Abstract
This paper explores the use of playful triggers when doing research with young people 14-17 years old, with the aim of providing a meaningful and mutual outcome, where both participants and the researchers gains value, this is done through Play Probes. As there seem to be a challenge when doing research with young people (Duncan, Drew, Hodgson & Sawyer, 2009) and there is a general agreement that young people are going through a complex period in their life (Kjeldgaard & Askegaard, 2006; Amit, 2001; Simonsen, 2003), this paper presents a take on how to provide a safe space for expression, for young people, that through playful triggers in the probe activities can intrinsically motivate young people to participate (Hektner and Csikzentmihalyi, 1996). 54 play probes have been filled out by young people from a Danish public school, and based on this, there are indications that the play probes can evoke motivation for participation, while also providing information to the researcher.

Keywords
young people; play; probes; motivation; participation
Introduction

A focus on involving young people in design-processes has increased recent years (Iversen & Hansen, 2013), this happens through approaches such as participatory design, interaction design and similar. However, when working with young people, spoken and written words tend to be the main – if not only – communication form, in the everyday work-life involving young people (Social worker, Municipality, Denmark). In research using interviews, questionnaires etc. it seems that this might not always be the optimal way of learning about young people’s lives (Duncan, Drew, Hodgson & Sawyer, 2009). In this research, there is an indication that young people also seem to be more inspired and willing to share, when involving different opportunities for expressing themselves, which is supported by a doctor and researcher focusing on young people’s mental health, stating that there is a discrepancy between what can be seen from the statistics showing the rates of young people with e.g. anxiety, and what the young people chose to share when involved in research or being asked (Doctor and researcher, Social Science, University, Denmark).

This paper presents a method aimed at young people 14-17 years old; Play Probes. The research puts emphasis on that the outcome should go both ways; not only should the person setting up the research get an outcome, but the young people should as well. A focus on play and design was hence chosen due to their attributes:

Design was chosen due to the diverse methods and use of materials, one example is the Say, Do and Make tools and techniques (Sanders & Stappers, 2020), where the research, dependent on the aimed knowledge, could benefit from different types of methods. Interviews tends to inform about the surface of a person; what they say and think, shared explicit. Whereas generative sessions involving materials and a process of making (something), tends to open up for more in-depth knowledge about a person, such as what they feel and dream.

As previously stated, young people are often met with spoken and written words in research, but not as often with »Make«, and hence exploring this category through Generative Sessions (Sanders & Stappers, 2020) – for the play probes, generative expression forms, might be valuable to explore combined with play.

Play can be defined and presented in many different ways, however there seem to be a general agreement that play can benefit the one playing, both short-term and more longitudinal (Sutton-Smith, 1997), e.g., there are indications towards a link between play,
enjoyment and the ability to cope with obstacles, such as difficulties in school (Sutton-Smith, 1997). Huizinga (1955) argues that play can be seen as the area where exploration of the real world can happen, but in a mutual and safe way, e.g., fighting as play. Extrapolating on this, play – or at least playful elements (Sturm, Tieben, Deen, Bekker and Schouten, 2011), could create a space where the participants, if met with appropriate playful triggers, will feel a sense of enjoyment and through that an increased motivation for participating. This paper positions in line with this suggestion, as the purpose is to provide an enjoyable experience during which, young people feel safe to express themselves, while also opening up for more in-depth perspectives for those conducting the research.

Thus, the emphasis is on providing young people different forms of expression when participating in research, through the *play probes*. It searches to open up for young people’s perspectives, and accommodate for their individual preferences of expression, while also enabling a sense of enjoyment for the participants, through playful triggers. Therefore, this paper searches to answer the following:

- In what way can generative forms of expression make the participation meaningful for both the participant and recipient of data, when doing research with young people?
- How can playful triggers be used, when doing research with young people?

