Play as mediator for knowledge-creation in Problem Based Learning

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ABSTRACT

This article recounts reflections by a small group of students and their supervisor on play utilized at their meetings as part of a Problem Based Learning (PBL) process. The students experienced how a less traditional professor-student relationship arose, which transformed their interaction and relationship into a more holistic, trustful, sensitive, open, creative and collaborative form that gave rise to the following questions: what can a more playful approach bring into a PBL learning-space? What influence can play have on learning, and on student-to-student and student-supervisor relationships and collaboration? Why did the students find that this experience enhanced a learning that differed from their earlier experiences? What was it play had mediated? The article, which is also a theoretical discussion of future pedagogics in Higher Education, introduces a new model including three different knowledge forms. These take their departure from a PBL approach - regarded as a 'problem-solving' approach to learning, and PpBL (Play and Problem Based Learning), a 'playful', experimenting and intuitive approach.

INTRODUCTION

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At Aalborg University, where the study for this article has been conducted, the overall pedagogy is PBL. This is a pedagogy based on learning organized around concrete practical or theoretical challenges in which students are expected to gain new and flexible knowledge through context-related learning processes (Bateson, 2005), self-directed learning processes (Laursen, 2004), and problem-solving processes (Hmelo-Silver, 2004). Through group-work and practical challenges, the students learn how to solve a given problem, seek new knowledge and gain new knowledge by the use of meta-cognition as a reflection on performed learning processes. They also learn to bring in cross-disciplinary theory and methods in their approach to their projects (Kiib, 2004).

In spring 2013, a small group of students from Communication and Digital Medias at Aalborg University were given the task, as part of their Bachelor's project, to construct, conceptualize and facilitate a creative workshop for a consultancy firm. The overall idea was to use play to bring groups of Danish primary school teachers to a closer understanding of their own role in a team and through this enhance their individual and mutual abilities as collaborators, as a way of fostering a better team-spirit and stronger teams in general in the work-place. As play was regarded as an ideal mediator for change, creativity and learning by the consultancy firm, this became the pivotal point of the creative workshop that the students were to develop.

During the PBL project the students and their supervisor sensed that something unexpectedly interesting was happening. It seemed as if play itself not only had an impact on the teachers participating in the workshop facilitated by the students, but also, amongst the students themselves and in their relationship to the supervisor, something different than 'normal' emerged. The PBL process in general became more experimental and intuitively driven compared to previously. The students became more courageous and creative. Hence, two of the students and the supervisor decided to examine more thoroughly their experiences from the PBL process retrospectively.

It is these dialogues and shared reflections that are the springboard for the article, which begins with an introduction to PBL and PpBL, together with a brief elaboration of the under-laying understanding of play with reference to creativity. Secondly, a new model is introduced and discussed to elaborate the different knowledge-forms related to PBL and PpBL. Thirdly, the students' experiences are verbalized by the students themselves and finally the article offers some answers to the opening questions.

PROBLEM AND PLAY BASED LEARNING

In 2004, PpBL as a new approach to PBL was introduced at Aalborg University by the faculty of Architecture & Design (Kiib, 2004). The overall idea of PpBL was a stronger focus on

experimentation and the creation of an inter-play between students' ability to be intuitive, aesthetic creators and at the same time goal-oriented. Earlier on, focus had primarily been on the problem-solving part of the projects, but now Danish professor Hans Kiib argued for a deeper emphasis on intuition, innovation and phenomenology. Kiib also asserted that this approach should not solely concern educations traditionally considered as creative, like Architecture & Design, but in general include all degree courses. As Kiib wrote with reference to Schön (Schön, 1987) and Kolb (Kolb, 1984) *"PBL requires intuition, play and action in a continual dialogue with reflection and rational problem solving… as a working principle in both practice and learning"* (Kiib, 2004, p. 204).

To our knowledge, Kiib did not elaborate more thoroughly what he meant by play and intuition at that time, nor did he return to this subject later, but he did suggest something interesting to follow up on. Mindful of German-American researcher Claus Otto Scharmer and his wife Kathrin Käufer and their ideas of a future university pedagogy (Käufer & Scharmer, 2007), a close dialogue with German philosopher Hans-Georg Gadamer and his understanding of play, together with our own experiences, we will now scrutinize more thoroughly the consequence of bringing play into PBL or PpBL, as Kiib calls it.

