Innlandet fylkeskommune

Den kulturelle skolesekken Innlandet

Art of learning

The Art of Learning Program

A hands-on contribution to a practical school that fosters self-expression through art and creativity, supports mastery of academic subjects, and promotes the development of executive functions.

– a curriculum and intervention report

Innlandet County Council, May 2025

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Preface

The purpose of this report is to provide an insight into the curriculum and the intervention of the Art of Learning project (AoL). The report describes the methodological approach, the theoretical foundation, the design process and the structure of the curriculum and intervention implemented. The records of procedures, all carefully kept, will also be shared in this report. They are available digitally with open access for replication and use.

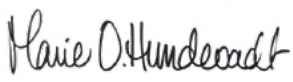
The Art of Learning Intervention and Curriculum was designed and developed in an iterative 3 year long process by a team of developers from arts and education, and with support from psychological expertise. The aim was to identify the characteristics of an effective art-based curriculum and intervention, acquiring improved Executive Functions (EFs) in the learners, as well as strengthening their learning capacities and their ability to learn.

The impact of the project is analysed and evaluated via different kinds of data: Interviews and focus groups with teachers, learners, artists, school leaders and parents, and a test called Yellow-Red (Rosas-Días et al. 2019; Rosas et al. 2022), a set of performance games for Android tablets, have been used and the results are analysed. These materials will not be evaluated in the present report, but they are utilized in separate reports (Håkansson et. al 2025; Németh et. al. 2025; Kleiven and Kaderják 2025) as this information is key to the assessment of AoL and how it impacts on children.

Finally, we would like to thank all the schools, teachers, learners and artists who worked hard in the service of research and school development, all partners who have made the work possible, and all the supporting actors and funders who believed in the project have been supportive throughout this process.

We would also like to thank Diane Fisher-Naylor for her valuable contributions to this report, and Thor and Carol Kvande for language support towards the end.

Marie Othilie Hundevadt



Malin Kathrine Vik

Samandrag

Denne rapporten tek for seg korleis dei ulike delane av Kunsten å lære-prosjektet verkar saman og formar eit heilskapeleg undervisningsopplegg med mål om å fremje både fagleg, sosial og personleg utvikling. Gjennom ein syklisk utviklingsprosess med design, testing og justeringar vart undervisningsopplegga og intervensjonen utvikla i tett samarbeid mellom lærarar, kunstnarar og forskarar. Prosjektet har eit solid teoretisk grunnlag basert på mellom anna Diamond sine studiar av eksekutive funksjonar, performativ læringsteori og Artists' Signature Pedagogies - alle med mål om å styrke elevane sitt engasjement, glede, kognitiv kapasitet, samarbeid og læring. Rapporten drøftar både dei praktiske aspekta ved undervisningsopplegga og utviklingsprosessen som ligg til grunn for intervensjonen, og viser korleis verktøya er tilpassa for å møte elevane sine behov. Gjennom prosjektet vart kunstbaserte metodar vektlagt som ein viktig drivkraft for å auke elevane sine eksekutive funksjonar og motivasjon til læring. Lærarane er aktive medskaparar og testar ut nye undervisningsstrategiar saman med kunstnarane i klasserommet. Gjennom intervensjonen skjer ein gradvis tilvenning til ein meir kreativ og elevsentrert tilnærming. Prosjektet viser korleis kunstbaserte metodar kan støtte både fagleg og personleg vekst, og skape eit inkluderande læringsmiljø der elevane trivst og utviklar seg. Rapporten legg òg fram eit sett med designprinsipp for heilskapleg og uimotståeleg læring, organisert i ti søyler, som kan brukast som eit praktisk verktøy i skulen. Samla gjev rapporten eit heilskapeleg bilete av korleis ein ny standard for innovativ undervisning kan sjå ut i praksis, for skulesystemet i framtida.

Abstract

This report examines how the various components of the "Kunsten å lære" (The Art of Learning) project work together to create a holistic educational program that promotes academic, social, and personal development. Through a cyclical development process involving design, testing, and adjustments, the teaching programs and the intervention were developed in close collaboration between teachers, artists, and researchers. The project is built on a strong theoretical foundation, including Diamond's studies on Executive Functions, Performative Learning theory, and Artists' Signature Pedagogies—all aimed at strengthening the students' engagement, joy, cognitive capasities, collaborative skills, and learning outcomes. The report discusses both the practical aspects of the teaching programs and the development process underlying the intervention, and shows how the tools are adapted to meet the individual needs of the students. Throughout the project, art-based methods have been regarded as an important driving force in enhancing the students' executive functions and motivation to learn. Teachers are active co-creators who, together with the artists, tests new creative, learner-centred teaching strategies in the classroom. The project demonstrates how such methods can support both academic and personal growth and create an inclusive learning environment where students thrive and develop. The report proposes a set of design principles for holistic and irresistible learning, organized into ten pillars, which can be used as a practical tool in schools. Overall, the report provides a comprehensive picture of a new standard of how innovative teaching can look like in practice, for the future education system.

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1

INTRODUCTION

"In Art of Learning, you have fun while learning, and when you are having fun it is easier for the brain to think it up."

(Student 22, Nemeth 2025: 14)

Kunsten å lære/ The Art of Learning/ A Tanulás Művészete was an international project and an educational intervention (2021-2024) with goals within both art-based learning, school development and neuropsychology, designed to support the development of learners' Executive Functions (EFs) through arts-based learning. The primary goal of the project was to investigate whether the implementation of a 48-week, art-based curriculum AoL might lead to an improvement in the EFs of the children involved. AoL was implemented in primary schools in the municipalities of Lillehammer, Øyer, Tynset, and Alvdal in Norway, and in the regions of Budapest and Pecs in Hungary (see Figure 1). The participating children were in grade 1 and 2 when the project implementation started in autumn 2021, and they had moved on to grade 2 and 3 when the implementation ended in spring 2023.

A set of independent evaluation reports (Kleiven and Kaderják 2025, Håkansson et.al 2025, Németh et.al 2025) has been examining the effects and results from the current Art of Learning project. These evaluations contribute to a better understanding of EF's development; it can help us understand what happens when children work with the arts, and they can contribute to making space for more arts and creative approaches to teaching and learning in schools.

The development and implementation of the AoL intervention is also examined in a master thesis, "The Art of Learning. A discourse analysis of the thought patterns underlying The Art of Learning - project 2021-2024". This research explores the underlying discourses and theoretical perspectives informing the program's design. It offers insight into the Art of Learning as a counter-discourse, criticising the dominating and institutionalized school discourse. The study is based on interviews with respondents from education, psychology and the arts and is a part of the Art of Learning curriculum development process (Hundevadt 2022).

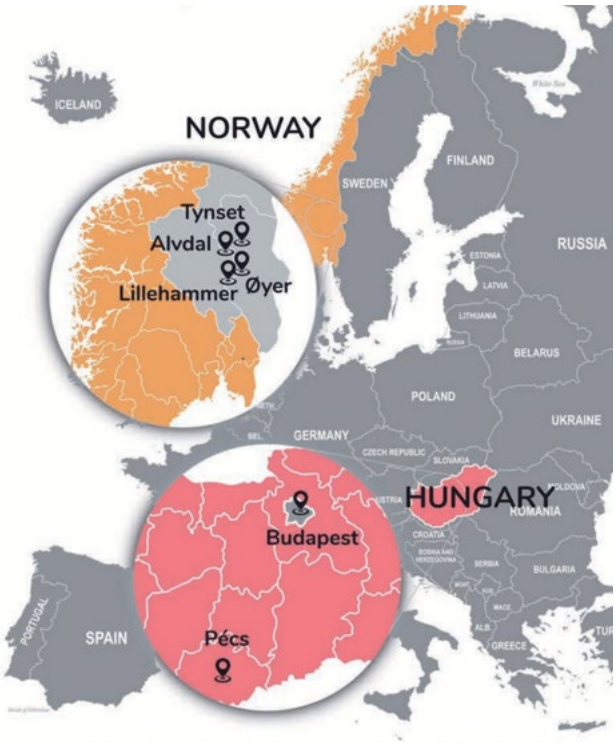


Figure 1: Map of Art of Learning Countries. Cred. Zador / Art of Learning Storybook

1.1 The Art of Learning Project

The Art of Learning was a Norwegian - British - Hungarian partnership project and a direct follow-up from three pilots implemented in primary schools in Ayrshire, Scotland in 2017 and 2018, and in Oppland, Norway in 2018.

The Art of Learning Intervention

The Art of Learning intervention took place in 9 primary schools in Norway and Hungary in the academic years of 2021 - 2022 and 2022 - 2023. All learners starting in grades 1 and 2 (5 - 7 year-olds) in these schools in autumn 2021 went through 270 minutes of art-based learning each week during the 48 weeklong intervention. During this time, they tested the systematically designed and developed pre-written art-based curriculum. Artists were hired to work alongside the teachers in the classroom for part of the time. The intervention was supported by a professional development program for teachers and artists.

See figure 2 for participants and geographical distribution of participating schools.

As practical and aesthetic subjects are already facing challenges in schools, there was a need to not further strain these subjects through the Art of Learning. As the Art of Learning curriculum is interdisciplinary at its core, the practical and aesthetic subjects are part of Art of Learning, but so are science, maths, reading and writing, amongst others. This consideration led to a decision to not use the time allocated for practical and aesthetic subjects in the Art of Learning, but rather to advise schools to allocate time to the Art of Learning from all subject areas. Thus, the Art of Learning was never meant to replace practical and aesthetic subjects, but to complement them.

The Art of Learning Curriculum

The custom-made curriculum tested in the AoL intervention was based on a theoretical framework from arts, creativity, education and neuropsychology, an analysis of the school context and needs, and based on experience from and evaluation of previous pilot implementations. The curriculum was also closely connected to the national curriculums from the Norwegian and Hungarian school systems. The curriculum development process was iterative, with four prototypes of the curriculum written, tested and evaluated consecutively during the four-semester long intervention. After a final evaluation, a set of Art of Learning curriculum design principles for educational lessons were developed.

The Art of Learning Research Assessment

The Art of Learning has been investigated by a research team led by Inland University of Applied Sciences (INN), testing the hypothesis that the EFs of learners participating in the programme would develop at a higher rate than those of learners in control schools (Németh 2023). A range of components within the project ensure that the intervention were consistently applied across different

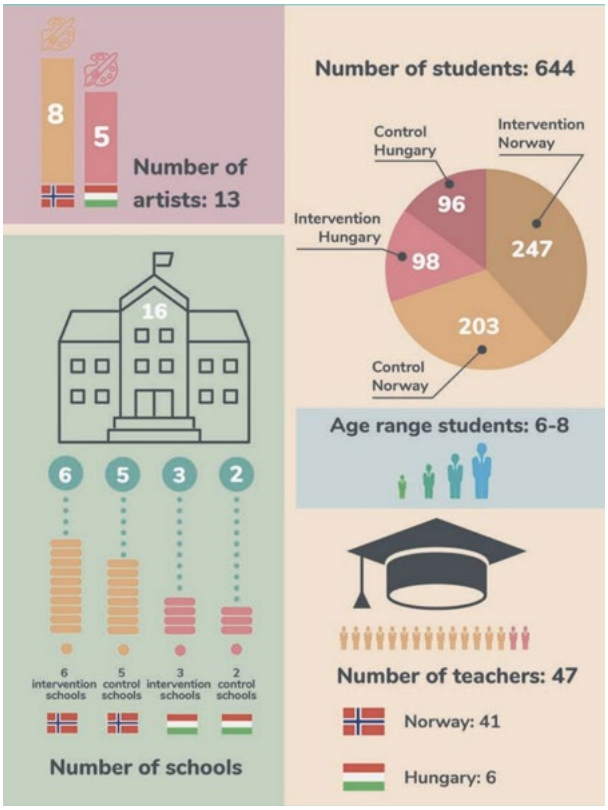


Figure 2: Geographical distribution of Participants Art of Learning. Cred. Zador / Art of Learning Storybook

educational settings. A central component is the use of a standardized curriculum and lesson plans, which are pre-scripted and identical across participating schools. The process and considerations made in the development of this curriculum are the topics of chapter 4. The implementation of the intervention includes a structured collaboration between teachers and artists, and to ensure consistency, all participating teachers and artists have undergone standardized training. Further, the AoL intervention is supported by an online platform "The Art of Learning Handbook", a resource providing access to the full set of lesson plans and training materials, allowing schools and educators to implement the program independently. The implementation process and the developed guidance are presented in chapter 5. The availability of a standardized curriculum, standardized training and structured guidance ensures that the intervention can be consistently applied across different educational settings, and future scalability and replication is made possible (Kleiven and Kaderjak 2025: 9-10).

