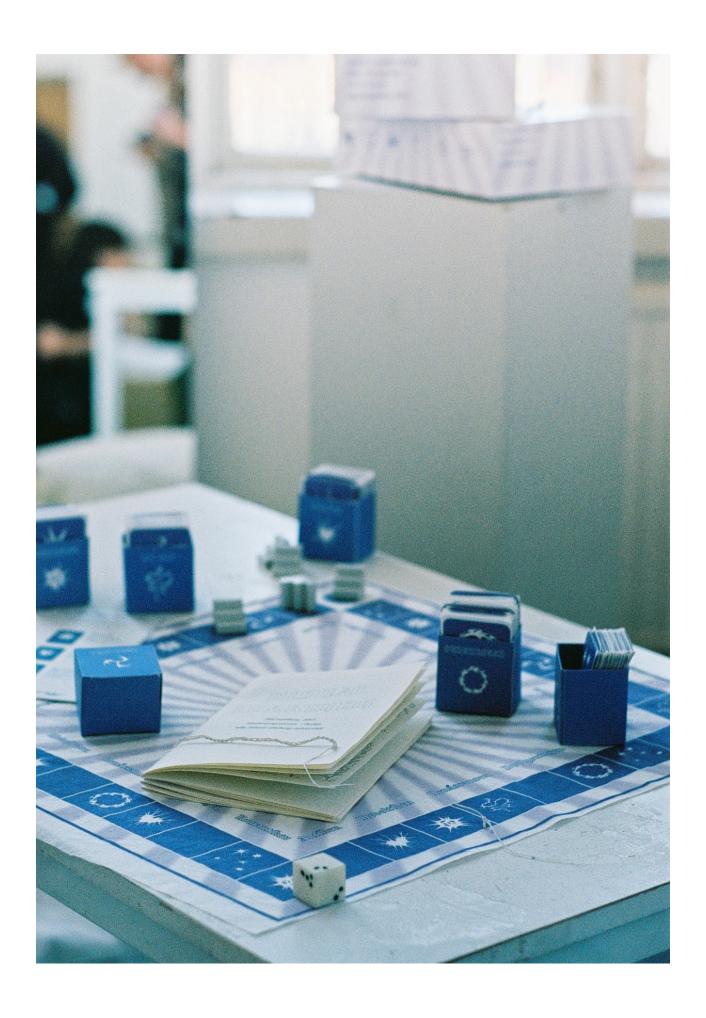
WISMAL LEARMING

Compiled Thesis, Niki Sundberg, 2023

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INTRODUCTION

My motivation for this project is the idea that visual material should permeate all forms of education and can enhance the ability to learn. I am convinced that well thought out and well structured visual material has a positive effect on the ability to learn and believe that knowledge is best gained when we combine creativity with science. If future education would regard creativity and science as one instead of two separate entities we could utilize more of our brains than ever before.

I have chosen to focus on the subject swedish since it is central in all other subjects. We use language when we think, learn something new, draw conclusions and make connections between how things are interrelated. The ability to comprehend what we read is also central in all other subjects, it is also a tool to meet and interact with different representations of reality, a tool to meet different personalities, backgrounds and emotions. Interacting with a diversity of representations of everyday life can give us a greater understanding of different humans and cultures because we get the possibility to walk in their shoes for a brief moment. Besides understanding our fellow humans, better literacy also plays a huge role in developing one's imagination, vocabulary and language development

The failure of students is not the failure of the individual but of the educational system and by creating more tools for learning we can better educate the students with various forms of learning disabilities like ADHD and dyslexia for example. The goal is then not to reduce the course content and make it easier, removing long texts and difficult words for example, but to change it so that it is better suited for students that have problems with literacy. By doing this the students are still challenged and stimulated and the subject matter at hand is not watered down and hollowed out. Customized education should not mean simplification in the form of redaction but rather about changing the subject matter so that it becomes more understandable. If we would constantly reduce all forms of education in school we run the risk of hollowing out the entire subject at hand and in the long run make it less interesting, engaging and challenging. Visual aid aims to convert information so it is available in visual form, that is to communicate it without hearing and text. Visual aids intention is to create opportunities of association for the viewer to process the information and aid the working memory. Examples of visual aid may be illustrations, photographs, diagrams/tables and symbols. Optimal visual aid supports our ability to concentrate, learn and understand the subject matter. A graphic element like an image can work as a pause and aid for the working memory. It provides time for processing the information and creating context

"The limits of my language mean the limits of my world"

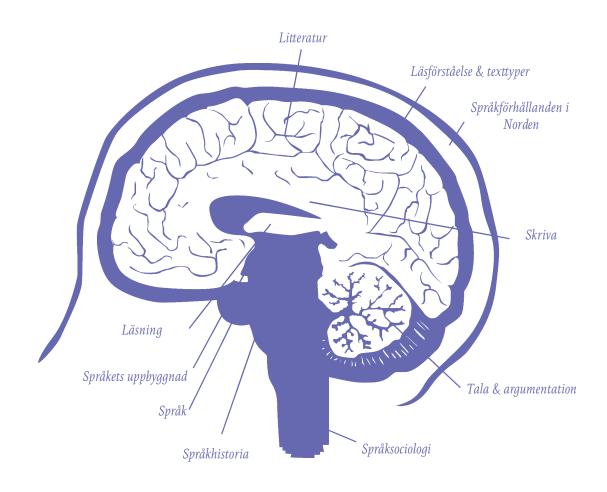
- Ludwig Wittgenstein



(Figur 1, Pojke med sten, Sundberg, 2022)

MOMENT SOM INGÅR I SVENSK-ÄMNET

(begreppen har ingen logisk koppling till hjärnans delar, utan är helt och hållet mitt påhitt)



Personal relation to the issue

This is an excerpt from my daily reports and anecdotes as a student assistant and substitute teacher from my impressions from LBS mediagymnasiet.

Vilgot is a 17 year old male who does not want to show that he is bad at something and he feels bad about himself in a school environment. Vilgot possesses very good self-confidence and radiates it. He likes IFK-football club and can always be seen on the supporter-bleachers. In school he performs poorly, he doesn't apply himself and never bothers to try. This might be because he is afraid of trying and he notices that he might fail even if he tries. Because of this he tries on purpose to fail following the logic of "If I'm not competing I cant loose".

Viggo, Joel and Gabriel belongs to the kids who sit in the back of the class. The class-environment is not their natural habitat. They say that assignments are boring when in actual fact they just don't understand and never dares to raise their hand to ask for help. Most of the time they don't even understand. Most of the time they do not listen to instructions because then they won't have to feel bad because they don't understand. It's much easier to play games on the computer and have headphones in their ears to distract themselves from their surroundings.

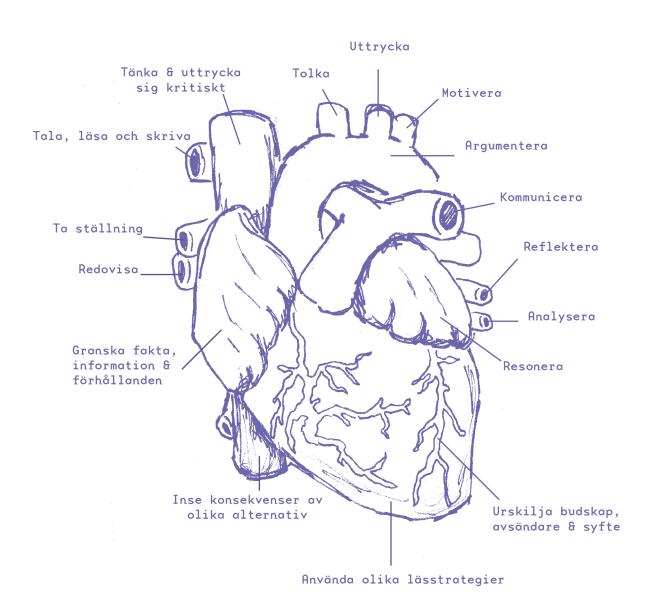
Olivia has now gotten her first F-warning for this term. It is september. She now feels the school year has started for real, everything is in order. She has always had the same non-existent study-technique. She has no strategies that work for her and it has been like this for as long as she can remember. Olivia never gets going with her studies. It gets especially tough when she beecomes aware that she will be graded and a teacher will examine what she has produced. Therefore it is extremely hard to turn in an assignment that isn't perfect. It has to be perfect down to the last detail because otherwise she won't turn it in. At all costs she avoids important assignments. For her to finish an assignment she has to be extremely engaged and motivated by the subject. Olivia has a higher chance of finishing the assignment if she gets to discuss ideas and topics before she gets started. During national testing in math Olivia did not answer a single question what she did instead was to write down the exact departure and arrival of the trams outside the windows.

Sebastian experiences that he isn't able to concentrate on anything at all. He is diagnosed with ADHD and sums up all non finished assignments to that. He says that he hasn't finished a single assignment or read a single page in all of his life because of the fact that he can't sit still and concentrate. This is a quote from a Swedish class where they write argumentative texts: "Niki you can write this, i can't write at all. Should i tell Ylva (the teacher) that I, a senior in high school, can't write?". On the other hand he can sit hours on end and play Seterra (geographical game) and try to fill in all the capitals, countries and flags of various countries flawlessly without interruption. While doing this he gets very fast feedback on his progression and he can improve each round.

Math teacher Admir likes chess. Admir brought several chessboards to school and place them on tables around school. His plan backfired. A chess epidemic has taken over the school. On all the brakes students are flocking around the chessboards to observe the chess games that are taking place. The excitement is insufferable. The chess playing is also taking over regular class hours, the students has found online chess and are battling eachother. Maybe this is not what Admir had in mind when he brought the chessboard. When the chessepidemic had settled a bit i brought my backgammo set to school and started to play Sebastian during recess, I also thought Olivia. Olivia thought Minou. Sebastian thought Ludvig. Ludvig thought melvin. At this point, the backgammon epidemic had taken over the chess epidemic.

Not to mention, students are sometimes lazy. Students are lazy. Everyone is lazy. But it, in general, would be very inconsiderate to assume that someone is lazy. Such an assumption would be an insult of the highest order. But on the other hand, in an educational context, laziness doesn't even exist, it's about the educational model not working. And therefore I completely ignore that laziness has a role in it all and assume that lack of commitment and interest has an underlying cause that does not include laziness. This ignores various explanations such as the study technique is not suitable, that you don't have the right strategies, that you don't have enough support, that you don't have visual support, and finally, that it's really bloody boring.

Språkliga moment som ingår i alla ämnen



(Figur 3, Hjärta, Sundberg, 2022)

RESEARCH QUESTION

For a project with an artistic basis the question at issue should be open enough to give creative freedom while still not being too broad. My research question is as follows:

How can playful graphic design create a more inclusive upper education system for the subject swedish in high school?

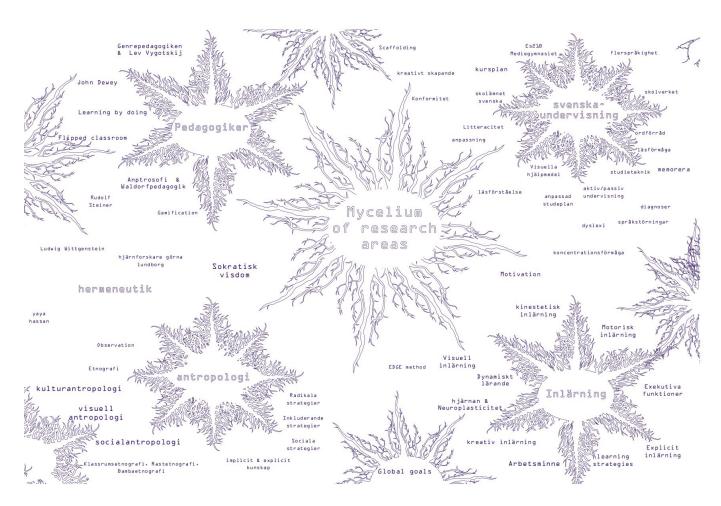
Primary target group

The primary audience is high school students, in the ages of 15-19 with extra focus placed on students with special learning and different aids. However, this does not exclude any student because i believe, design, making, interactive learning and visual aids benefits all students, regardless of ability.

Secundary target group

My secondary target audience is the ones who will purchase this game. Such as learning materials-companies, School directors and teachers. To enable this kind of learning material it is required that publishers, businesses and organizations are included in the target audience. I.e the ones who enable publishing and development of this game.

How can playful graphic design create a more inclusive upper education system for the subject swedish in high school?



(Figur 4, Mycelium of research areas, Sundberg, 2023)

MAPPING THE FIELD

This was the preparatory phase, which involves gaining a broad understanding and perspective on the topic. Find factors that create friction in the current theme and gain an understanding of gaps and problems. Research involves gathering relevant information and data that may be applicable to the topic. It is a stage where decisions about boundaries are made and the project's target group is identified. The question for the project is also developed here, the question is open enough to allow creative freedom and there should be no solutions in the question, while at the same time it must not be too large and vague so that it is not understandable. Observations are usually the first step in the design process. observe, document and perceive the current situation. Based on observations, you can design problems to solve.

"Education is the most powerful weapon which you can use to change the world"

- Nelson Mandela.

Global goals

My project connected to the global goals is to create an inclusive learning environment. Hopefully my project will draw attention to the knowledge about the importance of schooling, education and studies in life. All in all, I want to encourage and motivate education and studies. Education is essential for one's development and future, but my project will show that education can take place in different ways. I think that the global goals should be included in all forms of higher education, it should permeate all courses in one way or another. It creates the ability to be more holistic and inclusive in projects. In design all projects and learning should be influenced by the global goals for sustainable development. Art and design education are in my opinion the basis for sustainable design of products, processes and environments in the future. Art-oriented education should have its basis in sustainability as they are a big part in tackling society's complex challenges with climate, digitization, society and life in general. The 17 global goals were determined in 2015 by the United Nations and aim to be achieved by 2030. They are also known as the Sustainable Development Goals or

SDGs. The predecessor of the first global agenda for sustainability, were the Millennium Goals. They were conceived in 2000 and included all of the members of the United nations. The Millennium Goals were not as concrete and nuanced as the global goals and consisted only of eight goals that were mainly focus on the developing countries. Some of the goals were to have halved global poverty by 2015, all children should have access to school and to eliminate child mortality The environmental scientist and author Lester R. Brown is the progenitor of the concept of "sustainable development", which was introduced in 1981. The most common definition came from Norway's then Prime Minister Gro Harlem Brundtland and it says: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"1. Harlem Brundtland also believes that sustainable development contains three strong components: society, the environment and the economy. This definition and these components are the basis for the global goals. The project "sexkampen" primarily focused on goals number five and ten, to achieve gender equality and reduce inequality, and secondarily number four, quality education. The global goal platform (2022) describes goal number four as;

"ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

Education liberates the intellect, unlocks the imagination and is fundamental for self-respect. It is the key to prosperity and opens a world of opportunities, making it possible for each of us to contribute to a progressive, healthy society. Learning benefits every human being and should be available to all." (Global Goal 4).

Each goal has sub targets, which makes it easier to define the goal of a design project since it's easier to scale it down to a realistic vision if one focuses on the sub-targets instead of the whole goal.

4.1 FREE PRIMARY AND SECONDARY EDUCATION Sub target 4.1 has the goal to "ensure complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes".

4.3 EQUAL ACCESS TO AFFORDABLE TECHNICAL, VOCATIONAL AND HIGHER EDUCATION

Sub target 4.3 has the goal to "ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university".

4.4 INCREASE THE NUMBER OF PEOPLE WITH RELEVANT SKILLS FOR FINANCIAL SUCCESS

Sub target 4.4 has the goal to "substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship"

4.5 ELIMINATE ALL DISCRIMINATION IN EDUCATION

Sub target 4.5 has the goal to "eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations".

4.6 UNIVERSAL LITERACY AND NUMERACY

Sub target 4.6 has the goal to ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.

4.8 BUILD AND UPGRADE INCLUSIVE AND SAFE SCHOOLS

Sub target 4.8 has the goal to "Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all".

Anthroposophy and Waldorf

Anthroposophy is a life and world view developed by Rudolf Steiner, who is also the founder of Waldorf education. Anthroposophy is usually defined as "knowledge of human nature" and can be described as the bridge between natural and human sciences. Steiner preached that anthroposophy should be a path to knowledge that contributes to critical thinking and freedom. Waldorf education was developed by the scientist and philosopher Rudolf Steiner (1861-1925) and is based on the anthroposophical view of human beings. 'Knowledge is the means, creativity is the method and freedom is the goal' is one of the slogans of Waldorf education and the basis of its philosophy. A holistic approach is an important aspect of the holistic approach of Waldorf education. This means looking at the whole picture and working with themes that permeate all school subjects and can be linked to each other. Waldorf education is based on developing the whole person through theoretical, artistic and practical work. Great emphasis is placed on subjects such as art, crafts, music and theater as creative and free thinking is the foundation of the pedagogy. The idea is that art should permeate all subjects in the school and that they should be taught through, for example, craftsmanship. The pedagogy uses artistic elements such as color, shape, song and rhythm as a means to understand the world and achieve knowledge. Learning takes place step by step with the whole body as an aid; in lower grades, subjects are taught through drawing, songs, games and rhymes.

Learning by doing

Learning by doing is an educational discipline that translates to 'learning by doing'. The idea of pedagogy is very similar to Waldorf education and suggests that through practical and personal experience one can learn something new. The educator John Dewey (1859-1952) coined the term "learning by doing" which originally read "Learn to do by knowing and to know by doing". Waldorf education suggests that teachers are used as guides in collaboration with students, while learning by doing does not value the role of the teacher or the classroom. The teacher does not have the same kind of authoritarian role as in the traditional school. They value experiential learning and creating first-hand knowledge based on their own experiences.

Genre pedagogy and Lev Vygotskij

Lev Vygotsky was a Soviet psychologist and social constructivist who developed a pedagogical approach that is often referred to as the Vygotskian pedagogy. Vygotsky believed that learning is a social and cultural activity, and that children learn best when they are supported by more knowledgeable others. According to Vygotsky, learning takes place in what he called the "zone of proximal development" (ZPD), which is the gap between what a child can do independently and what they can achieve with the help of a more knowledgeable other. Vygotsky believed that teachers, parents, and peers can all play a role in supporting children's learning by providing appropriate scaffolding and guidance. In the Vygotskian pedagogy, teachers are seen as facilitators of learning rather than simply transmitters of knowledge. They create a supportive learning environment where students feel comfortable taking risks and making mistakes. Teachers also use a range of strategies to support students' learning, such as modeling, guided practice, and feedback. Another important aspect of Vygotsky's pedagogy is the use of collaborative learning. Vygotsky believed that learning is a social activity and that students learn best when they work together in groups. In collaborative learning, students are encouraged to share their ideas, ask questions, and provide feedback to each other. Vygotsky also emphasized the importance of language in learning. He believed that language is a key tool for thinking and that students need to develop a strong vocabulary and communication skills to be successful learners. Teachers are encouraged to use language in creative ways to support students' learning and to provide opportunities for students to express their ideas and thoughts through writing and discussion. Overall, Vygotsky's pedagogy is based on the idea that learning is a social and cultural activity that takes place in the ZPD. Teachers play an important role in supporting students' learning by providing appropriate scaffolding and guidance, using collaborative learning strategies, and emphasizing the importance of language in learning. Genre pedagogy is described as a literacy pedagogy and aims to strengthen and develop the language of pupils. Initially, the focus was that the pedagogy would primarily support students with a different mother tongue, but has proved to be significant for students, regardless of their mother tongue. Genre pedagogy is built on three important pillars; the sociocultural perspective (proximal development zone and support), Halliday's systemic functional grammar and the pedagogical circle model (Johansson 2016). Genre pedagogy is very much based on collaborative learning and has been greatly inspired by Vygotsky's approach to pedagogy and theory of development and learning. The psychologist Lev Vygotsky (1896-1934) was interested in educational theories and had a sociocultural perspective on education, learning and development. This means that the environment and social interaction are crucial to a person's development and performance. Development included thinking skills, language, and mental and personal development. Vygotsky preached that language was the most important tool for the individual in society and that her development takes place in interaction with the environment. Vygotsky came up with the concept of Proximal Zone Theory (PZT), which is the difference between what an individual can learn on their own, compared to what they can learn with a more knowledgeable individual. This means what a person can achieve without help and what she can achieve with the support and help of a more competent person. Emphasis was placed on imitation learning, instructional learning and cooperation as Vygotsky considered them to be the cornerstones of an individual's development (please add a sensible source). Scaffolding is a term in learning and developmental psychology that can be translated as "support". Literally, the word also means scaffolding and can symbolize how students need support in the learning process, such as a house needing the support of scaffolding during the building process. Vygotsky argued that pedagogically, the term refers to the support students need when they do not understand or cannot solve a problem on their own.

The heart of the Waldorf method is that education is an art-it must speak to the child's experience.

To educate the whole child, his heart and his will must be reached, as well as the mind.

-Rudolf Steiner

DESIGN DISCOURSES

Participatory design

Participatory design, also known as co-design, is a method to create and design together with other people. In my case the co-designers will consist of my stakeholders and target group, which means that they will be a big part of the design process. My project has a vision and goal to be entertaining, educational, engaging, and challenging. In addition to that, the project aims to integrate and combine multiple areas of expertise within the subject and pedagogical approaches. Participatory design in my project ensures that a wide range of perspectives, personalities, difficulties and experiences are included in the process. The fact that I'm not alone in this project, allows me to detect and tackle potential problems or difficulties early on, resulting in more efficient and successful solutions. Including the users, target group and stakeholders makes it easier to understand the desires and preferences. The key idea is to empower the users by giving them an active role in shaping the design and they contribute their insights, experiences, and ideas to inform the design process. Tools and proceedings used in participatory design can include observations, workshops, interviews, prototyping and design thinking/ storming sessions. Proceedings like these ones enable more user-centered and inclusive design solutions and create an iterative design process to the project. In the field of education, participatory design can be used to create learning environments, curriculum, course content and educational tools that are more effective and engaging for students. By involving teachers and students in the design process, solutions that meet the students' diverse needs and learning styles can be created. Participatory design can be utilized to develop inclusive and adaptive learning materials for students with special needs.