FROM CREATIVITY TO PLAY

For the students, in our case, the main task of their practical part of the PBL process was to design a creative workshop. Creativity is regarded as *"our ability to play with ideas, thoughts, possibilities and materials"*, as Danish researcher in innovation, Lotte Darsø, defines it (Darsø, 2011, p. 26). For her play is the source of all creativity. Mainemelis and Ronson also call it the 'cradle for creativity' (Mainemelis & Ronson, 2006). Hence, for the students it was natural to bring play activities in as a way to enhance creativity amongst the teachers participating in the workshop.

PLAY AS A UNIVERSAL LIFE-PHENOMENON

Let us begin by defining an overall understanding of play. One of the best-known theorists in the field of play was Dutch historian Huizinga (1872-1945), who regarded play as a universal life-phenomenon that goes with being a human being (Huizinga, 1963/1993). No matter who we are, where we come from, how old we are, what we do, or what we believe in, play has a natural role in all our lives. This means that play counts for all ages, genders and cultures and therefore also has relevance at a university, amongst students, if we follow Huizinga. From a more philosophical point of view, play can also be explained as a fundamental expression of life - or a sovereign expression of life, if we use the term of Danish philosopher Løgstrup, meaning a moment of a certain ontological value that has precedence over everything else

(Løgstrup, 1995 (1976). It is a moment where we are captured by life itself and therefore in play there is something "at play" which transcends the immediate needs of life (Huizinga, 1963/1993). 'Play as a sovereign expression of life' is Thorsted's interpretation and not that of Løgstrup. Like other theorists (Apter, 1991; Gadamer, 1960/2007; Huizinga, 1963/1993; Øksnes, 2013, Thorsted does not regard play as a solely physical activity, or a tool for solving specific purposes, but as a life-phenomenon with its own value. Play therefore has an inexplicable impact on all our lives.

More generally speaking, most people's motivation for play is the sheer pleasure of doing it, to have fun, but this does not mean that play is not serious. We see it when animals play together, or we feel it as human beings when we are 'captured by play' itself and forget everything else around us (Gadamer, 1960/2007). As parents, we know how a child can be fully engrossed by a computer game or a role-play for instance. When playing, we are carried away into another time, a parallel world to the real world, offering us the possibility to try out 'as if' before actually putting an action or an idea into practice (Apter, 1991; Gadamer, 1960/2007). We are in a moment of deep presence; a unique space where time stands still and we lose ourselves in pure 'being'. While playing, nothing else matters but what is at stake in the playful act. We feel free, alive, and deeply engaged.

Often play is brought in with the ambition of reaching a specific goal, following the idea of a certain outcome in form of learning or development facilitated or guided by professionals. This can be orchestrated by teachers, pedagogues or organizational facilitators, as in our case, where the students utilized play to approach a given task, to support the group of teachers in their shared understanding of the team and their own role in the group. In the dominant discourse on play in research literature, play is approached as asserted above from a biological, sociological, anthropological or psychological perspective, founded on the belief that play is a tool we can control, a certain *play-experience-learning* that we can prepare and predict (Øksnes, 2012).

But several philosophers are putting forward another perspective. They are advocating for an acknowledgement of play as an uncontrollable life-phenomenon, an ontological event, a '*geschehen*' or a comprising moment in which we are grasped by life itself and admitted into the unknown, to return to something more than we were before we started playing (Gadamer, 1960/2007). This is why we also speak of play's existential and ontological impact on our lives and the issue of *play-experience-Bildung*, transcending moments in which something unpredictable happens, when we do not approach it as a *"useful and/or speculative instrument in the service of fulfilling certain functions…"* (Øksnes, 2013, p. 142). This distinction between play as 'play-experience-learning' – something we use for a certain purpose – and play as 'play-experience-*Bildung*' regarded as a relation of a certain quality we enter between us and the world – is important for the continuation of the article.

