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Crafting Humorous Soft Toys: Incorporating Humour to a Holistic Craft Process in Early Years Education

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Abstract

This study explores humour's role in a holistic craft process when 7–8-year-olds design personalised soft toys. Humour enhances learning environments by fostering joy, belonging and a positive atmosphere, acting as a motivational tool in experiential and arts-based learning. The study aims to answer the following questions: (1) What are the humorous characteristics of the soft toys created by the pupils? (2) How does the crafting of humorous soft toys proceed? Employing an educational design research methodology, the project involved 36 first-grade pupils from an urban Finnish school over a 10-day intervention. The study examines how humour, when integrated into a holistic craft process, supports the making and designing of soft toys. In the study, the pupils created humorous soft toys, often anthropomorphised with exaggerated or contradictory traits. Challenges emerged in translating 2D drawings into 3D soft toys, particularly with sewing and fabric painting. Nevertheless, the final products were unique and evoked positive emotions. The findings suggest that incorporating familiar elements, such as humour and soft toys, into the holistic craft process in early years education can enhance motivation and learning outcomes, thus supporting the integration of humour into educational contexts to foster creativity and emotional expression.

Keywords

soft toy, holistic craft process, humour

Introduction

When craft design starts from personal life experiences, sensations and narratives, it transitions from a traditional technique and product-centred craft towards a more holistic craft process, where design and making progress alongside skill and expression (Laamanen & Seitamaa-Hakkarainen, 2009). The Finnish National Curriculum for Basic Education (FBNE, 2014) suggests that in first and second grade (6–9 years old pupils), familiarizing with the holistic craft processes should be supported through child-specific expressions and activities, e.g., imagination, stories, drama, play, games and the natural and built environments. However, the national curriculum for education (FNBE, 2014) does not mention humour, even though humour has many positive effects on learning in the early years and is vital to children's life experiences (Airenti, 2016).

In general, humour brings playfulness and joy to learning, develops feelings of belonging and generates a positive atmosphere (Anttila, 2008). According to Weisi and Mohammadi (2023), most teachers strive to develop a cheerful and friendly atmosphere in their classrooms through humour and feel that humour supports involvement in learning by relaxing and comforting

learners. Even though humour is often seen mainly as a promoter of a positive learning atmosphere and overall well-being, it could have a more dominant role in learning as an object for learning (Aerila et al., 2017) or as motivation for experiential and arts-based learning projects (Aerila et al., 2023a, 2023b) like holistic craft. Previous studies (Aerila et al., 2023a, 2023b; Leung & Yeung, 2022; Rönkkö & Aerila, 2018) suggest that incorporating humour into experiential and arts-based processes often pupils to create more detailed artefacts, feel more enthusiastic about sharing their work with peers develop a stronger, more positive sense of attachment to their creations.

In the context of education, there may be several reasons for the low implementation of humour, both in Finland and internationally, but many of them may be related to teachers' lack of awareness of the pedagogical or welfare implications of humour and to teachers' prejudice against pupils' humour (Aerila et al., 2023a). In many cases, pupils' humour is viewed from teachers' perceptions of humour, only the humour produced by the teacher is acceptable and teachers determine when and what kind of humour pupils can use or what is humorous in pupils' actions (Aerila et al., 2021; Anttila, 2008). Teachers may, for example, take pupils' humour too seriously without understanding that, in many cases, their humour stems from boredom or a need for entertainment and dissipates quickly (Stenius et al., 2022). As humour is a very individual characteristic influenced by hereditary factors, the environment and the individual's temperament style (Martin, 2011), it is vital to investigate humour in versatile educational settings and develop research-based information about the benefits of exploiting pupils' own humour in learning.

This study incorporates pupils' humour into a holistic craft process. In this process, the pupils ideate, design, and create a soft toy, starting with designing a character to make others laugh. The aim is to investigate the types of soft toys the pupils create and how the process unfolds when they express their humour. The soft toy was chosen as the artefact due to its crucial role in early years development, supporting cognitive growth, language skills, imagination and pretend play, problem-solving, social skills, and physical activity (Goldstein, 2012). Further, soft toys serve as motivational aims for a holistic craft process as they are familiar to pupils and evoke positive feelings (Heljakka, 2021). Previous studies (Kokkinaki, 2023; Trawick-Smith et al., 2011, 2015) show that soft toys aid education by fostering empathy, self-reflection, emotional expression while enhancing social integration and creative play. In this study, the pupils participating in the holistic craft process are 7–8-year-old pupils. At this age, conceptual thinking influences humour creation (McGhee, 1984, 2002, 2019), allowing pupils to recognise that objects have different features, and by changing one specific feature, they can create humour. Additionally, they may find humour, for example, in opposing adults' prohibition, bringing up socially taboo topics (Paine et al., 2021) or prefer humour based on collisions, exaggeration and wordplay (Dowling, 2014).

In our previous studies, we have applied various themes alongside humour to investigate the pedagogy of craft. These themes have included local history (Aerila et al., 2016; Rönkkö et al., 2016), fiction and visual arts (Rönkkö & Aerila, 2022), as well as nature pedagogy, visual arts, digital learning and STEAM content (Aerila & Rönkkö, 2023). In these projects, the other art forms were used as a part of ideation and design and, on the other hand, as a part of self-assessment. In the previous study (Rönkkö & Aerila, 2018) concerning the implementation of humour to holistic craft processes, the context has been Finnish early childhood education and

care. This study has indicated that humour not only helped the pupils to develop ideas for the craft product and refine its details but also encouraged them to work more persistently (Rönkkö & Aerila, 2018). As humour develops alongside other aspects of children's development (McGhee, 2019), it is important to explore the role of humour in the holistic craft process for school-age children, who are more linguistically, cognitively and emotionally developed (Vygotsky, 1978).