> *Instead of having math as usual, we are in the gymnastic hall and make math – like symmetry - then we built a long vehicle that needed to be the same on both sides.*
>
> *AoL learners explains AoL*

Schools comparable to the intervention schools were selected to serve as a control group. In these schools, data collection and testing were the same as in the intervention schools, but they only participated in regular school activities (ibid.). Interviews and focus groups were conducted with all intervention learners, their teachers, their school principals, a sample of their parents, and with the artists who participated in the intervention.

1.2. The History of Art of Learning

AoL emerged from a long-standing partnership between Creativity, Culture and Education (CCE) and the Centre for the Development of Inclusive Technologies (CEDETI), a centre made up of educationalists, psychologists and software designers at the Pontifical Catholic University of Chile.

After first meeting at the World Education Summit in Qatar in 2011, CCE and CEDETI shared their respective work on creativity and EFs. They drew up a diagram where they put the Creative Habits of Mind (see chapter 3.1.2) on one side and EFs (see chapter 3.1.1) on the other and began mapping the connections. Together they found multiple overlaps, seen from different angles and explained in different languages. From here, the idea of a common project was born, where CCE created a program filled with arts, cultural and creative educational activities, aiming to incorporate CEDETI's expertise in EFs (Hundevadt 2022: 14-15). The program was largely based upon the review of the existent literature by Diamond (2014), giving evidence that EFs interventions using arts and physical activities are most promising (Andersen et. al 2019). This project was named The Art of Learning, and from this, three pilots followed (see figure 3).

The AoL Ayrshire pilot was a two-year pilot program devised for learners age 7-11 years by CCE and delivered in partnership with Creative Scotland and Education Scotland. It was one of seven initiatives carried out across the UK funded by The Paul Hamlyn Foundation through their Teacher Development Fund (Cordingley, et.al 2015). The programme went through a significant development from the first year; "A different Approach" (Education Scotland 2024a) to the second year; "Creative Learning is Effective Learning" (Education Scotland 2024b) building on feedback from participating teachers and creative practitioners.

The AoL Oppland pilot was a one-year pilot based on the AoL Ayrshire pilot, delivered in partnership between Oppland County Council, CCE, CEDETI, The Norwegian Centre for Arts and Culture in Education and Inland University of Applied Sciences (INN). The programme was translated into Norwegian school context and for a younger age group (6-8 year olds), including a complete re-make of the literature part of the program (Hundevadt and Klausen 2019).

Figure 3: Timeline Art of Learning pilots and full-scale project. Cred. Zador / Art of Learning Storybook

In all three pilots, a research team tested the participating learners and a comparable control group using a digital game based test called Yellow-Red developed by CEDETI (Rosas et.al 2022). In the AoL Oppland pilot this test was accompanied by three other tools; BRIEF, a questionnaire assessing EF behaviours in school environments (Gerard A.), completed by the teachers of the participating learners and the control group; individual interviews; and focus group interviews with participating teachers.

Results from pilots:
AoL Ayrshire pilot 1 and 2: The evidence from the results of the Yellow-Red assessments on participating learners and those from control groups suggested that the intervention had a positive effect on those who participated. Differences between the groups in two of the more complex games show relative improvements in the participating learners. Important to note, is that although the differences between the two groups are not significant in numbers, the trend is consistent. This evidence suggests that significant improvements could be made with a longer-term intervention (Education Scotland 2024ab).

AoL Oppland pilot 3: The results of the BRIEF-test showed that "the intervention group displayed a significantly greater improvement than the control group on GEC [Global Executive Composite] and BRI [Behavioural Regulation Index]. The teacher interviews reveal positive effects for the learners when it comes to several aspects: collaboration, conflict management, inclusion, vocabulary, and confidence. These factors are regarded as important for EFs development and academic outcome." (Andersen et.al 2019). Its Yellow-Red data, however, failed to show any effects (Kleiven et.al 2022).

As the pilots were very small in terms of the number of schools and learners involved the results were not conclusive, but results from AoL Oppland pilot 3 were promising, and an interest in developing the AoL and exploring it on a larger scale was established.

1.3 Art of Learning as a Curriculum

Curriculum can be defined in a myriad of ways, but the essence as found in the etymological origin is a 'track' to be followed or a 'plan for learning' (Van den Akker 2010: 37). With this understanding, Art of Learning can be described as a curriculum specifically for learners aged 6 - 8 years old in primary school across all subjects. Curriculums can be distinguished based on their level of approach (ibid. 37-38), and the Art of Learning curriculum is developed mainly for the classroom level as instructional material, with a support structure of training and overarching content addressing both the school level and the level of each individual teacher/ artist.

The form of the curricula can be either *intended, implemented* or *attained* (ibid. 38-39). The AoL in its written form is an *intended* curriculum with an underlying rationale (which will be revealed through this report), from which the curriculum documents are presenting the specific intentions and instructions. In the iterative development process of the Art of Learning curriculum however, the curriculum came to life as *implemented* during the testing in schools. When it became clear how it was interpreted by the teachers and artists, and how it operated in the actual process of teaching and learning, reflection and refinement was done. The Art of Learning curriculum that emerged as *attained* can only be understood through the lens of the learning experiences perceived by the learners, and the learning outcomes obtained from the implementation, which have been the focus of the independent evaluation report.

2

METHODOLOGY

"When we have AoL, we learn through imagination – using things, making things, finding things, playing things, all kinds of different things."

(Student Interview 21, Nemeth 2025: 14)

In order to provide a systematic, theory based and verifiable structure and content of the curriculum and intervention, intervention design was the guiding methodology during the development process of the Art of Learning.

2.1 Educational Design Research

Educational design research is the systematic study of designing, developing and evaluating educational interventions in the real context of education, and this approach has been the basis of the development process of the Art of Learning program. The curriculum was designed to be part of a larger whole, as the designed and developed lessons in the curriculum were tested in a real school context in the intervention, and then the effects of the testing were assessed. The curriculum and the intervention are therefore closely connected, they were both dependent on one another to work. The character of the design and development work has been cyclical, involving iterative processes of analysis, design, testing in schools, evaluation and revision, with each stage informing the next (Plomp & Nieveen 2010:9-13).

The utility of the curriculum developed has been in focus, to understand and continuously improve the curriculum and its lessons, making them work practically in the classrooms in the intervention. This approach required professional development for teachers and artists, a close working relationship and continuous reflection and evaluation with participating teachers, artists and school leaders. This was made possible by a structure of professional development programmes, meetings, reflections, observations and evaluations being built into the structure of the intervention.

The Art of Learning curriculum and intervention development process comprises three main phases, inspired by McKenny (2001), in Plomp and Nieveen 2010: 14-15. In the first, **Preliminary Research Phase**, the theoretical framework including theory from education, creativity, arts and neuropsychology, from which the curriculum is based, is defined. Needs are analysed, curriculum needs, scaling-up needs, professional development needs, and the need to preserve the practical-aesthetic, arts-based core of the curriculum and intervention. Finally, the evaluation of the 3rd and final Art of Learning pilot, in Norway, gives key insight into the next phase, identifying both elements that need to be upheld from the pilots as well as elements in need of improvement (Andersen et.al 2019, Hundevadt and Klausen 2019). This phase is described in chapter 3.

Design, Development, Testing and Refinement is the second phase of the process. This phase is the largest in terms of time and effort, including the whole iterative process of designing, developing, testing in the intervention, evaluating and revising the Art of Learning curriculum. The second phase is structured into four micro-cycles of research, one for each academic term, always aiming at refining the curriculum and the intervention. This phase is further described in chapter 4 and 5.

In the last phase, Assessment and Reflection documentation is recorded and reflections are systematized. Whether the intervention was improving EF of the learners, and what learning capacities and abilities the learners were developing were assessed by the independent research team. Their conclusions support the evaluation in this final phase. Specifically for the Art of Learning curriculum, this phase is about understanding and identifying the characteristics of an effective art-based curriculum which is developing EFs and general learning capacities. For the intervention, this phase is about understanding to what extent the professional development and support was sufficient and effective, and how it could have been improved. The reflections have led to a set of design principles and solutions for future implementation and practice, which is further described in chapter 6 and 7.

Illustration: Invention from Theme 23: Energy Inventions; the "Homework Machine". Credit: Erik Brandsborg / Arts for Young Audiences.

A key task in designing a curriculum and intervention is to evaluate it. Engaging in formative evaluation activities tends to lead to important learning experiences, experiencing hands-on the problems that occur, and hearing first-hand the suggestions for improvements the participants come up with during the testing. This usually has a stronger and more direct effect on the designers' thinking and design activities, compared to cases where external evaluators are feeding back to the curriculum and intervention designers (Plomp & Nieveen 2010: 98-99). However, being involved in the formative evaluation of the curriculum and intervention that we, the authors of this report, have also been part of designing, we need to be aware of several pitfalls. One pitfall is to become too attached to the curriculum and intervention designed, which could lead to a less objective view towards problems and comments from the respondents. Another pitfall is for the respondents to be biased during the feedback and evaluation; knowing how much effort the designers have put into the curriculum and intervention; they may hesitate to be fully critical of it (ibid.). To overcome these biases, the main measure is the use of external evaluators, alongside our own formative evaluations. In this project, external evaluators oversee the effect-study of the curriculum and intervention, and in addition, an external evaluator does a formal observational evaluation during the intervention. Other measures to overcome these biases were to include formative evaluations from a very early stage in the process, and to apply a wide range of information methods, meeting notes, observations, deviation reports and professional development programs were sources of feedback into the formative evaluation.

3

PRELIMINARY RESEARCH PHASE

"It's more fun to learn in AoL than in Math or Norwegian, because then it takes longer to learn. It takes more time to think in your head [...] and stuff, but in AoL you just think it right away."

(Student Interview 22, Nemeth 2025: 14)

3.1 Theoretical Framework

As part of the preliminary research phase, (Plomp & Nieveen 2010: 15), the Art of Learning design and development approach has been founded on a set of theoretical propositions. Inspired by New Culture Studies, a combination of analytical perspectives from different disciplines will make it possible to illuminate different aspects of complex phenomena (Sørensen et.al 2018: 91), in our case Learning theory, Art theory, theory on Creative Education, and theory on Executive Functions (EFs) of the brain have formed a multi-perspective approach to the development and design of the Art of Learning.

To make a connection between theory and practice in the Art of Learning curriculum and intervention, a list of ten components addressing specific questions about the planning of learning (Van den Akker 2010: 39-41) is addressed in the following theoretical framework, and through the report. In this way, we aim to provide insight into the connections between the overarching theoretical propositions and their practical implications for the design and development work.

The ten components are:

1. Rationale / vision: Why are they learning
2. Aims and objectives: What are the learning goals?
3. Content: What are they learning?
4. Learning activities: How are they learning?
5. Teacher role: How is the teacher facilitating learning?
6. Materials and resources: What are they using to learn?
7. Grouping: With whom are they learning?
8. Location: Where are they learning?
9. Time: When are they learning? and finally
10. Assessment: How to measure how far learning has progressed?

The spider web (Figure 4) illustrates the ten components and how they are all interconnected.

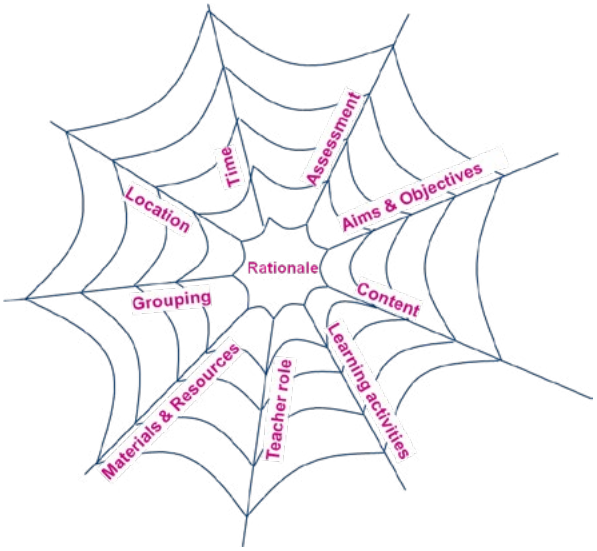


Figure 4: Ten Interconnected Components regarding Planning of Learning (Van den Akker 2010)

3.1.1 Executive Functions

Adele Diamond, professor in neuropsychology writes about Executive Functions (EFs) in the article "Want to Optimize Executive Functions and Academic Outcomes? Simple, just Nourish the Human Spirit". EFs are mental functions located in the front of our brain (in the prefrontal cortex). They work as a type of floating intelligence, regulating our behaviour. EFs make us capable of reasoning, problem solving, understanding what we hear in a conversation or in a school lesson, make choices, exercise self-control and discipline, be creative, and adjust flexibly when changes happen or we are presented with new information (Diamond, Hundevadt 2022: 14-15, 33-34).

