in ‘the fleshiness of our existence’, in Sartre’s words, which

Lennon borrows (Lennon, 2015: 132). It is through this *practice as a physical, corporeal phenomenon*, that we can become and remain open to new interpretations which we can allow to call on us: “My body takes responsive shape during my interactions with others, and the shape it takes, reveals the expressive context the body I am encountering has for me” (Lennon, 2015: 127). Rosa describes the responsiveness through the metaphor of the tuning fork and the sensuous oscillations, but with Lennon it does not remain a metaphor. Lennon insists on the body as being a body of flesh and blood *interacting* with other bodies of flesh and blood as the condition of possibility for a resonant relationship to occur. A further aspect of this interaction is the cultural, shaping layer of interpretation that is added to the individual’s sensory experiences in the form of other bodies’ reactions to one’s own body and its external appearance and expression (Lennon, 2015: 131–132). In an organisational context, this means that the individual’s body interacts with other bodies and together they constitute a sensory cultural, organisational system of interpretation.

As mentioned at the beginning, despite many inspiring metaphors to aid the understanding of the resonance relationship, Rosa is sparse when it comes to providing concrete *instructions* on how resonant relationships arise, develop, and are maintained. According to Lennon, the body of flesh and blood is a basic prerequisite for both sensuousness and interpretations and notions of the (social and organisational) world, without, however, giving instructions or applying the concept of resonance.

In the following, we will show how the concept of play practices offer applications for forms of organisation in an educational context where bodies of flesh and blood in sensory interaction can create and maintain the resonance relationship. This does not mean that we see play practices as recipes for how students can achieve the resonance relationship. Instead, we show how play can be viewed, the resonance relationship can be enabled, exercised, concretely, socially, temporally and with bodies of flesh and blood.

2.3 Play practices as a realisation opportunity

The concept of play practices comes from Skovbjerg (2021a), who defines the concept as “what is done in play”. This means that play practices are all the actions performed sensuously and bodily when playing. When playing with LEGO bricks, you build, assemble, and fiddle with, in rag ball, you kick, run, and pass the ball, in role-play you imagine, rehearse, and practice. Skovbjerg (2021a: 65) continues: “Practices are thus ways of being in the flesh, ways of thinking, ways of using things, ways of feeling and becoming motivated”. Basically, several activities are carried out, and we are not able to say that the practices ‘belong’ to anyone. These play practices are practiced in a rhythm that takes place between repetition and distance. This means that some play practices are characterised by strong repetition with minor changes from one action to another, while others are characterised by the opposite, i.e., that there is great disruption from one action to another. For all actions, this rhythm is the “what if” of play, and Skovbjerg typologises 4 basic types of play practices, i.e., four archetypal ways in which play takes place. The rhythm and the relationship between repetition and disruption can be varied in four ways.

The first play practice is called SLIDING and is characterised by being repeatable, rhythmic, and with few changes from one action to another. This play practice is characterised by being predictable, soft and quiet, without fluctuations and surprises. The body is often still, movements calm, and voices soft.

The second play practice is called SHIFTING and is characterised by being repeatable with clear and distinct repetitions that are interrupted at unpredictable times of change and disruption. For example, trampoline play that starts in the middle and where large jumps deep into the mat are replaced by unpredictable jumps to the side or bumping into each other, or a ride on a wild roller coaster that often starts out softly, building up when we are pulled to the highest point of the track, and then suddenly there is a change in direction, height, and pace. These play practices are often linked to play that revolve around large movements of the body, and often it is in this type of play that the world really strikes back and shows you where the body's limits are "in flesh and blood".

The third play practice is called DISPLAYING and is characterised by having a stronger focus on disruption than the previous two. It could, for example, be when playing circus, X-Factor or other types of play revolving around performances. They are characterised by the participants reenacting the social norms that characterise the play scenarios while expecting the individual to chime in with special ideas. A clown is practiced in one way, and so is the X-Factor play scenario, but at the same time, play participants keep bringing ideas that constantly reinvent how the clown is practiced, depending on who the play participants are. DISPLAYING play practices that are solely based on imitation without any new ideas will lose momentum, become sluggish, and eventually appear meaningless. This variability between the situational preferences for certain play practices and the ideas are what characterise the rhythm of this play practice and reveal the boundaries of a particular play; which rules do and do not apply.