We pose the following research questions (RQs):

RQ1: What are the characteristics of the humorous characters created by the pupils?
RQ2: How does the crafting of humorous soft toys proceed?

Holistic craft process in early years education

The holistic craft process is a form of creative arts-based learning in which pupils realise artefacts from ideation to design, implementation and evaluation (Pöllänen, 2009). According to the Finnish National Curriculum for basic education (FNBE, 2014), this holistic craft process aims to give pupils experience with longitudinal processes that span multiple working sessions and enable the implementation of craft products. Typically, pupils in early years' craft classes create small items, such as pouches and bags, paintings, shelves, various decorative objects and jewellery, and they learn and apply techniques, such as nailing, sawing, sewing, crocheting and painting (Rönkkö & Aerila, 2024). The framing of these tasks can be arts-oriented or emphasise functionality and technology, but the most important aspect is to give children space to make their own decisions (Aerila et al., 2019) and to see possibilities, analyse alternatives, and experience both failures and successes (Rönkkö & Lepistö, 2016). The holistic craft processes in early years education are usually designed pedagogically to develop knowledge and skills required in expression, designing and making crafts and so that pupils' skills and knowledge is accumulated (Rönkkö & Aerila, 2024).

According to Rönkkö and Aerila (2024), playful or creative activities are traditionally employed at the beginning of the holistic craft process to inspire ideation. However, it is important to ensure that motivation is sustained throughout the process (e.g., Deterding, 2016). The artefact created is key to motivation, especially for younger pupils. When the artefact is meaningful and usable for the pupils, they will probably be more motivated to design and make it (Rönkkö & Aerila, 2015). Therefore, the craft product should be chosen from the world of the learners, and it should be of such a level of difficulty that the pupils are likely to succeed in making it (Rönkkö & Aerila, 2024).

In the holistic craft process, ideation is the first phase – like in many other creative problem-solving processes (e.g., Pöllänen, 2009). In early years' education, the pupils often require support in ideating and designing craft products (Yliverronen, 2014). Ideally, ideation aims to make learning more relevant and engaging (Omwawi, 2024). Inspiration for a craft product can arise from virtually any source, with even the smallest detail capable of sparking the creative process (Eckert & Stacey, 2000), and the ideation can be supported with the use of imagination, storytelling, drama, play, games and other modes of expression, and by exploring both natural and man-made environments (Hope, 2008; Yliverronen, 2014). Previous studies (Bellieni, 2022; Hoicka & Martin, 2016) show that humour positively affects creativity and ideation in creative learning processes. In Leung and Yuen's (2022) study, children created pop-up books from

visual and literary art. In their literary art activities, humour was related to alliterative names, hyperbolic humour, multiple meanings, wordplay, personification, metaphors and incongruous storylines. Rönkkö and Aerila (2018) investigated humour in the ideation phase of a holistic craft process within early childhood education and care, finding that humour not only supported children in developing ideas for the craft product and working persistently on crafting but also fostered emotional attachment.

During the second phase of the holistic craft process, which is designing, the aim is to define the primary purpose, the properties and the maintenance of the craft product and gather the information necessary for making the artefact (Pöllänen, 2009). Usually, this phase involves acquiring knowledge about craft techniques, materials, and tools through experimenting, examining and defining the product's aesthetic and functional qualities (Rönkkö & Aerila, 2024). However, when it comes to younger pupils, as in this study, the teacher usually chooses the crafting techniques, and during the process, some specific crafting techniques are practised (Yliverronen, 2014). Further, it might be essential for the teacher to set design limitations, as this can help pupils refine their ideas into practical designs (Lahti et al., 2022). Pupils' learning sensitivity is utilised in craft education by guiding them from the beginning to design the craft products, carrying them out safely and technically correctly, and encouraging to use various design methods and understand the importance of planning as part of the crafting (Yliverronen & Seitamaa-Hakkarainen, 2016).

The making phase of a craft process means implementing and practising concrete skills such as cutting, gluing, and combining materials. In early years education, the making phase additionally enhances pupils' fine motor abilities (Yliverronen & Seitamaa-Hakkarainen, 2016) and their craft skills (know-how about the materials and techniques) to execute their plans created in the design phase (Rönkkö & Aerila, 2024). In making, especially the younger pupils often face challenges, and they must have patience and the ability to endure incompetence (Bodrova & Leong, 2012). Sometimes, teachers' and pupils' perspectives on a successful project can differ, and it seems that for especially younger pupils means having the artefact ready and the opportunity to realise creativity during the process (Aerila et al., 2024; Rönkkö & Aerila, 2024; Yliverronen, 2014). Thus, self-assessment is crucial for pupils in educational contexts as part of creative learning processes. It allows them to evaluate their learning and prepare for future projects by setting realistic goals and recognising the value of practising various sub-skills (Andrade & Valtcheva, 2009).

Method

Study context

The study was implemented through an intervention in two primary school groups in an urban area of western Finland, and crafting is part of a larger framework. The whole intervention (Aerila et al, 2023a) took place from late April to the end of May 2021, and it unfolded over approximately 10 days, with around two daily lessons. The intervention was designed collaboratively by the first two researchers, the primary group teachers and a project worker. Due to COVID-19 pandemic restrictions, the researchers and project worker could not participate in the implementation, except for the collaborative storytelling session.

The intervention concentrated on implementing a soft toy in a holistic craft process based on pupils' perception of humorous characters. The two primary groups of participants were in the

first grade; there were 36 pupils aged seven or eight. The progress of the holistic craft process is presented in Table 1.