PLAY AS ENTRANCE TO KNOWLEDGE CREATION

So far, PBL has primarily focused on problem solving through context-related learning, as Kiib called it, which led on to the creation of *explicit knowledge* and *tacit knowledge* (Schön, 2001). Students gain 'explicit knowledge' from reading books and articles and participating in lectures based on past experiences and thoughts already articulated. 'Tacit knowledge' is acquired through reflection *in* or *on* action. 'On' action' means students reflecting on their own gestalted experiences or thoughts based on practical experiences. Reflection 'in' action is when they reflect on a concrete learning situation or a cognitive learning process emerging through action. Both approaches are based on an overall wish to find a solution to a given task.

When Kiib argues for PpBL he talks of a learning process, based on a practice-oriented departure framed by a concrete goal, and, at the same time, of play as a way to foster more aesthetic and creative students through more experimental learning processes. Other advocators for more imaginative and creative students are Scharmer and Kaüfer, but their attention is not on the past, the *ontic*, and the already-established impression. On the contrary, their focus is on the *ontological* aspect of an experience[1], the moment where we are present and open to the unknown and future possibilities that can lead us to what Scharmer calls *not-yet-embodied knowledge* or *self-transcending knowledge* (Scharmer, 2007). Like Øksnes, speaking of play as a way to become self-forgetful and open to the unknown, Scharmer argues for a need for a 'certain engagement' in the world.

But are not Schön and Scharmer talking about the same thing, when they both look at the practitioner reflecting *in* action? The short answer is no. The practitioner in Schön's understanding reflects *on* the reality and proactively engages himself to the world, motivated by a wish to 'solve problems', 'gain new competences' to approach future challenges and hereby 'approve practice'. Scharmer on the contrary is engaged in creating a deeper sensitivity for *what-is to-come* before acting. *"Celebration of what is dialogic, unfinished, open, transcending time and the future"* as Øksnes expresses it, with reference to play and

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[1] The difference between 'the ontic' and 'the ontological' is fundamental one, which Martin Heidegger (1996/1927) discussed in detail in *Being and Time* as a difference between being in a *functional* mode or in an *existential* mode in a concrete moment. He considered how this difference opens up the world diversely (the way the world unfolds in our engagement with it) and the way we see and understand it. When we are in 'ontic' relation with the world, we are in a proactive 'doing-mode', but when we are in 'ontological relation' with the world, we are in a self-forgetting 'being-mode'. Problem-solving and critical-analytical reflection are typically connected to 'the ontic', whereas being in a state of wonder, playfulness, artistic process or contemplation is connected to 'the ontological'.

carnival (Øksnes, 2013). To create deeper contact with students' creative capacities and their own calling and to allow time for new ideas and knowledge to mature. Metaphorically speaking, one could say that Scharmer's focus is on fertilizing the soil before harvesting[2]. Scharmer's interest lies in the ontological and existential aspect of life that relates to play-experience-*Bildung*, as opposed to Kiib, whose attention primarily is on the ontic and play-experience-learning, whereby play is a function. Given Kiib's reference to Schön, we interpret his motivation for bringing in play regarded as a tool for creativity and not an acknowledgement of the true value of play itself, which we believe can never lie in the direct outcome of play. *"In play, we face and accept the risk of the human situations directly, and in doing so we realize the satisfactions and joys of our essential selves"*(Hackett, 2013, p. 128). Hence, the result of play in Kiib's approach to PpBL most likely leads to play-experience-learning and not to play-experience-*Bildung* or to the emergence of a not-yet-embodied or self-transcending knowledge, which arises from an ability and courage to take risks, stand in the open and to *wonder* about more fundamental philosophical questions (Hansen, 2008).

KNOWLEDGE MODEL FOR PPBL

Before turning to the students' experiences, we introduce a model as a point of departure for further discussion. Were the students' reflections primarily on the past or the present, the ontic, as Schön and Kiib are talking of and 'just' a matter of approving their own skills through play-experience-learning? Or did they also through the play-based approach give space to play-experience-Bildung? To answer these questions Ann Charlotte Thorsted has developed the model beneath to outline the differences between PBL and PpBL and their different knowledge forms (fig. 2).