The fourth and last play practice is EXCEEDING, which is characterised by primarily focusing on disruption. This means that this play practice is primarily concerned with exceeding everything that is in the process of establishing itself as clear and continuous. This play practice is therefore the opposite of SLIDING, and disruptions become wilder and wilder. When someone throws water, tells a joke, makes fun of something, changes their voice, swears, bursts into a fit of laughter, or teases someone else, it is about exceeding the social and cultural codes of what can be done within the contexts in which it takes place. And if the exceeding is to continue, you need a sense of what came before—i.e. what you are exceeding and how much, depending on what you can imagine. These play practices involve a creative force in every single play action. As Skovbjerg (2021b) puts it: "Play requires situational awareness to strike the tone of play—if you are tactless, you will miss the tone entirely" (75).

Above, we have described the theoretical framework which we will employ to reach a deeper understanding of how meaningful empirical experiences in educational contexts can be understood and described, but also to examine how we can create access to resonant experiences in the educational organisational context, making it possible to both live out and live. The three perspectives combined enable us to examine how specific resonant connections are created and maintained between students and teachers at the schoolteacher and pre-school teacher educational programme.

3 Research context, methodology, and analysis strategy

The empirical material is a sample of extensive material derived from the research project *Playful Learning Research Extension* (2018–2024). The project researches and develops playful teaching practices at the schoolteacher and pre-school teacher educational programmes at the six Danish university colleges. The material included in this paper consists of excerpts from transcripts of dialogues between a group of teachers from two study programmes. The dialogues took place at five three-hour meetings, which were held as reflection workshops (see also Jensen, 2019, 2022). The research purpose of the workshops was to examine the organisational change brought about by a project like Playful Learning when a group of teachers began experimenting with their teaching practices together. At the workshops, teachers could theme different aspects of their development work which they considered important and essential for the playful approach to learning becoming valuable for themselves, the students, and their colleagues (i.e., the entire organisation). In this context, the researchers (1) facilitated the teachers' sharing of concrete stories from their own teaching practice with each other, and (2) based on the stories, supported the teachers' reflections on what play consists of and how play affected the students' learning. The design of the workshops was a design experiment in a design-based research framework (Barab and Squire, 2004; Ma and Harnon, 2009; Ejsing-Duun and Skovbjerg, 2018). The design experiment is based on an extensive, iterative process investigating whether and how such a type of workshop can be used as an organisational change tool. The design experiment rested on the following design principles: (1) *description* of the teachers' own, playful teaching practices, (2) *joint reflection* on playful teaching practices, and (3) *joint learning* in playful teaching practices (Ma and Harnon, 2009). The design principles are inspired by Dewey's (1933) learning theories. The researchers translated the three design principles into action during the workshops by giving the teachers different questions and assignments, which were designed specifically for each principle.

We have interpreted the transcribed texts from a hermeneutic approach, where the empirical material was put into play together with our theoretical preconception (Mason, 2002) of the concepts of resonance, physicality, and play practices. The purpose of this first analysis of the collected material was to discover any patterns in the teachers' narratives and reflections that could influence our theoretical preconceptions of the concepts of resonance, physicality, and play practices, thereby creating new understandings (Whiting, 2002). We then grouped the patterns into three overarching themes (new understandings), which in this paper contributes to understanding resonance in teaching in an educational organisation (Ryan and Bernard, 2003). The analysis is therefore presented in a framework consisting of these themes. This means that each theme begins with an example taken from the empirical material, demonstrating the empirical anchoring of the theme, its nuances, and qualities. The empirical material is then put into play with theoretical concepts that will help us spot new empirical nuances and understand the empirical evidence in new ways. In this way, the link between the teachers' experiences and our interpretations creates a wider practical meaning with the theoretical concepts of resonance, physicality, and play practices.