Table 1. Phases of designing and making a soft toy as a holistic craft process

	The phase of the holistic craft process	Activity	Aims and tasks for pupils' craft process
Day 1	Ideation	Watching a video clip of a humorous book Friendship book sheet	Motivation
	Designing	Drawing a humorous character	Getting ideas Using imagination, expressing ideas, presenting characters
Day 2	Technical planning	Making a stick puppet for the Kamishibai performance	Stick puppet as a prototype of a soft toy
Days 3–7	Making	Making the soft toy	Drawing outlines onto fabric Fabric painting for details Cutting fabric with seam allowance (researchers sewed the edges of the soft toy) Stuffing the soft toy with cotton wool and hand-sewing the opening (Decorating the soft toy)
Days 8–10	Evaluation	Assessment	Completing the self-evaluation sheet
	Reflection	Kamishibai performance	Taking soft toys to the performance and showing them to each other

The holistic craft process began as ideation with an extract from a humorous children's book *Dog Man* by Dav Pilkey (2018). Due to the restrictions of COVID-19 pandemic, the extract from the book was presented to the pupils as a video clip. After watching the video clip, pupils engaged in small group discussions about humour, which sparked ideas for creating characters that make others laugh. In the ideation phase, the characters were sketched by drawing and writing. The writing was implemented on a friendship book sheet (e.g., their character's name and hobbies), and the drawing was by using wax crayons and the frottage technique on an A4-size paper. Before the design phase started, the pupils were informed that the drawings would be converted into a stick puppet and later into a soft toy. In the holistic craft process, the stick puppets served as prototypes and cutting patterns for the soft toy. The making phase started by the pupils drawing the outlines of the stick puppet and making decorative patterns with wax crayons and fabric paint on a fabric (the pupils used their drawings as models for the decorations). This fabric was the material for the soft toys. After the fabric had dried, the pupils cut around the outlines of the soft toy while ensuring a seam allowance. The researchers then sewed the front and back pieces of the fabric together with a sewing machine, leaving space for turning the fabric inside out. The pupils then stuffed the soft toys with cotton wool and sewed

up the opening by hand. At the end of the making phase, the pupils had the opportunity to decorate the ready-made soft toys with additional details. At the end of the craft process, the pupils presented the finished soft toys to each other. The stick puppets and the soft toys were later a part of a theatre performance that concluded the whole intervention (Aerila et al., 2023a) of which the holistic craft process was a part of. In the performance, stick puppets functioned as actors for a kamishibai theatre performance and the soft toys were following the performance with the pupils. Kamishibai is a traditional Japanese storytelling method that uses picture cards and small theatre stages to present stories. It can be utilised in education to teach languages, cultures, art education, and many other subjects, making learning both visual and interactive (Aerila et al., 2022). Finally, the pupils completed a self-assessment survey evaluating their entire learning process, including the holistic craft process, the implementation of the soft toy in general and its humorousness in particular (see Table 1).

Data and data analysis

The study employed educational design research as a methodological approach that focuses on developing and iteratively refining educational interventions—such as programs, teaching strategies, or learning materials—while simultaneously generating theoretical insights. This approach is characterized by its dual objectives: addressing practical educational challenges and contributing to scholarly understanding (McKenney & Reeves, 2018).

The primary data consisted of materials created by the pupils during different phases of the holistic craft process, such as the friendship book sheet, a drawing of the humorous character, a stick puppet, a soft toy and an evaluation sheet. All materials were photographed and saved in the university's cloud service. The secondary data comprised the teachers' memos written during or after the classes. The data were examined using thematic analysis, which is used to identify similarities and differences and summarise key features (Braun & Clarke, 2013).

In the analysis, the researchers first familiarised themselves with the data. To answer the first RQ, the analysis progressed from investigating the entities of the humorous characters to looking at the details. In the first stage, data-driven analysis was conducted to classify the soft toys based on their primary characteristics, resulting in themes such as human/animal, scatology, or references to popular culture. This phase also explored their individual and shared features, focusing on aspects like names, incongruences, visual appearance, and individuality. To address the second RQ, the data were analysed in relation to the themes of ideation, designing the soft toy, and the progression of the process as an individual endeavour. This focused on tracking each pupil's progression, noting challenges and successes in designing and making.

Findings

The humorous characteristics of pupils' soft toys

The analysis revealed that pupils followed their original idea of a humorous character consistently throughout the holistic craft process and seemed to focus on copying the details of the characters created in the ideation phase as carefully as possible. However, the soft toys of individual pupils were all different. The soft toys were represented according to the students' descriptions in their friendship book sheets; the first phase of the analysis classified the humorous characters as human or animal characters (n = 21), scatological characters (n = 10), and characters related to popular culture (n = 5). The human/animal characters were often

named with typical human first names (e.g., Pekka, Silvia or Lilli) or with information about the animal that the humorous character represented (e.g., Super Lizardman Lion). In all the names of the scatological characters, there was a word related to excrement (e.g., Poop Family, Super Poo and Colourful Pee). The characters sourced by popular culture were often named to refer directly to a phenomenon (e.g., COVID-19) or copied the name of an inspiring character (e.g., Moominpappa and Minion). The naming of the characters encapsulated the character's key characteristics, personalised the character and helped them to remember the character during the process. It may be that, for the younger pupils, naming the character improved their engagement in the process and helped them to focus; it was easier to plan the realisation of the character in the next steps when the character was called by a name. The names of all the humorous characters and their classifications are presented in Table 2.

