Supporting Play Pedagogy in Schools

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Introduction
A number of recent studies show a close correlation between the lack of play competences in children and social marginalization. Based on the research project "Can I join in?" (Jørgensen & Skovbjerg, 2020; Skovbjerg et al. 2018). The purpose of this abstract is to examine empirically and theoretically how we can provide play pedagogy support by introducing play design tools in schools.

There is a long scientific tradition of using play as didactic tools for learning purposes (Piaget, 1962 p. 215ff.; Vygotsky, 1972, p. 102; Butler et al. 2016, p. 48). However, play's importance as a pedagogical tool for inclusive purposes is still under development in practice (Kalliala, 2007; Skovbjerg, 2020) and has only rarely been the subject of theoretical study (Alvestad, 2020).

By developing an educational model, based on a curriculum design model by Akker (Akker, 2003) and combining it with play properties from Skovbjerg (Skovbjerg, 2020), we provide a tool for teachers with the aim of supporting their design of play environments. The hypothesis is that combining knowledge about curriculum development (Akker, 2003) with knowledge about play and play design (Skovbjerg & Bekker, 2018; Skovbjerg, 2016; Valk L de, et Bekker; Eggen, 2015) and childhood studies (James et al. 1998), can support the development of *tools for play pedagogy* intended to

be used by teachers. The potential of this theoretical combination is under-researched in both play, design and pedagogy.

The main contribution of this abstract is knowledge about how to develop play design knowledge for teachers. By developing the *playful spiderweb* as a design tool for teachers, we operationalize the theoretical combination into a useful tool.

Research Question
Based on the above the research question is as follows: *How can a combination of an educational model and play theoretical knowledge lead to a useful tool for teachers?*

Theory
In the process of development, we used the curricular spider web model (Akker, 2013), which describes the various components that define the 'design' of a curriculum or learning practices, including its aims, learning goals, the role of the teacher, the learning materials and the time of learning. To extend the curricular spider web into a playful spiderweb, we combined the model with play components from "the mood perspective" (Skovbjerg, 2020; de Valk, Bekker & Eggen, 2015). The mood perspective on play focuses on the framing of play inspired by Goffman (1974, p. 21ff), specific actions related to play through the concepts of play practice, on participation and on materials. The first iteration of the model we created by combining those two models which we describe below. Overall the dimensions from Akker (2013) were "interpreted" from a learning to a play context, and combined with "mood dimensions" from Skovbjerg (2020).

Method
In the research and development of the playful spiderweb we used a combination of design-based research and action-based research (Amiel & Reeves, 2008; Brown, 1992). The method is inspired by the distinction in design-based research between traditional empirical research and development-based research (Friedman, 2001). Part of the development-based research methodology is a strong collaboration between researchers and practitioners. We involved action-based research where the focus is on a collaborative interchange between researchers and practitioners about what they develop and carry out. That is, practice and theory interact and inform each other in an interchange as practice-generated theory, in which theory is a tool to explore the understanding of the design practice while, in turn, the project's practical experiences create the theoretical concepts and the (redesign of the) pedagogical tool.

We explored the potentials of the playful spiderweb through the four phases of Design-Based-Research.

1) Domain phase: Teachers are introduced to the curricular spiderweb (Akker, 2013) and the mood perspective (Skovbjerg, 2020). Then they are introduced to the playful spiderweb. The domain phase was documented by video documentation, participatory observation and interviews with pedagogues.

2) Lab phase: The teachers use the playful spiderweb for planning the play interventions. The lab phase was documented by observation, video documentation and interviews with teachers.

3) Intervention phase: The teachers try out the play activities they have planned through the playful spiderweb together with the children. The intervention phase was documented by observation, video documentation and interviews with pedagogues and children.

4) Reflection phase: Reflecting on the playful spiderweb design principles, their pedagogical activities and their experienced effect and on how the experiences so far have contributed to the expansion and rethinking of play pedagogy. The reflection phase was documented by observation, video documentation and interviews with pedagogues.

We have been through 2 iterations of the playful spiderweb, out of a total of 6 planned o

Table 1: Overview of changes

Topics based on spiderweb (Akker ,2013)	First iteration: In combination with Skovbjerg (2020) and translated into a play frame.	*Additions/ Changes made* in the Second iteration
Aims and objects	Aims and objects - does everybody participate?	Participatory positions
Time	Time - when and for how long?	Time and space - where and when?
Location	Space - where do they play?	
Grouping	Grouping - Who plays with whom?	
Materials and Resources	Play media - what do they play with?	
Teachers role	The role of the pedagogue	Facilitation

| Learning activities	Play interactions - what are they supposed to do?	Play practices - what are the participants supposed to do?
Content	Play forms - what forms of play do we aim for?	
	Play moods - what mood do we want to achieve?	Play moods - what mood of the four do you want to explore?

Results

Based on the video documentation, the participatory observations and interviews with teachers the following results can be emphasized:

1) Teachers need support in order to use and be a part of the development of a tool for play pedagogy. We explored problems in the beginning with using the tool, because of lack of time, confusion about the goal of using it and lack of feedback about the process. As one teachers stated in iteration one: *"But we can "run" a playful spiderweb next week"*

2) The presentation and the usability of the tool could be strengthened. The first iteration of the playful spiderweb, the teachers forgot where they put their model, and they asked for thicker paper, and also a digital version of the model.

3) The combination between education and play knowledge made sense to the teachers, and they were able to create play activities using the tool. As one of the teachers stated: "*What we have talked about is that the playful spiderweb is good for creating a framework and is good for structuring. We are a little flighty once in a while. The model has an easy approach. You have to sit down, of course, but it sticks to something concrete*".

4) Teachers mentioned the strength in the shared development of tools for play pedagogy and theirby the development of a shared expertise for play pedagogy. As mentioned in one of the videos: "*It is really great to be able to spend the time together and have preparation time for working with pedagogical content".*

5) The teachers used the components of the playful spiderweb in the iterations, in the last one to a greater extent than the first one. In the first iteration we had to remind them to reflect upon what they planned for and what happened in the iteration. The playful spiderweb helped the teachers to do that reflection. In the second iteration they were aware of the process of development of the activities, and they were more lightly to be transparent on what components they planned, and what happened in the interventions.

Figure 1: Visualisations of the playful spiderweb:
Iteration 2 and iteration 1:
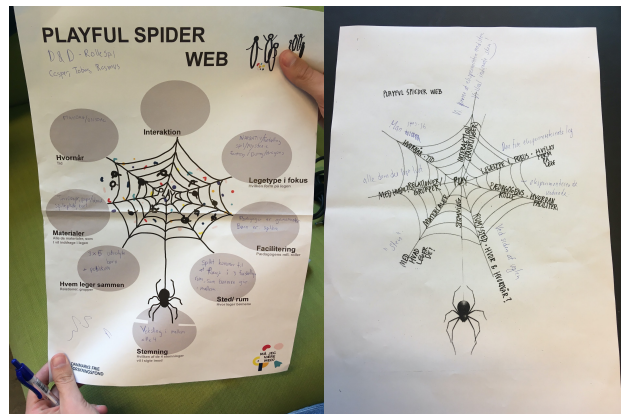
Conclusion

In the abstract we describe a research and development process where the aim is to provide teachers with a tool for supporting play pedagogy. Through a design-based-research process we now have explored two iterations where the main contributions are the examination of a tool for play pedagogy support, and thereby gather ideas and requirements for such a tool.

Acknowledgements

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