Abstract
This text is sketching out a pedagogical framework for how children, pre-school teachers and teachers could start communicating, playing and experimenting with others across time and space, both locally, regionally and indeed even globally using digital media. The framework takes the form of a number of figures developed during different research projects where children in kindergarten, kindergarten class and primary school were involved. It is not an exact step-by-step manual but the text represents a way for pedagogical institutions to understand and design a use of digital media and digital technologies when connecting to the world around them together with children. The examples below have their starting points from kindergartens, nursery pre-school and even primary school.

Keywords
experimenting communities, open laboratories, digital world citizens, playful searchers, online education, trans-glocal play culture
Introduction
I have since 2004 conducted practical research in the field of online communication, experimenting and playing (Thstrup, 2019; Æølgan, 2018). It has taken place in national projects like Formation in a Digital and Global World in 2015 (Thstrup et al, 2015), where 17 Danish kindergartens communicated using the software Google+, today reframed as Currents. Another has been ASSIST, 2017-2018 (Thstrup, Gislev & Elving, 2018; Gislev, Thstrup & Elving, 2020), where teachers in larger schools in Denmark worked together with teachers in remote schools on subjects, the remote schools could not offer. The research also took place in mediaPLAYINGcommunities, 2007-2009 (Støvelbæk, 2009), where preschools in Europe started to go beyond an understanding of their pedagogical practise as only limited to each institution. Finally I have been part of the international project The MakEY Project in 2017-2019, where among other things 3 schools in Denmark, Great Britain and Australia tested how to experiment together online (Thstrup & Pedersen, 2020).

The basic research question has over the years been the same: How can children and professionals in pedagogical institutions communicate, experiment and play together globally? The research methods have been inspired by action research (Duus et al, 2014) including participatory observations (Kristiansen & Krogstrup, 2012) and informal conversations and interviews (Kvale & Brinkmann, 2015). I have as a reflective practitioner tried to change practice through constructing practice (Smith & Dean, 2009). I have documented using visual methods (Pink, 2013; Henningsen 2005). The communication has drawn upon the ideas of blended learning, where the education is partly physically based and partly digitally based and networked learning (NLEC et al, 2021), where focus is on how one makes people work together in networks. It could also be called digital education (Bayne et al, 2020), based upon that «…teaching is a highly contextual activity bringing together people, texts, images, locations, objects, technologies, and methods in many different ways». (Bayne et al, 2020, p. 5). The projects draw upon research in children’s culture, where digital media were included (Jessen 2001; Johansen & Larsen, 2019) where the child is understood as competent in playing and maintaining a play culture. This does not exclude that children both have a right to communicate in any format they want, including using the internet and the need to be supported and protected when doing so (Livingstone et al. 2017). Creativity and carefulness when using the digital media are two sides of the same pedagogical effort, when giving children the opportunity to become connected globally through playing and experimenting.

One answer to the question on how to communicate together on a larger scale is to establish a social and cultural meeting place (Nielsen et al, 2019), where it is possible to make meaning together in one kindergarten or school and between kindergartens and schools. This can happen through a platform meant for playing and experimenting, that is both digital and analogue at the same time. This could be inspired by Gauntlet’s term platforms for creativity (Culpepper & Gauntlet 2020), where you celebrate and make room for people, who are playing, experimenting and supporting, no matter if it is online or offline, synchronous or asynchronously or a combination. One might talk about a platform that supports or take part in the development of a trans-glocal play culture (Pedersen, 2020). Global and local becomes glo-cal (Robertson, 2013; Roudometof, 2016), which in this context would mean that there both exist a local play culture influenced by more global narratives and cultures.
but also that the local play culture taps into an existing global culture, uses it, transforms it and maybe even partly changes it. One does not only copy an existing cultural expression, one does also transform it to something else through improvising upon the expression as a kind of formula and even create new formulas for others to improvise upon. The term trans-global play culture points to the fact, that any local play culture or culture has the ability to copy and change, maintain and edit, improvise upon formulas and even make new formulas (Mouritsen 1996).

The Experimenting Community

The first part of creating a platform meant for playing is to understand that a group of children and staff together can be Experimenting Communities (Caprani & Thestrup, 2010). That is a group, where the core of the activities in the group are primarily to experiment and not only to repeat existing everyday practice around the use of digital media. The point is to invent new practice that becomes part of everyday life in the community. The community might already have a practice around how to use and change media, technology and narratives and the result might even be, that a repetition of an existing practice or adapting a slight correction seems to be the best solution. However, there is a pedagogical process where the participants in the experimenting community ask themselves in what way the given technology, media or narrative would make sense for them to use (Dittert, Thestrup & Robinson, 2021). One answer here might even be, that it does not make sense and won’t be used. At the center of the pedagogy is also an understanding of culture as a meaning-making and creative practice (Gauntlett & Thomsen, 2013) and as emerging and relational (Jantzen, 2005; Jantzen, 2013; Nielsen et al, 2019), which has the potential and consequence, that meaning is established over time through common actions in the community itself.