Norman describes that participatory design increases user engagement, improves innovation and increases social inclusion (2023). While designing together and with help from the target group and stakeholders it gets accessible and inclusive to all users, including those who may otherwise face marginalization or exclusion. I see the target group and players as a source of input that gives feedback of the design choices and can create ideas to the project. But in the end it is me as the main designer that will be designing the game

and its aesthetics. That is the reason why co-design as a concept hasn't been mentioned. In co-design, as opposed to participatory design, the users are also seen as designers that have a direct influence on design choices and can decide which way the project is going. Co-design is seen as a co-ownership of the project, unlike participatory design where the designer rather gets support and information. co-design specifically emphasizes the equal partnership between users and designers, where they work together throughout the design process as collaborators and decision-makers. Participatory design, on the other hand, is a broader term that encompasses various approaches to involving users in the design process, but the designer makes the final decisions and work about the design. Participatory design proceedings can be applied to game design processes. This enables potential players to be a part of the development of the game and its design. By engaging players in the creation process, it can give valuable insights of the players preferences, way of approaching and playing, but also potential issues with the game design. Playtesting, feedback collection, prototyping and iteration processes are common methods used to involve players in game design. participatory design and game design are two separate concepts, but they can intersect when game designers adopt participatory proceedings to involve players in the design process. Participatory design in game design can lead to the development of games that resonate with the target audience, address their needs and desires, and provide a more enjoyable and immersive experience. Throughout the project I will be using a lot of tools that belong to the method of participatory design.

Ontological design

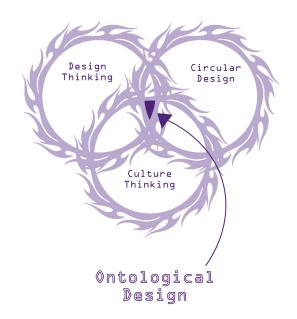
Ontological design is a design discourse that consists of human experience. It gives the perspective that design is something that is more profound and deeper than what's commonly recognized by designers and people within the design world. When we create the objects and contexts that surround us, we in fact design ourselves by altering the culture around us. By designing ontology is to think culturally. Ontological design is a philosophical and design approach that emphasizes the fundamental nature of existence and the relationship between humans and the world

around them. At its core, ontological design is concerned with creating objects and systems that embody a deep understanding of the nature of reality and the interconnectedness of all things. In practice, ontological design involves a deep understanding of the cultural and social context in which a design will be used. It requires designers to engage with the values and beliefs of the people who will use their designs, and to create designs that are responsive to their needs and aspirations. Overall, ontological design is a holistic approach to design that recognizes the deep interconnectedness of all things. It seeks to create objects and systems that are in harmony with the underlying structures and processes of reality, that respond to the needs and aspirations of people, and that are mindful of their impact on the natural world

Anne-Marie Willis (2006) writes that Ontological Design postulates "That designing is fundamental to being human:

- we design, that is to say, we deliberate, plan and scheme in ways which prefigure our actions and makings.
- in turn we are designed by our designing and by that which we have designed (i.e., through our interactions with the structural and material specificities of our environments); That this adds up to a double movement; we design our world, while our world acts back on us and designs us". When we design, our design generates behaviors that accordingly/ there/ consequently shape our experiences through culture; "The responsibility of culture lies with the designers, entrepreneurs and engineers to think about how our products are going to affect human to human interactions, and not just human to product interactions. If not, studies show we risk designing products that can potentially cause us to feel depressed, feel isolated, negatively impact our elections or accuse us of creating generations of narcissists. If any of these studies are true, the implications are enormous. It's too risky. We must intentionally think about the culture a design will spin up and spin into society. This is just as important as any other aspects of the business but arguably most urgent" (Willis, Ontological design, 2006).

Ontology is a Greek compounded word, where "Ont" means being, and "logia" means study. It is the philosophical discipline concerned with the study of issues related to being, existence, becoming and reality. Willis divides the concept into the ontic and the ontology and describes that the ontic refers to "what is", while the ontology refers to "the investigation of what is" and therefore the ontological refers to "the condition and behavior of what is".



(Figur 5, Venndiagran Ontological Design, Sundberg, 2023)

Culture thinking

Culture thinking; Willis writes that "Culture-Thinking is a mindset towards actively observing the behaviors a design would generate, its impact on our culture and iterating for better human interactions in our society", which brings in the anthropological view of design. Cultural thinking is behavior-centered and is centered on the culture that creates based on behaviors that are based on created design. Design generated behaviors that generate culture. Design-thinking; Design thinking is centered around humans with focus on the individuals problem, the solutions to it and how it applies to society as a whole.

Circular design

Circular design; Circular design describes and encourages designers to create products that will stay in loops and discourage waste. It illustrates the responsibility of designers' positive influence on our society and environment. Ontologi views design as philosophical utilitarianism and is included within the field of normative ethics (questions of morals). In short terms, utilitarianism builds on "the biggest chance of happiness with the least amount of sufferfing". One of the branches of utilitarianism the ethics of consequence where the consequences of an action (in this context a product) is analyzed and determined if the outcome is good or evil. This leads us to act with the intent of as little negative side effects as possible.

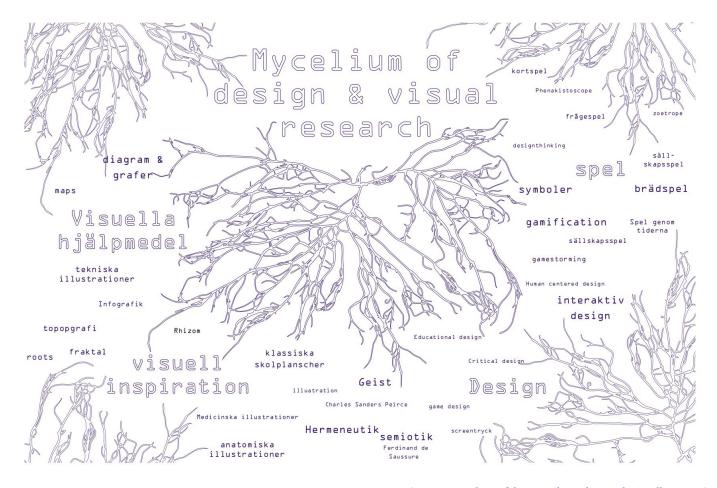
Hermeneutic design

In the book "Ontological Design" (Fraga 2022) it's explained how the hermeneutic circle is a fundamental ingredient in the discourse. The author describes the hermeneutic circle within language. "It is useful to think of the hermeneutic circle in three moves, taking the example of language. While we cannot think outside of language, this does not mean we are totally programmed: (i) we are born into and come to be human in language; (ii) we appropriate it, modify it, perhaps put words together in ways that they have not been combined before, encounter new situations which require new words; (iii) thus in appropriating language we also change it, and language-as-changed in turn acts back on us as language users".

Hermeneutic design is a design approach that emphasizes interpretation and understanding as the basis for creating meaningful and effective designs. It draws on the field of hermeneutics, which is concerned with the study of interpretation, meaning, and communication. At its core, hermeneutic design is concerned with the question of how we understand the world around us and how we communicate our understanding to others. It is concerned with the ways in which design can be used to create meaning-

ful experiences that are grounded in interpretation and understanding. In practice, hermeneutic design involves a deep engagement with the cultural, social, and historical context in which a design will be used. It requires designers to engage with the values, beliefs, and experiences of the people who will use their designs, and to create designs that are responsive to their needs and aspirations. Hermeneutic designers often use storytelling, metaphor, and other forms of symbolic representation to create designs that are meaningful and evocative. They are concerned with the emotional and aesthetic impact of their designs, as well as their functional effectiveness. Overall, hermeneutic design is a human-centered approach to design that is concerned with creating meaningful and effective designs that are grounded in interpretation and understanding. It emphasizes the importance of engaging with the cultural, social, and historical context of design, and of using symbolic representation to create designs that are evocative and emotionally resonant.

The hermeneutic circle is equivalent to the feedback loop, where we first design tools or products and then we are responding in a certain way, namely the products or tools are designing us in return. A common



(Figur 6, Mycelium of design and visual research, Sundberg, 2023)

example of that is the design and construction of a chair, you can design a chair in many different ways, and in that way the chair will design how the human will sit on it and use it. That being said, everything we have created and designed, whether mentally or physically, in turn affects further development in a form of feedback loop. We are designed by what we have designed and therefore everything that is designed constitutes acts of ontological design.

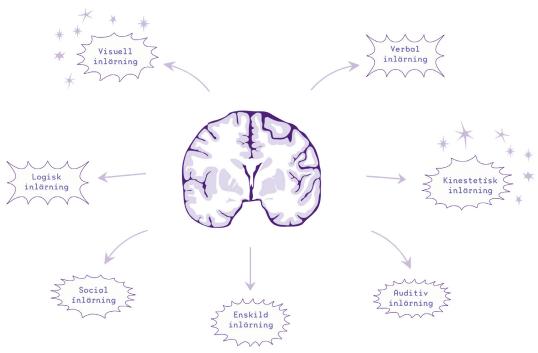
My goal is to use my aesthetic and visual knowledge and apply it towards improving education, teaching and learning strategies because I believe that the best way to acquire knowledge is when you combine creativity with science and education. I also believe that the theoretical and the visual disciplines can be combined much more efficiently than they are today within the public education domain. A concept that is repeated several times in the book "Kunskap i handling" (Molander 1996) is hermeneutics, one can describe hermeneutics as the doctrine of interpretation and understanding of actions. The hermeneutic circle, or the hermeneutic spiral as it is called, can be described as starting with a knowledge and understanding, then using interpretation to increase one's own understanding. Which refers to the fact that a circular movement is required between one's pre-understanding and experiences (and new ideas) in order to be able to interpret and further develop a new understanding. After that, the new understanding will become pre-understanding for the next experience (and new ideas). In my opinion, the iterative circle is equivalent to the hermeneutic circle. Hermeneutics has its origin in the Greek god Hermes, who was the messenger between gods but also towards the people. Hermes' life task was to pass on messages and interpret them for the people.

Education and teaching

According to all research, creative work develops the brain's ability to remember and learn. The best learning takes place when both hemispheres of the brain are activated during the learning process and it has long been recognized that image memory, the visual, is by far the strongest. In addition to image memory, the use of multiple senses simultaneously demonstrates enhanced learning. Doing something actively develops the brain and its memory capacity. When using the hand as an aid, the motor nervous

system is engaged and a muscle memory is created. The movements of the hand are controlled by the cortex and impulses are constantly sent between the hand and the brain. When we do something physical, mirror neurons in the brain are activated, which is why imitation and physical interaction work as a learning method. When there is an interaction between the hand and the brain, your physical movements are reflected in the brain and the learning process is strengthened. Göran Lundborg, a retired professor of hand surgery, is the author of the book "Handen och hjärnan" (2011), which describes how the hand interacts with the brain. Lundborg describes the role of the hand throughout evolution, in art but also in science. Lundborg claims that the basis for all culture and the existence of society is creative hands; society has been created thanks to the interaction between our hands and the brain. He also believes that the cerebral cortex is more developed in people who engage in creative work with their hands. A clear example is with instruments, Lundborg describes results and scientific evidence that more complicated systems of neural pathways are created in the brains of people who handle instruments. When we create with our hands, the interaction between the brain hemispheres is more demanding and develops its capacity. "What happens in our brains during different activities may be one of the most important things to find out for the future of learning" (Vad som händer i våra hjärnor vid olika slags aktiviteter kan vara en av de viktigaste sakerna att ta reda på för framtidens lärande"), says Rolf Ekman, Professor of Neurochemistry at Sahlgrenska Academy, University of Gothenburg (2012). Ekman verifies the claim that performing artistic activities makes you more creative because the hemispheres have to cooperate with each other. "We don't just learn with the brain, we also learn with our eyes, touch, sight and body" ("Vi lär inte bara med hjärnan, vi lär även med ögonen, känseln, synen och kroppen. Och ju fler sinnen som kopplas in, desto mer ökar de intellektuella krafterna"). And the more senses that are involved, the more the intellectual powers increase" claims Lundborg (Hallonsten 2022). Hallonsten reproduces and refers to Göran Lundborg and Fredrik Ullén, who are both brain researchers, and she clarifies their position that all senses should be used in learning. Practicing creativity increases brain plasticity, which in turn strengthens our intellectual abilities and the ability to learn all types of knowledge. They also believe that society suffers if we do not take aesthetic subjects seriously. The parts and functions of the brain are not so clearly divided, with

Inlärningsstilar



(Figur 7, inlärningsstilar, Sundberg, 2023)

the left standing for the logical and the right for the artistic, which is a much more simplified picture than reflects reality. Lina Bunketorp-Käll, physiotherapist and PhD at the Department of Neuroscience, clarifies both Lundborg's research and Ekman's theories on teaching and stimulation of the brain (2012); "My hope is to be able to show that stimulating environments and activities can increase motivation and make children absorb knowledge better. This can involve everything from movement in various forms, music, dance, rhythm to nutrition and outdoor education," ("Min förhoppning är att man ska kunna visa att stimulerande miljöer och aktiviteter kan höja motivationen och göra att barn tar till sig kunskap bättre. Det kan handla om allt från rörelse i olika former, musik, dans, rytm till kost och utomhuspedagogik") says Bunketorp-Käll. Association skills are important for learning, which is related to connecting new knowledge with previous knowledge. Making connections between different elements. There are several methods that make learning more efficient and improve memory, a classic method being to link new knowledge to old knowledge. It can be repeating steps that you have gone through before and building on new knowledge. Using words and terms you already have in your memory and combining them with new information creates deeper memories. Sara Stillesjö, postdoc at

the Department of Applied Educational Sciences, and Carola Wiklund-Hörnqvist, senior lecturer at the department, have published a research study at Umeå University that focuses on the brain, learning and memory (Wiklund-Hörnqvist, Stillesjö 2022). Part of the larger interdisciplinary project 'Learning to engage the brain', Stillesjö and Wiklund-Hörnqvist focused on the link between learning and memory function. The results of the study show that more effective learning methods are those that are active and simultaneously stimulate areas of the brain known to be linked to well-learned and consolidated memories. The research study shows that active learning styles help students remember more of the information over a longer period of time. Active learning styles have been shown to be significantly more effective than passive ones. Examples of active learning styles include integrating into the classroom and using multiple senses to learn, while passive learning styles include listening to instructions or reading a book. By being social, such as having group discussions, playing games or doing theater with the information, you are using an active learning style. The brain likes to absorb information based on a social context. There are several different learning styles that involve all the senses in some way. Verbal learning means

learning by hearing or reading something. Kinesthetic learning means learning by using your hands and body. Auditory learning means learning through music and sound. Social learning means learning by working with other people. Logical learning means learning through reasoning and systematic thinking. Visual learning means learning with images. In addition to these styles, repetition is important for all learning styles. Information that is repeated is retained in memory regardless of the learning style used. A very simple way to prove the effect of repetition is that songs and passwords are easily remembered because you hear songs several times or have to enter passwords/ codes several times. Active learning styles can be equated with interactive methods, i.e. when you actively interact while learning something, such as practical exercises, crafts or role-playing. The good thing about passive learning is that much more information and nuanced analysis/knowledge can be conveyed in a relatively short period of time. More information can be gathered in a shorter time when it is not to be processed through active and interactive methods, however, there is not the same guarantee that the information will be stored in the brain. A large part of school is aimed at teaching students how to learn, developing their ability to learn and finding appropriate methods. For students to learn what types of learning styles and strategies work for them, they need to be exposed to different learning styles and strategies. Therefore, it is important that schools use a wide variety of learning and teaching methods. By presenting different learning styles and strategies, the aim is to create an interest and desire to learn. A person's self-confidence, motivation and commitment are small keys to learning.

Purpose of the education in school

Chapter 1. 4§ "Education shall take into account the different needs of pupils. Pupils shall be given support and stimulation so that they develop as far as possible. Efforts should be made to compensate for differences in the pupils' ability to benefit from the education." (Skolverket, n.d)

(Original text in swedish: 1 kap. 4§ "I utbildningen ska hänsyn tas till elevers olika behov. Elever ska ges stöd och stimulans så att de utvecklas så långt som möjligt. En strävan ska vara att uppväga skillnader i elevernas förutsättningar att tillgodogöra sig utbildningen.")

Chapter 3, section 3 "All children and pupils shall be given

the guidance and stimulation they need in their learning and personal development so that, based on their own conditions, they can develop as far as possible in accordance with the objectives of education. Pupils who, as a result of a disability, find it difficult to meet the various knowledge requirements should be given support aimed at counteracting the consequences of the disability as far as possible. Pupils who easily reach the minimum level of proficiency should be given guidance and stimulation to enable them to progress further in their development."

(Original text in swedish: 3 kap. 3 § "Alla barn och elever ska ges den ledning och stimulans som de behöver i sitt lärande och sin personliga utveckling för att de utifrån sina egna förutsättningar ska kunna utvecklas så långt som möjligt enligt utbildningens mål. Elever som till följd av funktionsnedsättning har svårt att uppfylla de olika kunskapskrav som finns ska ges stöd som syftar till att så långt som möjligt motverka funktionsnedsättningens konsekvenser. Elever som lätt når de kunskapskrav som minst ska uppnås ska ges ledning och stimulans för att kunna nå längre i sin kunskapsutveckling.)

Minority language

Sweden has recognized Jiddish, Romani chib, Sami, Swedish Finns and Tornedalers as national minorities. The Sami have also been recognized as an indigenous people. In 2000, Sweden chose to join the Council of Europe Framework Convention for the Protection of National Minorities and the European Charter for Regional or Minority Languages (County Administrative Board). This meant that minority policy became a separate policy area within the Swedish state budget. The aim of minority policy is to protect and empower national minorities and to support the survival of historical minority languages. In 2009, the government reformed minority policy and presented a strategy and the Act on National Minorities and Minority Languages. The Act applies throughout Sweden and aims to protect and promote minority languages, and to enable national minorities to maintain and develop their culture. Administrative authorities are also obliged to inform minorities of their rights and empower them in matters affecting them. As of January 1, 2019, the Minority Act has been revised to further strengthen both rights and obligations. This means that society has a special responsibility to support the preservation, development and transmission of minority languages to the next generation. It is also important to protect and promote the

culture of national minorities and for administrative authorities to inform minorities of their rights and give them a say in decisions that affect them.

Game design

This project consists of creating games and being interactive with the student and learning process. A game is a problem solving activity, approached with a playful attitude, that is one of the reasons I've chosen to use games as a medium. Mechanics, Dynamics and Aesthetics (MDA) is a framework to understand, create and design games. Mechanics are the base components of the game, the rules and procedures. Dynamics are the behavior from the mechanics and aesthetics are the emotional responses and player experience with visual aspects.

There are challenges in every field, and it is crucial to be able to identify the challenges and risks of the subject you are designing for. With board games and board games, there are many challenges as the design is highly interactive and user-dependent. Some of the challenges and risks that arise in this project are lack of functionality (confusion), inactivity (lack of interaction), predictability and randomness (gaming culture). Lack of functionality (confusion) in games can lead to it being too strenuous to get started with the game. It simply takes too much energy and is not enjoyable enough to play. Rules and information about the game may be described in a too advanced or complicated way. Due to too complex written rules, interest is quickly lost. Too vague rules and too advanced rules can lead to confusion and become too energy consuming. This brings to mind The KISS principle (or Keep It Simple, Stupid) that encourages simplicity and clarity in communication and design. The principle suggests that complex systems or ideas should be avoided in favor of simpler ones, as this leads to easier understanding and greater efficiency. It can be applied to decision-making and time management, as it suggests that prioritizing the most important tasks and simplifying one's life can lead to greater productivity and satisfaction. The fact that one's goal is to achieve simplicity in design does not necessarily mean that the design is simple and simply executed. In my opinion, more advanced methods and approaches may be required to create simple design as opposed to complex design. Complex and advanced design can be perceived as redundant (unnecessary) information. Reading instructions and game rules

is an example of elements that make it take time to start playing, which goes against the KISS principle. The time before the game starts should be as short as possible. Other time-consuming factors include setting up the game board, game markers and various details of the game's setup.

Gamification

Gamification is the process of incorporating game-like elements into non-game contexts, such as education. This approach has gained popularity in recent years as a way to engage students, enhance learning, and increase motivation. Gamification can also be used to create simulations and interactive experiences that allow students to explore complex concepts in a more engaging and interactive way. Furthermore, gamification can also be used to promote collaboration and teamwork among students. Multiplayer games and group projects that require students to work together can help to develop social and interpersonal skills, such as communication, collaboration, and problem-solving. One of the key benefits of gamification in education is that it can increase student engagement and motivation. By incorporating elements of play and competition into the learning process, students may become more invested in their education and more willing to put in the effort to achieve their goals. However, it's important to note that gamification should not be used as a substitute for effective teaching methods. Rather, it should be used as a tool to enhance learning and engagement, supplementing traditional teaching methods and helping students to achieve their full potential. Overall, gamification has the potential to be a valuable tool in education, by increasing student engagement, promoting collaboration, and providing interactive and engaging learning experiences. By incorporating game-like elements into the learning process, educators can create a more dynamic and effective learning environment, helping students to achieve their full potential. Gamification is not about playing games, but about how pedagogy and psychology can interact to increase engagement, efficiency and job satisfaction in schools and/or other learning situations. Game design is a complex process that involves a variety of elements, including mechanics, dynamics, and aesthetics. These three elements work together to create a cohesive and engaging gaming experience. Ian Schreiber writes (2009) describes in his thesis "Game Design Concepts: An experiment in game design and

teaching" how the MDA framework works.