Three sub-functions as defined by Diamond are Working Memory (keeping information that is no longer perceptually accessible), Inhibition (controlling emotions, thoughts, feelings and behaviour, making us capable of focussing on what we want) and Cognitive Flexibility (closely connected with creativity and the ability to think outside the box, change perspectives and change opinions) (Diamond 2014: 161-164).

Our EFs are key to functioning well in school, in the workplace and in life in general. EFs can be negatively affected by factors such as loneliness, sadness, stress or poor physical

health. If you are lonely or stressed, it might appear as though you have underdeveloped EFs, as seen in conditions like ADHD, even though this is not the case. The association between socioeconomic status and a child's EFs is well-documented. A key factor in the failure of low socioeconomic status learners to achieve in school is seen as a consequence of the under-development of their EFs. This underdevelopment is not, in most cases, a permanent condition, and hence can be improved (ibid.).

It is acknowledged that EFs can be developed, and Diamond lists the activities that are believed to have the best effect:

> *Music making, singing, dancing, and sports challenge our EFs (thus helping to improve them), make us happy and proud, address our social needs, and help our bodies develop. That is, they address our cognitive, emotional, social, and physical needs—exactly what is needed for the best school outcomes (Diamond 2014: 161).*

According to Diamond, arts and cultural activities are key activities for developing EFs. She also writes that children who dedicate themselves to the arts, physical activities, or social work will be happier, less stressed, and in better physical shape, which in turn will improve their academic performance—even when they spend less time on academic instruction (ibid. 161/164). Her conclusive paragraph in the article reads:

> *The different parts of the human being are fundamentally interrelated (Diamond, 2007). We are not just intellects; we also have emotions, social needs, and bodies. Even if one's goal is only to improve academic outcomes, the best way to achieve that is probably not to focus narrowly on academics alone, but to also address children's emotional, social, and physical needs (Diamond, 2010, 2013; Diamond & Lee, 2011). Counterintuitively, the most efficient and effective strategy for improving academic achievement is probably not to focus only on academics but to nurture all aspects of the child. While it may seem logical that if you want to improve academic outcomes you should concentrate on academic outcomes alone, not everything that seems logical is correct. (Diamond 2014: 165)*

Adele Diamond's research on EFs is important for Art of Learning's design and development process. In the following paragraph, the parts of the ten components impacted by EFs research are listed in italics, with examples of their practical design expression in brackets.

Arts and cultural activities at the core of the Art of Learning curriculum, are supported by Diamond's theory and play a major role in the Art of Learning's *rationale*. The other components influenced by EF's are the *content* (arts, creative and cultural activities) and the *learning activities* (provide opportunities to fail, self-manage, concentrate, explore ideas/options and problem solve), *materials and resources* (using objects and materials as stimuli for learning), *teacher role* (rewarding effort and the willingness to fail, give responsibility, choice and time to think for learners), l*ocation* (use the world around the learners as stimulus for learning), *time* (time to think before responding or doing, time to plan) and *grouping* (connectedness, working in different groups; pairs, small groups, alone).

Diamond's theory has also served to broaden the focus in the curriculum, focussing on nurturing all aspects of the child: Their emotions, social needs, bodies and intellects equally, and activating all senses. In addition, a list of other elements, mostly connected to the components of content and learning activity from the EFs research into Art of Learning curriculum are a) joyful / fun learning b) irresistible learning based on curiosity / inquisitiveness c) tasks that are challenging enough (within the Zone of

Figure 5: Creative Habits model (Spencer et.al 2012)

proximal development as by Vygotskij (1978)), d) repetition of activities with progression/ practice to experience improvement, e) ongoing reflection activities. In summary, Diamond's theory on EFs has served as a major premise for the design and development of the Art of Learning curriculum and intervention.

3.1.2 Creativity

Creativity is a concept defined in a range of different ways, and general definitions can be grouped as either big-C Creativity, the extraordinary skills only a few of us inhibit (ia. Einstein, Kahlo, Picasso), or they can be grouped as small-c creativity, a more everyday skill that we all have and use in different capacities and degrees (Holbrook 2022: 28). The definition and understanding of creativity used in Art of Learning, is amongst the small-c creativity definitions. The work done by Spencer et.al (2012) for CCE and later for OECD on ways of assessing progression in creativity, has been adopted and used in the Norwegian Government's white paper "The School of the Future" (NOU2015:8 Fremtidens skole.) This model (see Figure 5) defines creativity as a combination of being Inquisitive, Persistent, Collaborative, Disciplined and Imaginative (Spencer 2012, Hundevadt 2022: 15-16). Spencer et.al's Creative Habits model with its five sub-habits and their co-operative whole has been a key element in the Art of Learning lesson development. The development of children's Creative Habits is an important aim for learning: We want learners to become more creative. More importantly, creativity is key in defining how they are learning. The outer circle of the model listing things like "tolerating uncertainty", "cooperating appropriately" and "exploring and investigating" have been used as guidelines for the types of learning activities we are developing. The teachers' role in facilitating creative activities without limiting the learners' process is also key and has been brought into the training and support of teachers and artists in the intervention.

3.1.3 Performative Learning Theory

The Performative Learning Theory is described by Dahl and Østern (2019) as a learning theory that views learning not merely as a cognitive process, but rather as a process of creation, where learning is simultaneously physical, relational, creative, affective and cognitive. The Art of Learning is based on this performative learning theory. This theory has given support to the design and development process of Art of Learning, through its overall rationale that learning happens best when the learner is using all of themselves. This mirrors the theory on EF, and the specific characteristics of a performative learning process listed by Dahl and Østern (2019) which have been key to the development of the Art of Learning Curriculum especially related to the components of how learners are learning (learning activities), teacher role, its rationale (why they are learning) and its aims and objectives (towards which goals they are learning).

Central learning processes in this theory are to do, to sense, to think, to relate, to co-create, to create, to move, to express and to act. With artistic, creative and cultural activities being at the centre of the curriculum in Art of Learning, the various learning processes listed here are key. The design of learning activities within the performative learning theory will be learner

centred, practice based and involve the body in learning. These elements are implemented as Art of Learning's perspectives on *grouping* and *learning activities.* In performative learning, knowledge is seen as value-laden rather than neutral. This is made part of Art of Learning's *rationale* as an important part of the philosophy at the centre of AoL. The teacher's role in performative learning theory will not be as a mediator, but rather to give impulses, work as a moderator or a dramaturg, structure the learning and set up a well-functioning frame for the learning activities. These ways of facilitating learning are the *teacher role* we are striving towards in Art of Learning (Hundevadt 2022: 30-31, Gjærum and Vik 2022: 37, Østern, Selander, Østern 2019: 57-59).

3.1.4 Artists' Signature Pedagogies Project

The Signature Pedagogie project is described in a report by Thomson et.al (2012) which sums up findings from investigating the pedagogy artists bring into schools in Creative Partnership programmes in England. This report compares "arts-related signature pedagogies" with "default pedagogy". The pedagogical approach brought into schools by artists, according to this report, is a will to challenge, take risks, focus on inclusion and the class community, use collective ways of working. The artists' pedagogy is described in the report as mirroring the UNESCO "Four pillars of learning: Learning to Know, Learning to Do, Learning to Live and Learning to Be" (Thomson et.al 2012: 11). The artists' practice implies the learning activities to be taken outdoors, that the learner is seen as a central learning resource, that the learners' bodies are activated, that play and games are part of the learning, and that tasks are built from rich narratives. The Signature Pedagogy Project highlights the value of bringing artists into schools and is the basis for artists being given a key role in the Art of Learning curriculum and intervention.

Thomson's report was the backdrop for CCE's development of the model they have named «Characteristic features of the so-called 'high functioning classroom'" (see Figure 6). This model includes amongst others, characteristics of the teacher role, organisation of time and space, and other important elements to consider when designing the *learning activities* (how children are learning). This model has been a key reference point in the design and development of the Art of Learning curriculum.

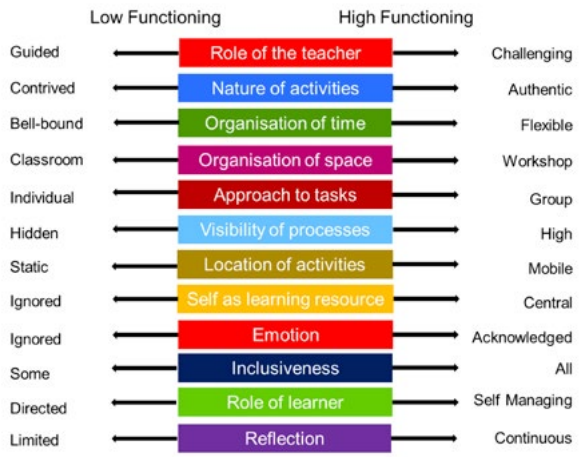


Figure 6: High-functioning Classroom model (Thomson et.al 2012)

3.1.5 Dewey's Art as Experience

In the book *Art as Experience* by psychologist and pedagogue John Dewey, he is critical of the idea of removing art from the concrete everyday experiences. For him, art does not belong on a pedestal but should be part of everyday life as aesthetic experiences. An aesthetic experience is, according to Dewey, based on a normal, full-fledged experience, only more intensified and clearer. Dewey's theory is an impact theory focussing on the effects the aesthetic experience will have on the individual. The aesthetic experience will be both a practical, aesthetic and intellectual experience, limited in time and space, in which the individual is present with their whole self; with senses, emotions, intellect and body. The experience is an interaction between the individual and the world, between body and mind, and holds both creation/action and reflection. The perspectives on Art as Experience shared by Dewey have been an inspiration to the Art of Learning curriculum-work, both the concept of art as a

part of everyday life (in our case as experienced in school during normal school hours), the engagement of the whole child in the activities, and the importance of reflection. Dewey also describes what he calls an impulsion, a driving force or a push into the experience. An impulsion is activating the whole human being and makes them enter the aesthetic experience all ready to take it in (Hundevadt 2022: 32-33, Dewey 1934/2005: 11-16, 60-62, Sortland et.al. 2022: 95-109). Dewey's Impulsion has been translated to the word Trigger in Art of Learning, and the use of triggers as a push into different concepts and experiences has been thoroughly experimented with in the Art of Learning curriculum design and development.

3.1.6 Embodied Knowledge

> *"Children should not build a birdhouse because they are going to learn Pythagoras. Children should learn Pythagoras because they are going to build a birdhouse. Touch. Feel. Know. Smell. Imitate a shape, a pattern, or a color. This is what we call action-based knowledge [embodied knowledge]."*
>
> Jon Bojer Godal

The concept of embodied knowledge (handlingsbåren kunnskap; Norsk håndverksinstitutt/ Jon Bojer Godal) means knowledge residing in the body, more specifically the sum of experience and action patterns, as the bodily knowledge known from apprenticeship (mesterlære). To gain embodied knowledge, ia. to become an expert in using a hammer, you need to use a hammer in practice. "Thoughts and body, head and hands are interconnected. We learn while we do." (Godal). The concept of embodied knowledge has been an inspiration for the Art of Learning curriculum as part of its rationale and content. The embodied knowledge as active knowledge *in* something is in Art of Learning valued as at least as important as knowledge *about* something. This is true for handicraft, and equally true for the arts. In the Art of Learning curriculum, the embodied knowledge in the arts is crafted and improved through warm-up activities from the arts, where the activities are practiced and advancing day by day. Also, inspired by the initial quote the learning activities in the Art of Learning curriculum aims to start from real life tasks, with theory connected as needed for solving this task. The handicraft perspective itself has however not been incorporated into the Art of Learning curriculum and implementation to any significant degree.

3.1.7 Posthuman Pedagogies

Nordin-Hultman (2004) poses a postmodern, constructionist perspective on education, aiming to "move the one-sided attention away from the children's characteristics to the pedagogical environment in which they act and are observed." According to Nordin-Hultman, processes and problems in education are often individualized, while the educational context more often is taken for granted and left without reflection (Nordin-Hultman 2004: 206-210). She moves the focus towards the organisation of time, space and material as central aspects of teaching. In her study, she finds that the pedagogical environments are quite uniform and homogeneous. These environments offer small variations of ways of working, and few activities can be carried out parallel with each other, which in effect is restricting children's different ways of creating meaningfulness. According to Nordin-Hultman, a pedagogical environment characterized by diversity and variation is a prerequisite for children's diversities and variations to be acknowledged and accepted (ibid.). The Art of Learning curriculum is striving to use location, time, materials and resources in a diverse and varied way. We have purposely designed for use of different spaces (indoor / outdoor, public spaces, nature, basements /specialized spaces/ hallways etc.), to use the regular spaces in new ways, to use diverse types of materials, and to use them in a variety of ways (ia. paper: vary between different types of paper, both in terms of texture, colour, size, and use paper in

2D, 3D, as objects etc.). Also, to facilitate the intervention for flexible use of time within the Art of Learning curriculum has been a premise for participating schools in the intervention. Nordin-Hultmans perspectives have also influenced the Art of Learning's rationale, especially when it comes to the intervention's support and professional development: We are striving to uphold the attention on the pedagogical environment, rather than focusing on individual children's characteristics.