The complex Youth

During the transition from child to adult, it is generally acknowledged that the teenage-year people go through, is highly complex and influenced by many different factors (Simonsen, 2003), such as school, family, friends but also expectations and prejudice from the society, media and community (Amit, 2001). When focusing on young people in research, Duncan et al. (2009) argue that this target-group is more complex to work with than others, as they are in a complex cross-field, both internal and external. Kjeldgaard & Askegaard (2006, p.232) support the external complexity, as they state:

»Youth is thought to constitute an in-process identity that is enacted at the individual level... as well as at a cultural level... on the one hand, marketers praised the continuously innovating youth culture as an engine for market expansion and profits; on the other hand, public policy makers and moral watchdogs condemned youth cultural practices as threats to the social order or problematized youth as a vulnerable population desperately in need of adult stewardship«. (Kjeldgaard & Askegaard, 2006, p.232).

Amit (2001) supports this, by stating that youth culture is not merely something that depends on the youth alone, but also the operation in wider networks across ages and statuses. Hence the culture of youths, are both something influenced internally, externally, locally and globally. The target group for this research, are between 14 and 17 years old, as the emphasis is on the group of young people who are still, in Denmark, following the public school-program, but are soon to get more autonomy regarding their future choices, relating to education, accommodation, friends etc. As there are indications that getting young people to share in-depth knowledge about feelings, dreams, etc. (Sanders & Stappers, 2020), can be a challenge (Duncan et. al, 2009), and this age-group being complex in different levels
(Kjeldgaard & Askegaard, 2006; Amit, 2001; Simonsen, 2003), enabling them to express themselves through a making-process could, as previously stated, be beneficial. Additionally, by using elements from play to trigger enjoyment and motivation this process could then also be of value for the participants and even encourage them to stay within the process for a longer time.

Hektner and Csikzentmihalyi (1996) argue that people can be considered intrinsically motivated if they are free to do what they want, simply due to them enjoying it, rather than being pressured into doing it. They (Hektner & Csikzentmihalyi, 1996) further state that a benefit of young people being intrinsically motivated, are the experiences of both enjoyment and a more positive self-esteem, and explain that: »A key dimension of intrinsic motivation is interest, a positive affect that occurs in the interaction between a person and an activity«. (Hektner & Csikzentmihalyi, 1996, p. 4). Interest demands for need, desire and capabilities to be met in an appropriate degree, which can be achieved through novelty and optimal challenge (Hektner & Csikzentmihalyi, 1996). Hektner & Csikzentmihalyi (1996) also found that when researching intrinsic motivation for young people in 7th to 10th grade in the US, the young people devoted more time to something when feeling intrinsically motivated.

Sturm et al. (2011) used playful persuasion through playful mechanisms, to encourage physical activity for teenagers, but with the motivational factor aimed at it being fun, not because it was good for them: The health benefits came secondary in the experience, though it was the overall purpose. This research positions in line with both Sturm et.al (2011) and Hektner and Csikzentmihalyi (1996), as the young people should be motivated to interact with the probes because it is fun, more than because of the research. The play probes should therefore have content with different types of challenges, while also incorporating aspects of novelty, in order to enable intrinsic motivation within the young people, both for them to engage in the probes and hence provide stronger data to the recipient, but also letting the young people enjoy their interaction with the activities. Therefore, a focus on playful triggers as the motivation for participation was chosen for the play probes.

Play and young people
Mouritsen (1998) argues that play is perceived as something just for children: »This does not mean that adults do not or cannot. They can and do – more than we are normally aware. But it means that the way the concept of adulthood is constructed in our culture does not involve play as a project, as meaning-bearing in adult life. Other values take priority. Here adulthood is contrasted with childhood, when play is seen as a primary medium and project for the children«. (Mouritsen, 1998, p. 13). This can perhaps explain the ambiguity of young people and play, when talking to young people, the word play is almost non-existing, though during the research for this paper, spending just a few moments with young people in their context such as free time at school, playful moments occurred on a regular basis, e.g: teasing each other, coming up with dance-moves, playing »tick« or jumping upon each other’s backs and running around. If play is generally perceived as something that is a project of children (Mouritsen, 1998), then young people might feel a need to distance themselves from that, in relation to them distancing themselves increasingly from being a child, and hence the resistance towards play might be more culturally based than based on whether or not they actually play, as in the case of adults.
From probes to play probes