Mechanics refer to the rules, systems, and structures that govern gameplay. This includes elements such as player actions, resource management, and scoring. Mechanics can have a significant impact on the gameplay experience, as they determine what the player can and cannot do within the game world.

Dynamics refer to the way in which the mechanics interact with each other, and with the player. This includes elements such as feedback, difficulty, and player choice. Dynamics are what make the game experience unique, as they create a sense of unpredictability and challenge.

Aesthetics refer to the overall look and feel of the game, including the visuals, sound, and narrative. Aesthetics are what create an emotional connection between the player and the game world, and can greatly impact the player's enjoyment of the game. Game designers must carefully consider each of these elements when creating a game. They must ensure that the mechanics are engaging and intuitive, the dynamics are challenging and rewarding, and the aesthetics are visually appealing and emotionally impactful.

With good games, players should ideally not be able to be too passive, players should feel engaged and included. An example of passivity is a long wait for other players. The optimum may be to play simultaneously with each other, as card games are usually structured. Whereas board games can risk a long wait and passivity while other players answer questions, make their choices and take steps. Player elimination is the term used in games where there is a risk of players being eliminated. It is common in card games, where there may be several players and one by one they are eliminated. There is often no problem as the games are usually shorter in time and do not last too long. Implementation of game elimination can be designed to be disadvantageous if the game lasts for several hours and one person leaves early. Games can be predictable in different ways, which can become boring and destructive if they are too extensive. A certain amount of predictability is required to create a functioning game. And another part is that interest can be lacking if there are feelings of hopelessness, that it is impossible to win. The interest in continuing to play can then wane. Games involving multiple people have the advantage that the level of difficulty of winning can be adapted and changed. It is not always the same. It is a difficult balance not to create something that is too easy and also not too hard, which can also suit a large group of people. One approach to solving the problem of the feeling of an obvious win or impossibility of winning is to create features that allow massive amounts of points to be taken at different points or randomly. Keeping players' scores secret until the end can be another way to keep interest alive. Randomness can be positive and a beneficial factor for the game's value. But it is a delicate balancing act because, despite the randomness, players need to feel that they have some kind of control that makes decisions meaningful. Games for younger children can usually be based on greater randomness as they are not as much in need of clear consequences of game moves. Rolling dice every round to see how far you can go is common at younger ages but can be perceived as an outdated and uninteresting method after childhood. Dice are a component that can add a randomness factor to the game. In all of these steps to create games, I have used the kiss principle as a starting point. The goal of my game is to follow the KISS principle in all design and creation.

The kiss principle and ockham's razor

An important cornerstone of KISS is having your target group as close as possible, having full control over them so that you can make decisions that benefit the target group and stakeholders. The Kiss principle and creating based on and close to the target group brings us to a more nuanced/ detailed concept/ concept/ principle; Occam's razor. Brian Duignan (2023) describes the Occam's razor principle as a scientific method and denotes that one should not assume more events or objects than necessary to explain the observations made. Duignan writes that "The principle gives precedence to simplicity: of two competing theories, the simpler explanation of an entity is to be preferred". You should not assume more phenomena or things than are necessary to explain the observations you make" (Wikipedia. n.d). In other words, it means not to complicate things unnecessarily. The name of the principle alludes to the shaving away of all unnecessary assumptions, leaving only the simplest explanation. The original definition of the principle is "Pluralitas non est ponenda sine neccesitate", i.e. "Entities should not be multiplied unnecessarily". In game design, Ockham's razor can

be a valuable tool for creating elegant and streamlined gameplay mechanics. When designing a game, it's tempting to include as many features and options as possible in order to offer players the most comprehensive experience. However, this can often lead to overwhelming and confusing gameplay that detracts from the overall enjoyment of the game. By applying Ockham's razor to game design, designers can prioritize simplicity and clarity in their mechanics, creating a more intuitive and engaging experience for players. This can involve removing extraneous features, simplifying complex systems, and focusing on the core elements of gameplay that are most essential to the player experience. Overall, Ockham's razor can be a powerful tool for game designers looking to create games that are both elegant and enjoyable. By prioritizing simplicity and clarity in their mechanics, designers can create games that are easy to understand and engaging to play, providing players with a more enjoyable gaming experience. In game design, Ockham's razor can be a valuable tool for creating elegant and streamlined gameplay mechanics. When designing a game, it's tempting to include as many features and options as possible in order to offer players the most comprehensive experience. However, this can often lead to overwhelming and confusing gameplay that detracts from the overall enjoyment of the game. By applying Ockham's razor to game design, designers can prioritize simplicity and clarity in their mechanics, creating a more intuitive and engaging experience for players. This can involve removing extraneous features, simplifying complex systems, and focusing on the core elements of gameplay that are most essential to the player experience. Overall, Ockham's razor can be a powerful tool for game designers looking to create games that are both elegant and enjoyable. By prioritizing simplicity and clarity in their mechanics, designers can create games that are easy to understand and engaging to play, providing players with a more enjoyable gaming experience.

Motivation and Goldilocks Rule

The Goldilocks Rule is a principle that suggests that the optimal state for achieving success is one that is neither too easy nor too difficult. This rule is based on the famous children's story of "Goldilocks and the Three Bears," vin which the young girl searches for a porridge, a chair, and a bed that are not too hot

or too cold, too big or too small, but instead are just perfect. In education, the Goldilocks rule can be applied in a variety of ways to help students learn effectively. For example, when designing curriculum and lesson plans, educators can use the principle to find the right balance of challenge and support for their students. If the material is too easy, students may become bored and disengaged, while if it is too difficult, they may become frustrated and give up. Students should be challenged with tasks that are neither too easy nor too difficult, but instead are at the right level of difficulty to foster learning and growth. The Goldilocks rule is a principle that suggests that the most effective way to learn is by challenging oneself just enough to stay engaged, but not so much as to become overwhelmed or disinterested. Goldilocks rule can be resembled with ockham's razor and the kiss principle within the design field. A design that is too complex can be overwhelming and confusing, while a design that is too simplistic can be boring and unengaging. In addition, the Goldilocks rule also applies to other design elements such as color, typography, and layout. For example, the use of too many colors can make a design look cluttered and chaotic, while the use of too few colors can make it appear dull and lifeless. Similarly, typography that is too fancy or too plain can be difficult to read, while typography that is just right is easy on the eyes and enhances the overall design. Overall, the Goldilocks rule is an important principle for graphic designers to keep in mind. By striving to find the right balance in their work, designers can create designs that are visually appealing, easy to understand, and engaging for the viewer. The human brain loves a challenge, but only if it is within an optimal difficulty zone. If something is too hard, you lose motivation, but also if something is too easy, which is a big challenge for me. But to do that, I have to stay as close to the users as possible. The vision is that it should be just challenging enough and show progress and immediate feedback, which I see as congruent with the function of games. James Clear (2023) describes how the psychologist Jonathan Haidt sees motivation and writes that one of the main keys to maintain motivation and joy in what you doing is to "get immediate feedback about how you are doing at each step" Immediate, clear feedback on one's progress is crucial to maintaining motivation in the long term.

METHODOLOGY

Anthropology as a methodology

Anthropology is the science and study of humans. Anthropology as a methodology revolves around human behavior, biology, culture and society. In this project I primarily focus and utilize social anthropology and its methodologies. Social anthropology's main method is ethnography and interviews which will form the basis of this project's method as well. I will study and observe students ages 15-19. Ethnography forms its believes on the idea that to completely understand a culture, society or context you must first become a part of it. Within social anthropology the visual is also studied, it also studied in what is called cultural anthropology. Within social anthropology humans are viewed through a social lens and in cultural anthropology they are viewed through a cultural lens.

Within social anthropology the visual is also studied and words like visual anthropology, cultural anthropology and design anthropology are becoming more and more common. The social anthropology method means to study society and the method within cultural anthropology is to study culture. These two will of course overlap just like humanities and social sciences overlap. In broad terms the differents methods chooses to view the human either as a social or cultural being. Design Anthropology, also known as Anthropology of Design or Design Ethnography, is an interdisciplinary field that combines the principles of anthropology with design practice. It seeks to understand how people interact with design and how design impacts people in different cultural, social, and historical contexts. In "Designs and Anthropologies" (Murphy, Wilf 2013) they bring up how anthropological concepts and methods are embedded/ introduced/ in the design process and thinking. but also vice versa, where design methods and concepts are embedded in Anthropology to create a more inclusive and better ethnographic study.

I view design anthropology as a sort of rendezvous point of social and cultural anthropology. My project is centered around the swedish language within education and this means we have to bring in linguistic anthropology as well. Linguistic anthropology regards how language shapes human society and identity.

Design Anthropology involves a range of research activities, including participant observation, inter-

views, surveys, and user testing, aimed at understanding user needs, preferences, and experiences. It also involves the co-creation of design solutions with users, stakeholders, and designers, based on the insights gained from research. The goal is to create more inclusive, sustainable, and culturally sensitive design solutions that address real-world problems and improve people's lives. Design Anthropology is a growing field that bridges the gap between anthropology and design, and seeks to create more culturally and socially relevant design solutions that reflect the diverse needs, values, and perspectives of people in different context. Anthropology in the context of my project means I will be working with the culture, identity, norms and diversity of high school students. In the book "Design Anthropology- Theory and Practice" (Gunn, Otto and Smith 2013) it enucleated how design thinking and anthropological research are connected and are integrated in each other. It describes how design anthropology elaborates on its observations, interpretations and insights and how to utilize it to shape, co-create and visualize.

Emic (EMIC) perspective: This perspective involves trying to understand and describe a cultural or social group from its own perspective, i.e. from within the group. This means focusing on the internal, cultural factors that influence how the group functions and what behaviors are important to the group itself. It tries to understand and describe the group's own categorisations, concepts and norms. The Emic perspective is more focused on discovering and explaining cultural differences between different groups.

Etic perspective: This perspective involves trying to understand and describe a cultural or social group from an external, objective perspective. It means focusing on the external factors that influence the group, for example by using a comparative approach to identify similarities and differences between different groups. It attempts to describe group behaviours and categorizations in terms of a comprehensive and general cultural model that can be applied to many different groups. The etic perspective is more focused on finding universal factors that explain cultural similarities between different groups. In design, emic and etic perspectives involve trying to understand and describe the user's or customer's perspective on a product or service. The emic perspective focuses on understanding the user or customer's needs, cultural norms and behaviors, while the etic perspective focuses on finding universal factors that can be applied to a larger customer base. Wasson (2016) describes the practice of design anthropology as follows;

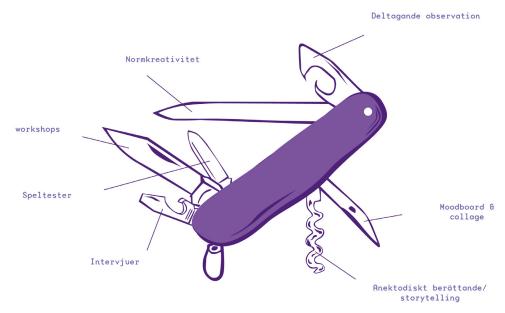
"Design anthropology describes the practices of anthropologists who collaborate with designers and team members from other disciplines in order to develop new product ideas. The primary contribution of the anthropologists lies in the ethnographic research they conduct with users, or potential users, of the product being envisioned, in order to learn about the everyday practices, symbolic meanings, and forms of sociality with which a successful new product would need to articulate. Designers and other members of product development teams draw on findings from such research to develop design ideas that fit the lived experience of intended users." -Wasson



(Figur 8, Trött elev, Sundberg, 2023)

METHODS

METODER



(Figur 9, Metoder, Sundberg, 2023)

Ethnographic Design based method

During the autumn and spring term of 22/23 i will study students at the LBS mediegymnaisum and mainly focus on two second year classes during their school days. In an ethnographic context I will participate and observe the groups from my point of view as their students' assistant and substitute teacher. Since I already have an established role as a trusted and natural part of their day to day routine I am hoping to execute a successful ethnographic research. During the coming school year I will gather qualitative and quantitative data in the form of observations, notes, illustrations, interviews, recordings, workshops and tests. In "Ethnography by Design" (Cantarella, Hegel and Marcus 2020) it's written by two anthropologists and a designer, and introduces how design can be applied in ethnographic studies. They describe how different design practices and discourses are connected to ethnographic methods. Ethnographic method which is based on observing people and groups is avgörande for insights and knowledge of identity, but it can also be a starting point for the creative design process. Since the end result of my ethnographic research will result in a graphic design product I will in conjunction perform design based methods. This means I will perform design studies in order to solve problems that arise in the classroom

through design. In a practical sense this will be executed with workshops, anecdotal narration and storytelling, normcreative methods, participatory observation, moodboards and collages, interviews and game tests. The workshops that have been executed and will be executed are performed in cooperation with high school students but also with my peers at HDK Valand, which are six thinking hats, post-it notes and Dark Horse workshops. Further on some of the planned workshops for the spring are SCAM-PER and PACT analysis, personas, SWOT analysis, and road maps. More thorough/ thoroughly/ ingoing concrete methods are qualitative and snowball interviews, but also quantitative questionnaires/ surveys and assessments/ evaluation. Most of my methods and workshops come from the compiled/juxtaposed design thinking Tool Kit, Funded by the European Union and developed transnationally by three art schools: erg (Brussels), HDK-Valand (Gothenburg) and ISBA (Besançon) (2022). The Tool Kit emanates from peer-learning and is a research programme on critical pedagogy in the arts. Implementation of design-based research concerns five main activities:

-Clarification of problems- The practical problem is investigated and analyzed. Underlying problems can be identified.
-Sketch of the artifact and definition of requirements. Sketch

of a solution to the problem in the form of an artifact. Requirements established. Transformation of the problems definitions and requirements on the artifact.

-Design and development of artifact. Artifacts are created with intent to solve the problem in question.

-Demonstration of artifact. Artifacts is demonstrated and used in an illustrative or real situation to probe its capabilities. Demonstration should show that the artifact is capable of solving the problem.

-Evaluation of artifact. The artifacts is evaluated to establish how well it fulfills the requirements and to what extent it can solve or mitigate the problem at hand that is the motivation behind the research (Johannesson, Perjons, 2014).

Know Your Users

"Design anthropology should be thought of as a philosophy and practice for creating a true partnership among stakeholders with the goal of designing for good, by being aware of the past, but seeking to positively transform the future". (Otto, Smith, p.1-30. 2013)

What has been most important during this project is to be close to the target group. Getting an understanding of how the target group will interact with my project. Their interaction with my project is very important for understanding the function of the project and developing it. Being constantly close to the target group also gives an idea of which features should be added and which features should be removed. Knowing what the users feel and being as close to them as possible has been a common thread throughout the project. By doing this, you look at someone else's problem and make it your own, which contributes to your own empathy, which in turn creates motivation and enthusiasm to solve the problem with your skills. Immersing oneself in the lives and communities of the people you're designing for is the most effective way to gain a deep understanding of them.

Classroom Ethnography

Ethnography is a research method that involves immersing oneself in a social setting to observe and document the everyday practices and behaviors of people within that setting. In the context of education, ethnography can be used to study the dynamics of classrooms, schools, and other educational settings. Classroom ethnography is a qualitative approach that draws on anthropological and ethnographic methods to gain an in-depth understanding of the cultural practices and social norms that shape teaching and learning. My goal of classroom ethnography is to document and analyze the everyday experiences of teachers and students in classrooms, with a focus on the cultural, linguistic, and social factors that influence educational practices. Ethnography, storytelling, and design are interconnected in various ways. One connection between ethnography and storytelling is that ethnographic research often involves the collection of stories and narratives from the people being studied. These stories can provide valuable insights into the cultural and social context of the research, and can help to create a more nuanced understanding of the experiences and perspectives of the people involved. Design can be informed by ethnographic research and storytelling. By using ethnographic methods, one can gain a deeper understanding of the needs, desires, and behaviors of the user's/people/ students/ target group. Ethnography can also be used specifically in game design to have workshops, test and refine game prototypes. By observing the gameplay and feedback of participants during playtesting, game designers can identify areas for improvement and make changes to the game that better align with the preferences and expectations of the target audience. Moreover, ethnography can also inform the development of games that have a specific educational purpose. By using ethnography in game design, designers can create games that are more educationally relevant, engaging, and impactful for their target audience. One approach I have chosen to conduct ethnographic research in educational settings is to participate in the daily activities of the setting, such as eating lunch with students. As part of my studies to achieve naturalism, I spend my lunches every day with the students in the dining room, as I feel it is a place where they can vent their thoughts and opinions freely. This allows me to observe the social interactions and communication patterns that occur during this time, and to gain insights into the norms, values, and beliefs that shape student behavior. By participating in this activity, the researcher can gain

a deeper understanding of how students navigate social hierarchies, negotiate peer relationships, and express their identities in this setting.

Design thinking mindset

I'm using Design thinking as a mindset in my methods. Design thinking is an iterative process where you use different designed based strategies to create ideas and solutions. A design thinking mindset is an approach to problem-solving and innovation that emphasizes empathy, creativity, and iterative experimentation. It is a way of thinking and an approach to work where accepting failure and uncertainty are necessary. I see design thinking and anthropological thinking as equal in many ways since one of the main attributes of design thinking is focusing on research about people, groups and their contexts. A need in anthropological practice, ethnographic study and design thinking is to be curious, to observe and to be surprised by our surroundings. At its core, it involves a deep understanding of the needs, motivations, and experiences of the people who will be using a product or service, and a commitment to designing solutions that meet those needs in effective and meaningful ways. One of the key principles of design thinking is the idea of "failing forward," or using failures and mistakes as opportunities to learn and refine the design. This requires a willingness to experiment and iterate, and a recognition that the design process is not a linear, step-by-step approach, but rather an ongoing process of exploration and discovery. Designers with a design thinking mindset also place a strong emphasis on collaboration and interdisciplinary teamwork. They recognize that effective design solutions often require the input and expertise of individuals from a wide range of backgrounds and disciplines, and they actively seek out these perspectives to inform their work.

Något som man kan gå miste om i sin designprocess är att ta hänsyn till bl.a. genus, etnicitet och eventuella funktionsvariationer. A feminist and norm creative mindset is an approach to design that challenges gendered and normative assumptions and aims to create more inclusive and diverse design solutions. This approach seeks to question traditional gender roles, stereotypes, and expectations and to create designs that are more representative and empowering for all individuals, regardless of their gender identity or expression.

Something you can miss out on in one design process is to regard among other things genus, ethnicity and eventual functional variations. For me it is important to include a norm critical viewpoint throughout one's design practice. Norm critics are about bringing to light the invisible rules that guide society and by shedding light on them create the possibility to question and change these norms. Norm critical thinking strives to work against all forms of discrimination and tries to steer clear of all prejudices regarding, gender identity, ethnicity, sexual preference, social standing, functional variation etc. By thinking norm critically one can consciously include groups that would have otherwise been excluded. Inclusion is important so that everyone can feel represented and feel like they belong within society. Norm creativity takes it a step further and breaks the norms using creativity. Norm criticism informs about the norms and questions them, while norm creativity creates new ideas and solutions to create something more inclusive. Norm criticism is the analyzing part, while norm creativity is the practical part.

Some of the viewpoints and terms that are important to regard are stereotypes. functional norms, social standing, gender norms, racialization and caucasian norms;

- What norms are there within my field of research?
- What perspectives are missing?
- -What possibilities are there? What functions and messages should your design have?
- Are you excluding anything with your design? What should and do you want to include?
- What are the consequences of your design?

DESIGN PROCESS

1: Empathize and Experience

Design process (game design). The way to go when creating games, Generating Ideas, take bunch of elements, throw them together, call it a game. There is the iterative process with iterative steps (design, playtesting, evaluation). The first step in the design process intended for this project is to observe and investigate for learning about the current/ prevalent problem/ situation and the people whom the design will be dedicated to. Through ethnographic studies and methods such as participant observation, interviews and workshops I will get more understanding of the different people, groups, context and problem. This is very important to not make the mistake of building up your own assumptions of the context. This is the part where anthropology is crucial, the better this part is done, the more chances to provide solutions that add real value to people's experiences. This part is also to include my own experiences essential as an observer. Have the mindset of being in the world as an observant and reflective human being. This phase lasted over a year for me, during spring 2022 and autumn 2022.

2: Vefine

The next steps are unfeasible to fulfill and achieve without this part. To find a solution you need to have a clear idea of what the problem is. In this step I will define the problem and my research questions for my project. Defining the problem is crucial because a solution cannot be found until a clear understanding of the problem is obtained.

3: Research

Gathering information and other data that could be necessary for later decisions and insights. It takes time to synthesize information and experiences into knowledge. The collecting could consist of all types of research, such as visual research, experiences, and gathering data that gives you inspiration. In Media Research you explore various media sources, such as: websites, documentaries, movies, educational magazines, journal articles, databases, etc. This was a period where I identified my different topics and keywords that are the most relevant to my project.