4 Analysis

In the analysis, we are particularly interested in material where teachers describe the students *doing something playful* together. Furthermore, we look at the connections between the students' play practices and the social arena they are part of when they enter an organised educational context. In our understanding, it is precisely this type of experiential space that enables resonance. We have interpreted (Mason, 2002) these play practice contexts through an understanding of resonance, social corporeal interpretations, and play practices to gain insight into how teachers' experiences and our readings together can create a further, practical and organisational meaning with the theoretical concepts of resonance, physicality, and play practices. Our hermeneutic analysis has led us to three main themes: (1) Social, repeatable play practices; (2) material play practices, and (3) physical play practices in the flesh—all considered as possible paths to resonance.

4.1 Analysis I: social, repeatable play practices as a path to resonance

The first part of the analysis examines how social play practices can be a path to resonance. We meet a visual arts teacher who often finds student teachers to be bashful about their work in visual arts. This becomes particularly evident when they are asked to draw or paint portraits. The students believe that the likeness of the person portrayed should be like that of a photograph. According to the teacher, this inhibits their zest for experimenting and their desire to explore resonant connections between themselves, the creative process, and the person and the situation portrayed. Therefore, the teacher has developed a playful activity in which the students are divided into two teams (see Figure 1).

The two teams are asked to sit on the floor in two circles: the persons in the inner circle facing outwards and the persons in the outer circle facing inwards. The participants in the inner circle are models, and those sitting in the outer circle are the artists. Those in



FIGURE 1
Students drawing each other.

the outer circle are given crayons in either a dark or a light colour and a clipboard with a piece of paper. After one minute, the students in the outer circle put down their clipboards and papers, keep their crayons, and move one place to the right. They now sit in front of a new model (i.e., a new student whose face is now in focus) with a piece of paper already drawn on by the previous student. This continues until all students in the outer circle have come full circle and are now again facing the student they started drawing. The teacher reflects on this way of organising the class with the following words:

“It becomes a social portrait, does not it? And when the students come full circle, I assess whether the portraits are close to being finished. If not, we do another round. What happens is that no one has ownership of the portrait, so there’s no one to scold if it’s not mimesis [photographic likeness]. Using this playful approach, the students discover that the social interaction they have had – because they laugh and joke with each other when they leave the classroom – actually ends up – regardless of the fact that ten people have been involved in this portrait painting – looking like the person who was portrayed. Not a photographic likeness – and that’s what I want them to realise with this activity – that it’s these characteristics of a person: dark hair, brown eyes, small nose, big mouth, happy person, whatever, that are still conveyed even if there is no photographic likeness. And so, it becomes a shared learning community where we can talk about what is happening here. But this shyness about their own expression disappears, and this is just a way to scaffold it.”

The teacher goes on to say:

“It is, of course, the scaffolding and the community dialogue. Because there’s a [silent] dialogue every time they move from one portrait to another on their uncertainty about ‘how it will turn out’. There’s this other person who made a portrait, which they enter into a dialogue with, because okay, now I have this colour, and how do I enter into a dialogue with what the person before me did? And then they say ‘Oh well, now the shadows have been made with this dark colour, which my fellow student used, and now I have a light colour, so I’ll just start where the shape comes out, will not I?’ So, there’s a dialogue both in a physical sense with the student, but also with the material that comes from the other student. So you could say that there are more dialogues going on. Does that make sense?”

In the context of the play practice which Skovbjerg (2021a) calls SLIDING, the students participate in a process characterised by a steady, continuous rhythm with the aim of finding common ground around something meaningful. The play takes place according to a predefined structure: The rhythm can be described as the students sitting on the floor, picking up a crayon, drawing for one minute, putting down the paper, moving to the right still holding the crayon, drawing on the next piece of paper for one minute, putting down the paper, moving to the right, the crayon still in their hand, drawing for one minute, moving to the right. These repetitive practices performed in a rhythm without anyone speaking, without disrupting the silence, the continuity, the socialising, is not solely an empirical expression of the SLIDING play practice but also of Lennon’s concept of the body of flesh and blood. Thus, the faces as a form are the focus, along with the craft of reproducing the form through a series of obstacles and rhythms. The SLIDING nature of the playful activity and the portrait’s

focus on bodies of flesh and blood does not call on the students to judge the product, and their flesh and blood are also not exposed to the scrutiny of others. The students are absorbed in the task and the process without considering whether it could be done differently. In other words, they participate in the social practice without setting boundaries in relation to whether something is too much or too little.