Table 2. Primary characteristics of soft toys

Classification	Soft toy's name
Human/animal	Silvia, Babna746, Pekka, Tipititi, Super Lizardman Lion, Siticky Bird, Odd, Blöö, Frans, Tube, Funny, Aunt Loose, Pete, Petri, Dog Perdi, Pertti the Buck, Lilli, Rocky, Aauu, Pekka, Mauro
Scatology	Little Fart, Pong, Poo, Poop Family, Fart Boy, Super Poo, Poopy, Poo Head, Ghost Poo, Colourful Pee
Popular culture	Moominpappa, Petetri, Patu, COVID-19, House Monster

All the humorous soft toys had common characteristics, regardless of the category in which they were placed in the first stage of the analysis. Almost all the soft toys had features related to anthropomorphism. The anthropomorphic features mainly focus on the head, facial expressions, and limbs. Even the poop soft toys were given human traits, such as smiling mouths. For example, the Poop Family is depicted as a cheerful family consisting of a mother, father and child (see Figure 1). Another example is House Monster, which has elements such as windows serving as cheeks and a chimney resembling a hat, as well as added elements like hands, eyes, legs and a mouth (potentially represented by the door), giving it a highly human-like appearance (see Figure 1). Adding human features to the characters might have been guided by the assignment in the ideation phase – the friendship book sheet – which asked for human-like qualities, such as diet, hobbies or superpowers.

Figure 1. Collage of soft toys: Poop Family and House Monster (soft toys with stick puppets)

The humour of the soft toys was primarily seen in the details that added contradictory features to the soft toys. This included names (e.g., Bird Sausage, Little Fart) or diets (e.g., Aunt Lause eats horse manure and Moominpapa eats pumpkin soup) and strange characters being involved in ordinary activities (e.g., Petri can fly and Aauu's hobby is climbing). The contradictions in the soft toys also involved exaggerating or multiplying features, such as the eyes and legs. Some soft toys had body parts that were out of proportion, like large stomachs, oversized heads with tiny legs or unusual teeth, which were often broken or missing. Many human characters had exaggerated navels. For some characters, the contradiction was manifested in the creative implementation of colours, such as multi-coloured or wavy lips. For example, a soft toy called Silvia (Figure 2) has exceptionally long feet (exaggeration of legs) and bright red hair (creative implementation of colour).

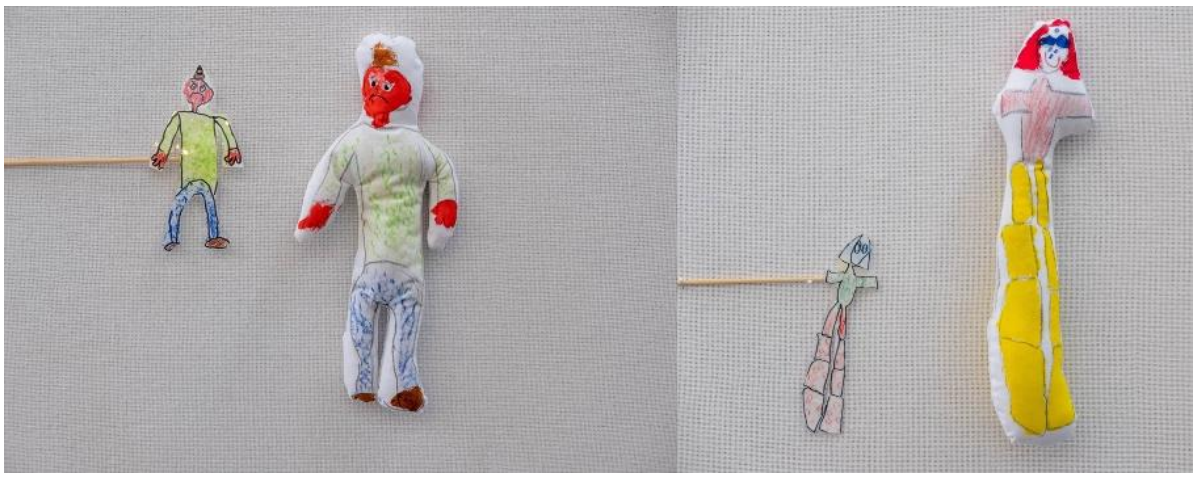

Figure 2. Collage of soft toys: Pete and Silvia as stick puppets and soft toys

As noted in the analysis, many of the soft toys depicted poop and pee characters (scatological humour). These soft toys represented perhaps the most stereotypical view of humour, as many of these characters resembled the emoji of the corresponding themes and were similar in colour to the subject. In other words, they were quite predictable: The poop soft toys were brown and appeared as separate piles or between the buttocks in pants. However, there were some soft toys expanding on this theme, as they incorporated elements like colourful stinky clouds or exaggerated features, such as flatulence. Scatological humour was also integrated into the characters of the other categories. For example, a human soft toy named Pete had poop on his head, as a bird had pooped on him (Figure 2), making him so angry that his face turned red. The addition of the poop element in some soft toys seemed a bit unplanned or illogical. Instead, the pupils added them primarily to make others laugh. One of the pupils confirmed this by stating that he created a poop character as it usually makes others laugh.

Most pupils had several humorous details in their soft toys. For example, the pupil who invented a soft toy called Little Fart followed his original idea of a multi-handed, multi-tasking character throughout the learning process. In the initial drawing, Little Fart was depicted with even more hands and featured additional elements, such as a crown, lack of hair, an open mouth and a distinctively green 'sausage' on its navel. The final soft toy had a brightly coloured body, a brown face and an exaggerated navel. Another soft toy, Stinky Bird Sausage, also exhibited contradictions in terms of both features and colour. Furthermore, it had an unusual

name, multiple eyes, three mouths and fin-like hands and feet. Stinky Bird Sausage maintained its colourful appearance in all forms, whether as a drawing, stick puppet or soft toy (Figure 3).