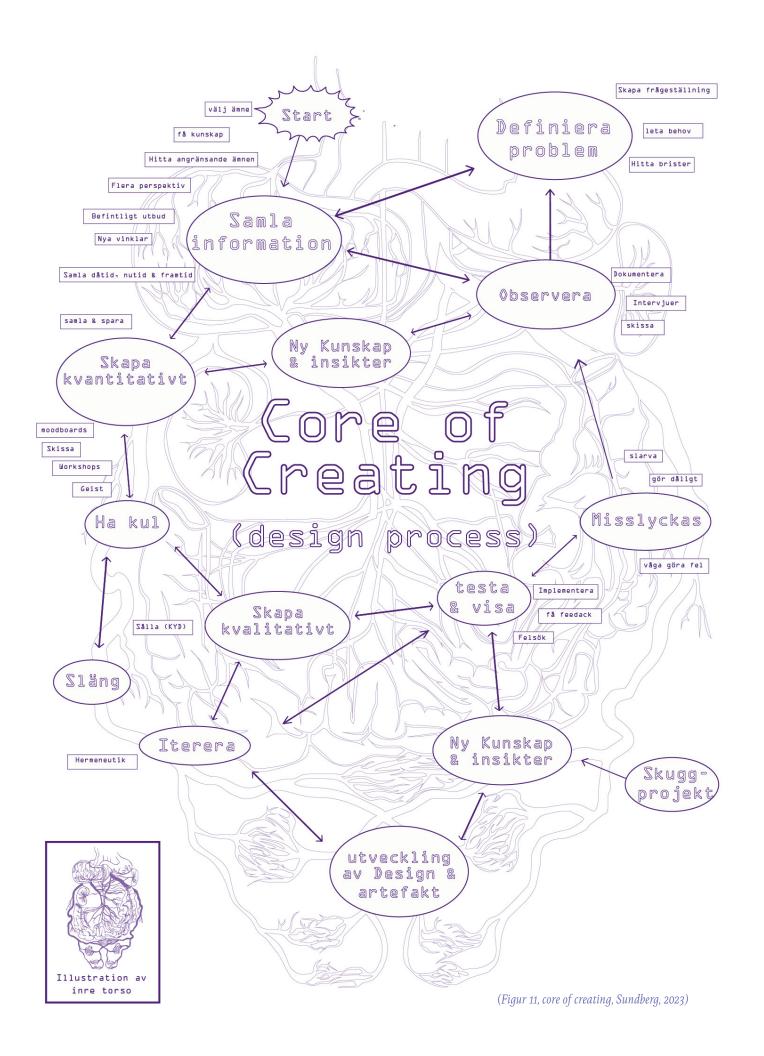
The outcome from this phase is to better understand the context of my project and give it direction. This phase leads to a project library whom you can be in a constant dialogue with and be in contact with. Find research that has nothing to do with the project and subject, but is interesting. Find research that looks similar to the interest of the project, but has different content. Find research written by someone else who has done something similar. Find research that is from a different perspective and experiences. Find research that is deep within academic research and understand what you are interested in. There's no wrong way to learn. Education is a process in which the environment changes the learner, and the learner changes the environment. In other words, both are interactive. Gather inspiration by amassing sketches, photographs, and data.

4: Ideate

I see this phase as a structured chaos. Its purpose is to search after myriads of answers and solutions. There is not only one perfect solution. This is where my different workshops are implemented. It's important to not be alone in this phase, because that could lead to a lack of knowledge and perspectives. Workshops with the target audience, that is to say, high school students, but also workshops for design students that possess knowledge of design, in other words my peers. Workshops with teacher that possess knowledge of education and learning. Commence the process of sketching, creating, and analyzing in order to gain insight into how the information and data you have gathered might affect your design. Very few problems are solved first try. This is due to the fact that when the primary problem is solved secondary problems arise. Therefore the effort has to be focused on continually prototype and test solutions to achieve the best possible results, Especially in an dynamical environment with many variables, where a probabilistic assessment is the most common solution, experimentation and testing is absolutely necessary.

5: prototype

This is the making, creating and experimenting process. Experimenting and trying out which ideas and solutions that are doable. It's important to remind yourself to have the mindset of an anthropologist here, learn from my target audience, listen, be curio-



us and include them. A method to use is the concept of "all is wind", which is a touch of of experiment, playfulness and being whimzy. Allow yourself to test. Workshops are also essential for this part, to not get stuck. Transform your initial concepts into several small-scale design alternatives and advance them into viable solutions

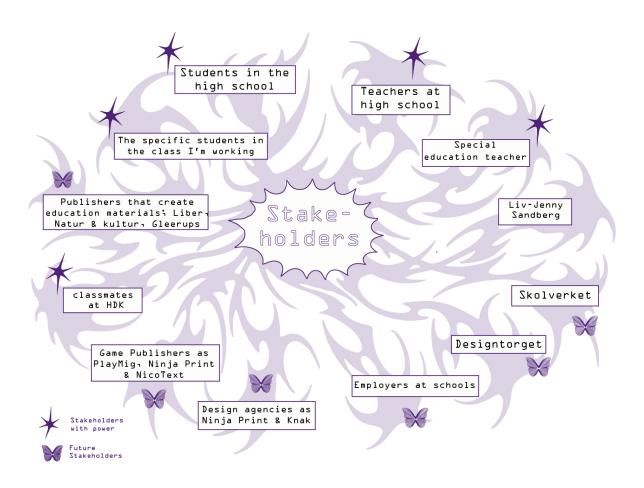
diverted the game away from its core concept. When I was capable of acknowledging a suggestion for the game as valid but not contributing to the vision I had for the game, that was the most significant sign that the game was "done" and ready for the following phase of the process.

6: Implement and Feedback

To gather feedback from the target group and others is a never-ending process and it's essential/determined to push my creating and prototyping forward. Share your ideas with a wide range of individuals, including friends, teachers, professionals, and others who can provide valuable feedback. The word scrutinize is something that I intend to carry with me as a permanent element in my design practice. By that I mean carefully scrutinizing and self-crutinizing my design from various perspectives and theories, for example from feminist perspectives or crip theory. My vision is to create sustainable graphic design that includes criticism against greenwashing, exclusionary design, hostile design and nudging.

7: Iteration and failing

Keep Iterating, "by continuing to iterate, soliciting feedback, and building those learnings back into your solution you'll get further and further toward having a huge impact" (Barry H. Gillespie). It takes time to synthesize information and experiences into knowledge. Accepting uncertainty and failure is essential to success. I will try my best to bring with me to be brave enough to make mistakes and be bad at things. Trying again after failing is an inherent part of the process and also counts as doing and creating. Have the mindset of "Nothing is a mistake. There's no right or wrong, win or fail, there's only make". It's challenging to determine when to conclude playtesting and declare your game completed. There isn't a definitive answer to this inquiry, as an artist's work is never really finished. Nonetheless, as time progresses, the feedback obtained from playtesters will become less important in terms of the actual gameplay and overall feel of the game. This is an excellent indication that you're nearing the finish line. In my case, there was a point at which the feedback I received, although intriguing, would have



STAKEHOLDERS, INFORMANTS AND INTERVIEWS

Informants and stakeholders are two different groups of individuals that can provide information to an organization or research study. Stakeholders innefattar en tvåvägskommunikation medan informanter innefattar en envägskommunikation. Informants in my project are individuals, organizations and companies who provide information about a particular topic, question or issue to me as a researcher that is conducting a study. They may have personal experience or knowledge of the topic being researched, and are typically interviewed or surveyed as part of the research process. Informants may or may not have a direct stake in the outcome of the research, and their information may be used to inform decisions or to gain a deeper understanding of the topic. Stakeholders, on the other hand, are individuals, groups, organizations or companies who have a direct interest or stake in the outcome of the project. Unlike informants, stakeholders may have a direct influence on the decision-making process, and their input may be actively solicited and considered in making decisions.

Stakeholders

Stakeholders are individuals or groups who have an interest or "stake" in a project or organization. The stakeholders are important to identify and understand in order to get ahead in the design process and reach the right target group. To identify my stakeholders I needed to examine everyone who could be affected by my project or be involved in it. Some of the stakeholders may have a bigger impact than others, some are fluent and will disappear and some will appear further on in the process. The importance of stakeholders in design cannot be overstated. Understanding and engaging with stakeholders is critical to the success of a design project, as it helps to ensure that the design solution meets the needs and expectations of those who will be using or affected by it. Engaging with stakeholders can take many forms, including conducting user research, gathering feedback and input through surveys or focus groups, involving stake-



BAKRE RADEN FR V

- Viggo Sjövall
- 2. Ted Lundgren
- 3. Gabriel Juster
- 4. Joel Svenssor
- Hampus Lindman
- 6. Ludvig Vall
- 7. Wissam Alhourani
- 9. Arvid Spolander

MELLERSTA RADEN FR V

- . Ella Svanberg
- 2. Josephine Lantz 3. Emma Ekman
- 4. Indra Eriksson
- 5. Lina Lundin
- 6. Alice Thorell 7. Freyig Rúngrsdóttir Dahl 8. Sebastian Skårbratt Peterzéns
- 9. Rasmus Svensson 10. Ylva Hansson, mentor

FRÄMRE RADEN FR V

- 1. Yasmine Blanco Bergendorff 2. Alex Johansson
- Harriet Sjövall
 Ayshin Imanpour
- 5. Tom Högfeldt 6. Milla Pers

8

- 8. Evelina Jirblom
- 9. Jennifer Gesana

I KLASSEN INGÅR ÄVEN Theodor Crenshaw Klinghoffer

- 2. Emma Varefjord
- 3. Munzer Chaikh Aldiaah
- 4 Lovisa Thornér
- 5. Olivia Svedemyr Gonzalez

(Figur 13: Skolfoto ES21B, LBS mediegymnasiet, 2021)

holders in the design process through co-creation or co-design workshops, and incorporating stakeholder feedback into the design solution through iterative prototyping and testing. By engaging with stakeholders throughout the design process, designers can gain valuable insights into the needs and desires of their users, identify potential barriers or challenges to adoption and implementation of the design solution, and build, buy-in and support for the project from key stakeholders. In addition to the practical benefits of engaging with stakeholders, there are also ethical considerations at play. Designers have a responsibility to create solutions that are not only effective and efficient, but also ethical, sustainable, and inclusive. Engaging with stakeholders can help to ensure that the design solution meets these ethical standards and does not unintentionally harm or exclude certain groups of individuals.

Stakeholders in game design can include a wide range of individuals and groups who have a vested interest in the success of the game. These stakeholders can include the game developers, publishers, investors,

marketers, gamers, and other individuals or groups who are affected by or have a vested interest in the game. By engaging with these stakeholders throughout the game design process, game developers can gain valuable insights into the needs and desires of their users, build buy-in and support for the project from key stakeholders, and ensure that the game meets the expectations and requirements of all stakeholders. Some of the stakeholders in my project connected to game design are:

My target group; the gamers. In the end the most important stakeholders are the ones that are going to play the game. I need to understand the needs and desires of gamers, such as what motivates them to play and what types of game mechanics that work.

Publishers are my potential stakeholders. Publishers as board game companies, education material companies and design studios. They are the one I imagine and strive to have. To be motivated and engaged in a project, The requirement is to have it realistic and down-to-earth. To have a belief in that my project could be a real product. Then the publishers are responsible for funding and distributing the game. Developers need to work with publishers to ensure that the game meets their requirements and expectations. Therefore one of my main goals has been to get in contact with the board game companies and education material companies that exist in Sweden. Grafisk designer och illustratör Filippa Wiklund, Liv-Jenny Sandberg, illustratör och grafisk formgivare. Natur och kultur (education material company), Gleerups (education material company), Liber (education material company), Tukan (education material company), Ninja Print (analog board game company), Alga (analog board game company), Nicotext (analog board game company), Playmig (analog board game company)

Stakeholders in education can include a wide range of individuals and groups in educational institutions. These stakeholders can include teachers, students, parents, administrators and policymakers.

My stakeholders connected to education are:

Students. They are the target group and gamers of the game, they are also the primary beneficiaries of education. They are responsible for learning and applying the knowledge and skills taught by teachers. My stakeholders are peculiarly the students at LBS mediegymnasium, for the reason that I´ve spent the autumn, Winter and spring together with them. They have been the biggest part of the design process and created the project together with me. The project wouldn't exist without them.

Teachers. They are responsible for delivering education to students and responsible for designing and delivering lesson plans, grading student work and providing feedback to students. My project revolves around these topics and I have a goal to change their amount of responsibility in school. My stakeholders are peculiarly the swedish subject teachers and swedish as second language teachers at LBS mediagymnasiet, but also specialpedagogs at other schools. I've maid interviews. mer exakt har jag haft ständig kontakt med ulla Westerberg, Special pedagog at LBS mediegymnasiet, Aleksandra hedman, special pedagog at Uppsala lalalal, Ylva Hansson, Swedish subject teacher at LBS mediegymnasiet, Pernilla Andersson, teacher at Luleå Porsöskolan, Liv-Jenny Sandberg, föredetta bildlärare och nuvarande teacher in visual

design at Luleå Tekniska universtitet. Victor Andersson, Swedish as second language teacher student. Anna Öhman, swedish teacher at LBS mediegymnasiet. Special educators and teachers are also included in the teacher stakeholder. They are significant due to the fact that their goals are the same as mine. The special educator helps facilitate learning in school for students who require special support. These may include students with reading and writing difficulties, or those with mental or intellectual disabilities. Special educators can also provide pedagogical support to teachers. Some special educators specialize in speech and language difficulties, visual impairments/ variation, hearing impairments, or students with disabilities. I see that as very interesting because of the reason that I also want to become some kind of supporter to teachers, but as a visual supporter. In addition to these tasks, special educators also engage in support and preventative work, collaborating with police, field assistants, youth centers, and the local community around the students' environment. Special educators primarily have a supervisory role, working together with staff and management and contributing to the educational development of the school. On the other hand, special teachers are often trained in language, reading, writing, mathematics, or disabilities.

Administrators. They are responsible for managing educational institutions and ensuring that they are functioning efficiently and effectively. They are responsible for hiring teachers, managing budgets, and ensuring that students are receiving a high-quality education.

Employers and Policymakers. Employers are crucial for implementing a new work role in school. A role of a visual supporter. They are responsible for creating policies that govern the education system, setting standards for curriculum, funding education, and ensuring that schools are providing a high-quality education.

Informants

Some informants in my project consists of Tobias Degsell; expert in the fields of creativity, structure, innovation and learning, the Yahya Hassan; danish poet, Fredrik Zimmerman; researcher in schooling boys in group perspective and Jiv-Jenny Sandberg; doctoral student in normative creative design.

Tobias degsell och kreativt lärande

Tobias Degsell is an expert in the areas of creativity, structure, innovation and learning (Degsell, 2022) Degsell is an author, lecturer and consultant who also specializes in helping companies and organizations improve their creativity and innovation. His strength as a speaker is his ability to explain complicated issues in a way that people can understand. A former curator at the Nobel Prize Museum in Stockholm, Degsell's passionate obsession with creativity took off during his years at the Nobel Prize Museum, where he not only studied all the Nobel Prize winners, but also memorized their creative processes. He noticed a pattern in their ability to think innovatively and implement ideas, which fascinated him. Some of what Nobel Prize winners have in common is that they have thought new and differently, but the most important thing they have in common is that they have been able to implement their ideas. People who have won the Nobel Prize have thought new and differently but have also been able to implement their ideas. Degsell argues that persistency is an extremely important quality to be creative and successful, as we tend to give up very quickly, not giving up is a huge strength. Tobias Degsell believes that all people can be creative, it is in our human nature. However, this does not mean that all people are creative, rather the opposite. Thinking and, above all, acting in a new way means exposing yourself to risk. Something that most people prefer to avoid. Creativity is not only about having innovative ideas, but also about having the ability to take risks and dare to try new solutions. However, creativity is something that can be trained, and even should be trained. Tobias Degsell believes that education is crucial for shaping the future and that it is an important task for teachers to help students develop their creativity and ability to think independently. Teaching is not only about transferring knowledge, but also about helping students develop their ability to think independently and solve problems on their own. Degsell believes in the importance of focusing on basic knowledge and skills, while promoting students' creativity and innovative/out-of-the-box thinking. There are many important elements for developing learning, creative thinking and execution. One of those elements, according to Degsell, is being with diverse minds, the most important being collaboration. Diverse people does not only mean diversity in ethnicity and gender. It is about surrounding yourself with collaborations that include different perspectives, having a culture

of co-creation and trusting each other. Other factors mentioned by degsell as a basis for creative work are communication, questioning, playfulness and curiosity.

Yahya hassan

The danish poet Yahya Hassan was Born in 1995 and made his debut in 2013 at the age of 18 with the book 'Yahya Hassan', a powerful collection of poems named after himself. His book was incredibly successful, selling an unusually large number of copies and being published in 12 different countries (Holm, 2015).

The collection of poems describes his upbringing with violence, drugs, crime, power structures, racism and religious oppression. Recurring themes in his work were his upbringing in an immigrant family and his experiences of exclusion in the suburbs. Yahya Hassan was convicted of violent crimes and his childhood was characterized by mental illness and addiction. During his youth, Yahya Hassan was placed in the "Solhaven" institution, which is a place for young people who have difficulties and are considered "unplaced". He was highly praised for his writing skills by a teacher in the institution, which made him focus on his writing as well as school work. After his time in prison, he began studying to become a writer and developed his writing at various folk high schools. Yahya Hassan was a Muslim with a Palestinian background and in his writing he often attacked the patriarchal structures and power relations of his Islamic upbringing. This has been considered controversial as it has been linked to the xenophobia of the far-right and the fact that their thoughts and opinions have been vindicated. However, Hassan has distanced himself from this and said that he cannot help how people politically choose to interpret his texts and words. He criticized the Islamic culture, just as he criticized the Danish culture, but makes it clear that he is not against Islam, it was after all his religion. In addition to being sentenced to prison for shooting another person, he also confessed to a number of crimes including assault, serious damage and threats. He was then sentenced to indefinite psychiatric care. Yahya Hassan was found dead in his apartment by his mother in 2020, aged only 24. "High school students for generations to come will get to know Yahya Hassan through his poetry", writes Jes Stein Pedersen (2020). Yahya Hassan's works and texts have been cited as an important and inevitable description of

today's Denmark. There are very few poetic works in modern times that have sparked such a large debate about society as Yahya Hassan's. According to Jonatan Jerichow, Yahya Hassan has made thousands of young Danes read poetry for the first time in their lives. "A whole generation of Danes has discovered that poems can be something else than they thought" (2020). Hassan's impact on young people was that he gave voice to a generation struggling with similar problems and experiences. Hassan had many sources of inspiration for his writing, which allowed him to connect his upbringing and experience with literature, some of which were Karl Ove Knausgård, Dostoyevsky and the Danish poet Michael Strunge. Hassan showed that it was possible to break the negative cycles of violence and crime and that there was another way to go. Through his poetry and his courage to tell his story, he inspired young people to think critically about society and to dare to stand up for their right to a place in society.

12. ÅR

när lillebror pissade i sängen väcktes han med knytnävsslag en natt ruskade han om mig bror jag har pissat igen och så blev hans bekymmer mina jag smög ut på toaletten hittade några våtservetter torkade av den fuktiga kroppen därefter det vattentäta madrassöverdraget kläderna stoppade jag i en svart sopsäck som jag gömde under sängen vi bytte täcken nästa morgon stoppade jag täcket i säcken slängde ut den genom fönstret på 1:a våningen jag borstade tänderna och åt arabiskt bröd lämnade säcken hos mamma i nummer 36 trots att pappa lovade gula och blå ögon om jag någonsin gick dit efter skolan hämtade jag säcken som inte längre stank av piss han var fortfarande på jobbet så jag rökte cigg i vardagsrummet och betraktade väggen på avstånd **PARABOL** vi hade inga danska kanaler vi hade al jazira vi hade alarabiya vi hade inga planer

för allah hade planer för oss pappa tog med mig till moskén under den heliga månaden varje kväll efter maten bad vi vi bad tills vi inte längre kunde stå på våra ben vi bad och vi bad och jag fick en cola och en kitkat han blev en annan i moskén gudfruktig och öm jag satt mellan hans ben lutade mig bakåt mot hans överkropp det var då medan imamen predikade som han kanske kysste mig när vi körde hem ramlade jag ur bilen jag trodde han skulle parkera men jag öppnade dörren i en u-sväng plattfisk jag minns våra fisketurer men vad fiskade vi efter jag vågade aldrig fråga efter något eller säga min åsikt när vi köpte kläder eller skor vågade inte sätta på teven när du sov vågade inte ta din hand vågade bara nicka när du sa din mamma är en hora och mamma har flytt går runt på gatan och fryser med vi äter fångsten i skräddarställning och du säger att du önskar att vi aldrig hade fötts

(Translated from danish by Holm, 2015).

Fredrik Zimmerman om pojkars skolgång

Fredrik Zimmerman is a researcher in child and vouth science at the University of Borås and has taken a deep dive into boys' school results and how to get boys to succeed in school. "Boys have fallen further and further behind in Swedish schools... the blame has often been placed on the boys themselves" ("Pojkarna har halkat efter mer och mer i den svenska skolan.. skulden har ofta lagts på pojkarna själva"), says Zimmerman (2022) and believes that we need to work on making school more understandable for boys and find strategies that work. In his works, texts and lectures, he clarifies that it is about boys in a group perspective, of course there are several girls and non-binary who have the same behavior and problems as boys, just as there are several boys who do not have these problems. Zimmerman has written the book "New ways to an equal school" which is based on getting more boys to succeed in school and dispelling the myth that there is an "antiplug culture" among boys. According to Zimmerman, no one chooses to fail in school, but boys have been falling further and further behind in school over the last decade, which many explain by an anti-plugging culture among boys. The fact that boys present a facade of being unconcerned and ignoring studies has nothing to do with the fact that it is cool not to perform, or that bad grades would increase someone's status. According to Zimmerman, boys behave this way because they don't understand school, it doesn't make sense to them. Boys are afraid to make an effort and fail, it feels better not to even try, because then your failure is deliberate and on purpose. If the boy doesn't enter the competition, he can't lose. According to Zimmerman, this is a way for the boy to protect his self-image in a social environment that values competence. It's all about creating learning strategies that work for everyone, creating teaching that is clear and structured. A common excuse for not doing assignments or studying is to explain it away by saying assignments are boring, when in fact they don't understand the assignment. The goal is to make teaching and assignments understandable. Zimmerman travels to schools and lectures on how to get boys to succeed in school, where he comes up with different measures, methods and strategies that are supported/proven by his and others' research work.