Considering the concept of resonance, this SLIDING rhythm along with the emphasis on the body being of flesh and blood are understood as being resonance-inducing in that the students' eyes and hands take part in the process itself and that they are socially connected at the end of the process. They are smiling and laughing when they leave the classroom, and this is interpreted by the teacher as meaning that they have had an experience which has strengthened their relationships. The involvement of the bodies in the rhythm of the play practice can be seen as a kind of developer liquid for resonance. When following Rosa's metaphor of the tuning forks and adding the points from the playful activity, if the tuning forks are to keep oscillating, they need to be repeatedly impacted by something or someone, and there must be room for other tuning forks to respond to impact from and provide impact to others by oscillating. The rhythm of the playful activity (categorised as SLIDING by Skovbjerg) is characterised by 'initiating' and 'responding to impact'.

4.2 Analysis II: material play practices as a path to resonance

In the first example, we saw that participation in the SLIDING play practice enabled the emergence of resonance, and that it was precisely the social repeatable rhythm and continuity that created a space for this to take place. In the next example, we will focus on the use of materials. The topic is a philosophy of science class at the pre-school teacher educational programme, and the teacher is explaining how she divided the students into three groups. Each of the three groups would focus on a specific philosophy of science paradigm: natural science, humanities, and social sciences. One member of each group is blindfolded and handed a fruit or a vegetable. The other group members must then ask the blindfolded member questions in line with the group's paradigm. For example, in the natural science paradigm group, one would ask about the temperature, colour, or weight of the vegetable, while the humanistic paradigm group would ask questions that concern people's experiences, relationships, and cultural connections with the vegetable, such as taste, smell, and associations. Finally, based on the questions which the blindfolded students are asked and the answers they give based on what they can feel with their hands, the other students in each group must guess which fruit or vegetable it is.

This process consists of initial step-by-step instructions from the teacher, dividing the students into groups, then blindfolds are distributed, and a selected student is blindfolded, fruits and vegetables are handed out and finally, philosophy of science paradigms are assigned to the groups. All steps were introduced without the students knowing what would happen next. The only thing they did know was that the topic was philosophy of science.

Finally, the three groups presented which 'truths' about the fruit or vegetable the different paradigms allowed the blindfolded students to deduce. The student's sensory experience of holding the fruit or vegetable and having to explore it with their hands guided by their



FIGURE 2
Students discuss theory of science using vegetables.

fellow students' questions thus becomes the starting point for the students to discuss with the other science paradigm groups, which questions are typically asked within the philosophy of science paradigms, which results can thus be obtained, and which subject areas are interesting for the individual paradigms (see Figure 2).

The teacher talks about this way of organising the class and the students:

"I then say: 'You have identified different elements of a truth by asking different questions.' So it could be an experience I then build on, I initiate a dialogue. In this way, students begin to add some concepts to the [specific] experiences. Stories as well as specific activities. But they actually have to get into this activity first."

The teacher provides a framework for the students' actions by initially setting the rhythm through simple repetitions that all students are invited to participate in without any advance knowledge: Receive fruit, blindfold, paradigm, question, answer, question, answer. In this context, the fruit is the anchor of the SLIDING practice and thus becomes a common third for the students. With their hands put forward, touching the materials, they set the direction of the repetitions. In this way, the teacher facilitates a sensory experience for the students through the SLIDING practice that links thinking and sensing. This connection is established between (1) the questions that the students are asked, (2) the material (vegetables), and (3) the students themselves, interacting with vegetables through the questions. When the teacher says that this optimises the students' understanding of the philosophy of science, the SLIDING practice can explain the realisation as a combination of sensing and thinking.