3.2 Context Analysis

To develop a well-functioning curriculum and intervention, it requires insight into the context and the system(s) within which it resides. What is the current situation? (McKenney/Reeves 2019: 99-101). In this analysis, the educational system is investigated, relevant policies in arts and education, and also the power structures within school are examined. Finally, factors that might enable or hinder change in the setting of the curriculum and intervention are considered.

3.2.1 The Educational Situation

During the last 30 years, there has been a neoliberal turn in education, and an accelerating reform pace in education globally (Hargreave 1996: 17, Skregelid 2022: 16). An economically motivated education policy has prioritised limited and measurable competences, and whilst education previously was seen as one of several factors for economic growth, knowledge and education is now seen as the crucial factor for economic growth (Skregelid 2022: 16, Volckmar 2016: 145).

This turn has resulted in an increased focus on language, science and mathematics, at the expense of the development of the all-round person and practical and aesthetic subjects. In Norway, the share of practical and aesthetic subjects in school has been reduced from 20 % to 12,4 % from 2000 to 2010 (Skregelid 2022: 16). Also in Norway, the share of teachers teaching practical and aesthetic subjects in school without relevant education has reached more than 50 % (2024), and less and less teacher learners are choosing these subjects in teacher education (Haugen et.al 2024). The situation for the practical and aesthetic subjects in school is, as these numbers indicate, not good, both in terms of status, time allocation and quality of the teaching, and with less trained teachers available, the situation is unlikely to change without significant effort put into changing it.

Historically and globally, the way of working in classrooms in school has changed over time (Hargreave 1996: 17; Hundevadt 2022: 19-20; Oldervik in Volckmar 2016:178-187). Through the 20th century, until the late 70's, reform pedagogy was strong. A unifying trace in reform pedagogy is the child being the centre of the education, and the support of each child's natural development being key. Children's urge to create, their interests and their needs are the framework of the teaching and learning activities. Key thinkers are ia. John Dewey, known for "learning by doing", and Maria Montessori, founder of Montessori pedagogy. They emphasized the focus on learner activity, education for collaboration and democracy, and the freedom to act based on one's own needs and interests. These progressive ideas have become less common amongst teachers in later years, and the trend has changed towards a neoliberal understanding of reality in school, as described above (ibid.).

Division of Time in School

The division of time in school has in postmodern time accelerated, with more and smaller components with different titles like planning time, lesson X, Y, Z, eating, recess, team meeting etc., which stands in stark contrast to the perception of time in the classroom, where personal relations and demands on different levels needs a dynamic approach (Hargreaves 2012: 18-19, 104-125 in Hundevadt 2022: 20-21). The division of time also has a strong disciplining effect, as it demands all activities to be planned, time, space, materials and activities are fully regulated by the teacher, and learners must

submit and have very limited opportunities to influence what they are to do, how and when. Teachers also have limited power over these elements, the power is placed outside the people whose everyday lives are governed by the regulations (Nordin-Hultman 2004: 92-97, 102-104 in Hundevadt 2022: 20-21). In these circumstances, time becomes a goal in itself, with the consequence that methodical or didactic variations that could be activating learners are excluded, in favour of the teacher's faster mediation. The teacher talking more and the learners less cements the differences amongst learners. According to Bernstein (1990), the learners without a well- functioning second arena for learning at home, cannot keep up due to the fast-learning pace (Bernstein 1990: 16-19, in Hundevadt 2022: 21). Time division in school must not be seen as a minor logistic circumstance, but rather as part of the core of being a teacher, as it influences and potentially alienates the humans inside the system (Hargreaves 2012: 18-19, 104-125 in Hundevadt 2022: 20-21).

3.2.2 Power Structures in School

The power structures that are presented in schools, both explicit and implicit, are a key factor to consider when analysing the context of an educational program such as Art of Learning (McKenney/Reeves 2019: 99-101), and through conducting a discourse analysis, the power structures will be revealed. The premise of discourse analysis is that thought patterns and opinions are often a prerequisite for action, and thus the thought patterns and opinions about school that are influential can be said to hold power (Neumann 2021:35).

A discourse analysis of the Art of Learning project was conducted by Hundevadt (2022), based on interviews with respondents from education, psychology and the arts being part of the Art of Learning curriculum development process. The analysis aimed to discover how power is unfolding inside and between the four discourses: Learning, Art, School and EFs in the Art of Learning.

The analysis reveals that School (understood as the human community of teachers, learners, etc.) is a dominant and institutionalized discourse with Cognitive learning, Curriculum and Time allocation as associated practices (sub-discourses). The way these practices are understood is seen in the dominant school discourse as the "normal", as routine, and thus self-sustaining. When it comes to Curriculum, the "normal" in the prevailing school discourse is to emphasize subject-specific competence goals at the expense of other parts of the curriculum as the overall curriculum. When it comes to Time allocation, the "normal" is to have a strict time allocation in the form of a timetable that regulates the length of lessons, recess, mealtime, collaboration time and meetings, and which regulates the use of space and the possibility space of the people in the school accordingly. When it comes to Learning, the "normal" is to think of learning as a process that mainly takes place cognitively, with the thinking of individuals at the centre. In such a dominant and institutionalized School discourse, change in any of its practices (Cognitive learning, Curriculum, Time allocation) is made difficult. The existing practice is considered "normal" amongst its bearers (teachers, school leaders etc.), change will lead to a disruption of the normal. Attempts at change will therefore meet resistance and may be rejected (Hundevadt 2002: 4).

The Art of Learning is to be considered as a counter-discourse, criticising the dominating and institutionalized School discourse. And by being a counter-discourse, resistance must be expected, as well as the chance of being rejected. To criticize a dominating discourse may have minor effects, no matter the accuracy of the protest, if the critique is not followed by a creation of an alternative (Neumann 2021: 166-167 in Hundevadt 2022). The Art of Learning is, according to the analysis, criticizing by proposing changes and alternative practices for both learning, time allocation and curriculum (Hundevadt 2022: 4, 80-83). When it comes to Learning, the Art of Learning discourse is

Illustration: Teacher, artist, and students studying and discussing the artwork they created. Cred.: Erik Brandsborg / Arts for Young Audiences

Performative (see chapter 3.1.3). When it comes to the Curriculum, both the overall and subject-specific curriculum are valued equally, and make room for, among other things, Creativity (3.1.2), art (3.1.5) and Embodied Knowledge (3.1.6). When it comes to the division of time, time should, according to the Art of Learning, be allocated flexibly according to need and task.

According to the analysis, Art of Learning has gained a role of a "trustee" in relation to the School. This means the Art of learning is considered a partner the school trusts to be able to make good suggestions for change. Art of Learning is empowered in relation to School in this sense. However, the School, represented by teachers, school leaders and school owners, are in power of the project on an overall level. If one or more of these actors' experience that they don't get from the project what they expect, they have the power to reduce the project to a minimum or end it.

In summary, the Art of Learning yields counter force against the School discourse and is allowed to suggest changes. However, the actors within the School discourse are in power to end the Art of Learning if they want to, and for a project like Art of Learning to gain traction, and not be rejected by the dominating School discourse, it is, according to Neumann (2021: 148) necessary that the ideas for change suggested by the project not only resonate in the school as such, but also that the changes suggested correspond to currents of thought and attitudes in society (Neumann 2021: 148, Hundevadt 2022: 108-110).

Interestingly enough, there are tendencies at policy level that arts, creativity and practical subjects like handcraft are becoming more valued, and the following paragraph will describe some of the most interesting policies in this respect.

3.2.3 Relevant Policies

International

As will be described below, there is a growing consensus internationally that art and creativity should play a more significant role in education. The EU, UN, OECD, researchers, national agencies, and educators worldwide have recognised that young learners need more than basic skills, and that formal education should cultivate the creativity and critical thinking skills of learners to help them succeed in an increasingly uncertain and rapidly changing, globalised world.

In the EU, their focus on Science, Technology, Engineering, Mathematics in Education (STEM) has since 2018 gradually incorporated an A, representing the Arts, to what is now regularly referred to as STEAM education. Central to the addition of Arts is the understanding that arts and creativity encompass a set of mental attributes or habits of mind which are key for innovation and entrepreneurship, thus decisive for young people to succeed in the future (European School Education Platform 2022).

In 2023, OECD tested 15-year old's Creativity as part of PISA. Learners' capabilities to create original ideas, solve tasks in multiple ways and improve existing ideas were tested. OECD argues that creativity has a positive influence in academic interest and achievements, and that organisations and societies around the world increasingly depend on innovation, giving urgency to innovation and creative thinking as collective enterprises (OECD: PISA 2022 Creative Thinking).

UNESCO's report "Reimagining our futures together; A new social contract for Education" (2021) urges governments and institutions worldwide to immediately change the course of education to secure the future of our societies and planet. One of their five main measures is to advance the arts and creativity, as the arts are key to both health, well-being, cultural understanding, tolerance and sustainable development (UNESCO 2021).

> *Curricula that invite creative expression through the arts have tremendous future-shaping potential. Artmaking provides new languages and means through which to make sense of the world, engage in cultural critique, and take political action. Curricula can also cultivate critical appreciation and engagement with cultural heritage and the powerful symbols, repertoires, and references of our collective identities (UNESCO 2021)*

In 2022, the Danish mason professional and author of "Clever Hands - a Defense of Crafts and Professionalism" (2013), Mattias Tesfaye was appointed as Denmark's Minister for Children and Education. He argues for more handicraft in schools by highlighting the difference between knowledge and being able to do, and that schools must convey both parts. A more practically oriented school with time for in-depth study is now the main topic of a new Danish school-reform (Simenstad 2024; Tesfaye 2013).

National

The National Curriculums of Hungary and Norway are key policy documents for the Art of Learning intervention and curriculum, as the intervention is taking place in these two countries, making these documents crucial elements of the context in which Art of Learning operates. A brief description of these National Curriculums and other relevant policies are made here.

National Curriculum of Norway

Kunnskapsløftet (LK20) is the name of the National Curriculum for primary and secondary education in Norway, implemented from 2020. LK20 is a review of Kunnskapsløftet (LK06). In LK06, competence aims in all subjects were introduced, and five basic skills were prioritized: reading, writing, calculating, using digital tools and oral expressivity. National

tests were introduced to evaluate these basic skills (Hundevadt 2022). The core curriculum consists of a set of core values for primary and secondary education: Human dignity, Identity and cultural diversity, Critical thinking and ethical awareness, The joy of creating, Engagement, and the Urge to explore, Respect for nature and environmental awareness and Democracy and participation. In LK20, in-depth learning became a special focus, together with three interdisciplinary topics: Health and life skills, Democracy and Citizenship, and Sustainable development. (Vik, 2020; Kunnskapsdepartementet: Core curriculum – values and principles for primary and secondary education).

The white paper "A more practical school" (Meld.St.34 23-24) aims to contribute to a more practically based school, and includes elective subjects, a Skills for working life-subject as an alternative to foreign language in lower secondary school, alongside economic support measures for upgrading craft and woodwork rooms, and to increase the possibilities for competence development for teachers. This white paper was first presented in the middle of the AoL project, and thus did not influence the initial development processes.

National Curriculum of Hungary
Hungary's National Core Curriculum (NCC), last updated in 2020, provides a centralized framework for public education, outlining key competencies, subject areas, and development goals. It emphasizes knowledge acquisition, national identity, and moral education, while also promoting digital literacy and critical thinking. The curriculum is structured by key stages and prescribes subject content and weekly lesson hours. The Hungarian National Core Curriculum (NCC) does include references to creativity, particularly within specific subject areas, but it lacks clear and consistent definitions of creativity, which may pose challenges for its effective implementation across all educational domains. While schools have limited autonomy, they may develop local curricula within the NCC framework. Recent educational policies have also emphasized performance measurement and standardized testing.