One reason why boys fail to study may be that they do not know how and what to do when they do not understand. Many do not dare to ask for help, it is perceived as weak and gender norms mean that boys do not ask for help (Zimmerman, 2022). In the long term, it is important to work with gender norms and break the notion that it is perceived as weak to ask for help. A very simple tip from Zimmerman is that the teacher works actively to go around and ask students if they understand or if you can help them in any way, and not only help those who actively seek help. In addition, many have difficulty breaking down a task into several small steps, it is beneficial to provide tools and strategies to structure, divide and create a clear overview of tasks. In addition, research shows that small, quick and clear wins help enormously to get started. Quick feedback is a key to creating motivation to succeed and confidence in yourself. Being able to see one's own progress provides encouragement and the drive to succeed, which provides motivation. Zimmerman describes that "those boys who display rule-breaking behavior at a young age often have poorer language skills relative to their classmates. Early support with language development shows that these students do better in all subjects and are less disruptive in the classroom as they get older. This is because language is one of the most important tools to make school comprehensible" ("de pojkar som i ung ålder visar ett regelbrytande agerande har ofta, relativt sina klasskamrater, en sämre språklig förmåga. Tidigt stöd med den språkliga utvecklingen visar att dessa elever klarar alla ämnen bättre och inte har ett störande agerande i klassrummet när de blir äldre. Detta för att språket är ett av de viktigaste verktygen för att göra skolan begriplig"). By providing the educational support needed to make school comprehensible to boys, studies show that boys complete assignments and become more engaged in school. Zimmerman finishes his article in Svd with an encouragement to schools to provide resources to teachers to develop students linguistic capabilities in an early stage. He also clarifies once and for all that "anti-study is a myth created to indebt boys themselves and therefore the actions, or the, lack of action, inactionable." ("antipluggkulturen är en myt skapad för att lägga skulden på pojkarna själva och därför blir åtgärderna, eller bristen på åtgärder, verkningslösa".)

QUALITATIUE

INTERVIEWS

Filippa Widlund, illustratör

Vad är din yrkestitel och hur länge har du jobbat som det Titel: Grafisk formgivare och illustratör.

Hur blev du intresserad av Grafisk form & illustration? Har ritat, maniskt, sen jag föddes. Otroligt mycket och jämnt haha. Var extremt närsynt som barn, kanske därför, höhö. Levde i min värld av papper och pennor, nära nära, så näsan nuddade papperet. Drömde jättetidigt att jobba med illustration. Grafisk form fick jag på köpet när jag började Konstfack.

Du har illustrerat mycket för läromedel och fakta-illustrationer, vad tycker du är svårast (mest utmanande) med att skapa pedagogiska bilder?

Att bilden ofta bör vara rätt detaljerad för att bli helt korrekt. Det ligger mycket tid/jobb bakom det. Research och skissande. Och att den inte får bli plottrig trots detta. Den ska uppfattas omedelbart "på håll" trots att den ev måste innehålla väsentliga detaljer vid en närmare granskning. Och det ska ju inte likna ett foto heller, det ska finnas en handgjord känsla tycker jag plus att ett foto sällan kan få med bra vinklar. T ex just nu gör jag en svamp som jag visar både från undersidan och från sidan, genom att kombinera två fotografiska förlagor, det var omöjligt att hitta ett foto av just den bild jag vill visa. På så vis är ju en illustration vara överlägsen ett foto:)

Vad är den största lärdomen som du tagit med dig till formgivningen/ skapandet inom illustration och formgivning? (gärna kopplat till fakta-illustrationer eller inom läromedel, men allmänt om yrket som illustratör går också jättebra)

Lärdom. Vilken svår och intressant fråga.

Hm. Svårt. Jo nu vet jag. Jag tänker på hur bestämd jag var i början, att jag tyckte jag visste bäst liksom. Litade benhårt på min intuition och starka känsla av vad som var rätt. Var lite ungdomligt korkad faktiskt (fniss). Det här har slipats ner (eller till) med tiden. I början var det supertufft, jag upplevde det som ett nederlag att behöva kompromissa om hur en bild skulle se ut, jag kämpade emot och var antingen tjurig och motvillig att ändra mig, eller för att inte verka besvärlig ändrade jag med bitterhet men låtsades inte om inför kunden att det tagit emot – och kände mig då falsk och

som att jag svek mig själv. Men med åren har jag förvandlat kompromissandet till en konst! Faktiskt! Har inte tänkt på detta förut (så tack för frågan)! Jag utgår aldrig numer från att mina ursprungliga idéer är geniala (höhö) eller perfekta på något vis alls. Jag ser till att jag trevar mig fram tillsammans med kunden (redaktören, författaren, fotmgivaren eller vem det nu må vara som är mottagare av mina skisser) långsamt och utan prestige. Dels för att inte behöva känna mig besviken sen, men mer och mer för att jag insett att både slutresultatet och framförallt hela mitt liv blir mycket bättre av samarbete och av att lyssna på andra än mig själv! Men jag gör ju sällan "egna verk", alltså barnböcker där jag är 100% upphovsman. Jag jobbar med författare och förlag som initierar titlar. Och då sätter jag numer en ära i att göra en slutprodukt som alla inblandade är nöjda med. Jag är genuint nyfiken på vad författaren har för förväntningar, vad hen själv älskar för stil, ser framför sig och så. Och vad förlaget har för plan vad gäller marknadsföring och försäljning. Det är ju urviktiga saker. Och först när jag vet det sätter jag igång, får ofta en superklar bild av vad jag ska göra av allas idéer. Jag älskar att byta manér och testa nya uttryck! Hjälper nog. Kunde vara avundsjuk på kollegor som har en tydlig egen stil, tyckte jag saknade ett eget, unikt uttryck. Men nu är jag tacksam över att jag är som en kameleont, det är ju skitkul att byta stil och manér. Och framförallt: har fått skitmycket jobb! Tror faktiskt det hänger ihop. Alla vet att jag kan göra lite vad som helst. Att jag är lyhörd och att folk därför ofta blir väldigt nöjda med vad de får :) Plus att flera av kollegorna som bara kör sin stil är arbetslösa!

En annan lärdom apropå det är att gå vidare. Blev inte den senaste boken perfekt kan nästa bli det. Eller nästa. Ingen fara. Vad gör det om hundra år. Allt ska bli till sand. Vi är fisar i rymden.

Fast det är klart. Jag har lärt mig att säga nej också. Till hela projekt. Lyssna på magen. Gör det ont i magen – säg nej! Det är ett gott råd. Även om man visst kan genomföra projekt på ett professionellt sätt ändå. Men magen är viktigast i slutänden. Man ska försöka må bra.

Har också lärt mig (apropå risk för magsår) att aldrig jobba helger. Hur långa dagar/kvällar under veckan som helst är ok (om ens partner är förvarnad och med på det och maten är planerad hehe). Men helgen ska vara helig. När jag trots detta måste jobba helg (som de två senaste) mår man ju inte bra. Dumt. Livet är kort. Så vägra jobba helg, om det går, Niki!

En annan grej jag lärt mig. Det är en bluff att man ska v ä n t a på inspiration. Den kommer inte som en anista från ovan. Nope. Det är bara att bita ihop och sätta igång. Hålla på. Klockan nio till fem. Varje dag. På en för ändamålet anpassad arbetsplats. Gneta och streta. Jobba. Inte maska. Det funkar.

Och min lärare på konstfack sa "räkna med fem hundår" innan det lossnar. Det stämde.

Sista lärdomen. Jag ville faktiskt bli keramiker vid ett tillfälle, gick två år på en folkhögskola i Luleå, en konstlinje. Blev tokkär i leran!! Men blev illustratör för att det kändes enklare. Det låg och gnagde i bakgrunden men till slut (efter över 20 år) tog jag tag i saken och började gå kurser. Och startade sen en verkstad ihop med en kompis året jag fyllde femti! Där får jag ett enormt utlopp för min kreativitet, där kompromissar jag inte, det behöver inte bli nåt! Där finns bara frihet och lust.

Så man behöver inte "få ut" allt på jobbet. Bättre skaffa nåt vid sidan om för fullt utlopp. Det blir mindre slitsamt.

Vad tycker du är bäst med ditt jobb?

Att jag får göra det jag älskar. Sitta och rita hela dagarna. Och att jag vet att mina bilder kan nå ett barns blick. Känns helt magiskt. Jag har alltid barnets ögon i mig på något vis när jag jobbar.

l korta drag, hur har din väg till din nuvarande yrkesroll gått till (utbildning etc)

(Examen: MFA / Master of Fine Art, gick två års förberedande konstlinje i Luleå 1988_1990 + fyra år på Konstfack, linjen för Grafisk design och illustration 1990 till 1994)

Började jobba med små uppdrag redan på Konstfack 1990, (tog allt jag hittade på anslagstavlan) frilansade efter examen som formgivare år ett belysningsföretag (gjorde om deras profilprogram, höll i all reklam, förpackningsdesign etc) + som illustratör för diverse tidningar.

Var anställd som illustratör en period men sa sen upp mig och startade eget 1998 (efter två år i Kambodja, Tomas var anställd av för FN/Unicef medan jag frilansade på distans mot Sverige (Bonnier Utbildning) som läromedelsillustratör + jobbade även ideellt i Phnom Penh, där vi bodde, åt Rädda barnen samt på ett rehabiliteringssjukhus för minskadade, Calmette Hospital där jag gjorde bruksanvisningar för hemmagjorda proteser.

Väl hemma i Sverige jobbade jag uteslutande som läromedelsillustratör och med barnböcker tills jag bestämde mig för att enbart satsa på barnböckerna, minns inte riktigt, kring 2005 nånstans.

Har du något arbete/projekt som du har varit med och skapat som du är extra stolt över?

Mitt seriealbum Mona i rymdåldern som jag jobbade med under ett helt år direkt efter Kambodja, tog en risk, hyrde lokal och satsade allt. Vilket ledde till utgivning av Bonnier Carlsen och som gjorde att jag "fick in en fot" i branschen. Har aldrig sökt ett jobb sen dess, varje projekt har lett till ett annat på ett organiskt, naturligt vis. Pekboken Det brinner på zoo som gavs ut i en satsning med mina idoler Janne Lööv och Mati Lepp. Var mycket stolt över detta. Stora boken om bläckfiskar. Och alla böckerna om Bojan som har blivit så älskad av massor med barn, det är otroligt rörande och inspirerande attkänna! Muminböckerna också, för de känner folk till. Och barnkammarböckerna.

Vad tycker du är det bästa sättet att lära sig något på?

Spontant: lust. Men det är lite som med inspiration. Inte helt nödvändigt. Går nog bra med lite tvång också. Träning ger färdighet, hjärnan är en muskel osv. Nu tänker jag nog på vår Theo, Lukas kusin. Han har svår dyslexi och vi kämpade som galningar när han var mindre med läsningen. Där var det tvång och mutor och att vi läste jättemycket för honom, alla slags texter, mest litteraturklassiker. I hans eget läsande fanns inte mycket lust. Men han plöjde ner sina timmar och idag går det riktigt bra (han är 16 nu). Men hjälpmedel är superviktigt också! Talsyntes, legimus, ljudböcker, stavningskontroll. Svår fråga. Men är man motiverad lär en sig kanske bäst.

Och läslig typografi är superviktig! Om man ska lära sig genom läsning alltså. Särskilt om man har särskilda behov. Inte att förakta! Läsbarheten. Typografin

Vad är det roligaste som du har fått göra inom ditt jobb

Att jag får lära mig så himla mycket nytt hela tiden och göra bilder jag aldrig skulle ha kommit på själv, genom att jobba med andra och få oväntade uppdrag. Träffa mina idoler. T ex: Dricka skumpa med Sven Nordkvist (Pettson), glögg med Björn Berg (Emil i lönneberga), dansa till Janne Lööfs saxofonspel i "Tårtan"-bandet, sitta i möte med Sophia Jansson (Toves brorsbarn som äger Moomin Characters), tjuvlyssna på Gunilla Bergström (Alfons) och Cecilia Torudd som äter glass bordet bredvid på Piazza Maggiore i Bologna. Haha. Lite glamour va. Annars sitter jag ju till 99% i min ateljé i Gnesta och är extremt oglamourös och asocial.

Hur skulle du säga att bästa sättet är att få ut ett sånt här spel på marknaden? Vilka vänder man sig till?

Jösses, svår fråga! Du ska kanske gå via läromedelsbranschen ändå eftersom det är tänkt att användas i skoundervisningen. Problemet är att de ju mest gör böcker. Spel är dyrt som skrutt att tillverka gissar jag. Och kräver en erfaren speltillverkare för att allt ska kunna göras på ett effektivt och prisvärt sätt. Så ett spelförlag antar jag. Finns det sådana i Sverige? Kärnan, Egmont? Googlade och hittade Nicotext, Cartamundi, ja det verkar ju finnas! Du får göra en prototyp och fota av, sätta ihop en snygg pdf och börja skicka runt antar jag. Kanske borde du skydda dig på något vis, söka patent innan, vet inte hur detta funkar om det finns risk att nån snor idén och så om du visar alla detaljer.

Du kanske borde kolla med läromedelsförlagen, Sanomaa, Natur&Kultur, Liber m fl, om intresse öht finns och därefter försöka få det i produktion. Om spelföretag vet att du kollat upp och har ett halvt ja från olika läromedelsförlag kanske de är mer benägna att satsa.

Ta kontakt med någon inom respektive bransch, hör runt om någon känner någon som kan berätta och ge lite inside information, kanske dina lärare har kontakter. Be om hjälp! Ligg på. Ge inte upp. Det måste finnas en lönsamhet för att folk ska hoppa på grejer. Gör en kalkyl, prata deras språk om du förstår vad jag menar. Ekonomi också. Inte bara att det är världens bästa spel och att det finns ett behov. För det tror jag absolut. Skulle ju vara ett perfa hjälpmedel för en svenskalärare! På massor med vis. Och som du säger allt analogt är ju guld!

Kommer du på något som du tycker jag bör undvika eller tänka extra mycket kring angående mitt projekt? Hm. Ja det där med hur du säljer in det hele. Även det ekonomiska.

Vem tycker du att jag ska intervjua härnäst? Nån i brädspelsbranchen!!!

Har du något som du tänker på eller vill lägga till? Gud, detta låter ju fantastiskt! Vilket ambitiöst och stort projekt! Ser ljuvligt kul ut, skulle vara spännande att spela, älskar ordspråken! Och vilka fina författarprojekt, har du gjort dem?

Ska fundera o fråga runt så hör jag av mig om jag kommer på nåt smart eller nån som är bra att kontakta!

Karolina Vanström, redaktions- och utgivningschef på Natur och Kultur.

Vad är din yrkestitel och hur länge har du jobbat som det Redaktions och utgivningschef för äldre elever, högstadiet, gymnasiet, SFI och akademisk utbildning. Jag ansvarar även för utgivning av studentlitteratur inom psykologi och filosofi. Allt som allt har jag hand om akademisk litteratur.

Jag har jobbat två förlag. Först på Samonova utbildning i 15 år, där jag först var förläggare i fem år och därefter utgivare i fem år.

Jag har en bakgrund som gymnasielärare inom matte och fysik från första början.

Vad tycker du är bäst med ditt jobb?

Man jobbar med sin kompetens och kunskap och får ta det ett steg vidare. Du måste sätta dig in i texten, i ämnet i hela projektet. Man måste lägga in sin kompetens i andras arbete och det är väldigt roligt. Dessutom tycker jag att mitt jobb är roligt på ett kreativt plan. Vi som jobbar med läromedel känner att vi gör något superviktigt, att det faktiskt spelar roll vad jag gör på dagarna. Det är väldigt roligt att få bidra till samhället och att ens arbete leder framåt.

Allt som allt är det ett superroligt jobb att få möjlighet att stötta författare, de viktigaste personerna är inte anställda, det är författare som egentligen jobbar som något annat, till exempel lärare.

Vi bidrar med vår tid och möjlighet att köpa in extern kompetens, känslan efter ett projekt väldigt fin och alla gånger känner man "gud vad jag har lärt mig mycket av det här". jag tror att det är väldigt viktigt att få blanda kompetenser.

l korta drag, hur har din väg till din nuvarande yrkesroll gått till (utbildning etc)

Först är jag utbildad till gymnasielärare inom matematik och fysik och har jobbat som det. Det tycker jag är en viktig grund för att kunna jobba med utbildningsmaterial, att faktiskt ha varit i klassrummet och jobbat som lärare. Det känns essentiellt att ha erfarenheten av pedagogik och lärande Därefter har jag jobbat som redaktör, förläggare och redaktionschef.

Vad tycker du är det bästa sättet att lära sig något på och vad är ditt bästa sätt för att få elever att bli motiverade? För oss vuxna är det piska eller morot. Antingen att vi är tvungna att lära oss något eller för att vi är intresserade och motiverade. Har man tur går de ihop. När något betyder något är det lättare att lära sig. Det är svårt att lära sig något

som man inte har intresse för eller använder sig av, eller behöver testa sig på det.

Ett barn är en annan femma. Per definition så är det annat som motiverar med skolan; schyssta lärare, trygghet och kompisar. Men lärarens undervisning är superviktig. Att läraren har en förmåga att vilja förmedla sitt ämne. Ska man vänta på att elever blir motiverade så får man vänta ganska länge. Ge motivation till eleverna genom att undervisa och förmedla. Att man testar eleverna på olika sätt för att se vad som fastnat är också viktigt för deras motivation, att de är medvetna om att de kommer att testas på det de gör.

Jag tycker att det finns många dåliga exempel på hur digitaliseringen missanvänts som förstör undervisning. Ett exempel är att ge eleverna uppgift att börja söka information själva. Det tror jag är ett stort misstag, man måste själv ge eleverna en grund för något, samt ett intresse och motivation.

Allt som allt är nog det viktigaste för barn att känna sig trygga med lärare och trygga med kompisar. Så tips till lärare är att verkligen lära känna sina elever. Man måste känna sina elever om man ska kunna hitta bra sätt för dom att lära sig saker på. Sen måste läraren såklart vara väl insatt i sitt ämne och kunna det man ska undervisa om.

Vad är det svåraste med att vara lärare?

Att vara lärare var ett jätteroligt yrke för att man hade saker att göra hela tiden. Det är fullt upp. Det svåra var att man inte kände att man fick med alla. Att se att någon elev hade större potential men att man inte riktigt lyckades locka fram det. Jag var vux-lärare också, där var det var alltid några som hoppade av. Men de som stannade kvar, det var härligt att få reparera något som länge hade varit ångestfyllt/ en ångestfaktor för dom.

Kommer du på något som du tycker jag bör undvika eller tänka extra mycket kring?

Att kunna se lärarens roll och begränsningarna, göra spelet så enkelt som möjligt. Se till att det funkar bra i ens klass och att läraren kan ta hand om varenda sak som händer och svara frågor som uppstår. Så att det inte bara funkar när du som skapat spelet är med. Spelet ska funka utan att skaparen står där och pratar. Det kan känna självklart men är nog något som måste repeteras och prövas. Skala ner och förenkla. Var tydlig när spelet ska användas. Var smal och visa exakt när och vart det ska användas. Var tydlig med vart det är riktat.

Tror du att ett sånt här spel skulle kunna användas i undervisningssyfte?

Jag tror det, men undervisningen är ju många olika saker. Att hitta ett sätt att kommunicera spelet. Istället för att gemene svensklärare ska komma på när det ska användas, då blir det svårt.

Vad tycker du om ideen med ett analogt sällskapsspel? Jag tycker just nu att det är jättebra att det är analogt. Det kommer alltid finnas elever som gör något annat på datorn, någons dator har inget batteri, någon har glömt laddare, någon har glömt dator, etc etc. Du gör helt rätt. Man slutar undervisa när man börjar undervisa digitala läromedel.

Hur arbetar ni med inkludering, stereotyper och normer? Våra bildredaktörer försöker alltid välja normkritiskt och ha det i åtanke. Normkritiska projekt breddar vår utgivning. Vi försöker hela tiden att granska det vi gör, är det tillräckligt, är det inkluderande etc. Det är ett ämne som ständigt diskuteras i redaktionen. Normkritik är ett kriterium för bildskapare, illustratörer och bildredaktörer hos oss. Dels har vi det också i ryggmärgen, att man jobbar på att vara medveten, att inte släppa igenom något som vi inte granskat.

Vem tycker du att jag ska intervjua härnäst?

En specialpedagog. Få bra ideer till produkten. Göteborgs universitet kanske? Eller på din skola? Någon professor i pedagogik som jobbar med det taktila.

Hur går ni tillväga för att få tag på formgivare?

Man anlitar formgivare som hört av sig till förlaget, skickat in portfolio. Så när man ska starta ett projekt så söker man i sin mapp. någon som skickat portfolio. Det är såhär som du gör. Det är ju positivt att man har jobbat med illustratören innan. Formgivare är en större process. Det kan ta två till fem år med ett projekt. Illustratörer är lättare att anställa.

Victor Andersson, Gymnasielärarestudent

Vad jobbar du som och/eller studerar till?

Gymnasielärare med ämnena matematik och svenska som andraspråk. Håller på med min sista terminen nu.

Varför vill du bli lärare? Hur/ Varför blev du intresserad av läraryrket och dina ämnesinriktningar?