It is important to state that the experimenting community is not the same as children’s own play culture. One can say that children’s culture consists of three interconnected elements (Mouritsen 2002): Firstly, children’s own play culture, where they to a large extent decide themselves what to play, how to do it and for how long. This you can frame as culture by children. Secondly, you can talk about culture meant for children like toys, games, theatre or movies or activities in a museum or a library. Here it is often initiated by teachers, pre-school teachers, other grown-ups or of course institutions. Finally, you can talk about culture with children, where both parties are involved in a common process. Culture with children is in between the two together and requires certain considerations. The experimenting community is relating to children’s own play culture in the sense that there is an exchange going on between the community and the children. Examples of what to play and how to do it are being told about and used in the community as inspiration and vice versa. What is going on in the community can become inspiration for playing in children’s own play culture. Culture for children on the other hand can become a source of material for the experimenting community. Any media, narrative or technology can be used, altered or transformed to examine ways of playing, telling and experimenting. This is also called media play (Thstrup, Henningsen & Jerg, 2009). All of which can take place in physical or digital worlds or combinations. The experimenting community can be placed as an example of culture with children that can relate to the both culture for children and children’s own play culture.
The Open Laboratory

The community experiments in *Open Laboratories* (Thstrup & Robinson, 2016), that are open in several ways. In the open lab it is not decided in advance what materials, tools, processes and spaces to use. This means that digital and analogue materials are intertwined in processes, where it no longer matters, where it came from, but what the actual combination might consist of. There is in principle no hierarchy between processes and traditions. Everybody involved must be part of the common research process when experimenting and during this process be open for other suggestions and attempts.

Fig. 1 below demonstrates a possible process. A, B and C to the left in the model illustrates existing use, experience on and points of view upon certain media, technologies and narratives. In the open laboratory A, B and C are brought together and a new practice might emerge from this meeting place, in this case named as D. This new practice is then developed to be the common practice in the community after and outside the open laboratory has been at work.

![Fig. 1: The Open Laboratory (Thstrup & Robinson, 2016)](image)

As part of the open laboratory, both physical and virtual spaces are linked together in open-ended, social and cultural processes, where both the physical and the virtual space are important. In both spaces, the materials, tools, bodies, narratives and the space itself are unfolded according to the possibilities and the intentions but they also support, inspire and potentially change the processes in the other spaces. So the open laboratory is more a way of organizing the connection between different spaces than one being only a physical space or only a digital space.

The idea of the open laboratory derives originally from discussions on how one should define drama and theatre. One answer to this was the idea of the open theatre, where no drama and theatre traditions in advance were expelled and that included even the use of digital media (Lehmann & Szatkowski, 2001). With this background the open laboratory inherits the use of space, body and fiction together with digital media, narratives and technologies and like children’s own play becomes multi-modal (Cowan, 2017) and a space of connections and
transformations. The consequence of this is that the participants in the open laboratory need to be open to each other. Tools, materials and spaces might be used in different processes by different people. It also means that any given pedagogical method or way of playing is not just as it is.

The open laboratory changes the existing balance between formula and improvisation. As the participants in an experimenting community are experimenting, they are not only improvising upon a formula, they might construct a new formula to improvise on. In one case children and pre-school teachers were experimenting with green screen in the playground in a kindergarten. They were using a large green piece of cloth to cover objects and themselves to disappear and reappear in the video clips recorded. They also buried the piece of cloth in a sandbox in the playground outside and dug it up again to see an image appear on the screen on the tablet used. The piece of cloth was not only used as a background to stand in front of to create the illusion that an actor in a movie was somewhere else than in a movie studio. Body, space and local objects were instead of used to investigate how to create the green screen effect as part of the local activities and playing. Green screen was new to all involved and was as such a new formula to be improvised upon, but it also became a new formula, that existed and was constructed locally (Hansen, 2016).