Figure 3. Collage of soft toys: Little Fart and Stinky Bird Sausage as drawings, stick puppets and soft toys

It was surprising that, in the analysis, we could find hardly any humorous details suggesting aggression or violence. The low number of these was also unusual in the sense that the children's book used as a motivator contained many references to explosions, harm to people and other forms of violence. The lack of this kind of humour might have been influenced by the instruction, which emphasised the positive feeling of those who would see the character (draw a character that makes others laugh), or this might have been due to the static nature of the characters. Violence and aggressiveness in humour perhaps require a more dynamic and active approach. This was also evidenced in this study, as the only references to themes were found in the friendship book sheets that contained story-like parts.

The progress of pupils' crafting humorous soft toys

The humorous book was an inspiring source for ideation, chosen for its humour and appeal to the target age group. Humour in the book helped spark ideas, which the pupils brought to life by sketching and writing on a friendship book-like sheet that asked questions about their soft toy's favourite food, activities and possible superpowers. The pupils quickly decided on the shape and colours of their soft toys and drew their designs. In drawing, the pupils were asked to create a character that would make others laugh, and they did not know that the character would later be transformed into a soft toy during a holistic craft process.

In implementing designs, the stick puppets and soft toys were figure patterned with a technique called *frottage*. Although this was an unfamiliar technique for the pupils, it allowed them to add decoration to the surface. The method made it easy for the pupils to add details to their soft toys, resulting in a unique design reflecting their perspectives. However, while the frottage technique was quite easy on a paper surface, applying it to fabric was significantly more challenging.

While the stick puppets were A5 paper size, the soft toys were intended to be larger and cuddlier. The pupils were tasked with using a scanner with adult assistance to enlarge their designs. While most pupils understood the process of enlarging the stick puppets, transforming 2D images (the drawings and stick puppets) into 3D soft toys proved challenging, particularly when drawing limbs that were too narrow for sewing and stuffing, a problem that was often resolved by adding a fabric backing to facilitate the process. Learning to visualise in 3D helped pupils transform ideas into physical craft products. Spatial visualisation required imagining the

integration of colours, shapes and sizes. In the process, conceptualising the soft toy in 3D, including the front and back views, was crucial for understanding the toy's structure. One pupil notably applied this concept to a toy with a COVID-19 theme; on the front piece, he depicted a face with a mask, while on the back piece, he illustrated the occiput. However, visualising characters from different angles presented difficulties, as some pupils struggled to envision the soft toy differently from behind (see Figure 4). For example, Super Lizardman Lion is drawn with similar front and back representations.

Figure 4. Collage of soft toys: COVID-19 and Super Lizardman Lion as drawings, stick puppets and soft toys (from front and back)

The crafting process involved a variety of skills and techniques. Sewing presented challenges like needle threading, which required concentration and fine motor control. Additionally, pupils had to paint their characters onto fabric using paints and brushes, which proved difficult for some and occasionally led to frustration. Painting on fabric was much harder than using coloured pencils or markers on paper, mainly because the pupils' motor skills were still developing, making it challenging to manage the fine details needed for painting. Furthermore, some pupils chose brushes that were too large or loaded with too much paint, making achieving the desired precision in their soft toy designs even more challenging.

Having a soft toy as the final product of a holistic craft process was a good choice, considering the process and the learning objectives practised within it. The soft toys in this study did not correspond to traditional soft toys but were more unconventional and even disgusting. However, it is noteworthy that despite seemingly repulsive features, all the soft toys evoked positive emotions, surprised viewers and left them in a good mood. These toys evoked feelings of ownership in pupils, enhancing their sense of responsibility and connection and encouraging social interactions, particularly through play.

In this study, we successfully selected a motivating product that met the learning goals, matched pupils' abilities and was almost completed within the set timeframe. At the end of the making phase, the pupils could add extra effects using materials such as pipe cleaners, sewing

by hand, braiding yarn and so on to create features like horns, body parts, accessories, jewellery and combat tools. However, they had to forego these detailed additions due to time constraints. The study showed that more time should be allocated to finish the products. Adding more details to the soft toys during the drawing would have been beneficial, especially if they had been shown the materials during the process, helping them choose the appropriate ones.

Discussion

In this study, we investigated a holistic craft process in which the pupils in early years education implemented an individual soft toy and where the pupils' idea of a humorous character formed the basis for the individual characteristics of the soft toy. According to this study, humour created an engaging framework for pupils to undertake a long-term effort and create a personalized soft toy. It is worth noting that even though the soft toys or their humorous characteristics did not necessarily reveal all about pupils' perceptions of humour, the pupils found their soft toys humorous and were happy with the result. Further, it seems that humour allowed the pupils to create original characters and to be imaginative while gaining the learning aims of a holistic craft process.

The results of the humorous characteristics of the soft toys accord with the findings of Loizou and Kyriakoi (2016) regarding young pupils' humour. In their study, Loizou and Kyriakoi (2016) applied Torrance's test (2006) of creativity to humour and employed the concepts of fluency, flexibility and originality. In their application, fluency is manifested in the number of humorous events, situations and actions; flexibility means the themes and ideas are not within the rigid and expected perspective of humour, and originality contains unique ideas. Loizou and Kyriakou (2016) also created categories of colour and feature violation, as well as violence and humorous symbols, to illustrate the humour children prefer in their outcomes. In the study, pupils' humour had several characteristics of fluency, flexibility and originality. In this study, humour emerged especially as contradictions in names, attributes and appearance and in violating expectations of the soft toys' colours and features. According to Loizou and Kyriakou (2016) children's humour is sometimes less creative. This less creative and original humour means e.g., clowns, certain facial expressions and scatological elements. These less creative humorous characteristics were in the minority in this study as there were only a few soft toys with scatological characteristics.