3.2.4 Roma Learners in Hungary
Roma learners in Hungary face significant educational challenges, including systemic segregation and limited access to quality education. Approximately 45% of Roma learners are placed in segregated schools or classes, often receiving a lower standard of education compared to their non-Roma peers. This segregation is exacerbated by practices such as misdiagnosing Roma learners with intellectual disabilities, leading to their placement in special schools. Such systemic issues contribute to lower educational attainment among Roma learners, with only about one-third continuing to secondary education, compared to over 90% of non-Roma learners. These disparities highlight the need for inclusive educational policies and practices that address the specific needs of Roma learners and promote equal opportunities for all learners.

3.3 Needs Analysis
As part of the preliminary research, the key stakeholders were defined to be found mainly within education (school authorities, teacher education, school leaders, teachers), arts (artist organisations, individual artists) and psychology (research institutions, educational psychology services, interest groups within ia. ADHD). Consultations were made with representatives from the different groups in an initial phase, to understand their needs and wishes. Already established relationships with teachers, school authorities, artists, artist organisations and research institutions from the Art of Learning pilots was beneficial in this process, as access to relevant stakeholders was made effortlessly. Experience with school visits, attendance at relevant professional meetings and an established list of relevant literature was also brought into the project from the pilots. In this paragraph the most important needs identified in this process are presented.

3.3.1 The Arts Need to be Prominent

As the Art of Learning aims to investigate whether and how a more arts rich education is beneficial for learners, the arts needed to have a prominent position in the project and a range of measures were taken to ensure Arts' prominent position. First, the Arts were defined according to Dewey's Art as Experience (Chapter 3.1.5), and supporting theories making the connection between our chosen definition of Arts and pedagogy was sought out and chosen. Artists' Signature Pedagogies (Chapter 3.1.4), Embodied Knowledge (Chapter 3.1.6), Creativity (Chapter 3.1.2) and Performative Learning Theory (Chapter 3.1.3). Second, professional artists were put in prominent positions in the project; as part of the project management; as developers of the curriculum; in the classroom during the implementation, working shoulder to shoulder with teachers, and in the Norwegian steering group of the project, represented by Arts for Young Audiences, a state-run agency for arts and culture for children and young people. Third, artists were part of the group facilitating the professional development of teachers and artists, and co-led training, school visits with observations, and meetings. The Arts were given a prominent position in the project by having a conscious relationship with the importance of Arts in the project, and this was supported through these structural means.

3.3.2 From Policy to Practice

As seen in the context analysis, there is a growing consensus internationally that art and creativity should play a more significant role in education. However, from the stakeholders it was made clear that there is a gap between acknowledging the value of the arts and creativity and the ability of schools and authorities to effectively support and cultivate these skills in practice. This view is supported by the EU, which states that stronger evidence is needed to better understand and assess the impact of arts and creativity in education, and that "research evidence is also missing on whether, and how, education and training systems have the capacity to support learners in developing [arts in education and] cultural awareness and expression"(EU: HORIZON-CL2-2024-TRANSFORMATIONS-01-08). In order to fully understand the impact of arts and creativity on children and young people, and to support the use of arts in education, more insight is needed to bridge the gap from policy to practice.

3.3.3 Curriculum Connection

As the intervention would take up 270 minutes of time in school for each of the participating learners, each week for 48 weeks, the need for a close connection between the Art of Learning curriculum and the existing school / national curriculums was crucial to be able to complete the project intervention. This was made clear from the educational stakeholders. The importance of this is present both to recruit school owners, school leaders, teachers and getting the approval of parents, but the same is true from an ethical point of view. When occupying a large group of learners' valuable time in school, this time needs to be used according to national guidelines and regulations, so that all participating learners receive the education they are entitled to.

In Hungary, the curriculum links were developed by Mari Zágon, a renowned educational expert and the professional leading the Hungarian Step-by-Step inclusive education program since 2014 (and earlier between 2001 and 2004). With nearly five decades of experience in the field, she has gained extensive professional expertise across various areas of education.

The connections between the Art of Learning curriculum and the national curriculum of Hungary were created in two directions; 1) for each Art of Learning theme, the specific subjects it was related to was indicated, and 2) for each subject and for each grade, 1st and 2nd separately, a list of corresponding themes and their targeted subject aims.

In the case of Norway, the Art of Learning curriculum connects to all three levels of the

national curriculum (LK20, see chapter 3.2.3); The values in the core curriculum, ia. the joy of creating, engagement and the urge to explore; The interdisciplinary topics [NO: Tverrfaglige tema]; Health and Life Skills, Democracy and Citizenship, and Sustainable Development; and the competence aims in the full range of subjects, Social Science, Maths, Norwegian, Natural Science, English, Physical Education, Art and Crafts, Music and Christian and other Religious and Ethical Education (CREE). In addition, Drama and Rhythm was included, although this is a subject for learners using sign language only. As described in the Context Analysis, chapter 3.2.2 Power Structures in School, the "normal" in the prevailing school discourse is to emphasize subject-specific competence goals at the expense of for instance the overall curriculum. When the Art of Learning is making connections to all three levels of the curriculum, this is part of the role as trustee, criticising the limited "normal" focus in a creative way, by suggesting a different approach where all three levels are integrated, as well as Drama and Rhythm. As the interdisciplinary topics were new in 2020 and consequently less explored than other parts of the curriculum, the Art of Learning's focus on these topics was appreciated, as this was a field of specific interest from the educational stakeholders in Norway.

3.3.4 Upscaling: From Pilot to Full-Scale Project

To scale-up from a pilot into a full-scale intervention project made a series of changes prerequisite. The number of learners were increased from 220 to 644, the number of intervention weeks were increased from 12 to 48, the number of intervention minutes per week were increased from 240 to 270, and the share of teacher-only led sessions were increased from ¼ in the pilot to ⅓ in the full-scale intervention. Also, the selection of learners was changed significantly, from only the Oppland region in Norway in the pilot, to selecting from the larger Innlandet region in Norway as well as from two different regions in Hungary in the full-scale intervention. These changes meant the pilot session design was insufficient, both in number of sessions, length of sessions etc., and this led to a need for a new design and development process for the Art of Learning curriculum.

Perhaps the biggest change from the pilots to the full-scale project was the shift from having a pool of artists from different art fields who rotated from school to school during the pilot to having artists assigned to each school throughout the intervention. This change allowed teachers, artists and learners to build trust and collaboration over time, something that had been clearly demonstrated in the evaluation of the pilots to be difficult to combine with a rotation system for artists. This change led to a new requirement, that the artists recruited for the full-scale project needed to be capable of, and willing to work with artforms outside their own primary disciplines. To ensure the quality of the delivery of sessions based on art-forms the artists were not experienced in, the chosen artists would get specific training and peer learning and support was facilitated for.

Table 1 presents the full list of changes made from the pilots into the Art of Learning full-scale project.

Description of changes	AoL pilot	AoL full-scale project
Length of intervention	12 week intervention	48 week intervention
Session duration	60 min sessions	90 min sessions
Number of sessions	4 sessions a week	3 sessions a week
Number of min. per week	240 min	270 min
Type of arts used in sessions	Art-form specific sessions	Generalized art-based sessions
Delivery of sessions	1 out of 4 delivered by teacher only	1 out of 3 delivered by teacher only
Artists met by each learner	Learners work with several artists	learners work with one artist
Overall design dramaturgy	Individual “stand alone” sessions	2 week / 6 session themes following one joint dramaturgy
Session delivery order	Sessions designed to work when delivered in different order	Sessions designed to be delivered in fixed, consecutive order
Activity change frequency	Each session - unique warm-up and reflection activity	6 consecutive sessions having the same and advancing warm-up and reflection activity
Target group adjustments	Adjusted from content made for target group 7 - 9 years	Custom made content for target group 6 - 8 years
Level of instruction details	High level of detail, sometimes down to “lines” mimicking what to say in class	Reduced level of detail, more descriptive instructions step by step
Functional design	1-3 printed sheets of paper to bring for each classroom session	A two-sided “one-page” for each classroom session

Table 1 Full list of changes made from the pilots into the Art of Learning full-scale project.

Illustration: Learners participating in an AoL activity. Cred: Barbora Hollan

However, it is important to note that the evaluation of the Art of Learning pilots showed promising results, including positive effects on inclusion, cooperation between learners and vocabulary, which made it important to maintain the essential parts of the pilots in order to maximise the chances of getting the same or even better results in the full-scale project.

From the Art of Learning pilots, the developers of the pilot sessions were appointed as the lead authors of this full-scale curriculum. Furthermore, artists from the pilots were hired as contributors, to ensure that their experience and insights were utilized. The conceptual framework and theoretical principles of the pilot curriculum were retained, but further developed, expanded and more clearly expressed in this full-scale project (see chapters 3.1 and 4.1). The structure of the implementation process was also maintained from the pilots; the recruitment, the support system with teacher and artist professional development program and school visits (chapter 5.2) and the sessions with teachers and artists working shoulder to shoulder in the classroom.

4

ART OF LEARNING: CURRICULUM

"I remember better when I am doing something in a subject. Then I understand what the point is and why we are going to learn this."

(Student interview 4, Nemeth 2025: 14)

The Art of Learning: Curriculum at a Glance

When the students enter the classroom, they discover a full and sealed Mystery Box. The teacher explains that something strange happened on the way to school—she found this box, just left there. The students are a bit shocked by the discovery, but quickly become curious and start asking questions: Who could the box belong to? Why did someone leave it behind? And what should we do with it?

The curriculum of Art of Learning is based on several topics, ia. Friendship, The Mystery Box, Virus, Pizza, and Kingdom of Colour. The introduction above is the beginning of Theme 8: The Mystery Box. Each theme consists of six sessions of 90 minutes, delivered over a two-week period, presented in a standardized format, with structured guidance on space set-up, materials, curriculum goals, preparations and instructions for delivery of the activities. Each session has a fixed structure: Warm-up, Main Activity, and Reflection.

The full set of learning sessions from the Art of Learning curriculum can be accessed online (open access) here: artoflearning.ktoa.hu

Design and development phase

From the preliminary research phase, theoretical framework, context and needs are presented, including the learning points from the pilot evaluation. In this second phase, the Art of Learning curriculum has been developed in an iterative process and the design of the lesson plans have been set. Along with the intervention in schools where the curriculum is tested and refined, this phase in the development process is the largest in terms of time and effort. Although the curriculum development and the intervention have been happening as part of the same cyclical proces (see Figure 7), the intervention will be described in chapter 5.

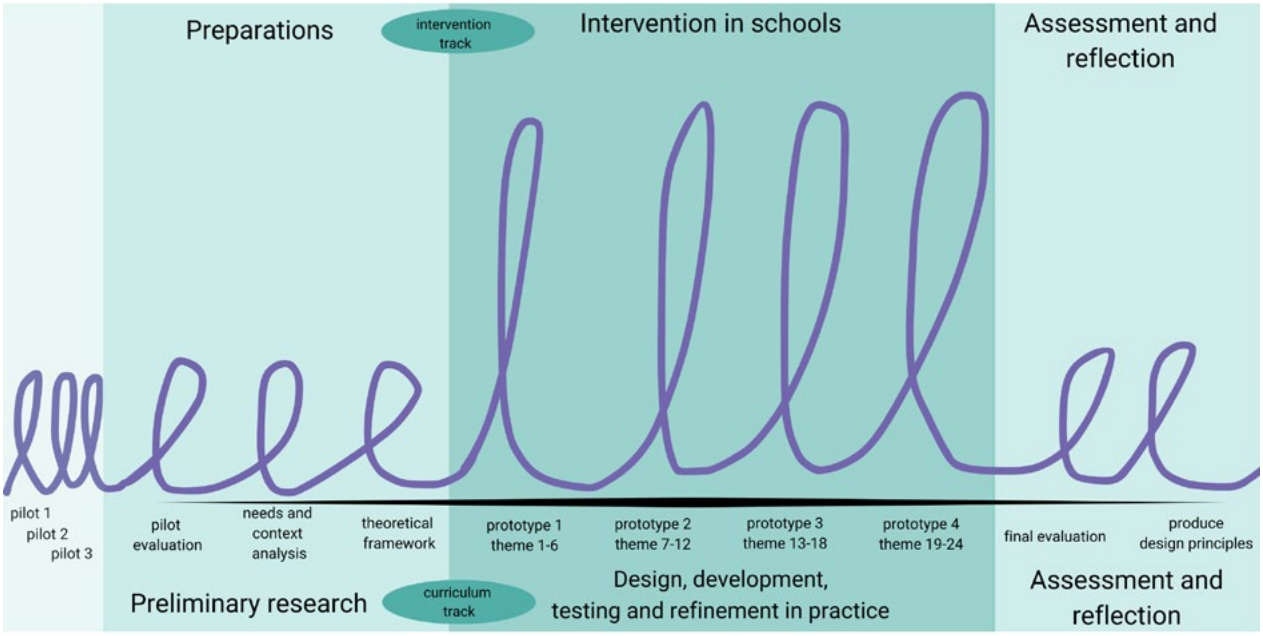


Figure 7: The Cyclical Process of Intervention and Curriculum Development in AoL. Illustration inspired by McKenny (2001) in Plomp & Nieveen 2010: 9-15).