4.3 Analysis III: physical play practices in the flesh as a path to resonance

Whereas the first two analyses deal with the organisation of the social and material aspects of teaching and the organisation's potential for evoking resonant experiences, the last part deals specifically with

the physical, corporeal dimension, i.e., where specific bodies of flesh and blood are involved in play practices in specific situations characterised by social community (see Figure 3).

In the following, the teacher describes a teaching situation which answers our reflection questions about when teaching is truly playful and makes a difference for specific students, in this case a student teacher. The teaching revolves around the concept of 21st century skills, which among other things deals with the education programmes of the future meeting society's need for students to develop communicative, creative, and critical thinking skills. The teacher wanted to make the lessons more engaging ('less boring' as she put it) and decided to reorganise everything with the help of a colleague. The teacher says:

"... in this class, I started a four-hour teaching session by entering the classroom and clearing the whole room of tables and chairs. I was a bit surprised at how unnerving this actually was for the students, because they were like: 'Oh no! What's going on? What should we do, what do we do? What am I supposed to do? Where should I sit?' It was quite crazy."

Thereby, the teacher explains how the empty classroom's disruption of expectations and habits made the students nervous. The teacher goes on to say that she then facilitated a series of exercises where the students were asked to mingle while asking and answering questions from a set of printed question cards. She wanted everyone in the class to speak to each other. The cards were also divided into colours, which meant that the students ended up being divided into groups of four. The teacher then facilitated an exercise in which groups were positioned in pairs in a double circle while discussing four questions which ultimately led to the question: 'What will the world look like in 20 years, and what should the school be able to do to prepare students for this world?' This was a way to facilitate a process that would help participants gain an understanding of what 21st century skills could be.

On this facilitated organisation of the class, the teacher says:

"And the comments the students made were: 'Oh wow, those four hours just flew by.' They could not understand how time had passed"

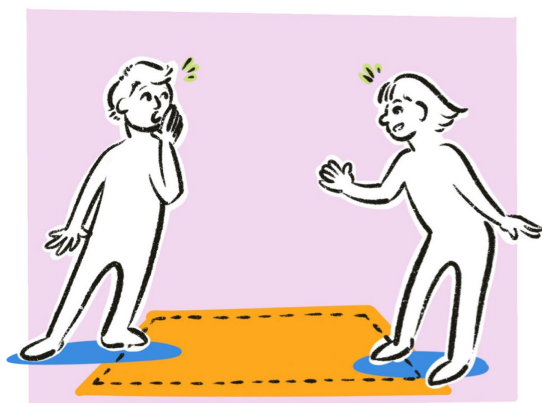


FIGURE 3
Students entering a classroom without tables and chairs.

so quickly. Several students also said that it might make sense to include 21st century skills in their teaching careers."

If we interpret this story in the context of resonance, play practices, and corporeal connections, we can point to several interesting points: Firstly, the students' expectations of what 'a classroom' looks like are disrupted. In the words of Rosa, it causes a dissonance in the room, which the teacher describes as "nervousness" and illustrates by reproducing the students' immediate verbal response ("oh no!"). The teacher describes the missing tables as becoming an impulse, an input that evokes a clear awareness among the students of their way of being a body of flesh and blood in a classroom. This apparent body of flesh and blood in the empty room is, however, soon organised by the teacher in relation to the bodies of others through the SLIDING and SHIFTING play practices. This can be identified by the question cards, by the students moving among each other, alternating between moving and being stationary, speed and change of direction, by groups forming through the question cards, and by the students imagining the school of the future. If we interpret this in the light of the EXCEEDING play practice, the students experience that time flies by, which to us suggests that there is a resonance among the students and between the students and the academic material—all parts "oscillate" together with regular impacts creating sustained oscillations. This seems to be related to the fact that the students' bodies and actions are organised in an entirely new way, which creates an opportunity for them to act openly and with their body of flesh and blood in the presence of other bodies of flesh and blood. The experience of time flying by (which can be associated with the concept of resonance) may also indicate that this activity has given the students the opportunity to encounter an academically relevant topic that they would otherwise have found difficult to engage with.