The holistic craft project described in this study had many elements familiar to children: humour, a soft toy and drawing. These aspects allowed the children to focus on the steps of the crafting process and helped them both visualise the finished product and engage in the activity. The process involved many problem-solving situations: transferring the humorous character onto the fabric, cutting the fabric into the shape of a soft toy and transforming the character from 2D to 3D. In the future, it might be worth planning these problem-solving situations more carefully and from the versatility perspective. For example, it might be necessary to use a technique other than drawing to transfer the figure onto the fabric. Changing the technique could motivate those who find it difficult to draw while at the same time adding to the process, for example, the opportunity to practise one more craft technique. According to McLain and others (2017), in the design process, it is good to guide pupils to focus on imagination and design thinking rather than letting technical knowledge take the focus. The results of this study relate to this notion, as using imagination, one's own experiences and knowledge in the process

transformed the holistic craft process into a more child-oriented process, enabling the pupils to concentrate on content that was familiar and important to them. Furthermore, by combining humour with crafting, pupils could practise empathic designing and making by considering the end users of their artefacts in both concrete and abstract ways throughout the process (see e.g., Bosch et al., 2022).

The significance of the soft toy lies in its familiarity, which provides both comfort and a solid foundation for the creative process, inspiring ideas for soft toys. According to the analysis, almost all pupils created soft toys that presented a contrast to traditional cute soft toys like teddy bears, as there were strange human figures, poo cuddles and imaginative animals. This is unsurprising, as similar soft toys are on the market, especially in the humorous soft-toy segment. These kinds of 'ugly' and contrasting soft toys create amusement and strong emotional responses through contradiction or surprise. Rajagopal (2019) notes that Angry Bird soft toys are one example of this kind of soft toy. This emotional connection to the soft toys became especially evident during the theatre performance, where each pupil in the audience hugged their soft toys several times, demonstrating the deep bond they had formed (see e.g., Heljakka, 2021).

Conclusion

Our results show that bringing elements of pupils' humour into the school context does not prevent the achievement of learning goals; indeed, it is possible to design learning processes and tasks to meet learning goals while allowing pupils to express themselves and benefit from what matters to them. Moreover, humour is a skill that should be practised, and its skilful use requires the ability to empathise with the recipient and interpret the situation (Heintz et al., 2017). It is therefore important to encourage teachers to use humour in various learning situations (also at a policy level) and to highlight how receiving and interpreting humour can be practised and is influenced by many factors.

According to Rutland (2009), there is a need to break down the boundaries of art and design education and enhance collaboration between the subjects of art and crafts to support and improve creativity in educational contexts. In this study, the collaboration was widened across several school subjects: mother tongue and literature (creative writing, drama, literature), visual arts and crafts. It might serve as an example of how effective creative learning processes – like a holistic craft process – might be when the different phases of the project are moulded into learning goals from different school subjects. In this way, crafts could act as an integrator of learning and support pupils' engagement in longer learning processes.

Limitations and ethical considerations

A notable limitation of this study is that the data were collected exclusively from two classrooms, with the learning process facilitated by two teachers who followed guidelines provided by the researchers. Moreover, specific restrictions related to the COVID-19 pandemic in Finland impacted the intervention period. While pupils had attended school since the beginning of the academic year in the fall of 2021, the researchers could not be physically present except during joint storytelling sessions conducted outdoors in the schoolyard. The seams of the soft toys were sewn by adults using sewing machines rather than by pupils. This decision was made to ensure safety and adherence to the project schedule.

Additionally, a methodological limitation of educational design research lies in its context- and data-specific nature, which can limit the generalisability of findings to other settings or populations. The study was conducted following the EU's General Data Protection Regulation and the ethical principles of research with human participants in the human sciences in Finland (Finnish National Board on Research Integrity TENK, 2019). The pupils were informed about the study in advance and consulted again during its duration. Additionally, they were allowed to withdraw from the study at any time.

References

Aerila, J.-A., Laes, T., & Laes, T. (2017). Clowns and explosions: Finnish preschoolers' perceptions of humour. *Journal of Early Childhood Education Research*, *6*(1), 108–135. https://journal.fi/jecer/article/view/114072/67271

Aerila, J.-A., Rönkkö, M.-L., & Stenius, T. (2023a). Humour-themed holistic learning processes in a Finnish primary school. *The European Journal of Humour Research, 11*(4), 75–92. http://dx.doi.org/10.7592/EJHR.2023.11.4.841

Aerila, J.-A., Rönkkö, M.-L., & Stenius, T. (2023b). Humor as a source for collaborative storytelling: Perspectives to dynamic and static stories. *HUMOR: International Journal of Humor Research*, *36*(4), 607–629. https://doi.org/10.1515/humor-2023-0047

Aerila, J.-A., Siipola, M., Kauppinen, M., & Lähteelä, J. (2022). Finnish children's perceptive to kamishibai: A multisensory storytelling method for arts-based literature and language education. *Journal of Creative Practices in Language Learning and Teaching, 10*(2), 11-26. https://doi.org/10.24191/cplt.v10i2.3196

Aerila, J.-A., Rönkkö, M.-L., & Grönman, S. (2016). Field trip to a historic house museum with preschoolers: Stories and crafts as tools for cultural heritage education. *Visitor Studies, 19*(2), 144–155. https://doi.org/10.1080/10645578.2016.1220187

Aerila, J.-A., & Rönkkö, M.-L. (2023). Learning STEAM content via arts-based hands-on activities. In W. Yang, S. Kewalramani, & J. Senthil (Eds.), *STEAM education in the early years: Achieving the Sustainable Development Goals* (pp. 91–107). Routledge. https://doi.org/10.4324/9781003353683

Aerila, J.-A., Stenius, T., Laes, T. & Laes, T. (2021). Opettajan ei tarvitse olla humoristi: pierusta ja sen vierestä. [The teacher does not have to be a humorist: Something about scatological humour]. *Journal of Early Childhood Education Research*, *10*(3), 269–281.