The prototyping process has been evolutionary, where the prototypes are continually refined and evolving throughout the process. The first step in this process has been to define the conceptual framework, followed by an ideation process. Several steps have then been made in prototyping, in a spiral movement of ideation, curriculum development, presentation mode, testing in schools, evaluation and revision. Once the first prototype began testing in schools, the evaluation process started (with feedback meetings and observations), and revisions were instantly installed in the development of the 2nd prototype, which was developed in parallel to the evaluation process. In the same way, the third and fourth prototypes were developed, tested and evaluated.

4.1 The Conceptual framework of the curriculum

The conceptual framework is the structure established to create balance and consistency between the many research components from the theoretical framework, context and needs analysis, including the pilot evaluation. In order to capture and ensure a proper transmission from these preliminary research components into practice through curriculum development, the initial process was to organise these elements, and the list of ten components addressing specific questions about planning of learning (Chapter 3.1 /Van den Akker) were used as support, against three major planning elements in curriculum development; content, purpose and organization of learning (ibid.). The initial set-up looked like this. (see pages 32-33)

This overview of the various interconnected components that needed to be taken into consideration simultaneously built a clearer image of the challenges, interconnections and possibilities for the curriculum to be developed, and some important reflections were made from this.

From performative learning theory, the differentiation between content and learning activities is opposed, as they are to be considered at the same time and as part of the same whole (Østern, Dahl 2024: 30). The model above is reflecting this by integrating the content (what) into the learning activities (how).

Regarding time, the conceptual framework seems a bit conflicted, both flexible use of time and a structure of fixed session lengths. These elements are combined by having a fixed amount of time available for each session, and by opening up the time frame within these 90 minutes. For instance, the lesson plans do not define how much time each activity is supposed to take, this is up to the teacher and artist to choose, responding to the class' day to day focus and engagement level. If there is a need for a break during the 90 minutes, a break can be taken. if they finish early, they are finishing earlier. And if they work intensely and are not ready to break, they should be allowed to work for the full 90 minutes straight. Also, the types of tasks within the sessions vary from activities that are possible to finish in a short amount of time, and activities that last for several sessions in a row. The defined session length of 90 minutes is also a possibility to build sessions with a clear dramaturgical structure, including a defined start and ending point.

The choice of building a thematic structure of the curriculum is found in the conceptual framework. The thematic structure gives the possibility to integrate longer processes into the content, and to dig deeper into the topics chosen, and include repetition in a systematic way. Also, the theme structure gives a certain level of predictability for both learners, teachers and artists. Though the Art of Learning advocates change, diverse learning methodology, surprises and non-predictable learning set-ups, the thematic framework gives a sense of something being known, a stability for the sessions within each theme.

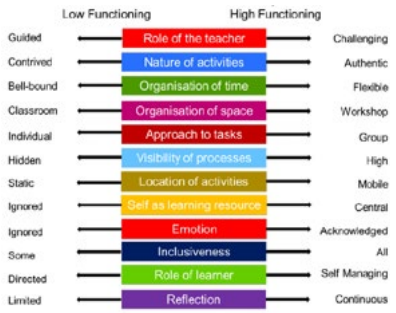
Learning activities - how are they learning?	Organization
Content: • Arts, creative and cultural activities, ia. music making, singing, dancing, playing theatre, working with literature, visual arts, handicraft. • National curriculum content from Norway / Hungary. • Deep learning. **Approach** • Provide chances to fail, self-manage, concentrate, explore ideas/options, and problem solve with high process visibility. • Learners engage intellectually, emotionally, socially, and bodily by being encouraged to do, sense, think, relate, co-create, create, move, express, and act. • Focus on practice-based, authentic, real-life tasks where learners are central as learning resources, and everyone is included. • Activities are repeated and made progressively more challenging (in line with Vygotskij's zone of proximal development), with ongoing reflection supporting continuous improvement. • **Creativity** ◦ **Collaborative:** Giving and receiving feedback, sharing the product. ◦ **Persistent:** Embracing challenges and uncertainties. ◦ **Inquisitive:** Wondering, questioning, and challenging assumptions in a safe environment. ◦ **Disciplined:** Developing techniques, crafting, and refining. ◦ **Imaginative:** Playing with possibilities and making intuitive connections. • Incorporate triggers/impulsions that push learners into irreversible, joyful, irresistible learning based on curiosity. **High Functioning Classroom Framework:**  	Interdisciplinary topics as defined in 24 themes. Art-based sessions, designed to be delivered in a fixed, consecutive order, following one joint dramaturgy. Designed in a standardized format, presented with structured guidance on space set-up, materials, curriculum goals, preparations and instructions for delivery of the activities. Each session is set in a fixed structure: Warm-up, Main Activity, Reflection, with the same and advancing warm-up and reflection activity within each theme. Custom made content for 6-8 year olds. A well-functioning frame for the learning activities.
	Assessment
	In school: Reflection activities, presentations, products made, observations, parent-teacher conference, learner-teacher conference etc. In the project: Research rig: teacher/artists observations, interviews, testing In support and follow-up: Uphold the attention on the pedagogical environment, rather than focussing on individual children's characteristics.

Table 2. The Conseptual framework of the curriculum

Purpose /rationale: Why are they learning?		Aims and objectives
To have a good life here and now: To be part of a safe social arena where they are being challenged, are mastering, are motivated, are having fun - they are thriving while learning. To be confident in meeting challenging tasks now and later in life. To be able to express their opinions and feelings. We learn because we have fun, it makes sense here and now. Knowledge is seen as value-laden rather than neutral.		To meet curriculum aims: National curriculum (HU), Core curriculum (incl. interdisciplinary topics) and competence aims in each subject (N), Broader focus in the curriculum, focussing on nurturing all aspects of the child; emotions, social needs, bodies and intellects. Activating all senses. To develop EF's To experience art and cultural activities, regardless of prerequisites and socioeconomic background To develop creativity as a combination of being collaborative, persistent, inquisitive, disciplined and imaginative.
		Organization
Teacher role	Dramaturg, give impulses, set up a well-functioning frame for the learning activities. Rewarding effort and the willingness to fail, give responsibility, choice and time to think to learners. Artist's signature pedagogy: Challenging the learners, acknowledging emotions.	⅔ of sessions delivered in collaboration between artist and teacher, ⅓ of sessions delivered by teachers only. One artist is assigned to each school.
Materials and resources	Using objects, materials as a stimulus for learning.	Diverse use of resources and use of a variety of materials, use materials from different art forms.
Grouping	Group approach to tasks.	Working in different groups; pairs, small groups, larger groups, alone. Diverse use of grouping (random/pre-decided, size / individual-groups)
Location	Use the world around the learners as a stimulus for learning. Organising space like a workshop. Pedagogical environment characterized by diversity and variation.	Diverse use of existing spaces, and use of a variety of spaces, inside and outside. Mobile location of activities.
Time	Flexible use of time. Time to think before responding or doing, time to plan. Diverse, varied use of time. An experience limited in time and space (Dewey)	48 week intervention, 90 min sessions, three sessions a week

A simplified model of the conceptual framework, which at that time was named *Art of Learning Performative learning theory,* was developed based on the work described in this paragraph. The model looked like this:

Having the conceptual framework in place, the next part of the process was the ideation process, and here the content was the focus of attention.

Art of Learning – Performative Learning Theory	
1	Thematic and Interdisciplinary curriculum approach
2	Irresistible learning
3	Teacher's role as catalyst, dramaturg
4	Artbased repertoire of approaches and activities
5	Flexible and varied use of time, space, grouping
6	Physically, emotionally, socially, intellectually engagement
7	Repetition with added challenge
8	Process-oriented, open and authentic tasks
9	Transparent learning processes
10	Seeing the competent child - add positive challenge and risk
11	Practical, continous refflection

Figure 8: Simplified Model of the AoL Conceptual Framework

Figure 9. Learners aged 6–8 years old's answers to "What are your interests?"

4.2 The Ideation Process

As seen from the conceptual framework, the learners' inquisitiveness key. Also, the curriculum need to be pre-written and could therefore not respond to the individual learners' preferences. However, by carrying out an initial ideation process, the aim was to capture a broad range of topic and activity ideas that could inspire and arouse inquisitiveness in the target group. The following idea capturing activities were performed:

- **Learners age 6-8:** "What are your interests?" (See Figure 9) A teacher from 2 different classes asked their learners, and the lists were shared with the development team.
- **Group of artists' workshop:** Topic ideas and activities (see Figure 10). An invited group of 6 artists from visual arts and theatre brainstormed topic ideas, and to share their best art-based activities. The artists were a mix of artists working in the AoL pilot, and artists with other experience working with learners 6-8 years old.
- **Online author ideation workshop:** Topic ideas and activities from learners and workshop was shared within the group of curriculum authors, well-functioning activities from the pilots were shared, and new ideas were brainstormed from this.

Curriculum activity bank

Based on the inputs from learners in the target group, artists working with the target group and curriculum developers, a long list of topics emerged, and an internal curriculum activity bank was made to capture them all. The bank also included well-functioning pilot activities and CCE's immense bank of activities. The activity bank was created as an online tool and was continuously filled with new content when great ideas were spotted or experienced by any of the members of the curriculum development team. In the next top to bottom.

2-week Themes suggestions		
We are creating a country	The more the merrier	Mythology
Creating a Fortress	What happens when we get old?	Boy-flees and Girl-flees
A Child is made	Animal Therapy	The Archeologists
Joy of life for young and old	Kitchen Chemistry / being researchers	My dreamday
The Weather	The Haunted School	Welcome to the News!
The Magical Pen	Flying in the Galaxy	What is inside the darkness
The Space Thief	In the tree tops	Strange World Records
Who is lurking in the dark?	Not my shoes	The Backwards Country
The life of a banana fly	Nothing at all	The World as seen through Magnifying glasses
On a mission	Detectives	
Hush! (Taboos)	The Great Team	The Frog in the Fridge
The Secret	The Lonely Troll	Forest
The Question Box	The history of Moss	Mysteries
From Pie to Poop	Not only girsl wants to be princesses	Mine and others' homes
Collage	How does our head look like from the inside?	If I was a hedgehog - where would I live?
Planning and executing something: A party / cultural event /happening	Space (our place in the universe)	Stone Age
People in other countries	Friendship: The Friendship/ unfriendship-country	Treasure Hunt
Roleplay - handling difficult situations amongst friends	In the Castle	What happens in the forest?

Figure 10: 2-week themes - suggestions

4.3 The Art of Learning: Curriculum Described

The Art of Learning curriculum is based on a 5-level structure. The first level in the structure of the content is the overall structure, including all the elements captured from the theoretical framework, the needs and context analysis. The second level is the themes, the 24 interdisciplinary topics developed and their structure. The third level is the 144 sessions within a theme and their structure: the fourth level is the activities within each session and their connection to the overall level. Finally, the fifth level is the curriculum connections made between Norwegian and Hungarian national curriculums accordingly, and the Art of Learning curriculum.

4.3.1 The Overall Structure

The overall structure reflects the complete set of elements derived from the conceptual framework and ideation process. As the 24 themes within the organisational structure should be delivered in a consecutive order, an overall arch was constructed as a guideline for structuring and choosing amongst the list of theme ideas captured from the ideation process. The overall arc served primarily as a support tool rather than a constraint, to guide choosing and placement of different topics that made up the overall structure. The arch (see Figure 11) was built as a sliding movement from a narrow focus into a wider societal focus. In the first year of the intervention, when the learners were 5-7 years old, the focus was on the learners and their class becoming a "we". Then the perspective was broadening into a focus on the school. In the second year of the intervention (from theme 13 onwards, when learners were 6-8 years old), the local society was in focus, and finally at the end of the intervention, the focus is on the outer world.

The 24 themes build on each other, as the overall arch shows, but they can also function independently of each other. 20 out of the 24 themes are pre-written, whilst the last four are "free choice"-themes, where the content is decided by each participating class together with their teacher and artist, based on a basic set of criteria. The full list of themes is presented on next page.