Jag gillar skolmiljön. Jag har alltid trivts i det, gillar att interagera med elever. Gillar att förmedla kunskap. Jag gillar att lära mig saker. Jobba med något som jag tror har betydelse.

Inriktningen matematik valde jag för att det är kul, jag gillar matte väldigt mycket, gillar att få personer att förstå matte. Svenska som andraspråk blev mer en tillfällighet. Dels så var det en ämneskombination jag kunde ha. Men det känns också viktigt att jobba med nyanlända elever. Språk är rätt så intressant också, särskilt när flera språk blandas under samma tak.

Vad tycker du är det bästa sättet att lära sig något nytt på? Att vara omgiven av det. Repetera. Börja väldigt basic. Använd vardagligt språk. Ibland försöka råplugga in men sätter sig väldigt sällan. Det ska nog vara en process.

Vad är ditt bästa tips för att få eleverna motiverade?

Ha bra relation med dem. Försöka få små glimtar av hopp, små ljusglimtar när ett ämne verkar tråkigt. Ha taktiker när man lär ut. Gå runt i klassrum, ögonkontakt, göra sig lustig. Försöka fråga och inkludera eleverna. En grej när man har en genomgång på tunga saker är att göra en begreppslista och ge ut först, och ge eleverna i uppgift att försöka leta efter dessa begrepp i presentationen/genomgången.

Du har ju jobbat mycket i skolan, vad tycker du är det svåraste/ mest utmanande med att vara lärare?

Att hela tiden prestera på en hög nivå, att hela tiden orka med att vara motiverad och engagerad. Att samla ihop en klass som kan vara väldigt spridd. Veta vilken nivå man ska lägga sig på.

Tror du att ett sånt här spel skulle kunna användas i undervisningssyfte? varför/ varför inte.

Ja. Men också bra innan och efter moment. Verktyg för att få reda vilka förkunskaper som finns och för att få koll. Men också efter, få reda på vad eleverna har tagit till sig. Man kan komplettera undervisningen genom att testa eleverna med detta. Finns också en charm i att ha det som en rastaktivitet. Då tänker man inte att man lär sig fast man lär sig. Det är nog jättebra som "mellan-lektion". ibland är man trött och inte orkar läsa en lärobok, då kan ett sånt här spel

vara lite lättare att använda.

Vad tycker du om ideen med ett analogt sällskapsspel? Fördelar med att göra det digitalt är att det kanske hade

varit billigare och lättare med uppdateringar och livslängden. Men med analogt känns det mer som en gemenskap. Det känns något när man får hålla i saker än att det är på en skärm. Det blir dock svårare med uppdateringar. Rätta till fel är lättare digitalt.

Kommer du på något som du tycker jag bör undvika eller tänka extra mycket kring angående mitt projekt?

Att materialet inte får vara för fint, det måste nog vara robust eftersom det ska användas i skolmiljö. Där är man inte jätterädd om saker. Men också att det inte ska kännas som en engångs sak. Göra så att det sker något nytt varje gång, så att man inte gått igenom allt på en enda omgång. Men också att tänka kring uppdateringar, köra i lag, nya regler, flera olika regler. Nya uppsättningar av kort. Överföra till andra ämnen, göra till andra språk? Men också inte tänka att bara skolelever ska spela, alla är ju intresserade. Språk -och kunskapsspel är uppskattade av många.

Vem tycker du att jag ska intervjua härnäst? Ylva Hansson.

Liv-Jenny Sandberg, lärare på LTU och formgivare.

Vad är din yrkestitel och hur länge har du jobbat som det ? Adjunkt och doktorand i visuell design och genus.

Hur blev du intresserad av Grafisk form & illustration?

Jag har alltid ritat. Första veckan i lågstadiet som sjuåring vann jag en tecknar-tävling och på scenen sa jag att jag ska bli illustratör. Visuella språket har mindre värde och makt än det skrivna språket. Det visuella räknas inte alltid, det viktiga är att kunna stava rätt. Min skoltid har varit en frustration över att det skriftliga språket är det som räknas. Jag gör en doktorsavhandling nu som ifrågasätter det.

I korta drag, hur har din väg till din nuvarande yrkesroll gått till (utbildning etc)

Hundra år. Efter gymnasiet (fanns inget bild gymnasium när jag gick, men jag gick extra bild)

läste jag illustration på universitet i Milano. Därefter läste jag konstvetenskap A,B C D på Gotland.

Efter det jobbade jag som illustratör på byrå och frilans ett bra tag. När jag var 27 gick jag en master i visuell design och illustration i Milano.

Sen återvände jag till jobbet på en byrå, där jag illustrerade 98 procent men också lite grafisk form.

Sen for jag till stockholm och jobbade på byrå och hade en atelje på mariatorget med en designbyrå som hette Summer. Där jobbade jag jättemycket tills jag fick min son Didrik. Då vändes hela mitt liv och jag flyttade tillbaka till Luleå och började jobba som lärare.

2016 blev jag klar med min lärarutbildning och gick lärarbehörighet och lärarleg. Då gick jag från att ha det roligaste jobbet någonsin, bildlärare på mediegymnasiet. Men Luleå prioriterade inte det och vi fick ingen teknik så då vände jag mig till universitetet. Jag har jobbat på alla Luleås gymnasieskolor med medie och bild. På LTU blev jag ansvarig över programmet i. Grafisk design. Grafisk Design-utbildningen flyttade från Piteå till Luleå, då blev det jag och johan som hade all undervisning. Nu är vi tio, då var vi två. För tre år sen sökte jag doktorandtjänsten och det är den som jag sysslar främst med nu.

Vad tycker du är det bästa sättet att lära sig något på? *Med flera olika sinnen.*

Vad är ditt bästa sätt för att få eleverna att bli motiverade? Det som är roligare på gymnasiet är att man kan anpassa undervisningen efter gruppen. På universitet är det samma hela tiden. Innan man lägger upp uppgiften ska man lära känna klassen. Anpassa undervisningen till klassen. Att hitta nya vägar som fungerar för dem. Ju mer man känner eleverna desto lättare är det att undervisa dem. Det är lättare att ge feedback till elever som man faktiskt känner. Sen tycker jag att det är viktigt att inte vara högtravande i språket, prata lätt, visa att du är en person och inte någon auktoritet.

Vad är det roligaste som du har fått göra inom ditt jobb/ Vad tycker du är bäst med ditt jobb?

Att få rita och att få vara med människor.

Tror du att ett sånt här spel skulle kunna användas i undervisningssyfte?

Ja, det riskerar dock att bli väldigt stort och lite för brett. En grej hade kanske varit att använda betygskriterierna lite hårdare. Eller att göra spelet inriktat på nationella proven. Eller ett spel per grej, ett för nordiska språk, ett för litteratur, ett för minoritetsspråk och ett för litteraturhistoria.

Vad tycker du om ideen med ett analogt sällskapsspel? (I början stod jag i valet och kvalet mellan att skapa något digitalt eller analogt. Men känns som att nästan allt i gymnasiet sker på dator och andra digitala plattformar. Om några elever spelar det här spelet och inte tittar på sina mobiler eller sin dator under en liten stund så ser jag det som en vinst i sig).

Bra på det sättet att man får använda flera sinnen, man håller kortet, man ser kortet, man pratar och hör ljud. Att spelet är analogt ger möjlighet till sensoriska egenskaper. Ha varit kul att leka med storleken. ha gigantiska och mini-kort. Att lämna öppet om man vill fylla i själv, kanske få färglägga.

Man glömmer inte en författare som man har färglagt.

Kommer du på något som du tycker jag bör undvika eller tänka extra mycket kring angående mitt projekt?

Jag vet inte, att utmana dig lite mer. Typsnitten är svårlästavälj mer lättlästa. Dock är det bra att inte ta traditionella typsnitt, bryt mark. Titta på redundans, vad man kan förvänta sig på kort tid. Wayfinding om vad man ska kolla på.

Hur skulle du säga att bästa sättet är att få ut ett sånt här spel på marknaden? Vilka vänder man sig till? läromedelsförlagen.

Vem tycker du att jag ska intervjua härnäst?

Testa bild-lärare, någon serieskapare, någon som jobbar med tecknade serier. Ta någon som inte alls känner dig och någon som känner

WORKSHOPS

To demonstrate how I have included participatory design in my project, I have selected a number of workshops from the design process. A significant part of the project involved a collaborative creation with groups of students and classes from LBS Mediegymnasiet. The collective creation took place through workshops, game testing, and iteration processes. It is common and standard in game design to involve testers and the target audience once a playable version of the game is created. This allows the game to be playtested, and the designers can then further develop and improve it. However, I have chosen to involve testers and the target group before the game has started to take shape or even exist at all. This gives the target audience and testers significantly more power and a decisive role in the game's development

Workshop Existing Games

Site: LBS mediegymnasiet

Participants: 20 students, 16-18 in age.

Date: November 29, 2022

Time: 60 min

Goal: Document existing supply and start to generate a

mindset for game thinking.

Methods: Post it notes and brainstorming

Prior knowledge: A common design method is to use post it notes. It is an effective way to get help from other people, more brains together can usually come up with a significantly greater breadth of ideas. The method involves writing down all the ideas that come up where no ideas are bad and all are worth writing down. Finally, you will hopefully have a board filled with lots of new ideas that you would not have been able to generate yourself.

This workshop is a warm-up exercise to start engendering thoughts about games, game boards, game types, rules and much more. The moderator (I) gives an introduction about what the workshop is about and shows inspiring pictures as a preventive measure to get the participants thinking about different kinds of games. Hand out post-it notes and pens to all participants and explain the purpose of the tasks. Music is played while everyone has to perform tasks and the music stops when the time is up.

Task No. 1

in two minutes, write down at least three different kinds of card games that you know about. If you have time, you can write a descriptive sentence of what the game is about. One game per mailing label. Put up on the wall.

Task No. 2

In two minutes, write down at least two different board games. If you have time, you can write a descriptive sentence of what the game is about. One game per mailing label. Put up on the wall.

Task No. 3

In two minutes, write down at least three different types of mobile games that you have played. If you have time, you can write a descriptive sentence of what the game is about. One game per mailing label. Put up on the wall.

Task No. 4

In two minutes, write down at least three different types of computer or video games. If you have time, you can write a descriptive sentence of what the game is about. One game per mailing label. Put up on the wall.

Task No. 5

For two minutes, write down at least one game that you remember from your childhood. If you have time, you can write a descriptive sentence of what the game is about. One game per mailing label. Put up on the wall.

Task No. 6

for two minutes, write down at least one game of some kind that you found educational/ that you learned something from or that you think has a teaching purpose. If you have time, you can write a descriptive sentence about the game is about. One game per mailing label. Put up on the wall.

After the sixth task, a ten minute break was taken for the participants. When we regroup, it's time for the next phase of the workshop. Now there should be a wall full of different kinds of games, which bring the group into the division phase, which lasts for 5-10 minutes.

The participants are divided by the moderator (me)





(Figur 16, foton från Speltest. Sundberg, 2023)

into different responsibility groups, one group responsible for fun games, one for boring, one for educational and one for visually appealing games. The moderator writes the headings "FUNNY" and "BORING" clearly on the board and the groups can start moving the post it notes around.

The learning group gets a red pen and the visual group gets a green pen. The two groups get to hand out fat dots to those who fit into their area of responsibility. I, as a moderator, document everything. The fun group collects all the post it notes that they think contain funny games and the boring group does the same. The educational group has black pens and draws clearly and boldly dots on the post it notes that fit their topic "educational", which the visual group also does with a green pencil.

After the workshop, I document the results and the divisions made. In total, approx. 200 different kinds of games have been compiled and divided by the students. I take the results with me as a basis and inspiration for my own design process.

Workshop: divisions and categories

Site: LBS mediegymnasiet

Participants: 20 students, 16-18 in age.

Date: November 15, 2022

Time: 80 min

Goal: Design names for different game categories

Methods: Six thinking hats, dark horse & horse scurrying

race.

Prior knowledge

Six thinking hats is a method for engendering ideas and making joint decisions about the different ideas. The hats symbolize different ways of thinking, each person in the group is assigned a hat and represents different perspectives or modes of thinking, and they can only formulate opinions based on their thinking hat. The purpose of the thinking hats is to have a more creative process and improve communication within the group. This way you can separate your thoughts and not mix everything in your head. It is easy to bring in your own feelings with information and mix desires with facts and logic. Wikberg-Nilsson (2021) describes the workshop as common used by product designers and Industrial Design Engineerings. By giving each person a mindset, it becomes easier to bring out the thoughts when you only need to devote yourself to one way of thinking at a time and

you can come up with new perspectives and ways of looking at the same thing.

Introduktion

The moderator (me) starts by explaining what the workshop is about and shows inspiring images to prevent and get the participants thinking. Go ahead and explain the project and its purpose and content. Distribute post-it notes and pens to all participants. Write on the board the content of each topic category. Give plenty of space to each topic/category. Make it clear that each task will take three minutes. The moderator (me) shows a board with all the categories that will take some place in the game and introduces the participants with one sentence about each topic and category on the board. Ask participants to write down the first category names they come up with for each task. Write at least one name for each category. Write one name per post-it note. It doesn't matter if you think they are bad suggestions. The timer is set at 3 minutes.

Task No 1 Abbreviations

For three minutes, generate and design abbreviations or short titles for the categories. At least one abbreviation per category. Write one name per post-it note.

Task No 2 Dark horse

For three minutes, try to generate and design unrealistic and quirky names for the categories. Write at least one abbreviation per category, one name per post it note. The idea of this task is to come up with unexpected, perhaps funny, quirky and innovative names for the categories. They do not have to be realistic or linked to the categories. Think freely, whatever you like. Try to think wrong.

Task No 3 Rhyme and fun

For three minutes, write and design names for the categories that rhyme, contain alliteration or feels witty. Alliteration is words that start with the same letter (the moderator gives common examples here). Write one name per post-it note.

Task No 4 Reasonably

In three minutes, generate and design reasonable and informative names for the categories. straightforward, short and concrete, clear. Write one name per post it note.

A break for 10 min

The moderator (me) divides the participants into groups, two to four people in each group. Different roles are then given to the groups, based on the "six thinking hats" categories.

White hat - stands for information and facts. The white hats should collect the names that they think are reasonable, concrete, informative and sensible. Red - stands for intuition and feelings, i.e. instinctive perceptions and thoughts. The red hats collect the

perceptions and thoughts. The red hats collect the names they like and no arguments or justifications are needed.

Yellow - stands for positive possibilities and logical arguments. The yellow hats collect names that have the potential to become something, names that can be developed.

Black- stands for all the risks and obstacles that exist and are also built on logical arguments. The black hats collect all the names that they think are bad and useless, those that have no potential for development. Green- stands for creative and comes up with alternative solutions. Green hats do not collect any notes but try to come up with fun solutions for categorization or take everything to another direction.

Blue- stands for the whole process and thinking, it kind of leads the whole group by drawing conclusions and giving more space to different hats. The blue hat doesn't collect anything at all. They talk together and come up with some final words about what they think is best.

Let the groups grab the names that they think fit their hat perspective and mindset. If several groups want the same post it note, that's fine, hand out more post it notes with the same title. When all the post-it notes have been distributed, one group at a time should present their notes and explain why they chose those particular names. Then the workshop is over. The moderator (me) documents all divisions, results and thoughts from the workshop.

Workshop: create Game boards

Site: LBS mediegymnasiet

Participants: 20 students, 16-18 in age.

Date: December 7, 2022

Time: 60 min

Goal: compile ideas for designing game boards.

Methods: Design thinking, dark horse.

prior knowledge

A dark horse workshop in design refers to a creative session or workshop that focuses on uncovering hidden or unconventional ideas and solutions. The term "dark horse" originates from horse racing, where a dark horse is an unexpected winner who surpasses the expectations of others. Similarly, in design, a dark horse workshop aims to bring forth innovative and unexpected concepts that may not have been initially considered. The moderator of the workshop sets up themes that the participants can freely speculate on and draw, sketch and write down during a certain time. During a dark horse workshop, participants are encouraged to think outside the box, challenge assumptions, and explore unconventional approaches. The workshop typically involves brainstorming sessions and ideation exercises. Between each theme, the participants can present their ideas, which the moderator then saves. The goal is to create ideas that are radical, risky, weird, etc. that may not be in line with the project's goals & can lead to a new direction. Can be ideas that are not realistic and require an incredible amount of work. "What is exciting about a dark horse is that it can turn out to have such good potential that it can become a really successful winner". (Wikberg-Nilsson, Åsa. Ericson, Åsa. Törlind, Peter, 2021).

Introduction

The moderator (me) divides the participants into two smaller groups to streamline the workshop and not risk boring the participants with a lot of waiting time. When one of the groups is in the room and has been assigned several papers and pens, the workshop can begin. The moderator (me) starts to tell the background of my project and the purpose and goal of this workshop. Then I show inspiring pictures of the already exciting range of game plans, both historically and from 2022. After each task, one at a time shows their sketches and shares their ideas and thoughts. The moderator (me) documents these and leads the storytelling round. Then the next task begins.

Task 1 Common existing game boards

Write and/or draw as common forms of game boards as you can think of, ones that you have seen before,

what you think are the most common playing boards that exist. Feel free to write and/or draw common additions in games that you know about, e.g. miss a roll, start over, end up in jail, roll the dice twice, accidentally hit the target, get perks or challenges, etc. This happens for 3 minutes

Task 2. Dark horse (unrealistic)

Write and/or draw absurd and unrealistic ideas on the board that you can think of. Eg 3d, giant, miniature, changeable/interactive. You are welcome to write, draw weird and unrealistic additions to games, such as pitfalls, loops, go out, win directly, etc. This takes place within 3 minutes

Task 3 Visually appealing

Write and/or draw a game plan that you would like and that looks aesthetically appealing. Play with shape, color, text, and graphics. Feel free to add different features, challenges, perks, pitfalls and things you like. This takes place over 3 minutes

Task 4 Material and format

Write and draw suggestions for material for the game board and game itself. Paper, plastic, fabric, cardboard, yarn, 3d printed, wood or something else. Please think about whether your choices have consequences on the environment, sustainability, supply, access and/or cost. In addition to materials, you are also welcome to draw and/or write thoughts about format; big, small, 3d, 2d, flat, digital, etc. This happens for 3 minutes

Compilation

After all the tasks and presentation rounds, the group talks about which ideas we liked the most and which have potential for development. Then the moderator (me) collects all contributions and sketches.

The next day, I went through all the proposals myself, drew and sketched the proposals digitally and with my manners

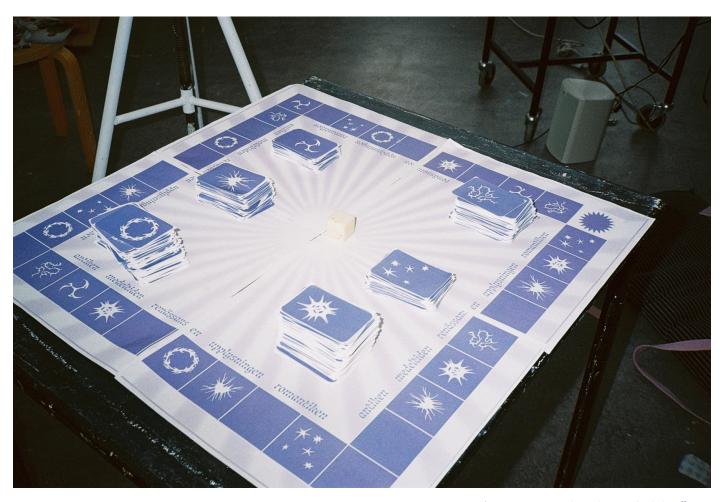
Colours

Color is part of your first impression of something. You see color before anything written and color is one of the fastest forms of communication and creates an interest in exploring the content. In many cases, color is very strongly coded to gender, which is implemented from an early age. One may think that all colors should be gender neutral, but one cannot avoid that colors have gender markers socially. According to the norm, pink is a girl's color and blue is a boy's color. Dark purple is perceived as gender-neutral. It is easy to find gender-coded colors in the girls' and boys' sections of regular clothing stores. There is a large proportion of dark purple clothing in the boys' section of clothing stores, as well as in the girls' section. However, as soon as the purple goes towards more light and becomes pastel, it is perceived as girlish. I have chosen to use the color purple for many reasons. The colors that can be found in my work are almost exclusively purple. Historically, purple symbolizes wealth and luxury. It was a very precious and majestic color worn by royalty. Purple should represent the inclusion of everyone and should be seen as a non-gendered color. The color is often associated with creativity and is seen as a much more luxurious and rich color (Strandberg, 2018). With the creative feeling and association I can personally relate to. Purple gives me feelings of creativity, melancholy and confusion, which is what I want to convey. It is a color that you can be confused about, it does not belong to any characteristic gender. I see purple as a very exciting color and experience it as creative and magical.

















(Figur 18, speltest, Sundberg, 2023)







(Figur 19, speltest, Sundberg, 2023)







(Figur 20, speltest, Sundberg, 2023)























CATEGORIERS OF THE GAME AND THEIR PURPOSE

The keyword method

This is something I have worked with in several categories, e.g. literary history. easy to link ancient words, Greek. likewise medieval and renaissance and enlightenment. They have many keywords that are easy to connect with. the same applies to the culture question. There I have worked a lot with keywords and association skills. linking an illustration to cities, books, works and years. you may know some of it which means you know the rest. It involves phonetic and image-based connections.

KULTUR (culture)

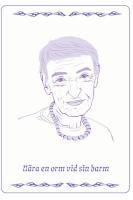
Questions about culture, literary terms, classics, authors and fiction.