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[2] Thorsted has developed a model called FIE, based on some of Scharmer's ideas, to help students and organizations navigate in creative or innovative processes (Thorsted, 2014).
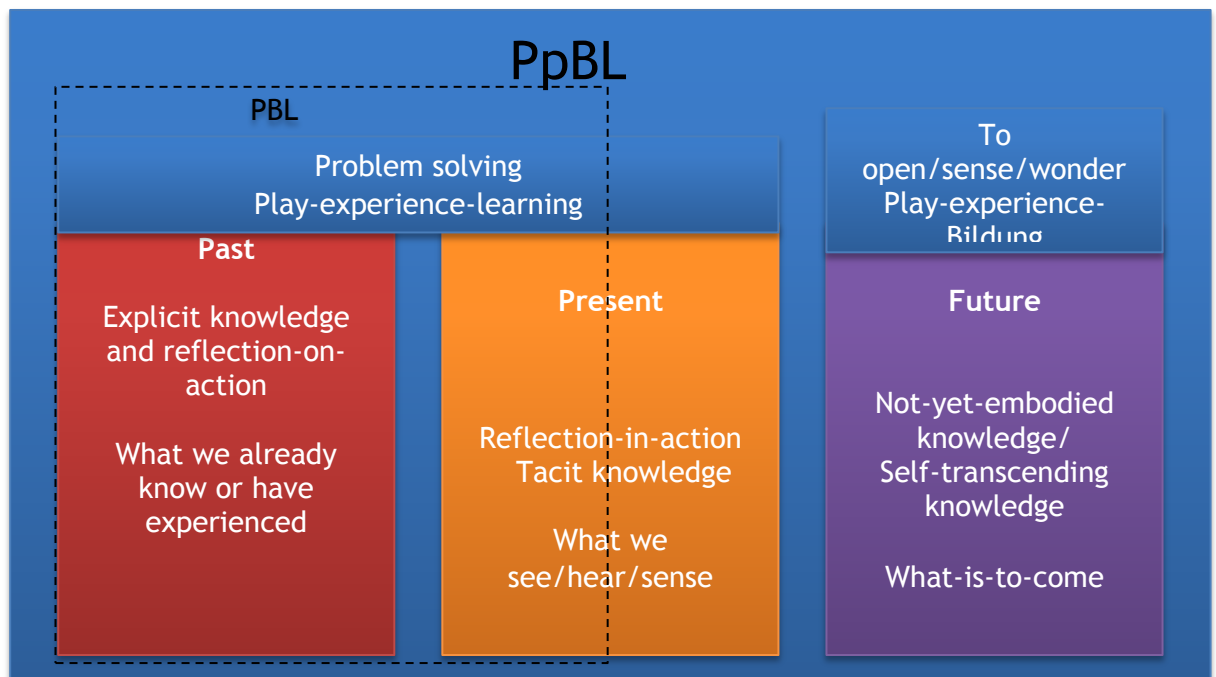
Figure 2: Knowledge-model for PBL and PpBL

In traditional PBL, focus is on problem solving, bringing in knowledge based on the past or the present. In regard of the past, students reflect on what they already know or have experienced (reflection-on-action), which is the first box of the model. The second box (present) symbolizes what happens when students reflect-in-action, which is a matter of reflection on present realities. This is still guided by a wish to find a *solution*, but in this case we talk of a more intuitive and reflective cognition, where practice and theory are expected to melt together in the urge for a specific learning outcome. In the first two boxes, play is regarded as a tool, as we believe Kiib saw it - something we ourselves can govern and subordinate to our needs and a way to accomplish a certain play-experience-learning outcome. In the last box (future) we have moved away from a functional and problem-solving modus. Instead, we are now seeking another kind of awareness and approach to learning that requires a more profound engagement and the will to let go of control, as Scharmer expresses. This is essential to our understanding of PpBL, a type of learning where participants have the courage to risk their selves to 'give birth to something new' as American existential psychologist Rollo May (1909-1994) describes it (May, 1975/1994), which is fundamentally different from the first two approaches to learning (past and present). Therefore, we bring in Scharmer's third kind of knowledge in our discussion of PpBL. A not-yet-embodied-knowledge that emerges from more *generative* dialogues (Scharmer, 2007) or the *wondrous* dialogues of Danish professor F. T. Hansen (Hansen, 2008; Hansen, 2014). To be creative or innovative we must open ourselves to make what-we-do-not-know welcome, to give room to

the unexpected as Darsø formulates it (Darsø, 2011). When play as an ontological event catches us, we start listening and sensing more intuitively, but this requires that we let go all our expectations and allow whatever calls us in that precise moment to guide us. In this way, knowledge creation becomes more than a directed process explicated through specific learning goals formulated at the beginning of the learning process.