The Flexible Meeting Place

When encountering other communities locally, regionally or globally, this might happen through the virtual spaces, where the open laboratories are connected. This might be supported by the idea of a media ecology, where different kinds of software are given a specific use or abandoned when no longer needed (Thestrup, Gislev, & Elving, 2018). It can look like this as illustrated in fig. 2 below. The yellow circles are each of them an experimenting community and they meet in the inner blue circle through a number of meeting places, that can be both analogue and digital or a combination. These meeting places can be changed and used for other purposes, if needed be. The outer blue circle demonstrates that the two experimenting communities have a common project, but also do things on their own. Therefore, the blue dotted line goes down through the middle of the two yellow circles indicating this.
Please notice that the model does not indicate anything about the activities in every single meeting place or for that matter the organization of the actual processes in and between the meeting places. It can be in the form of synchronous or asynchronous communication, analogue or digital including experimenting, playing, chatting, storing, sending and showing while using screen, body, space and face. Workspaces, makerspaces and playgrounds can be part of the media ecology as well as the ordinary classroom or lecture hall. These areas can be part of a more formal educational system as well as more informal areas understood as third spaces between schools and home (Potter & MacDougall 2017). This media ecology can unfold in many formats. It might be webcams on mounts that show ongoing physical processes and materials, forums, where inspiration can unfold through text and images, scissors and pens that together with online editing tools shape narratives and understandings of technology and media. Many options can be combined according to the interests of the participants.

The connection between people and places happens in several ways including body, objects, spaces and screens and can be framed as a media ecology (Postman, 2000), which has to do with the study of media as an environment (Scolari, 2012; Strate, 2006). Media ecologies can be seen as a dynamic and constantly changing aggregation of media wherein existing practices transform or new practices emerge. Online communication is not only about talking together in online meetings. The camera or the camera function on a mobile or tablet can be understood as the connector between workshops. If one wants to demonstrate tools, materials, objects and even processes to each other synchronously or asynchronously it is possible to do so. The webcam or the mobile phone can be moved around in the different physical spaces so it is possible for others outside the actual space to get a better understanding of what is going on. Using a mobile can be a tool to get close to a process as it unfolds. The recorded video clip or the edited image uploaded on a chat forum can become part of a generative process, where people at one place can be inspired or challenged by what people
A platform for playing

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at another place is doing. Somebody sees one image and upload their own. The camera can
become the access point between a vast, global and developing network and the local workshop
in a concrete space with concrete tools and materials (Velicu, Thestrup & Giannis, 2019).
However, the camera as the access point needs to be supplemented with both synchronous
and asynchronous ways of communicating. Software where one can upload images, video and
text and at the same time, comment on what others are doing is important.

Some examples from the project where 17 kindergartens started to collaborate demonstrate
the different ways of communicating (Thestrup et al, 2015). One example is when the children
in the different kindergartens were using an app, that could be used for recording short video
clips and play them backwards. These small video clips were shown on G+, a piece of software
that allowed the participants in an easy way to share their videos and comment on them.
In the run of a very short time, a lot of different examples were uploaded on how to use the
backwards app. One example was how to slide up small roller coasters in the kindergartens.
Another was to stack green boxes on top of each other in different ways, film them while
falling and watch them magically rise on the uploaded videos.

The actual meeting places used are always in a certain format that is being put together with
the intention to try out something, that being the examination of a method, an expression or a
content or even different numbers of participants in each part of the meeting place. So every
single meeting place might be constructed slightly different during the period of use. It is like
a number of LEGO-bricks that one in principle puts together in an infinite number of ways
even to the level, where the bricks themselves might be changed or replaced. One could argue
that the examples above use the software in ways where play are supported. The stacking of
boxes are a formula, where you immediately can improvise inspired by what you have seen
online. It is even possible to stay in physical spaces using body and objects and just add a
digital element through the mobile or tablet. The processes also include watching the videos
of others, to store video clips for later use and even synchronous communication through
zoom or another video conference system to talk about how the videos were made and to get
new ideas. In the flexible meeting place, the single places and the possible action between
them relate closely.

Part of a network

The experimenting communities in the flexible meeting place are ready to be inspired
and challenged by others outside the laboratory. In one laboratory, the children and the
professionals might play and experiment in ways others do not. The professionals might
have the same or different views on pedagogy, children and society. However, that does not
mean the possible cultural or pedagogical differences are a permanent barrier. During the
encounter views might change or common ways of interacting and reflecting upon each other’s
practices can be established to investigate, understand and reflect upon different challenges
and values, that might be local, regional or global. The open laboratory mentioned earlier
on is not only open to the combination of digital and analogue or involving the internet in
the process in the laboratory, but also represents an open pedagogy, where others outside
might have interesting ideas on processes, tools, materials, spaces and challenges (Thestrup
& Pedersen, 2020).