Airenti, G. (2016). Playing with expectations: A contextual view of humour development. *Frontiers in Psychology*, *7*, Article e1392. https://doi.org/10.3389/fpsyg.2016.01392

Anttila, T. (2008). *Lukiolaisten käsityksiä huumorista ja kokemuksia opettajista huumorin käyttäjinä* [High school students' perceptions of humour and experiences of teachers as users of humour] [Doctoral thesis, University of Joensuu]. Joensuu. https://erepo.uef.fi/handle/123456789/8742

Andrade, H., & Valtcheva, A. (2009). Promoting learning and achievement through self-assessment. *Theory Into Practice*, *48*(1), 12–19. https://doi.org/10.1080/00405840802577544

Bellieni, C. V. (2022). Laughter: A signal of ceased alarm toward a perceived incongruity between life and stiffness. *New Ideas in Psychology*, *68*, Article e100977. https://doi.org/10.1016/j.newideapsych.2022.100977

Bodrova, E., & Leong, D. J. (2012). Scaffolding self-regulated learning in young children: Lessons from tools of the mind. In R. C. Pianta (Ed.), *Handbook of early childhood education* (pp. 352–369). Guilford Press.

Bosch, N., Härkki, T., & Seitamaa-Hakkarainen, P. (2022). Design empathy in students' participatory design processes. *Design and Technology Education: An International Journal, 27*(1), 29–48. https://ojs.lboro.ac.uk/DATE/article/view/3046/3067

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. Sage.Dunbar N. E., Banas J. A., Rodrigues D., Liu S-J., & Abra G. (2012). Humor use in power-differentiated interactions. *Humor, 25*(4), 469–489.

Deterding, S. (2016). Make-believe in gameful and playful design. In T. Turner & T. Harviainen (Eds.), *Digital make-believe* (pp. 101–124). Springer

Eckert, C., & Stacey, M. (2000). Sources of inspiration: A language of design. *Design Studies, 21*(5), 523–538. https://doi.org/10.1016/S0142-694X(00)00022-3

Finnish National Board of Education (FNBE). (2014). National core curriculum for basic education. Finnish National Board of Education.

Finnish National Board on Research Integrity TENK. (2019). *The Finnish code of conduct for research integrity and procedures for handling alleged violations of research integrity in Finland*. TENK. https://tenk.fi/sites/default/files/2023-11/RI_Guidelines_2023.pdf

Goldstein, J. (2012). *Play in children's development, health and well-being.* Toy Industries of Europe. https://tiestorage.b-cdn.net/resources/Play-in-childrens-development-health-and-well-being-final.pdf

Heintz, S., Ruch, W., Lau, C., Saklofske, D. H., & McGhee, P. (2022). Development and validation of the Short Version of the Sense of Humor Scale (SHS-S): Paving the way for assessment of humor skills training. *European Journal of Psychological Assessment: Official Organ of the European Association of Psychological Assessment*, *38*(4), 320–331. https://doi.org/10.1027/1015-5759/a000670

Heljakka, K. (2021). Liberated through teddy bears: Resistance, resourcefulness, and resilience in toy play during the COVID-19 pandemic. *International Journal of Play*, *10*(4), 387–404. https://doi.org/10.1080/21594937.2021.2005402

Hoicka, E., & Martin, C. (2016). Two-year-olds distinguish pretending and joking. *Child Development, 87*(3), 916–928. https://doi.org/10.1111/cdev.12526

Hope, G. (2008). *Thinking and learning through drawing in primary classrooms*. Sage.

McGhee, P. E. (1984). Development of the creative aspects of humour. In P. E. McGhee & A. J. Chapman (Eds.), *Children's humour* (pp. 119–130). John Wiley & Sons.

McGhee, P. E. (2002). *Understanding and promoting the development of young children's humour*. Kendall/Hunt.

McGhee, P. E. (2019). Humor in the ECEC classroom: A neglected form of play whose time has come. In E. Loizou & E. Recchia (Eds.), *Research on young children's humor: Theoretical and practical implications for early childhood education* (pp. 83–106). Springer.

McKenney, S., & Reeves, T. (2018). *Conducting educational design research* (2nd ed.). Routledge. https://doi.org/10.4324/9781315105642

McLain, M., McLain, M., Tsai, J., Martin, M., Bell, D., & Wooff, D. (2017). Traditional tales and imaginary contexts in primary design and technology: A case study. *Design and Technology Education: An International Journal*, *22*(2), 26–40. https://openjournals.ljmu.ac.uk/DATE/article/view/1552

Kokkinaki, K. (2023). The soft toys as a consolation play-object in school after the Covid period: The Teddy Bear Project in primary art classroom. *European Journal of Education Studies*, *10*(4), 282–295. http://dx.doi.org/10.46827/ejes.v10i4.4786

Laamanen, T.-K., & Seitamaa-Hakkarainen, P. (2009). Sources of inspiration and mental image in textile design process. Art, Design & Communication in Higher Education, 7(2), 105–119. https://doi.org/10.1386/adch.7.2.105_7