Probes have first been presented in the research of Gaver, Dunne & Pacenti (1999) as a way to evoke inspiration for designers, through different activities done by participants in their own homes, such a probe-kit could include postcards to fill out, disposable cameras with an assignment or even a diary with a specific framing (Carter & Mankoff, 2005). The play probe is inspired by this concept, but also applies aspects from newer-defined probes such as design probes (Mattelmäki, 2006), where the probes are used more directly in analysis and as a part of a larger data-gathering, e.g., interviews. While the design probes are used to influence a design-process and the cultural probes are aimed at inspiration for designers, the play probes have a different intention. Here the participants’ shared information is the »product« either on its own or combined with e.g., interviews. Thus, the play probes take inspiration from both the cultural probes (Gaver, Dunne & Pacenti, 1999) and the design probes (Mattelmäki, 2006), and in terms of activities, it contains different types of diaries through either photo, words or visuals (Carter & Mankoff, 2005). But the play probes are with play in focus, in how the activities are framed.

While the play probes, in their nature, have a constricted framing, they are still designed towards certain play types. The play probes contain activities with playful elements as triggers. These are based on construction-play, fantasy-play, game-play and/or physical-play (Legaard, 2018), together with tasks based on childhood memories on play and supported by descriptive materials, such as diaries. The memory-based play activities are often used as the easy accessible activities, enabling the participants to quickly getting a feeling of achievement. Whereas some of the activities involving playful triggers, require more effort from the participants, which is in line with the approach from Gaver, Dunne and Pacenti’s (1999) cultural probes, where they implement both time- and focus-demanding activities and the activities that are easy and quick to do.

Figure 2: Two images of content from the play probes. Left: a map of a playground. The participants are asked to map those activities to current activities. Right: An example of creations. The participants were asked create a representation of something important to them, in this case friends.
From construction to fantasy

One example on how the activities are designed, is presented below together with some of the underlying research.

Through play, it is possible to separate from the real world, while still dealing with or creating an explanation of a (real) situation, which makes play a space that gives an opportunity for safe exploration of something that might else not have been conceived as safe, e.g., animals biting each other in play to learn about something that later in life might be a matter of life and death (Karoff, 2013; Sutton-Smith, 1997) or, for the play probes, to open up to something that might be difficult to talk about for the participants, in a way that gives the participants control over how and what they choose to share, thus creating a safe space for expressions.

Legaard (2020) who deals with aesthetics affording different types of play, such as the four types mentioned in the previous section, states that when involving in play forms within construction, if at one point the playful practitioner during construction-play has a certain imaginary space in mind, that they are building towards, the gap between the imaginary world and the real world starts diminishing. When that happens, there is a chance for a degree of what he calls »...investigative storytelling«: meaning that an exploration of what story the playful practitioner wants to tell, can emerge. This is what is aimed for, in the constructive-activities within the play probe, as the participants will start out with materials and only a short and open-framed description, telling them which direction to move towards, e.g: »...create and describe a creature that informs something about you«. During the process of making, they are asked to define the back-story of their creation, by giving it a name and specific features or abilities relating to themselves. Through the exploration of the material provided, together with an abstract framing (e.g. using the word creature), the participants hopefully will get ideas about what to create encouraged not only by their reflections and thoughts, but also the sensory experience of the material(s).

The difference compared to other probe-activity might not be visible at first, but in the play probes the emphasis lies upon the framing of the activities with play in mind, both when defining the activities, choices of materials, by providing opportunities for the participant to disrupt the framing (e.g. a small bag with different types of materials with no direct purpose, are present in all the play probes) and in the diversity of the activities.

As stated, probes have some constraints in its own nature, that could arguably conflict with the state of play experienced, which meant that not all types and approaches towards play would be doable, especially considering the target-group and their reluctant perception of play. Therefore, the type of activities is chosen attentive to the intended experience for the participants.