Figure 11: The Arch of Themes in AoL

	English title	Hungarian title	Norwegian title
1	From I to us	Az én-től a mi-ig	Fra meg til oss
2	In our homes	A mi otthonunk	Hjemme hos oss
3	Friendship	A barátság	Vennskap
4	The Golden Chest 1	A szavak kincsesládája I.	Ordkista, del 1
5	The Golden Chest 2	A szavak kincsesládája II.	Ordkista, del 2
6	Free choice	Szabadon választott	Visning – fritt valg!
7	In your shoes	A te helyedben	I dine sko
8	The Mystery Box	A költöző doboz rejtélye	Flytteeske-mysteriet
9	Kingdom of Colour	A színek	Fargeriket
10	Shape Explorers	Alakzatok	Form-fangerne
11	First Day	Az első nap	Oppdrag skolestart
12	Free choice	Szabadon választott	Visning – fritt valg!
13	Our friends in other countries	Barátaink más országokban	Brevvenn
14	The Lonely Creature/ Loneliness	A magányos sárkány	Det ensommme trollet
15	Viruses	A vírusok	Virus
16	Viruses 2	A vírus előadás	Virus-visning
17	Pizza	Pizza	Pizza
18	Free choice	Szabadon választott	Visning – fritt valg!
19	Solar System	Naprendszer	Solsystemet
20	Habitat	Lakhatás	Habitat
21	Maps	Térképek	Kart
22	Energy Poetry	Energiköltészet	Energi-poesi
23	Energy Inventions	Energiatalálmány	Energi-oppfinnelse
24	Free choice!	Szabadon választott	Visning – fritt valg!

Figure 12: Illustration of the overall structure: the 24 themes developed in Art of Learning.

4.3.2 Themes

The themes create a thematic framework and a structure built around the sessions, framing the content into 24 different thematic superstructures. Each theme is structured in the same way, built from 6 sessions spread over a period of 2 weeks in school. The distribution of these sessions was somewhat flexible for each school. Table 3 shows an example of how grade 3 in Alvdal Primary School (Norway) distributed their sessions over two weeks.

Day of the week	Mon	Tue	Wed	Thu	Fri	Mon	Tue	Wed	Thu	Fri
Session no (S)		S1	S2		S3	S4	S5	S6		
Time		11.30 - 13.00	08.30 - 10.00		08.30 - 10.00	11.30 - 13.00	11.30 - 13.00	08.30 - 10.00		
Lead by teacher (T) / artist (A)		T+A	T+A		T	T	T+A	T+A		

Table 3: The timetable of Alvdal Primary School with AoL session distribution highlighted.

Session 1, 2, 5 and 6 were always led by the teacher and the artist together, while session 3 and 4 were led by the teacher(s) alone. Sessions 1,2 and 3 were distributed across week 1 and session 4, 5 and 6 across week 2. Although each session had a set structure, session 1 within a theme often started with a “trigger”, (Impulsion - Dewey), activating the whole human being, triggering their inquisitiveness in what’s to come. Also, session 6 within a theme normally end with a reflection on not just today’s session, but on the theme for all sessions.

The presentation mode of the theme starts with an overview sheet (Figure 13 - next page). Here the goals, a summary of the content and general guidance to this particular theme are presented. Then, an overview of the theme’s sessions is presented, with information about the activities, the space, the materials/resources and preparations needed. The overview sheet is meant for exactly that - to get an overview of the full theme, before moving on to the individual sessions.

Friendship

Overview

Art of learning

THEME 3

OVERVIEW OF THEME 3

GOALS	Exploring friendships and the challenges of friendships both through exploring literary characters, text in music and personal experiences. Highlight, share and express different feelings related to friendship and practice resolving conflicts that may arise in friendship. Highlight the importance of trust and security in the class and explore this practically. Practice listening to increasingly challenging instructions while moving in warm-ups, and practice focus and listening in reflection.
SUMMARY	The class becomes familiar with the theme of friendship through the book 'Lena and Anne-Marthe' by Ida Jackson, and works broadly on the theme of this book, as well as its own experiences and the song 'Who can sail', as a starting point. The class will also work on strengthening their relationships with each other.

GENERAL GUIDANCE ON THE THEME 3
The goal is to provide students with tools to manage their own friendship and relationships. It is important to ensure that this topic is explored safely for everyone involved (for example, in forum theatre Day 3-4, make sure to use actual situations and this needs to be considered carefully by the teacher). Also remember that the final film (Day 6) should not be a fully complete film or based on a ready-made product. The adults should avoid the temptation to control the process or lead the children to deliver a particular result.

THEME 3	DAY 1	DAY 2	TEACHER LED DAY 3-4	DAY 5	DAY 6
Content Summary	**Warm-up:** In number groups have conversations about friendship. **Main activity:** Read excerpts from the book 'Lena and Anne-Marthe' and get to know the challenges of friendship, from which the students will make still images to create a slideshow. **Reflection:** Mind reading reflection sitting down: "What will you remember?"	**Warm-up:** In number groups have conversations/make still images about repairing friendships. **Main activity:** Repetition of extracts from 'Lena and Anne-Marthe'. Through character work and forum theatre, students practice resolving the conflicts in the book. **Reflection:** Mind reading reflection standing up: "What was the best solution?"	**Warm-up:** In number groups have conversations/make still images about feelings related to friendship (Day 3) and objects (Day 4). **Main activity:** See suggestions for activities in the theme lesson plans. **Reflection:** Mind reading lying down: "What will you remember best from today's session?"	**Warm-up:** In number groups have conversations/make still images about trust and safety. **Main activity:** The pupils will learn about trust and safety in practice through mirroring, falling and catching exercises in groups and as a whole class. **Reflection:** Walking mind reading reflection: "When were you a good/bad friend in this session?"	**Warm-up:** In number groups have conversations/make still images based on the text in 'Who can sail'. Learn 'Who can sail' and talk about the text. Assemble content from Theme 3 into a collective piece which is filmed. **Main activity:** The pupils will learn „Who can sail" and interpret the text. Then they bring together content from the entire Friendship theme, which is filmed. **Reflection:** Mind reading reflection of choice: "What will you take with you from Theme 3?"
Space	Listening space, open space, viewing space.	Listening space, Open space, viewing space.	Open space.	Open space.	Open space (preferably large room).
Materials	The book 'Lena and Anne-Marthe' by Ida Jackson.	The book 'Lena and Anne-Marthe' by Ida Jackson.		Set of A4 paper sheets, one blindfold for each group in Part 3: 'The bomb'.	Something to play music on. Something to film with and then a screen to show your movie on.
Preparations in advance	Prepare space.	Prepare space.	Prepare main activity and reflection questions.	Go through Exercise 2: Fall/Catch. Make sure that it is well planned and safe. Adjust the framework as needed.	Test technical equipment.

NOTES

Figure 13: Overview sheet from Theme 3 Friendships

Pizza

Session 1

TIME
90 min. including break

Art of learning

THEME 17

WARM-UP: 'PIZZA, PIZZA, PIZZA'

This will happen:	The whole group will stand in a circle and those who like the Pizza Chef's topping run to the centre and touch the pizza box. The last person to touch the box becomes the Chef.
Materials needed:	A pizza box approximately 30 cm or 10 inches, the pack of 'Pizza, Pizza, Pizza' warm up cards.
Preparations in advance:	Print out the 'Pizza, Pizza, Pizza' warm up cards on thick card and cut them into single cards.
Preparations in the space:	None.
The space looks like this:	Open space (this works well in an outdoor space).

GUIDANCE:

1. Everyone stands in a circle with the pizza box in the centre.

2. Ask the students what they can see in the circle.

3. Explain that they are the Pizza Chef (they also stand in the circle) and they are going to call out 'Pizza, Pizza, Pizza' and say a pizza topping from a card they have selected from a pile (the last card used each day should be pizza). If students like that topping, they have to run into the centre and touch the pizza box. The last person then becomes the Pizza Chef and they select the next card in the pack. Have a practice and do several rounds.

4. Move directly into the main activity from the warm-up.

REFLECTION: PIZZA REFLECTION

This will happen:	Students are asked to respond to a statement and place a red, yellow or green dot on the correct slice of pizza to reflect their feelings on the statement.
Materials needed:	A large sheet of paper – draw a pizza cut into four slices on it. Each slice should have its own number: 1, 2, 3, 4. Red, yellow and green sticky dots.
Preparations in advance:	Make the pizza reflection sheet.
Preparations in the space:	
The space looks like this:	Classroom space.

GUIDANCE:

1. Explain that the pizza is going to be used to reflect on the session. The students must think about a statement. Depending on whether they agree, are in the middle or disagree, they put a sticky dot on the correct slice of pizza. Ask them what they think the green dot should be used for to check they understand. Do a quick practice.
   1. I like sweets – invite the students to put their dot in slice 1.

2. Take the students through the following three statements and after each one they should think, select a coloured dot which reflects their views/feelings and place this on the correct slice of pizza.
   2. Today was fun
   3. Today I worked well with my partner
   4. It was hard to agree on the toppings for our pizza

3. Highlight that the pizza has been divided into four parts. Each part is called a fraction and in this pizza each question represents one fourth of a pizza, ¼.

NOTES

Figure 14: Theme 17 Pizza, session 1, side A

4.3.3 Sessions

The sessions are built up in three parts: Warm-up, Main activity and Reflection, the main activity being the largest part. In the intervention, 90 minutes need to be designated to each session, but the time frame is meant to be flexible, adjusting to the specific group on the specific day. If learners are tired, there should be room for a break, or for ending early. In the opposite case, if the learners are engaged and intensely devoted to their task, they should be allowed to work the full 90 minutes.

The sessions are designed as a one-page, two-sided A4-sheet, that contains all the teacher / artist needs to know while doing the session in the classroom (see Figure 14 and 15).

Pizza	Session 1	TIME 90 min. including break	Art of learning	THEME 17

MAIN ACTIVITY: PIZZA – WHAT WE KNOW AND HAVING A GO

This will happen:	Students will identify what they know and don't know about pizza. They will be Young Pizza Chefs working in a pair to create a pizza from craft materials.
Materials needed:	Flipchart and pens, or whiteboard. A Chef's hat and apron for each student. A large cloth, a wide range of art/craft supplies and recycled materials that the students can craft into a pizza base and pizza toppings (a range of different colours, textures, for example, shredded paper is perfect as cheese!) and types of materials will be important – card, felt, felt pens, paint, paper towels, glue and scissors (enough for each pair of students). A short video or postcard/flyer from the Pizza Chef using the template provided. Projector and screen (if you are using a video)
Preparations in advance:	Make Chef's hats from paper and plastic bags for each student. You might get the students to do this in advance as part of a craft lesson or a lesson about how to follow instructions. This video shows how to do it. https://www.youtube.com/watch?v=khkYdsPlt_0. Each student might be asked to decorate their hat and put their name on it but do not reveal what they are for. Create the video from the Pizza Chef or create the postcard/flyer (a template is provided).
Preparations in the space:	Hide the craft materials from view under a cloth. Get the projector and screen and videos ready if needed.
The space looks like this:	Classroom space.

youtube.com

GUIDANCE:

1. Students sit either in small groups on the floor or at tables.
2. Ask them to close their eyes. Ask what they think they need to do to be a good team member and think back to other times they have worked in groups. The students need to keep their eyes closed. Explain they will be tapped on the shoulder and that is the signal for them to share an idea. Take a few ideas and then ask everyone to open their eyes. Remind them about listening, contributing, taking turns and making sure everyone gets a turn. Remind them of specific examples when they have worked well in groups.
3. Ask what they think this theme is about and explain it is pizza. In their groups they should begin by discussing everything they know about pizza. Then ask them to agree their two best facts and a person from the group to share these with the class. When they are ready, invite the student from each group to share. Write all the facts on the flip chart/whiteboard as a mind map or list. These should remain in view for the session.
4. Repeat again but this time the groups discuss the things they don't know about pizza or would like to know. A different student from each group shares and the ideas are written up separately on the flip chart/ whiteboard. These should be saved/recorded as they will be returned to in a future session.
5. Ask the students why they have been asked what they know about pizza. Then share the video, postcard or flyer from the Pizza Chef. Ask them again if they are willing to help the Chef in this important task as Young Pizza Chefs.
6. Give each student a Chef's hat and an apron, ask them to find a partner from one of the other groups and a place to work.
7. Remind them of the facts they know about pizza and introduce others, for example: pizzas can be different sizes, they can have different types of bases (thin, medium, thick), there are lots of different ingredients/ toppings for pizza – some that people like and others that people don't (remind them of some from the warmup).
8. To help the Pizza Chef, their first task is to agree on toppings they would both like on a pizza. They might record their ideas in simple sentences or pictures.
9. Remove the cloth and reveal all the art materials. Explain that they now must work as a pair to create one pizza using the materials. They need to create both a base and also add the topping they have agreed on. Each pair works together to create their pizza.
10. Thank the students for their hard work and say that they will work on the pizza theme again tomorrow.

NOTES

Figure 15: Theme 17 Pizza, session 1, side B.