Lahti, H., Kangas, K., Härkki, T., & Seitamaa-Hakkarainen, P. (2022). Challenging creativity constraints: Three design studios in craft teacher education. *Techne Series: Research in Sloyd Education and Craft Science A, 29*(1), Article e4250. https://doi.org/10.7577/TechneA.4250

Leung, S. K. Y., & Yuen, M. (2023). Exploring talented children's humour through creating pop-up storybooks. *Education 3–13*, *51*(8), 1325–1341. https://doi.org/10.1080/03004279.2022.2071453

Loizou, E., & Kyriakou, M. (2016). Young children's appreciation and production of verbal and visual humour. *HUMOR: International Journal of Humor Research*, *29*(1), 99–124. https://doi.org/10.1515/humor-2015-0131

Martin, R. A. (2011). *The psychology of humour: An integrative approach*. Elsevier Academic Press.

Omwawi, A. (2024). *From inspiration to garment ideas: Elucidating the threads of inspiration in apparel design ideation* [Dissertation]. University of Helsinki.

Paine, A. L., Karajian, G., Hashmi, S., Persram, R. J., & Howe, N. (2021). "Where's your bum brain?" Humor, social understanding, and sibling relationship quality in early childhood. *Social Development (Oxford, England)*, *30*(2), 592–611. https://doi.org/10.1111/sode.12488

Pilkey, D. (2018). *Koiramies* [Dog man] (J. Kapari-Jatta Trans.). Tammi.

Pöllänen, S. (2009). Contextualising craft: Pedagogical models for craft education. *International Journal of Art & Design Education*, *28*(3), 249–260. https://doi.org/10.1111/j.1476-8070.2009.01619.x

Rajagopal. (2019). Branding in emerging markets. In *Competitive branding strategies: Managing performance in emerging markets* (pp. 193–224). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-24933-5_7

Rutland, M. (2009). Art and design and design and technology: Is there creativity in the designing? *Design and Technology Education: An International Journal, 14*(1), 56–67. https://openjournals.ljmu.ac.uk/DATE/article/view/2294

Rönkkö, M.-L., & Aerila, J.-A. (2024). A friend to Milli Mörriäinen: The storification method supporting pupils' crafting processes. *Techne Series: Research in Sloyd Education and Craft Science A*, Article e5488. https://doi.org/10.7577/TechneA.5488

Rönkkö, M.-L., & Aerila, J.-A. (2022). Kertomukset ja käsityö varhaiskasvatuksen eheyttävissä oppimisprosesseissa [Stories and craft as a source of holistic learning processes in early childhood education]. In I. Ruokonen (Ed.), *Ilmaisun ilo. Käsikirja 0–8-vuotiaiden taito- ja taidekasvatukseen* [Joy of creativity: Handbook for arts education of 0–8-year-old children] (pp. 149–164). PS-kustannus.

Rönkkö, M.-L., & Aerila, J.-A. (2018). Humour in a holistic learning process in a preschool setting: Unique soft toys and stories inspired and further developed by children's sense of humour. *FormAkademisk, 11*(2), Article e1858. https://doi.org/10.7577/formakademisk.1858

Rönkkö, M.-L. & Lepistö, J. (2016). The craft process developing student decision making. *Techne Series: Research in Sloyd Education and Craft Science A, 23*(1), 48–61. https://journals.oslomet.no/index.php/techneA/article/view/1457

Rönkkö, M.-L., & Aerila, J.-A. (2015). Children designing a soft toy: An LCE model as an application of the experiential learning during the holistic craft process. *Techne Series: Research in Sloyd Education and Craft Science A, 22*(1), 44–58. https://journals.oslomet.no/index.php/techneA/article/view/988

Rönkkö, M.-L., Aerila, J.-A., & Grönman, S. (2016). Creative inspiration for preschoolers from museums. *International Journal of Early Childhood, 48*(1), 17–32. https://doi.org/10.1007/s13158-016-0159-z

Stenius, T., Karlsson, L. & Sivenius, A. (2021). Huumori lasten kanssa – ovi yhteisöllisyyteen? [Humour with children? A door to community?]. *Journal of Early Childhood Education Research, 10*(2), 11–40.

Trawick-Smith, J., Russell, H., & Swaminathan, S. (2011). Measuring the effects of toys on the problem-solving, creative and social behaviours of preschool children. *Early Child Development and Care*, *181*(7), 909–927. https://doi.org/10.1080/03004430.2010.503892

Trawick-Smith, J., Wolff, J., Koschel, M., & Vallarelli, J. (2015). Effects of toys on the play quality of preschool children: Influence of gender, ethnicity, and socioeconomic status. *Early Childhood Education Journal*, *43*, 249–256. https://link.springer.com/article/10.1007/s10643-014-0644-7

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Weisi, H., & Mohammadi, V. (2023). Humour in the classroom: Forms and functions among Iranian EFL teachers. *The European Journal of Humour Research*, *11*(1), 168–183. https://doi.org/10.7592/EJHR.2023.11.1.739

Yliverronen, V. (2014). From story to product: Pre-schoolers' designing and making processes in a holistic craft context. *Design and Technology Education: An International Journal, 19*(2), 8–16. https://openjournals.ljmu.ac.uk/DATE/article/view/1635

Yliverronen, V. & Seitamaa-Hakkarainen, P. (2016). Learning craft skills: Exploring preschoolers' craft-making process. *Techne Series: Research in Sloyd Education and Craft Science A, 23*(2), 1–15. https://journals.oslomet.no/index.php/techneA/article/view/1505