First example of this, is two construction- and fantasy-play activities: one with silk-clay and one with wooden-bricks, where the participants are to create something, e.g., a monster, animal-like creature or object, that informs something about themselves. The participants are to choose what, how and to which degree they interact with the activity, hence they have a high degree of control. When they have made their creation, they can fill out a small note stating different features about their creations, such as a name or title, if there are special features or powers etc. Thus, moving from construction-play over to fantasy-play (Legaard, 2020).
Another example is a »go and explore« activity, where the participants are given a plastic bag, that they are asked to bring with them. They should then search and find different objects on their trip, that represents somethings about e.g., their home or their childhood, that they are to put in the bag and describe. This activity is based on a combination of the idea of physical-play, the game-play-mechanic »search-quest« (Spierling, Kampa & Stöbener, 2016) and similar probe-activities, e.g., a festival study by Carter and Mankoff (2005), where the participants are to collect items as small tokens during a festival.

Method

A pilot test was designed to explore which types of play activities, resonated best within the young people (Sharp, Rogers & Preece, 2010), and based on that, different probe activities were developed and tested by young people from three 9th grade classes at a school in Denmark.

For the main test, 60 pupils in a public school in Esbjerg, Denmark, were handed probekits containing between five to seven small activities. Each activity was present in 20 probes: Some of the activities had very similar content but with different word-phrasing, while others were based on the same play-type, such as construction-play, but with different materials. 54 probes were handed back either completely or partially filled out, whereas six probes were either not handed back or not interacted with.

There are not a clearly depicted way of analyzing probes, as the analysis of these subjective and aesthetically materials are often in research presented as subjective and ambiguous (Gaver, Dunne & Pacenti, 1999; Mattelmäki, 2006; Carter & Mankoff, 2005). Therefore, the content from the 54 probes, were categorized, summarized and used to find patterns and outliers to discover tendencies. This approach was chosen as it can be used for complex datasets, in this case due to the content being a combination of different types of data (Sharp, Rogers & Preece, 2010; Jordan & Hendersson, 1995). Highlighted themes and tendencies extrapolated from this, are presented under Empirical Findings.

Nine selected probes that represented i.e., seven general probes in terms of what was filled out and gender while also containing different activities and two outliers were the probes in some way indicated a different level of information, were displayed for different professionals chosen due to their work with young people. These were: Different teachers, a social worker (SW) from a municipality, responsible for the division working with young people in need of guidance or help, and a doctor and researcher (DR), researching young people’s mental health. They all work with young people, but on different levels; the teachers meet all types of young people, SW works specifically with young people in need of help and DR focuses on learning about young people and meet them through his research. Based on these presentations, semi-structured interviews (Sharp, Rogers & Preece, 2010) with the professionals were conducted. Go to Figure 3 on the next page, to find the nine probes.
Empirical findings

As previously stated, 54 out of the 60 probes provided to the participants, were interacted within various degrees when handed back, all of them applicable for further analysis. The participation was emphasized as being voluntary, as the purpose of the test, was to discover how young people would approach the play probe and the activities and materials within the probe. Across the three classes who got the probes handed out, the six who did not participate are evenly spread out, and the same goes when looking at gender.

Feedback from the teachers

During the three weeks, where the participants had the probes, the teachers in their classes responded that the young people often talked to the teachers about the probes. The following two aspects were highlighted from all the teachers, as aspects that many of the young people shared with the teachers across the three classes:

The young people were happy about the probes, as they experienced their families, both parents and siblings, being curious about the probes and in some cases even joining in on the activities in the probe. All the teachers got the impression through the conversations, that the young people longed for more interaction with their families, and the fact that the probes provided a curiosity in the families, supported this desired interaction.

The young people were surprised by the content of the probes, as many of the activities were not similar to what they meet in their everyday-life. Some associated the activities to fun things they did when they were younger, e.g., making their own slime (probably related to the silk-clay). The teachers stated that many of the young people talked about the probes as being
…”strange, but also fun“ and that the probes often were a topic of conversations between peers, hence in some way evoked an interest or curiosity.

Empirical exploration
When looking upon the findings, different tendencies arose. Some based on the materials and framing of the activities, other tendencies appeared from the information the young people shared in the probes. Both types of tendencies are presented below.