THE CASE STUDY

To recapitulate, the aim for the students' project was to design a creative workshop for a small team of teachers from a Danish primary school, containing playful elements in order to give the participants an enriched and shared understanding of the team. The students designed the workshop in cooperation with a small consultancy firm, whose founder and head consultant sought new creative inputs related to the team understanding process. The workshop held three main activities and an icebreaker, all enrolling play as a mediator for the creation of shared understanding of their interpersonal relationships and thereby their respective roles, their communication and relationship to each other.

For the article, the entire project has been divided into three parts. The first part describes the students' preparations for the workshop, the second part, how the workshop was facilitated and lastly, some afterthoughts. The workshop was sound-recorded and transcribed and, together with written journals of the students' reflections during the project, this constitutes the empirical data for the Bachelor project and this article. The students' own formulations of their experiences and their points of view are presented almost as they were expressed in the first draft for the article.

PREPARATIONS FOR THE WORKSHOP

The students write: Inspired by our supervisor and associated professor Ann Charlotte Thorsted's work with play and creativity, we applied for Thorsted as a supervisor for our Bachelor project. Without any participation from Thorsted, we had already established contact with the consultancy firm before our first meeting. Our general expectations for the project were not in any way unusual or out of the ordinary; we expected an academic, educational and challenging PBL process with a relatively professional relationship to our supervisor – as in previous semesters. Thus, it was without any extraordinary expectations we arrived for the first supervision meeting. Great was our surprise when Thorsted brought out for us six dice with different figures on each side, the so-called Story Cubes (figure 1). She suggested that we took turns to throw two dice and used the outcome from the throw to introduce ourselves and formulate what we were engaged in at this precise moment of our study. The dice showing an 'eye' could, for instance, be an opportunity to express how one of us regarded a concrete situation.

Figure 1: Story Cubes

Despite being a simple act of a telling a personal story, retrospectively this seemed to be the beginning of a different and more holistic way of collaborating, in which we as a group and in relation to our supervisor, took a step towards a higher degree of openness, sensitivity, trust and thus a space for everyone to be themselves. We will not elaborate further on the Story Cubes, as our interest do not lie in the actual play activity or tool itself, but in the role of play more generally speaking in relation to our project.

The fact that we played together and that Thorsted showed interest in us as persons and not only as students, made our relation to her more equal and relaxed, which for instance led to a significant use of humor at our meetings. We had seldom experienced such an honest and liberating meeting in a professional educational context before. We spoke about what was on our minds in an unrestricted social frame compared to previous experiences. One could argue that this seemingly insignificant event with the story cubes might hold an impact for the months to come, but we strongly feel today that this first impression and experience of play became a key milestone that struck a note for how the entire project was carried out – both in regards of the relationship between us as students and between us and our supervisor.

Halfway through the project, we needed to take the necessary step away from reading, theorizing and conducting academic discussions to be able to create an actual real life workshop. This was a crossroad in the process, where we had to convert "perfect" theories and delimited ideas and conceptions into a concrete workshop, useful for the consultancy firm and the participants in the workshop. But we felt stuck and frustrated. The process went very slowly. However, an important turning point occurred, when one of us took the initiative to set up and facilitate a creative session amongst ourselves, in which each of us had to take on the role of a famous person. This could, for instance, be Albert Einstein. The challenge was now to think as the given *persona*. What would be the most interesting aspect of understanding a team of teachers if one were Einstein? Despite ending up with somewhat

predictable topics such as 'roles, communication and relations' that could lead the teachers to a deeper understanding of their team, this session mediated topics in a way that we believe a rational discussion could not have provided. By adapting a playful approach, we felt more liberated and able to try out and not hold back even some more crazy ideas.