Reading classic books in school can provide an insight into the development of society throughout history and show how different cultures have influenced each other, demonstrating how certain themes are constantly relevant and important no matter when they occur, such as love, friendship, injustice and the meaning of life. Reading classics can also improve students' language skills and written expression. Knowing about and engaging with books written in different eras helps to provide an insight into the historical and cultural background of our culture. Literature does not have to be something that you only have as a personal interest and read by yourself. Reading and literature can be a shared and social activity. Reading experiences and understanding of a text or book can be deepened by reading together, doing different exercises, illustrating from it, making a film based on it or talking about it.











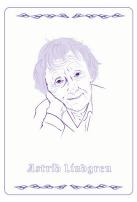




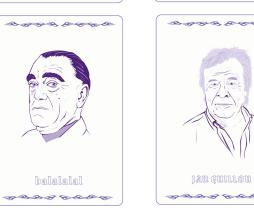


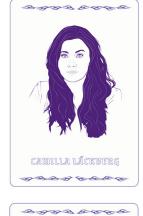














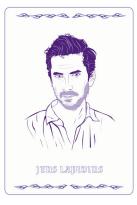






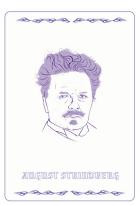










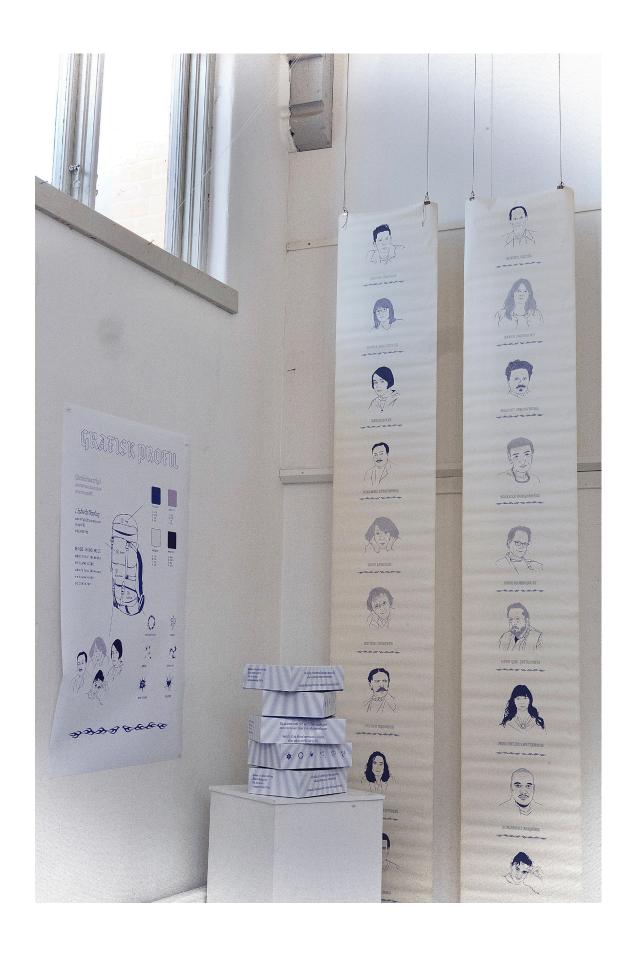












SPRÅK (Language)

Questions on loanwords, minority languages, nordic languages, dialects and linguistic influences and origins.

Knowledge of loanwords, minority languages, Nordic languages, dialects and linguistic influences and origins is important for understanding and appreciating different cultures, improving communication between people, understanding the historical context of the language and having professional advantages. In addition, Sweden has a special legal responsibility to ensure that its minority languages can survive, develop and be passed on to the next generation. Language is an important part of a culture, and knowledge of the language helps us to understand and appreciate the culture better. Knowing minority languages and dialects can give us an insight into the cultural traditions and characteristics of different regions. Loanwords are words borrowed from other languages and used in our own language. Knowledge of loanwords makes it easier to communicate with speakers of other languages and can increase understanding between people. Knowing linguistic influences and origins gives us an understanding of the historical context of the language. It helps us understand how language has evolved over time and what factors have influenced its development.

TYPTEXT (typed text)

Questions on text types, abbreviations, typography, layout, figures of speech and symbols.

Having knowledge of different text types, abbreviations, typography, layout, figures of speech and symbols can develop your own writing, but also help you to understand and analyze the texts and works of others. In addition, the content of this category can improve communication in many different areas. It can help to convey messages in a more understandable way and make it easier for the recipient to absorb the information. In addition, it can facilitate one's own reading comprehension and interpretation of texts, books and other works. In fiction, poems and lyrics are often considered to be the most difficult genre for many readers to access. It can be challenging to understand the meaning of poems, both old and modern. While older poems may have outdated language and references that are unfamiliar to contemporary readers, the content of modern poems can be obscure. To gain insight into poems, texts, movies, songs and other creations, various methods from this kategori can be used.

ORDKUNSKAP (word knowledge)

Questions about words, spelling and synonyms. The cards also contain new words from the Swedish Academy's dictionary.

LIT-HIS

Literary history, where the answer to the questions is always an era. Antiquity, Middle Ages, Renaissance, Enlightenment. Romanticism

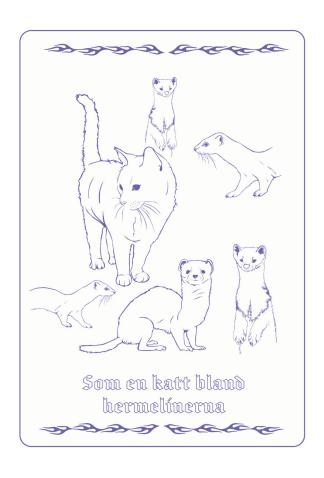
Through in-depth information, events and phenomena, the "lit-his" category allows you to see patterns, connections and recurring themes between eras. Studying the literary history of one or more countries contributes to an understanding of how literature and culture have developed over time. Based on different eras and genres, you can learn about different stylistic styles and themes that have shaped culture and literature over decades and centuries. Through literary history, you can get an insight into how society has developed in different eras, such as politics, culture, injustice and equality. You can get an insight into how certain themes are constantly relevant and eternal, regardless of the century, such as love, friendship, injustice and the meaning of life.

ORUSPRÅK (Proverbs)

Interpret, identify and conclude proverbs, sayings, and classical metaphors and similes.

Being familiar with proverbs can be beneficial in several ways. First, proverbs often contain valuable wisdom that can help provide insights and advice in different situations. Understanding and using proverbs also allows you to communicate more effectively and accurately in different contexts, as they often express complex ideas or emotions in a concise and effective way.

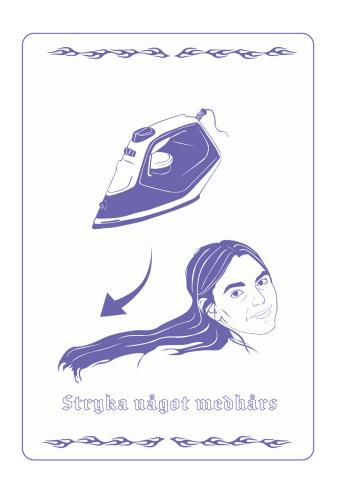
Proverbs can also serve as part of the cultural heritage and common frame of reference, which can contribute to a sense of belonging and understanding of other cultures and societies. Proverbs can serve as a common frame of reference and cultural capital that can contribute to a sense of belonging and understanding of other cultures and societies. In addition to this, knowledge of proverbs can be valuable in the study of literature and history, as many proverbs have been used over time and have an impact on culture and history. As for metaphors and similes, they can be useful in several ways. First, they can help convey complex ideas and feelings in a more concrete and understandable way by using images or symbols. In this way, difficult or abstract concepts can be explained in a more accessible way, which can facilitate understanding and communication. Second, metaphors and similes can also be used to reinforce and emphasize messages, making them more emotional and engaging. By creating a strong image or symbol, emotions and associations can be influenced, making an impression that is difficult to achieve with words alone.

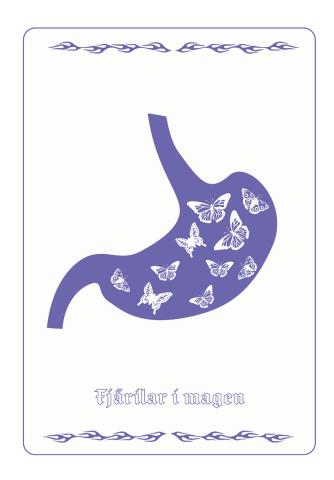




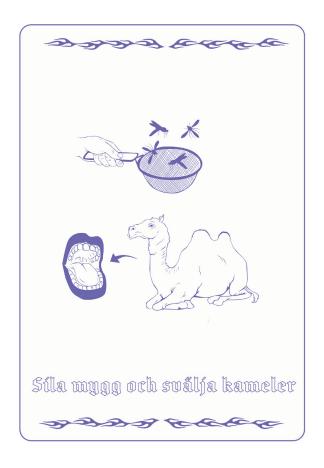


(Figur 29, ordspråk, Sundberg, 2023)

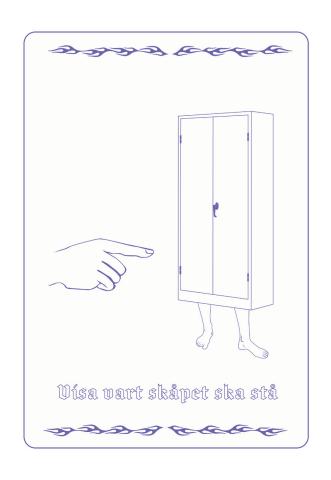


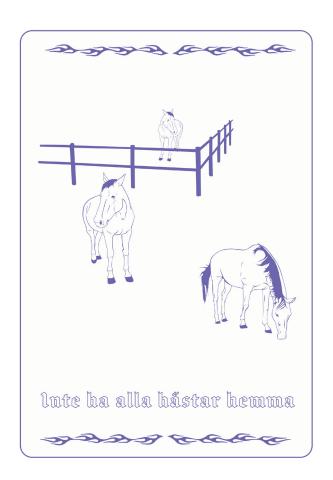


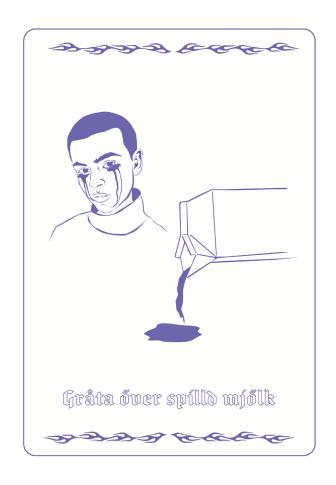


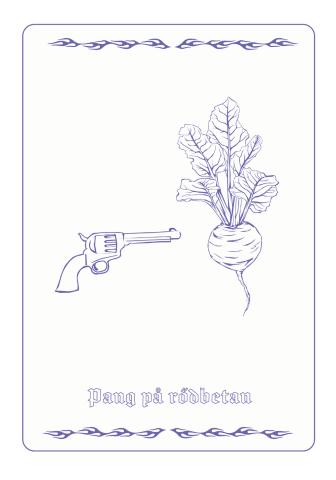


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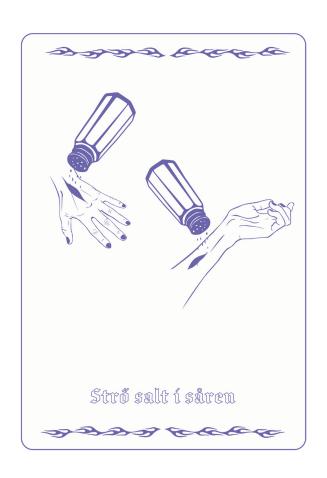




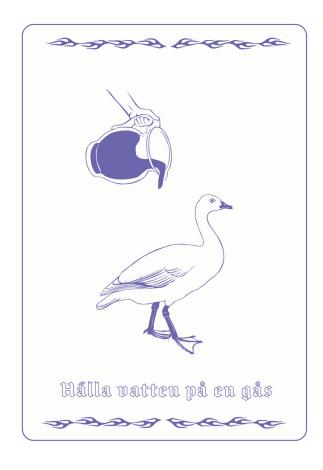




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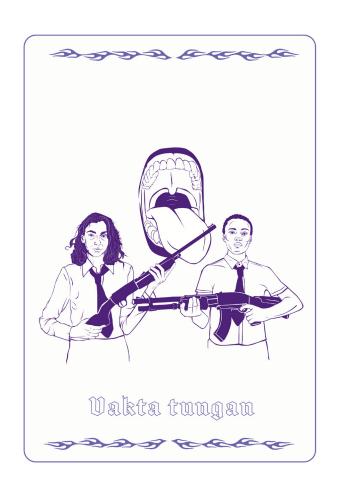


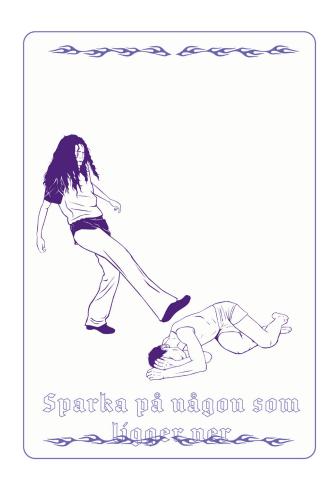


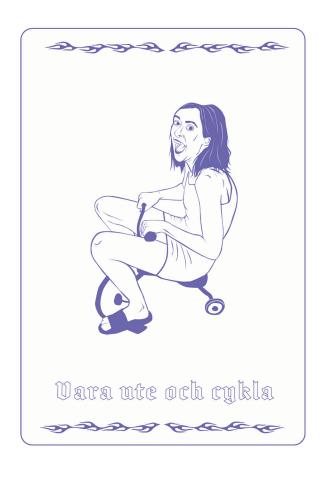




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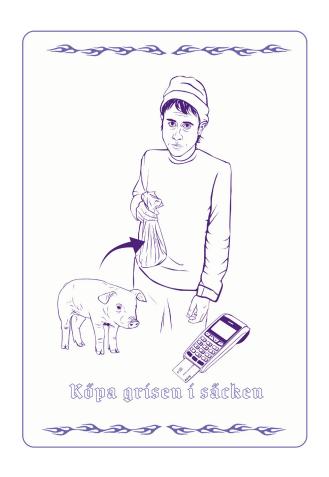


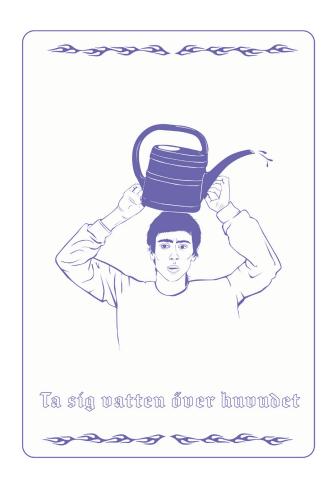


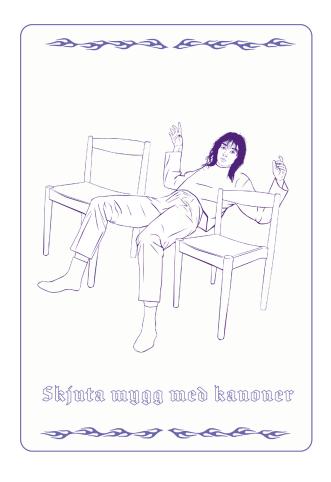


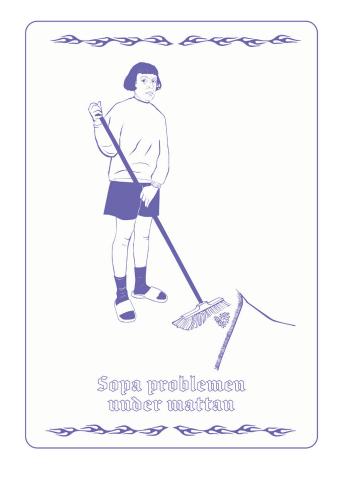


(Figur 33, ordspråk, Sundberg, 2023)









(Figur 34, ordspråk, Sundberg, 2023)



Visual support

Visual support means making information of various kinds visible to the eye, i.e. seeing what is meant in addition to hearing or reading it. Its intention/function is to create association possibilities with visual support, process information and support working memory. Examples of visual support can be illustrations, photographs, diagrams/tables and symbols. Optimal visual support supports the ability to concentrate, learn and understand information and tasks. A graphic element such as a picture can stop and act as a memory aid, allowing time for processing and providing context to information.

CONTRIBUTION THROUGH PRACTICE

I have showed that graphic design and the visual factor has a major impact on learning and the motivation to learn. This project resulted in an analog board game that incorporates many components of the students abilities and opportunities to different learning styles. The game revolves around the swedish subject and has the title "Swedish ludus" (Ludus means "game" in Latin).

By incorporating and bridging gaps in the subject in question, pedagogy, inclusion and the visual subject. The goal is to unite these components to combine an entirety and place great emphasis on everyone and not neglecting one aspect. Especially the visual aspect. The game "Svenska Ludus" has been played once a week and has taken form to exemplify an effective learning style. The game has shown itself to a specialized education style without sacrifice. A way to show that you can change the learning style without sacrificing the quality of teaching. The development of the game has happened in close collaboration with students who belong to the target audience. This has contributed invaluable to the development of the game in the iteration process, the game content and its mechanism. The synergy between the students and me as a designer and a teacher has provided working examples of many different effective learning styles. Effective learning in "SVENSKA LUDUS" is primarily provided by linking new knowledge to existing knowledge. Swedish Ludus is built on joint thinking and progress, not having to ask for help, but assuming that you have to explain to your classmates and participants. An additional element that I have taken into account for the project is to be able to see your own development, which automatically creates an incentive/encouragement and motivation. Many elements are recurring, which means that you can immediately see the progress you are making. Being able to see your own progress is an incentive, it provides motivation. The game includes quick feedback and small, quick and clear wins is used as mechanisms to provide motivation for the students who play the game. The project "SVENSKA LUDUS" demonstrates how active learning styles, using multiple senses, are demonstrated, it have been shown to be significantly more effective than passive learning styles. A lot of evidence from my project, game occasions and workshops, points to using multiple senses, i.e. using multiple learning styles. Important features of my game to fulfill its goal of effective learning are fast recurring feedback, active participation, discussion and a possibility to critical thinking. I have done a lot of work to find out what motivates students and try to make it visually compelling. What has made the project feasible and able to result in something positive that facilitates teaching for students has been to have a very clear target group and to be clear that the aspect of the game I want to address, is motivation. That games are an easy way to create motivation was before the start of the project based entirely on my own personal experiences, while now after the project I can build my arguments with students' experiences, literature and research and have been able to examine whether this is a fact that has evidence. SVENSKA LUDUS consists of knowledge and insights that can indeed be communicated in an entertaining and interesting way, without ever compromising on facts and credibility. But it requires a very special kind of communication, because when words are not enough, the visual takes over. And these thoughts have permeated my project and working process.

What has been crucial to the game has been the tight integration between text and illustration. To elaborate educational texts, pedagogy and explanatory illustrations. In overall, the students' motivation, engagement and confidence is an important and crucial part of the evidence-based workshops, interventions and development of the game, which I created with visual tools.

Using anthropology as a methodology, I carried out a project that is heuristic. The aim of the project was to create something that is inventive, leading forward and leading on. The project embodies in a visual way the ideas of learning to understand when you don't understand and learning to use the right strategy for the right occasion. Teaching is not only about transferring knowledge, but also about helping students develop their ability to think independently and solve problems on their own. SVENSKA LUDUS is a symbol for the importance of focusing on basic knowledge and skills, while promoting students' creativity and out-of-the-box thinking.

Explanation of the visual and graphic

In summary, the user tests led to the conclusion that there is a need for a common design language that makes the whole thing coherent. When images are unison, they do not need to be as understandable or obvious, it is more acceptable to use abstract icons. A further result of the user tests was that I got a clearer sense of the denotation and connotation of my image icons. Finally, I have realized that to create a more coherent theme, a similar visual expression is required.I am convinced that something visual that is well designed with a clear intention will have a positive effect on memory and become a strong recognition factor. For me, symbols and logos are what I find most difficult. I am a very illustrative person and symbols are the furthest thing from my mind. But it's also incredibly fun because once I've come up with well-designed and elaborate symbols, it has taken a lot of time and my method for creating symbols is extremely iterative and made in collaboration with others. What is best between pictograms that depict what it wants to convey or symbols that you have to learn the symbol with is probably not a clear answer. It is very much tied to its purpose and circumstance. Pictograms that you immediately understand the connection and the meaning can be perceived quickly and are good in that way, you don't have to put much thought into understanding them. But a symbol whose appearance is more abstract and has no connection to its meaning can be easy to remember precisely because it is so unexpected and unpredictable. One element that I found complicated for my symbols was the balance between being too detailed or too simple in the visualizations. A simplified image can lead to confusion and misinformation. A too nuanced picture and description can also lead to confusion and be too difficult to understand. Balancing complexity with simplicity has influenced my process and these were factors that I had to weigh back and forth between.

SVENSKA LUDUS consists of a rectangular packaging in the form of a cardboard box with a plastic paper cover. The box is a two-part package, a box and a lid. The text and information found on the box is the title on the top of the lid, a short description below the title. On the sides of the lid there are the category symbols, two introductory sentences about the game, as well as indications of time, number of players, age etc. On the bottom of the box there is more in-depth information about the content of the game, a picture

of the game board itself and a description of what is inside the box with all the materials. Inside the box there is a fabric game board that is printed using digital printing. 600 question cards divided into 6 categories, each category has one hundred questions. Each category has an accompanying card box/card holder in hard matte paper. 6 pieces of game pieces that are 3D printed in a resin printer. Pieces of dice 3D printed in resin printer. Two instruction papers, between A5 and A4 in size, harder coated paper. One paper contains instructions and game rules and the other paper consists of an explanation of the categories.