Themes
Different themes arose through the analysis of the probes. For this paper, the relevant themes, are shown below together with just some of the keywords the young people shared in their probes and then presented more in-depth in relation to which tendencies could be extrapolated from the probes:

<table>
<thead>
<tr>
<th>Relations:</th>
<th>Parties, friends, being together, playing computer games</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise:</td>
<td>Fitness, running, training</td>
</tr>
<tr>
<td>Gaming:</td>
<td>Computer, PlayStation</td>
</tr>
<tr>
<td>Identity:</td>
<td>Sentences such as “beneath the surface lies the real me“</td>
</tr>
<tr>
<td>Home:</td>
<td>House, safety, together</td>
</tr>
<tr>
<td>Family:</td>
<td>Board games, cleaning, siblings</td>
</tr>
<tr>
<td>Creative:</td>
<td>Painting, singing, writing stories</td>
</tr>
<tr>
<td>Phones:</td>
<td>TikTok, social media, FaceTime</td>
</tr>
</tbody>
</table>

Figure 4: Some of the themes and their keywords, from the play probes

Relations was often presented as a theme surrounding leisure-time and in connection to friends especially, e.g., often the male participants connected friends to one of the two themes: Exercise and Gaming (which were not emphasized as much for the female participants).

Identity tended to have a deeper level of reflection upon who they are and how they are perceived or how they perceive themselves. One example can be found in Figure 5, from a 15-year-old female who describes that she attempted to create a house, as it represents herself: she describes the house (herself) as inviting and with room for everybody, but also a bit different when you get to know her/get inside the house as it looks different from the outside than on the inside.

Some of the words had a critical nature, using words such a naïve, embarrassed, isolated, being different etc. These words were present, mainly in the probes from females, and in only few incidents, from male participants. Male participants on the other hand, seemed to emphasize words such a strong and loyal. However, they did not use words for being smart or clever, this could be connected to the tendency from the probes, that the males often associated the theme School with words such as tired, boredom and frustration. An example on this, can also be found in Figure 5, a 16-year-old male participant drew his school as something that challenged him, he continued on the following pages by drawing different courses and homework, that too, challenged him.
For the themes Home and Family, there was a clear tendency that the emphasis was on being together and the sense of belonging and feeling safe, presented in many different forms in the probes. A few incidents were more ambiguous when describing the family, such as «... different on the outside compared to the inside», where it could be understood in different ways, but held against the rest of the content from that specific probe, with positive aspects of home and family represented there, it indicates a certain direction. There was also a tendency that Home and Family, and the theme Creative had a connection, especially for the female participants, who often put them together, e.g., «I like to write poems and sketch, when I’m alone in my room». Some even supported this by sharing drawings in the probes, see the two examples below in Figure 6.
Technological representation
There were only few incidents where their phones were in focus. This can be due to many reasons or a combination thereof, e.g., the materialistic nature of the probes, but it could also be due to their phones being some form of a natural extension of them and hence not perceiving it as an object on its own, as the times where it was present usually was through other mediums, such as TikTok and Youtube or under frustrations during a week, one mentioned that he was missing his charger. This would require a further study into the underlying reason, but it is a surprising outlier from the themes, given the target-group. The computer and/or »gaming« on the other hand, is mentioned regularly in the probes from the male participants, both as something they do on their own and, more often, with their friends.

Play triggers in probes
As previously mentioned, there is a clear tendency that the activities involving creative outlet, evoked a deeper level of reflection and investment of time. This is also evident, if compared to those play probes, that did not contain this type of activities: The general level of involvement in all the probe activities seemed higher, based on the outcome, for those probes that contained one or two construction-based activities, than those which did not.

Figure 7: An example of a creation from a play probe, made with silkclay

The same tendency is shown if looking at activities that only had a descriptive nature, e.g., writing a list of things the participants liked to do on their own and with others, compared to the same framed activity involving two spheres that the participants was intended to fill with the information. If the goal is to get the young people to share as much as possible, there is a clear tendency, across gender, that involving a physical element, evoked a higher degree
of data, based on comparison between these two types of activities. See Figure 8, for two examples of this activity with and without spheres.