Before the real workshop with the teachers was carried out, we tested two of the main activities in it with help from two other groups from the university, to see how the play activities worked and how much time it would require. This was the first time we tried our roles as play facilitators. In addition to this learning, we had studied Thorsted's (Thorsted, 2013) and Bente Halkier's (Halkier, 2008) thoughts on facilitation and reached the conclusion that facilitating a playful process requires knowledge, but also an ability to let our intuition guide us. By trying out two of the exercises of the workshop beforehand, we gained a vague feeling of what might happen at the workshop, but this counted primarily for the more practical aspects of the session. The 'uncertainty' and 'unpredictability' as part of the facilitator role (Thorsted, 2013) was something we could not fully prepare for.

FACILITATION OF THE WORKSHOP

We began the workshop by introducing ourselves and the aim of the project. Beforehand we had agreed on our different roles, one as the main facilitator, one, the helping facilitator and the last, an observer (Halkier, 2008). After the introduction, we started out with an icebreaker exercise utilizing the Story Cubes for everyone to present themselves to the others. All of us took part in this first exercise. Afterwards, the participants described the icebreaker exercise as 'personal', 'fun' and 'creative'. The ambition had been to use the exercise to build up a relationship within the group and to create a more trust-based space that could support the playful attitude and help the participants overcome conventional thinking (Thorsted, 2013), just as we had ourselves experienced. We will not go deeper into elaboration of the other play activities performed but turn towards our reflections after having finished the project.

AFTERTHOUGHTS

Retrospectively, it has become clear to us how important our way of facilitating actually was for the whole process, and how difficult it is to navigate in moments of uncertainty. Both our lack of facilitation at times and, at other times, over-controlling facilitation had an important impact on the participants' response and ability to be playful. It was really hard to navigate in a process where one could not predict beforehand a specific outcome. Therefore this experience and the project as a whole turned out to be quite different from the other processes

we had participated in. This time we had to rely on our instinct and ability to be open and let go our desire to be in control.

A CHANGE IN THE INTERPERSONAL RELATIONSHIP

We have now heard the students describe their experiences, which led to the following questions: What had the playful approach brought into the relationship and the collaboration between the students and their supervisor and what had the more playful approach to PBL offered in relation to their learning?

The students described a change in the relationship between themselves and their supervisor starting from the very first meeting, where the supervisor took the initiative to use Story Cubes to introduce them to each other. This fueled a more open and personal engagement and a feeling of trust, which had an impact on the entire project. With reference to Thorsted's research, the change in relationship can be explained through the development of a *community of play; "where play as a sovereign expression of life has taken over, filled the players with its own spirit and pulled them into its own sphere ruled by the beat of life itself. In a community of play, the players have surrendered to play as a life phenomenon and become self-forgetful, placing some of their life into the hands of their good colleagues. In a community of play you feel safe and free, everyone is equal, there is no power negotiation, just a will to collaborate and, at the same time, allow space for the individual to experiment and just be"* (Thorsted, 2014, p. 16)*"*. In the group the students and the supervisor acted no longer only as professionals. They also allowed a more personal side to come forward, which can feel vulnerable. In this case, it led to more open and honest dialogs and the development of a more trustful interpersonal relationship and a starting acceptance of the risk related to play, which fostered the courage to experiment.

COURAGE TO BE CREATIVE

According to the students, another turning point was the emergence of three topics from their small exercise utilizing famous persons to outline the main topics for the workshop. They had reached a crossroads and, leaving behind them safe ground, perfect theories and delimited ideas, were now confronted with a concrete creative demand in regard of the workshop. With reference to the famous sculpture of David by Michelangelo, they articulated the experience in this way; when Michelangelo is asked for an explanation of his aesthetic process, he explains it by saying that 'David was already in the stone. He just took away everything that wasn't David' (Scharmer, 2001). As an analogy to their own process, they found themselves emptied for new ideas. Not until they began playing, working more intuitively, enacting different roles, did they grasp some of the notions of what could be considered important

aspects for the further process (they found David in the stone). Through the playful and creative process, they overcame their obstacles and found an answer to their challenge – they took away everything that wasn't David.

Intuition requires that we dare to put ourselves at stake, let ourselves be absorbed by the moment and through this get access to the world of our existence, not only as a matter of reaching certain facts or conceptual understandings, but also to let life itself impress us. For the students this was a new way to approach learning that gave them courage to experiment, enter the unknown and let go of control. They began to sense and listen more freely, not allowing their assumptions and already-established knowledge overrule their instincts. This came forward, especially in the design of the workshop, which was very original in its form. They developed their own play exercises, which the consultancy firm was quite impressed by. The workshop facilitated by them was a challenge, as their experience in facilitation was limited, but the project as a whole became quite original and interesting.