Analog versus digital

I see it as a win in itself if some students put down their computers and mobiles for a while. Playing SVENSKA LUDUS is not only educational and fun, it is also a break from screens and the digital. If the game had been digital, the physical community is lost, and there will always be different things on the computer and mobile that disturb and attract. In addition, there will always be someone who has an uncharged dead computer, someone has forgotten the computer, someone is watching YouTube instead. There is simply less risk of other distractions. When playing digital games, there are often many distractions that can reduce the gaming experience, such as messages and notifications from the phone or computer. With analog board games, you can focus entirely on the game and the people you are playing with. It also avoids technical problems. A common problem with digital games is technical issues that can interrupt the game or even ruin it altogether. With analog board games, you don't have to worry about the technology failing. With analog, a completely different context is formed. Because in an elusive digital reality where everything is close but always a bit away, on the other side of the screen, there is value in socializing. For real. To take out a cardboard box, lift the lid and pick out the contents with your classmates. Feel the cards and dice, lay out the game board, stack the categories. Someone reads out the rules and there is a moment to pay attention to each other and take a break from everything going on around you. Board games can create community and build bridges between people. According to all research, creative work develops the brain's ability to remember and learn. The best learning occurs when both hemispheres of the brain are

activated during the learning process, and it has long been recognized that image memory, the visual, is by far the strongest. In addition to image memory, the use of multiple senses simultaneously demonstrates enhanced learning. Doing something actively develops the brain and its memory capacity. Using the hand as a tool engages the motor nervous system and creates muscle memory. The movements of the hand are controlled by the cerebral cortex and impulses are constantly sent between the hand and the brain. When we perform something physical, mirror neurons in the brain are activated, which is why imitation and physical interaction work as a learning method. When there is an interaction between the hand and the brain, your physical movements are reflected in the brain and the learning process is strengthened. When we create with our hands, more demands are placed on the interaction between the hemispheres of the brain, which develops its capacity.

One of the biggest advantages of SVENSKA LUDUS being analog is the social interaction that digital games cannot replicate in the same way. When playing SVENSKA LUDUS, there is a physical presence that is missing in digital games. Touching the question cards, moving game pieces, throwing dice and giving each other cards has a great impact on several levels, partly reassuring and adequate feeling but also including several senses which promotes learning and gives a higher retention chance (chance to remember what you are doing)

Improvement potential

There is potential for improvement in everything, you can always continue to work on your work and improve. Without that insight, I think you would have stopped very early in your process. If I had continued to work on this project, I would have changed and deepened my understanding in certain user interfaces and functions. You often have to balance between fun and logic. Finding something that is both is the utopia and the goal, but often fun and funny user interfaces are also much more difficult to understand. For example, to read information about my categories, you click on one of the cards displayed. Another component is the red thread. Being continuous and following a similar user interface is practical for the user to be able to understand the work. What I take

away from the project is the synergy between functionality and aesthetics. The urgency that design should not only look aesthetically good, it should also be functional. Interactive design must be logical for it to work, the person should not have to think and hesitate, it should be obvious from the beginning. Another thing I have learned from the project is above all that it will be good if you have fun, nothing good comes from being bored during your process. When you do something that you think is fun, you spend more time on it and it usually results in something good. And even if you don't think a task is particularly fun or you feel uninspired, you can make it fun using various methods. After trying out different design process methods, the final project in this course felt much more inspiring and easier to tackle. Something that also feels very important in a design process is to talk with others. I have gotten stuck many times during this project, but I have always started talking to someone, a classmate, a teacher or someone completely outside the project. Whether we're talking about my project or someone else's project, it has always helped me move forward. Discussions have taken me one step further on the path that I started to take, they have made me completely change direction but also opened a door that might have been right next to me. Taking different paths, and often changing paths to reach the goal feels rewarding now in retrospect. I usually want to take the first best idea, partly because I'm lazy and partly because it feels like it's the best idea I could come up with. Which is not true. In this project, I have left several ideas and changed directions. Having the courage to let go of things and start over is something I take with me from this course. To delete things even if you like them, you can always go back to your original idea if it doesn't turn out the way you want in the end. For me, it was better when I changed and did not stick to my first idea and I am happy that I talked to so many people during the project and dared to change my mind. I have worked this year to encourage students to see themselves as creative beings, to appreciate creativity in others and to consider creativity as an essential component in all areas of education and creating. I have tried to create a place for discussion where students develop and value perseverance and a tolerance for ambiguity. Students are challenged to appreciate aesthetic forms, to use their imagination, and to develop the skills and attitudes that allow creativity to flourish: independence and non-conformity, the ability to organize and reorganize information, and the

confidence to think in new ways. This year has been dedicated toemphasize the skills of including different learning strategies, critical thinking, listening and speaking together.

SVENSKA LUDUS is an essential tool that supports the process of acquiring knowledge and skills. The game allows the students to build a strong foundation of knowledge and develop a deeper understanding of the concepts they are studying. Another key benefit of SVENSKA LUDUS is that they can be tailored to the needs of different learners. For example, some learners may prefer visual aids, while others may prefer text-based resources. This makes learning more engaging and effective, as learners are more likely to stay motivated and retain information when they have access to materials that suit their learning styles. SVENSKA LUDUS also plays an important role in promoting active learning. By providing learners with opportunities to practice and apply their knowledge, they can gain valuable experience and build confidence in their abilities. This can help them develop critical thinking skills and become more independent learners, which is essential for success in any field. Finally, the game SVENSKA LUDUS exists to be helpful to students in school to generate and increase engagement, improve understanding of the subject matter, support students with learning difficulties and contribute to improved retention. Through an interactive game with well-designed visuals and mechanisms, the learning process can be more engaging for students. Instead of just reading text on a page, they can use their visual skills to gain a better understanding of the subject. The game can give students a better understanding of the topic and an insight into how different parts of the topic are related to each other. The game can be particularly helpful for students with learning difficulties and/or diagnoses, such as language disorders, dyslexia, autism or ADHD. SVENSKA LUDUS should give students a better chance for students to remember information they have seen in a visual material compared to information they have only heard or read. Visual materials and interactive methods can help reinforce the memory of what is being taught.











(Figur 37, foto av förpackning. Sundberg, 2023)



(Figur 38, foto av förpackning. Sundberg, 2023)



(Figur 40, foto av förpackning. Sundberg, 2023)



(Figur 41, foto av förpackning. Sundberg, 2023)







KATEGORIER



OrdKunskap

Frågor om ord, stovning och synonymer. Korten innhåller även nyord från svenska akademins ordlista.



Ordspråk

Tolka, identifiera och avsluta ordspråk, talesätt, samt klassiska metaforer och liknelser



Språk

Frågor om lånord, minoritetsspråk, språk i norden, diolekter samt språkliga influenser och ursprung.



Kultur

Frågor om kultur, litterära termer, klassiker, författare och skönlitteratur.



Lit-his

Litteraturhistoria där svaret på frågorna alltid är en epok.Se epokerna på spelplanen.



Typ-text

Frågor om texttyper, förkortningar, typografi och layout, stilfigurer och symboler.





Innehåll

En spelplan, frågekort med 6 styckna kategorier med varsin kortbox, 1 tärning, 6 styckna spelpjäser, beskrivning av kategorierna och det här instruktionsbladet.

Förberedelser

Lägg ut spelponen och korten i respektive kategoribox. Spela ensam eller i log, 2-6 log eller spelare. Välj spelpjäser. Ta from popper och pennor till varje deltagare/ log.

Hur en vinner

Hurenvinner
Någon börjar, vem ni vill,
Börja på den hör symbolen.

Den som börjar får välja katego-ri, gå medsols, eller inte. Spelaren till höger eller vänster läser kortet. Först som hinner ett varv runt tillboka till startsymbolen vinner. Eller kanska fem varv.

Om deltagaren svaror rätt får hen slå tärningen och ta så många steg fram som tärningen visar. Vissa frågar har chans till flera tärningskast. Om deltagaren svaror fel får hen stå kvar på samma ruto.

Om ni hamnar på en tom ruta så får ni satans lyx att själva välja kategori.

Varianter på Spelkort

Textfrågor

Klassiska frågor och svar. Svaren finns längst ner på kortet.

Illustrationer

Gissa vad illustrationen visar, kan vara en författare, symbol eller ett ordspråk. Svaren finns på baksidan av kortet.

Lit-his

Ett-flS
Korten innehåller fakta och
påståenden från olika epoker
inom litteraturhistoria. Svaren
är alltid en epok.De epoker som
finns att välja mellan står
utskrivna på spelplanen.

Alert alla

Aktiveringskort som innehåller utmoningar och uppgifter som inkluderar alla deltagare. Alert alla ger chans till flera steg fram för samtliga.

Rabblarrunda

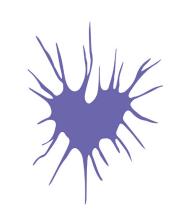
Aktiveringskort som innehåller utmaningar där deltagarna ska komma på olika saker inom ett tema, kan vara synonymer eller ord som rimmar.

Lyckokort



KULTUR

Frågor om kultur, litterära termer, klassiker, författare och skönlitteratur.

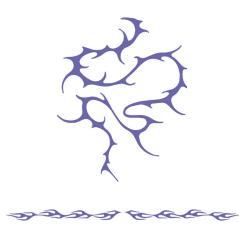




Lit-his

Litteraturhistoria där svaret på frågorna alltid är en epok.

Antiken, Medeltiden, Renässansen, Upplysningen, Romantiken





Vad heter författaren som 1909 blev första kvinnan att få nobelpris i litteratur och som skrivit Nils Holgerssons underbara resa och Gösta Berlings saga.

(6)



Vem har skrivit och illustrerat barnbäckerna Tomtebobarnen, Solägget, och Tant Grön, Tant Br och Tant Gredelin



Vad heter boken som Malin Persson Giolito har skrivit som blev den första svenska netflix-serien och handlar om en skolsjutning i Djursholm?

Störst ov ollt n kom 2016 8 merien kom 20

Fredrik Backman har bl.a skrivit böckerna Björnstad och Britt-Marie var här. Vad heter Mannen som han också skrivit en bok om?

Vem har skrivit klassikerna Den fula ankungen, Kejsarens nya kläder och Den lilla sjöjungfrun?









Finlandssvensk poet som skapat radern "Du sikte en blomma och fann en frukt Du sikte en bälla och fann ett hav. Du sikte en billa och fann en själ-du är besviken!

I vilken av Astrid Lindgrens böcker finns Jum-Jum och antagonisten riddar Kato med?



Iliaden av Homeros

Epos or långa berattelse skrivna på vers.

Koranen är den arabiska litteraturens mest kända verk som skrevs ner under den här tiden.

Den spanska pikareskromanen "Don Quijote" skrivs av Miguel Cervantes

En pikoreskroman handlar a äventyr och händelser som oftast är humaristiska

William Shakespeare lever under den hör perioden. Hons mest könda verk or Honlet & Romeo & Julia.

Den gudomliga komedin skrivs av Dante Alighieri Först homnor Donte i helvetet där man plägas i nio kretsor baserat på synder.

Darefter kommer skarselden, ett berg med sju avsatser. De döda klättrar upp för att sona sina synder. Den tredje delen or porodise som har nio himlar.

Den romerske poeten Horatius lämnor efter sig citatet carpe diem (Fånga dagen)

I norden skrevs under den hör perioden den isländska Eddan som innehåller hjältedikter och nordisk mytologi

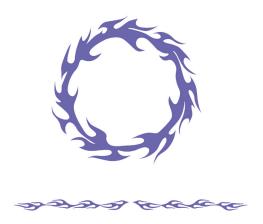
oethe hor skrivit brevro "Den unge Werthers liden



ORDKUNSKAP

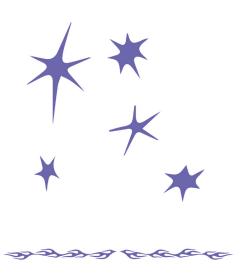
Frågor om ord, stavning och synonymer.

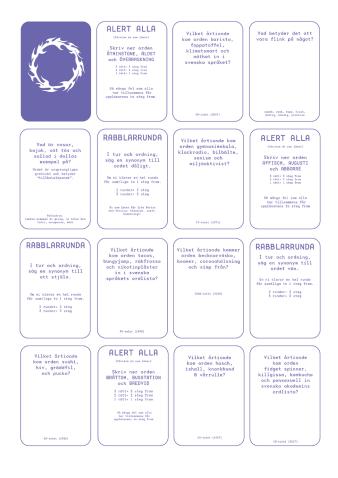
Korten innhåller även nyord från svenska akademins ordlista.





Frågor om lånord, minoritetsspråk, språk i norden, dialekter samt språkliga influenser och ursprung.



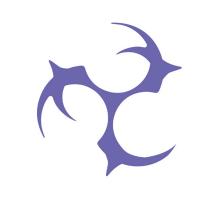


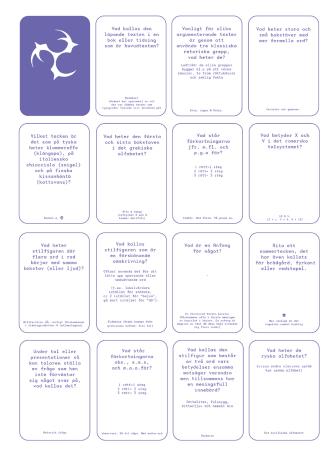


(Figur 44, Översikt av kategorierna Ordkunskap & Språk. Sundberg, 2023)

TUP-TEET

Frågor om texttyper, förkortningar, typografi, layout, stilfigurer och symboler.





ORDSPRÄK

Tolka, identifiera och avsluta ordspråk,talesätt, samt klassiska metaforer och liknelser







(Figur 45, Översikt av kategorierna Typ-Text & Ordspråk. Sundberg, 2023

DISCUSSION AND

CONCLUSION

My entire project has led me to think about a new professional role in the world of education. During the project I have come to realize that the game "SVENSKA LUDUS" acts as a Trojan horse for this new professional role. The professional role includes/ contains/ implies a visual supporter. By introducing a new role in school, a kind of visual supporter, it will become easier to incorporate the visual in education with an academic and an professional basis. A person who is deeply familiar with the visual aspects of learning and spends his/her time creating visual material for the different subjects in school. The teacher is not trained in creating visual material, but is still currently responsible for the design of the teaching in every way, where much can be visual, but becomes crucial depending on who the teacher is. They are responsible for delivering education to students and responsible for designing and delivering lesson plans, grading student work and providing feedback to students. My project revolves around these topics and the goal to change their amount of responsibility in school. If my work from this year should live up to its fullest potential, it would be to have an impact on the Swedish skolverk (Swedish National Board of Education), educational publishing companies but above all to introduce a new professional role in schools. A role of a visual supporter. In doing so, I have created a kind of proposed framework for what such a professional role could entail. To conclude this thesis, I would like to list these tasks. Thank you and goodbye to me, a future visual supporter in the school world.

-Have an inclusive approach that permeates all tasks. Be responsible for the visuals in the school environment, what kind of pictures and posters are on the walls, what literature is provided, what materials are offered. Some approaches and terms that are important to reflect and investigate within this role in schools are stereotypes, functional norms, class, gender norms and, among other things, racialization and whiteness norms. Ensure diversity in terms of gender, age, ethnicity, color, functionality, love, family images, religion, etc) Identify what kind of gender expressions that exist, avoid stereotypes and challenge the norms. Make visible the norms in the materials used by the school and review it. Watch the language that is used in school, help to create a more inclusive language. Review what perspectives they convey in illustrations, photographs, textbooks, videos, images

and other materials.

-Actively help students to visualize what they are reading, working on and what they are learning about. Helping to promote students' capacity to visualize, both physically but also create mental images. This also includes the creation of mind maps, roadmaps, graphs, diagrams and to clarify, convert and process the teaching material into visuals.

-Increase engagement in different visual ways. It can be with images, illustrations, animations, and videos. Visual materials that can make the learning process more engaging for students. Instead of just reading text on a page, they can use their visual skills to gain a better understanding of the topic.

-Support for students with learning disabilities: Visual materials can be very helpful for students with learning disabilities, such as dyslexia or ADHD. By visual support, they can gain a better understanding of the subject in a way that suits their learning style

-Helping to make school tasks and activities meaningful, interesting and motivating

In conclusion, this professional role, working with visual support, can be a valuable resource for students in schools, as they can increase engagement, improve understanding, support students with learning difficulties and improve retention. I believe that this professional role can be extremely important to society and can create more holistic learning in schools.







BIBLIOGRAPHI

Reference list

Akker, Jan; Bannan, Brenda; Kelly, Anthony E; Plomp, Tjeerd; Nieveen, Nienke. 2007. An introduction to educational design research. SLO Netherlands institute for curriculum development. ISBN 9789032923297. https://www.are.na/block/19282453

Cantarella, Luke; Hegel, Christine; Marcus, George E. 2020. Ethnography by Design. Routledge. ISBN: 9780367728700

Clear, James, 2023, The Goldilocks Rule: How to Stay Motivated in Life and Business. The article is an excerpt from the book Atomic Habits (2018), Jamesclear.com (Retrieved 02/05-2023) https://jamesclear.com/goldilocks-rule

Degsell, Tobias; Kreativt lärande, digital föreläsning för personal på Sveriges alla LBS-skolor, 2022-09-10

Duignan, Brian, 2023. Occam's razor. Britannica (Retrieved 02/05-2023)

https://www.britannica.com/topic/Occams-razor

Dunlosky, J., Rawson, K., Marsh, E., Nathan, M.J., Willingham, D. (2013) "Improving students' learning with effective learning techniques: promising directions from cognitive and educational psychology". Psychological Science in the Public Interest.vol. 14. Artikeln Improving Students' Learning With Effective Learning Techniques

Escoba, Arturo; Murphy, Keith M; Wilf, Eitan Y. 2021. Designs and Anthropologies. University of New Mexico Press. ISBN: 9780826362780

Ett år efter Yahya Hassans död – nu uttalar sig familjen. 2021. SVT.

https://www.svt.se/kultur/ett-ar-efter-yahya-has-sans-dod-nu-uttalar-sig-familjen),

European Union, developed by three art schools: erg (Brussels), HDK-Valand (Gothenburg) and ISBA (Besançon). 2022. Toolbox. http://www.ttttoolbox.net/?f-

bclid=IwAR2zcRygHV91ODMBiGELU47DjebgzqL-mjnEMTv8gLnw7mKoTgQXERx3pGBo (05-01/23)

Fraga, Daniel. Medium. 2020. The Manifesto of Ontological Design

https://medium.datadriveninvestor.com/the-manifesto-of-ontological-design-7fdb19169107 (05-01/23)

Globala målen. 2022. Mål 4- god utbildning för alla. https://www.globalamalen.se/om-globala-malen/mal-4-god-utbildning-alla/ (05-01/23)

Gunn, Wendy, Otto, Ton and Smith, Rachel Charlotte. 2013. Design Anthropology-Theory and practice. Berg Publishers. SBN: 9780857853691. DOI: 10.5040/9781474214698.ch-001. Page Range: 1–30

Hallonsten, Anna-Karin. Lundborg, Göran. Ullén, Fredrik. 2022. Hjärnforskare: Därför är skapandet nödvändigt i skolan. Vi Lärare. https://www.lararen.se/praktisk-estetiska-amnen/forskning/hjarnforskare--darfor-ar-skapandet--nodvandigt

Holm, Johanne Lykke, 2015, Yahya Hassan, Nordstedts,

https://www.norstedts.se/bok/9789113066523/yahya-hassan

Johannesson, Paul & Perjons Erik, 2014. An Introduction to Design Science. Springer International Publishing AG. ISBN: 9783319106311.

Johansson, Britt, 2016, Genrepedagogik del 1, Digital föreläsning, Pedagog Värmland, Skriv- och läsnätverket i Värmland (SOL i Värmland) i samarbete med NCS (Skolverket), CSL och RUC på Karlstads universitet, youtube. https://pedagogvarmland.se/video/britt-johansson-genrepedagogik-del-1/

Molander, Bengt. 1996. Kunskap i handling. Bokförlaget Daidalos. ISBN 9789171730398

Nationella minoriteter och minoritetsspråk. N.d. Länsstyrelsen. Organisationsnummer: 202100-2247 https://www.lansstyrelsen.se/stockholm/samhalle/social-hallbarhet/manskliga-rattigheter-och-demo-

krati/nationella-minoriteter-och-minoritetssprak. html

Norman, Donald A. 2023. Design for a Better World: Meaningful, Sustainable, Humanity Centered. Cambridge, MA, MA: The MIT Press,

https://www.interaction-design.org/literature/topics/participatory-design

Schreiber, Ian. N.d. Game Design Concepts: An experiment in game design and teaching. (Retrieved 02/05-2023) http://gamedesignconcepts.pbworks. com/f/Game+Design+Concepts+-+An+experiment+in+game+design+and+teaching.pdf

Wikberg-Nilsson, Åsa. Ericson, Åsa. Törlind,Peter . 2021. Design : process och metod. Förlag: Studentlitteratur AB. ISBN: 9789144143392

Willis, Ann-marie. Academedia. 2006. Ontological design.

https://www.academia.edu/888457/Ontological_designing(05-01/23)

Zimmerman, Fredrik, 2022. Antipluggkultur bland pojkar är en myt. SVD)

https://www.svd.se/a/5BnXoe/fredrik-zimmerman-antipluggkultur-bland-pojkar-ar-en-myt

Zimmerman, Fredrik, 2022. Pojkar i grupperspektiv och skolgång. Lecture, LBS Mediegymnasiet, Gothenburg

Illustrations

Sundberg, Niki, 2022. Figur 1: Pojke med sten.

Sundberg, Niki, 2022. Figur 2: Hjärna.

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