5 Recapitulation and conclusion

The examination of the above empirical examples in the context of Rosa's concept of resonance in synthesis with Lennon's social body in the flesh and Skovbjerg's play practices generally reveal several opportunities to further develop the concept of resonance in relation to social interaction in the classroom, which again points to a wider, educational organisational context.

We analysed the playful practices in the examples as a way of insisting on the fleshiness of our existence in interaction with other bodies "in the flesh". In the analysis of the examples, we see how the organisational dynamics of play practices create resonant connections among the students and resonance in their encounter with the academic material. However, the analysis also indicates that Rosa's metaphorical image of resonance as oscillations between tuning forks needs further development for it to become relevant in an organisational context, e.g., in a teaching context. As the example of the portrait-painting students or the empty classroom shows, the concept of resonance may need a physical corporeal dimension. A physical corporeal dimension to the concept of resonance would enable the development of intentional, organising principles that sharpen the framework and opportunities for students' bodies to enter relationships with other bodies. In this way, the metaphor of the tuning forks can create organisational meaning and value in a bodily sense. Intentional, organisational principles could, as demonstrated,

be the different play practices, where, for example, the use of the SLIDING practice in the portrait painting activity both organises the movement of bodies in a social context and creates the rhythmic impulse and pulse that sustains the resonance.

The empirical examples in combination with the SLIDING play practice also indicate that the metaphor of resonance as the oscillations of a tuning fork implies a need for an impact—an initiating sound—to create resonance in the first place. The logical consequence is that in the absence of a new impulse, a new impact, the oscillations die out. In the examples, the intentional organisation of impulses to put the students' bodies into oscillations through the rhythmic repetition of SLIDING seems to precisely create this continuous impulse to sustain resonance, first by the teachers, then by the students' active involvement in the processes where they create impulses for each other. This means that the rhythm invites the students to respond and keep repeating as in the play practice SLIDING or offering new impact as in the play practice SHIFTING. The students must therefore listen and respond, and it is only possible for them to listen if they are sometimes quiet and do not just provide impact without listening and engaging with the impacts of others.

Here are two further considerations of resonance as an organisational phenomenon: firstly, resonance also provides the potential to investigate or make visible something else or someone else's boundaries and otherness. This happens if something or someone "strikes back" in a dissonant way, as in the example of the empty classroom. Secondly, the examples, when analysed in the context of the tuning fork metaphor, may give rise to consider whether the organisational context allows participants to "oscillate freely" (for one tuning fork to resonate with another tuning fork, it must be held so that nothing touches the prongs of the tuning fork preventing oscillations while the stem is what holds the two prongs together). Translating the metaphor of oscillating freely into human resonance relationships means that circumstances (such as the "stem") must allow people in social contexts to oscillate freely not only in a psychological/emotional sense, but also in a bodily sense ("the prongs"). The bodily, free oscillation means, among other things, that both students and teachers are comfortable in their own bodies and recognise that their bodies move in a social context inside the classroom ("the stem")—to become part of what we call "the social body". Meaning that individual bodies become part of a greater social organism ("the prongs" oscillate freely). When the organisational context allows the individuals present to feel comfortable in the social body, they can oscillate with other bodies and at the same time feel enabled to act. We saw this in the example of social portrait painting—the rhythm of the SLIDING practice seemed to allow the students' bodies to oscillate freely, losing themselves. Similarly, in the example of the philosophy of science activity, blindfolding provided new bodily possibilities for oscillating with the bodies of others.

Based on the empirical examples, we thus argue that the concepts of play practices with a focus on the fleshiness of our existence can provide potential for further developing the concept of resonance in a social and organisational context, as in Rosa's current opinion, the concept of resonance is an individual phenomenon. However, in this paper, we have shown empirical examples of how resonance is very much anchored in social processes. To allow resonance to occur in social processes, we rely on organising principles of action and relationships. Here, the paper offers play practices with an explicit

bodily focus to increase the likelihood of creating organisational resonance—in this instance in a teaching space. With this thinking it might also be possible to create resonance in other organisational contexts.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by Copenhagen University College and the Playful Learning Programme. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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