FROM PBL TO PPBL

Let us now return to figure 2 once again to see what kind of knowledge the students gained. In the beginning of the project, they drew on literature and lectures based on the past (explicit knowledge) and their own reflections *on* earlier actions performed in other PBL projects (tacit knowledge). As we have already heard, when Schön talks of 'reflection-in-action', his focus is on learning to improve or solve. But this solving attitude conflicted with the creative skills that the students needed at the crossroads, where they had to develop new ideas for the workshop. At this point, they could not rely entirely on what they already knew; instead they had to 'reflect-in-action' or let "what-is-to-come" emerge. The students described it themselves with reference to Michelangelo: "take away everything that wasn't David'". This could lead us to interpreting the learning situation as - they tried to let new ideas emerge by letting go a desire to perform something specific and instead led play and through this, their own senses guided them to 'what-was-to-come ('future' in figure 2). On the other hand, they also described the situation as a need for conceptualizing a workshop for the consultancy firm. In this case they might still have been in a functional and goal- directed mode, which is the middle box in figure 2, where they do something different than normal, but they are not really playing. This Thorsted calls a 'creative-everyday-break' *"characterized by moments when we do something differently from normal, which might feel creative"* (Thorsted, 2014, p. 9). When taking a creative-everyday-break, players have not surrendered themselves to play and therefore still remain in the ontic mode.

The distinction between reflection-in-action and the creation of play-experience-learning or play-experience-Bildung can be difficult to establish. As Øksnes writes with reference to Gadamer: *"the player does not know what exactly he "knows" in knowing that"* (Øksnes,

2013, p. 147). What is important for us to emphasize is that the approach and possible outcome of the two differ from each other. To reach a not-yet-embodied-knowledge and a play-experience-Bildung (future) the students would also have to open themselves to a more ontological and existential influence, which could lead, not only to a creative idea to build on in the workshop, but also to an impression that could hold an existential impact (Hansen, 2014). In this case we would talk of a Bildung emerging from a playful moment of a certain contemplative character that makes space for new possibilities and for Truth related to who we are as human beings and not only a matter of learning (Øksnes, 2012).

CONCLUSION

Through a theoretical discussion of PBL, inspired by dialogues with a group of Danish university students and supported by a minor study conducted with the same group, this article investigates the role of play in PBL from two different perspectives. The study showed how play mediated a more honest and profound dialog between the students and their supervisor and through this meetings became more meaningful, fun and interesting for everyone. At the same time, the 'use' of play as mediator also led on to the foundation of a more trustful and courageous form of collaboration between the students and the development of a creative learning process or PpBL. PpBL is a term coined by Kiib in 2004 which sees play as a new entrance to the development of more creative students. In this article this is elaborated further and supplemented by a new model outlining three different knowledge forms related to PpBL (explicit, tacit and not-yet-embodied-knowledge) as point of departure for the discussion.

In the article, the underlying understanding of play in PpBL and the role of play in relation to the new knowledge-model is discussed thoroughly through the use of two terms – 'play-experience-learning' and 'play-experience-Bildung' (Øksnes, 2012). In play-experience-learning focus is on reflection-in-action and problem solving through Schön's perspective, whereas play-experience-Bildung is centered around the establishment of a more open, sensitive and wondrous approach to learning and 'what-is-to-come'. The latter opens to a more ontological and existential influence on students (Hansen, 2014; Käufer & Scharmer, 2007).

By bringing in play from the first meeting with the supervisor and through the establishment of a 'community of play' (Thorsted, 2014), the students seemed to get the needed confidence and courage to let go of their desire to be in control. They began to engage in the world more authentically and intuitively, which encouraged them try out new ways to approach the project and the learning process as a whole. We interpret this as an important step towards development of more creative students.

Given its small size, this study can only be regarded as a tentative study, pointing to directions for further investigations and discussions of a future pedagogic in Higher Education and more specifically the role of play in PpBL (PpBL). More extensive experiments with larger groups of students and different learning goals are needed to establish a more differentiated conclusion in the field.

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