![Figure 8: Two versions of the same activity. Left: Written as a list. Right: Put into spheres](image)

One of the activities involving construction, was different. Twenty of the participants were presented of an activity, that involved wooden pieces, glue etc. The activity had different types of framing, all aimed at representing aspects of the young person’s life or personality, or something important for them. Different wooden materials were tested for this, some with only one type of piece (matchsticks) and some with different forms and sizes (small bricks, balls etc.). In the case of the activity with matchsticks, it could be seen that all participants had attempted to create something, but with only two exceptions, where the participants chose to involve other materials from different activities, all the others did not complete this. It seemed that the materials where too difficult to deal with and hence, though clearly an attempt was made to create something, no information could be extrapolated from these cases. This is in line with Csikzentmihalyi (1996), who argue that there must be a correlation between challenge and competences, as the materials chosen, seemed to influence whether or not the participants could succeed in this activity.

**Are the probes providing a safe space?**

Based on the interviews with teachers, both some who knew the participants and one who did not, they all expressed surprise about the level of involvement from the young people in the classes. That 54 out of the 60, actually participated though it was emphasized that it was voluntary, and that even the male participants filled out the probes without making a mock out of it, was not expected from their side. In the contents from the probes, many of the participants chose to share reflections about themselves, that both contained involvement
and vulnerability, which in some degree indicates that the probes, did create some version of a safe space for them to express something about themselves.

Considerations for the future
One thing missing, is the interviews with the participants. To ensure that the play probes, are doing what they were intended to do; creating a safe space for expression, while also providing meaning for the participants, the study would benefit from the voice of the young people being emphasized more. However, as this is a part of a larger study, and the test took place during Covid-19, it was not possible to conduct interviews with the participants at this point.

An element that could be considered in implementing, is the use of parody: «Parody offers a safe space in which flirting with what students know to be politically incorrect is sanctioned». (Duncum, 2009, p. 237). Looking at parody from the perspective of play practices, it creates a space for exploring elements of the play practice exceeding, where boundaries can be pushed while still expressing something valuable (Karoff, 2013).

Conclusion
There are clear indications towards benefits from rethinking research with young people: involving playful triggers in a probe to encourage intrinsic motivation and fun (Sturm et.al., 2011; Hektner and Csikzentmihalyi, 1996) seem to contain possibilities. The play probes show tendencies towards creating a meaningful experience for the young people, as they indicate having a desire to interact with it and that they enjoyed the participation, at least some of it, this could also be seen in the number of participants though it being a voluntary activity presented through their school. Even their teachers did not expect, for one that so many chose to participate and secondly that they did so, in an honest way – the teachers revealed that they were concerned that some of the participants would respond in silly or even inappropriate ways, but no one did. The majority of participants even decided to share more intimate details about themselves, such as feeling different and how being under pressure, could lead to losing some of oneself (as the lizard loses its tail).

Based on both the number of participants, the information they shared and the reactions observed by the teachers, it seems that the participants actually, to some degree, enjoyed participating. Follow-up interviews are however necessary to be able to distinguish what worked well and did not work as well within the play probes, which will be a future study based on the findings presented in this paper. When presenting the content of the filled-out play probes to professionals working with young people, they all responded positive towards seeing the potential they could get out of the method, and hence the play probes seem to create a space where both involved parties can get something out of the method.
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Biography

Line Gad Christiansen is a PhD-fellow at the Designschool in Kolding, at the laboratory Design for Play. At Design for Play, she has among others worked with teachers from public schools and high school, in how to use design and play in teaching, and with companies working with children and young people, in how to include the users, more specifically children and young people, in a design-process. In her PhD she is exploring the use of play triggers and materiality when working with young people, by developing play probes to gain insights to young people. This paper is a part of the underlying research for the PhD. She has a background from Aalborg University surrounding interaction design and user experience, with a special focus on young people and children, both with and without special prerequisites, touching upon topics such as motivation, learning and play.