One example of the possibilities of exchange and collaboration are the following. In one
project, the children in two kindergartens started singing the same song, when they met on
Skype. Later on the children in each kindergarten were filmed while they were dancing. These videoclips were uploaded to a secure drive and edited into one small music video (Lauridsen & Hansen, 2016). A second example is a kindergarten in Denmark and a kindergarten in Italy, where they used Book Creator as their common platform to share stories, ask questions about their local lives and even made a special version of the classic memory game. One kindergarten would send six images and the other had to guess which one were paired (Lauridsen, 2016). The catch was that the pairs were not two completely alike images, but two that had some similar qualities. One example would be a yellow flower and fire. Finally three schools in Britain, Australia and Denmark, who shared images of spaceships, planets and robots on a common platform (Thestrup & Pedersen, 2020). However, the catch was that they should not copy each other, but start transforming, what they saw. The others were inspiration for new spaceships, planets and robots.

These examples have several things in common. They all use the local spaces available and involve both body and images. Some kind of exchange is happening, where the actions of the others in the network is of importance and experimenting is needed. The kindergartens who did the music video had never done this before. The memory game points towards a certain possibility of meeting each other trying to interpret, what the others mean and understand by a certain connection or a chosen expression. The interpretation is an integrated part of a game that can be played by children from different contexts, as they establish and use the same formula or basic rules to improvise upon.

The example above on the three schools starting to collaborate is about deliberate transformation and has more implications than the memory game. The goal is not that everybody involved copy what others are doing but that they reflect upon what the encounter means and transform it for their own needs and possibly for the common interest in the network. It can be an outspoken way of understanding the activities that one has to transform and not only copy. There can be the question of not having the same kind of resources behind this idea. One experimenting community might have tools, materials and spaces others do not have access to and instead of installing yet another hierarchy between the participants, one installs the value of communicating, inspiring or challenging through transforming. When receiving a video or an image from another experimenting community about a narrative or a certain use of a technology, then one can change materials, tools, space or processes to alter an expression or a given use more or less, document it during the process and finally return it. Then the pedagogical process can continue as an ongoing give-and-take between the communities as long as it is considered interesting and vital for all parties.

The consequence of transforming is also that the pedagogy has to be open in yet another way. In a process of transforming, the single community in a network might be interested in following other methods and aims than defined in the community itself so far. The community has encountered something new, something different or something, it might not understand right away. The flexible meeting places involving several experimenting communities can then take the form of a platform of creativity, because the intention is to experiment. As fig. 3 below demonstrates, the process of transformation might indeed be an ongoing process. Contact has to be established, communication tested and ways of experimenting together needs to be tried out and rearranged according to needs.
To the far left in figure, the experimenting community is in no contact with someone else outside itself. There is a lot of potential and the different members of the community is perhaps already using social media themselves or know of some who does. If it is a school or a preschool it might be using some kind of digital learning management system, but there is no direct contact to the world outside the school as an experimenting community. Then contact is established, but there is not yet established any specific meeting place for the experimenting community to use when communicating with another group of people. The flexible meeting place is then established as a third possible step and this might be developed even further, where the experimenting community is in contact with a number of other communities. That is demonstrated in the final step as seen to the right in the figure above.

A school or a preschool might be part of several larger networks without abandoning the local connection. One can even talk about a feeling of *globeness*, meaning that the organization does more than simply reach out to the wider world but instead sees itself as a network imagined and acted out through strong connections across time and space (Bayne et al, 2020; Sheail, 2018). At the very least, a concrete school or pre-school can be in a process of changing from only being local to be more global with many collaborators worldwide. A game might be repeated, altered or improvised upon several times in these collaborations. It all depends upon where the experimenting community is in the development of a collaboration between partners in the different networks. The aim of the process could be to establish a playful connectedness, where the common unfolding of play, the exchange of play and finally the change of play could be at the center of the open laboratory and the flexible meeting place.
The playful searchers

To be playing, experimenting and communicating in an experimenting community requires some reflections on the role of the pre-school teacher and the children in the experimenting community. It can also be quite difficult to know what to encounter or how to react, when someone wants to communicate or react to something the community has uploaded. Fig. 4 below is a suggestion for how the pre-school teacher can place him or herself in this context.

The pre-school teacher is not only an instructor or a facilitator, but one participating in the process interested in finding an answer to the questions asked in the pedagogical process. Therefore, the term will be *The Participator*. Please notice that the term does not yet exist as a word in English but is justified through the explanation. It might or might not become part of the English language at one point.

*Fig. 4: The Participator (Thestrup, 2020)*

To the left in the model, the pre-school teacher is outside the pedagogical process, that the children are part of. He or she mainly observes and frames, what is supposed to go on. To the right the preschool teacher is part of the process. Notice the two arrows. The one on the left goes from the preschool teacher toward the children but the one on the right illustrates another process. Here it is an ongoing infinity process, where everybody involved can learn from each other. The preschool teacher might be the one, who initiates a question, a theme or the use of certain, tools, materials, spaces or processes, but the point of this is to make it possible, that the children involved also can suggest ideas, demonstrate ways of playing or experimenting, ask questions. When they do this, the pre-school teacher might be inspired or even learn from the children. This new inspiration or challenge he or she then can use to send new questions back to the children. The principle is quite simple: The more you might learn from me, the more I might learn from you. You might upload a video or write a messenger-text or show a photo of something that might give me the opportunity to learn something and
then respond to it. The process is infinite and goes both ways. The pre-school teacher is in a process of improvising over a formula with the children as equal partners. However, so are the children. They too can engage in an exchange with the pre-school teacher. The infinity process and the teacher as participator actually fits the situation of playing very well. The teacher and the children are all involved in the rules and the change of rules and can offer suggestions for improvising upon formulas. The infinity process potentially goes between all involved and not only between the pre-school teacher on one side and the children as a group on the other.

The pre-school teacher and the children are potentially involved creating, expanding or leaving networks, they are part of and they might be in a situation, where they have to inspire, challenge or change methods and intentions in the encounter with somebody else or somebody’s statements, expressions or use of media, technologies and narratives. One cannot take it for granted, that a cooperation is easy to establish or has been established when any kind of collaboration is starting. The experimenting community has to be able to use the internet and the potential collaboration as playful searchers (Thstrup & Gislev, 2021: Mackenzie et al, 2021). The community must look actively for information, inspiration and play an active part in the construction of the communication, playing and experimenting required.

A part of all the community’s communication is of course also to say no to communication, trying to figure out why someone is saying or doing something and show it is possible to talk politely and respectfully to others online. The children and the pre-school teacher can be understood as searchers, who establish connections and investigations and they can be understood as playful, as they actively experiment and play with media, technologies and narratives inside the single community or together with others. When establishing this kind of communication it is a possibility to listen and talk in a way, that makes exchanges possible and at the same time critically discuss when a mutual productive form of exchanging is not possible or wanted and then leave them be. The playful searchers in an experimenting community might also be a strong and resourceful community when demonstrating important ways to communicate.

The playful searchers in the experimenting community using the idea of the open lab as a pedagogical method and principle can be understood as a culture of creativity connected globally, where cultures meet and communicate (Gauntlett & Thomsen, 2013). One might argue that at the center of each culture, there exists the possibility to both maintain existing cultural expressions and being able to change them. Children’s own play culture is no different in that regard. It is a question of establishing these qualities when encountering other people and cultures around the world when trying to solve our common problems.

The playful searchers in an experimenting community are not in themselves a trans-glocal playculture, if this kind of culture is defined by only children unfolding it. Nevertheless, the experimenting community could at least relate to different actual trans-glocal play cultures and support the children in the experimenting community in how one could be part of these cultures. But an experimenting community including both pre-school teachers and children could also become a part of different emerging trans-glocal playcultures across the globe by simply joining them and add content and suggestions to them. The search for playing and experimenting can make the experimenting community an important part of any
situations, where people experiment and play together because it can come up with many different suggestions and solutions during the processes of communication. Finally the experimenting community can be seen as a trans-local playculture in itself, as it is defined by the communication and experimenting between different partners inside the community. The playful searchers do have the possibility to develop a digital and analogue platform, when they enter the internet, encountering new cultures and challenges out there.

References
https://doi.org/article/aba105d1075948f895b343e91f1f92d3
Global Studies of Childhood: Global Makerspaces: Creating places for children’s play, experimenting and communicating globally. Special Issue. Vol. 10, Issue 3, September 2020, localized 03.03.2021 at https://journals.sagepub.com/toc/gsca/10/3
Hansen, M. S. (2016). Børn som verdensborgere Lab 1. video. localised 15.03.2022 at https://www.youtube.com/watch?v=71NwZG6mFMw&list=PLAVS-GEyTChzqj6n51XfWWBTIXU9ZhW&index=2


Thestrup, K. & Gislev, T. (exp. 2021). Campus beyond Campus. Call for responses to the Manifesto for Teaching Online. Part of *Collective Response Article, Postdigital Science and Education*


**Biography**

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