4.3.4 Activities

This level contains all the warm-ups, main activities and reflection activities done by the learners in the Art of Learning curriculum. The activities are directly connected to the overall structure, and they are the operationalization of the conceptual framework.

For instance, from the conceptual framework, the AoL should base its content on an “Art based repertoire of approaches”. In practical terms, this means that for each activity, we considering which art form to use, which materials to use, which format to work in, and what level of collaboration to use. These considerations are based on both finding the best fit for the theme, the session and activity in question, and on the Art of Learning as a whole, making sure the learners go to experience a broad repertoire of art forms, formats, materials and collaborative methods throughout the curriculum. In the same way, the other principles from the conceptual framework have been considered for each activity.

The activities were either created, brand new, or amended from known activities.

Cred.: Erik Brandsborg / Arts for Young Audiences

4.3.5 Curriculum Connections

Norway

The national curriculum the Art of Learning curriculum is connected to is Kunnskapsløftet (LK20). Within this curriculum, all three levels of the curriculum relate to the Art of Learning curriculum, as described in chapter 3.3.3.

Firstly, within the core curriculum, all themes are connected to: The joy of creating, Engagement and the Urge to explore, and others are connected to more than one, ia. Theme 2 In our homes and Theme 3 Friendship are, in addition to The joy of creating, also connected to Identity and Cultural Diversity.

Secondly, for each theme the connection between the specific theme's topic and the relevant excerpts from detailed descriptions in LK20 on one or more of the interdisciplinary topics Health and Life Skills, Democracy and Citizenship, and Sustainable Development were specified. As the interdisciplinary topics in LK20 are quite broadly defined, ia. "become aware of one's own identity" or "gain practice in adopting different perspectives", several of the excerpts were equally relevant and thus part of various themes.

Below is an example of how interdisciplinary topics in the Norwegian national curriculum are connected to the Art of Learning curriculum. Here from the Norwegian version of theme 16.

Virus-visning

TEMA 16: OVERORDNET FAGLIG FORANKRING OG KOMPETANSEMÅL

Kunsten å lære

TEMA 16

A) TVERRFAGLIGE TEMA

FOLKEHELSE OG LIVSMESTRING

Bli bevisst på sin eigen identitet og si eiga identitetsutvikling og forstå individet som ein del av ulike felleskap. Få innsikt i korleis relasjonar og tilhøyrsle blir påverka av samhandling med andre. Bidra til å skape forståing, respekt, toleranse for mangfald og andre sine verdiar.Utvikle evne til å uttrykke seg gjennom spill, sang, andre vokale uttrykk og dans. Kunstneriske uttrykk gir mulighet til å forstå både eget og andres følelsesliv bedre, og dette legger grunnlag for god psykisk helse.

Utvikle elevenes muntlige og skriftlige retoriske ferdigheter, slik at de kan gi uttrykk for egne tanker og meninger og delta i samfunnsliv og demokratiske prosesser. Gjennom kritisk arbeid med tekster og ytringer øver elevene opp evnen til kritisk tenkning og lærer seg å håndtere meningsbrytninger gjennom refleksjon, dialog og diskusjon. Utvikle elevenes evne til å uttrykke seg skriftlig og muntlig. Dette gir elevene grunnlag for å kunne gi uttrykk for egne følelser, tanker og erfaringer, noe som er viktig for å håndtere relasjoner og delta i et sosialt fellesskap.

DEMOKRATI OG MEDBORGERSKAP

Få øvelse i å innta ulike perspektiver, og være åpen for andres synspunkter.

Utvikle elevenes muntlige og skriftlige retoriske ferdigheter, slik at de kan gi uttrykk for egne tanker og meninger og delta i samfunnsliv og demokratiske prosesser. Gi elevene innblikk i andre menneskers livssituasjon og utfordringer. Dette kan bidra til at de utvikler forståelse, toleranse og respekt for andre menneskers synspunkter og perspektiver, og det kan legge grunnlaget for konstruktiv samhandling.

Utvikle kunnskap og ferdigheiter for å kunne skape og delta i demokratiske prosessar. Utvikle kunnskap om og innsikt i demokratiske prinsipp. Gi forståelse av hvordan elevene kan ta i bruk kunstneriske ytringsformer og estetiske uttrykk i demokratiske prosesser. Tenkje kritisk, ta ulike perspektiv, handtere meiningsbryting og vise aktivt medborgarskap. Fremje evne til samspel i aktivitetar og refleksjon over kva eiga deltaking og eigen innsats inneber for samspel og læring. Få kunnskap om og forståing av demokratiske verdiar og spelereglar gjennom medverknad og medansvar i deltaking og samarbeid. Gje rom for å øve opp kritisk tenking og lære å handtere meiningsbrytingar og respektere usemje.

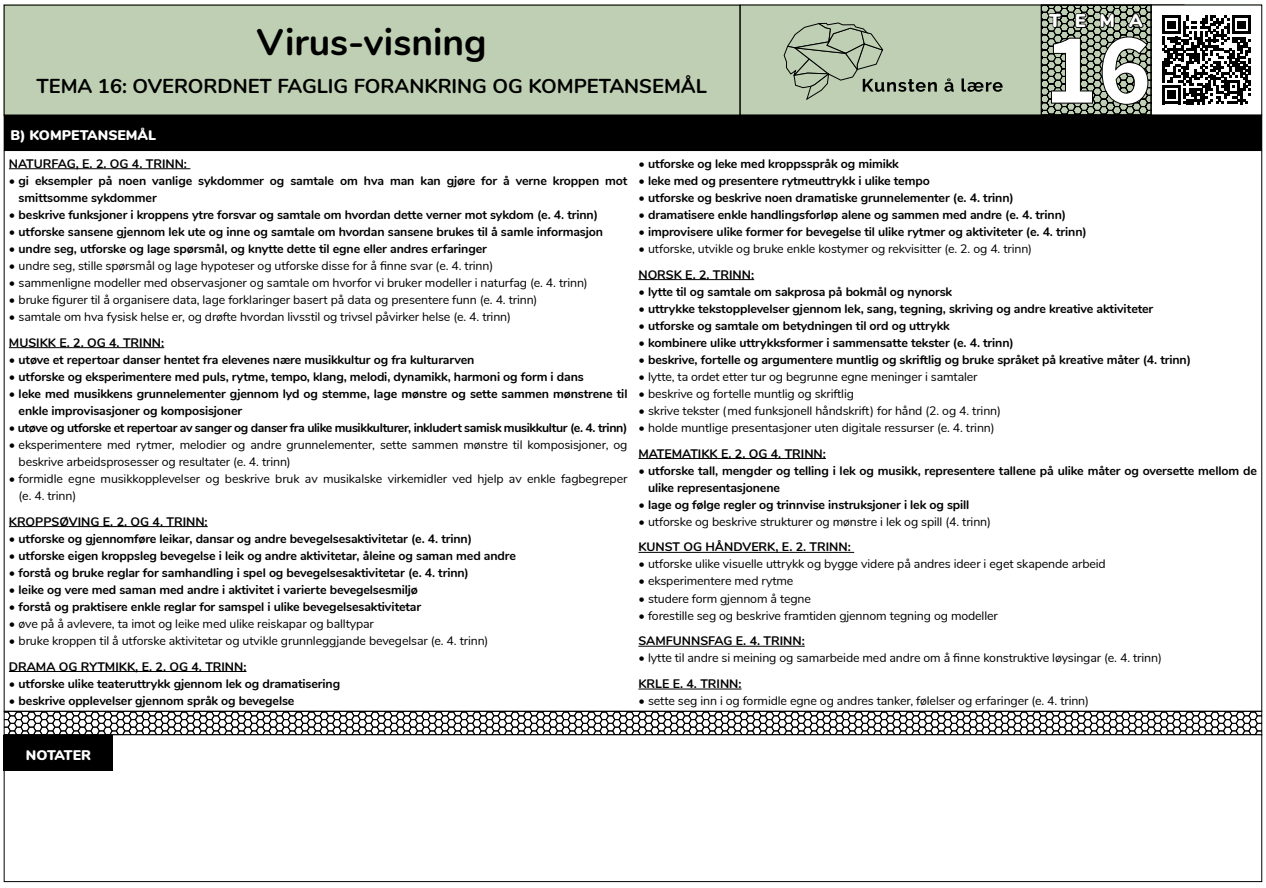
NOTATER

Figure 16: Theme 16 Viruses2 (Norwegian); Interdisciplinary topics from National Curriculum (LK20) listed.

Thirdly, the Competence aims relevant to each theme is listed, subject by subject, on an overall level with no differentiation made between sessions or activities. Most of these subjects have joint competence aims for year 1 and 2, with aims that need to be achieved by the end of year 2, and in the same manner for year 3 and 4, with aims needed to be achieved by the end of year 4. The exceptions are Maths, with aims by year 2,3 and 4, and Social Sciences and CRRE with aims only by year 4. The competence aims as defined in LK20 are sometimes very specific, ia. "Use maps to orient oneself in familiar terrain" (Phys.Ed), and sometimes quite broad, ia. "Create and follow rules and step-by-step instructions in games and play" (Math). For an aim to be listed in the Art of Learning, this aim is not necessarily achieved (ticked) during this theme, but the aim is describing a process, an activity or a concept that is part

of the learning activities happening during the theme. The same aims may therefore be listed in more than one theme, covering different parts of the aim, working with the aim from different perspectives, and thus moving towards the aim being fully achieved.

Due to the thematic approach, the Art of Learning curriculum does not always follow the proposed order of subject aims in the curriculum. Norwegian National Curriculum subject aims relevant to the themes have sometimes surpassed the learners' school year, as seen in the headline named ia. Matematikk e. 2., 3. og 4. trinn (Maths, [goal achieved] by the end of year 2., 3., and 4.).



Virus-visning

TEMA 16: OVERORDNET FAGLIG FORANKRING OG KOMPETANSEMÅL

Kunsten å lære

16

B) KOMPETANSEMÅL

NATURFAG, E. 2. OG 4. TRINN:
- **gi eksempler på noen vanlige sykdommer og samtale om hva man kan gjøre for å verne kroppen mot smittsomme sykdommer**
- **beskrive funksjoner i kroppens ytre forsvar og samtale om hvordan dette verner mot sykdom (e. 4. trinn)**
- **utforske sansene gjennom lek ute og inne og samtale om hvordan sansene brukes til å samle informasjon**
- **undre seg, utforske og lage spørsmål, og knytte dette til egne eller andres erfaringer**
- undre seg, stille spørsmål og lage hypoteser og utforske disse for å finne svar (e. 4. trinn)
- sammenligne modeller med observasjoner og samtale om hvorfor vi bruker modeller i naturfag (e. 4. trinn)
- bruke figurer til å organisere data, lage forklaringer basert på data og presentere funn (e. 4. trinn)
- samtale om hva fysisk helse er, og drøfte hvordan livsstil og trivsel påvirker helse (e. 4. trinn)

MUSIKK E. 2. OG 4. TRINN:
- **utøve et repertoar danser hentet fra elevenes nære musikkultur og fra kulturarven**
- **utforske og eksperimentere med puls, rytme, tempo, klang, melodi, dynamikk, harmoni og form i dans**
- **leke med musikkens grunnelementer gjennom lyd og stemme, lage mønstre og sette sammen mønstrene til enkle improvisasjoner og komposisjoner**
- **utøve og utforske et repertoar av sanger og danser fra ulike musikkulturer, inkludert samisk musikkultur (e. 4. trinn)**
- eksperimentere med rytmer, melodier og andre grunnelementer, sette sammen mønstre til komposisjoner, og beskrive arbeidsprosesser og resultater (e. 4. trinn)
- formidle egne musikkopplevelser og beskrive bruk av musikalske virkemidler ved hjelp av enkle fagbegreper (e. 4. trinn)

KROPPSØVING E. 2. OG 4. TRINN:
- **utforske og gjennomføre leikar, dansar og andre bevegelsesaktivitetar (e. 4. trinn)**
- **utforske eigen kroppsleg bevegelse i leik og andre aktivitetar, åleine og saman med andre**
- **forstå og bruke reglar for samhandling i spel og bevegelsesaktivitetar (e. 4. trinn)**
- **leike og vere med saman med andre i aktivitet i varierte bevegelsesmiljø**
- **forstå og praktisere enkle reglar for samspel i ulike bevegelsesaktivitetar**
- øve på å avlevere, ta imot og leike med ulike reiskapar og balltypar
- bruke kroppen til å utforske aktivitetar og utvikle grunnleggjande bevegelsar (e. 4. trinn)

DRAMA OG RYTMIKK, E. 2. OG 4. TRINN:
- **utforske ulike teateruttrykk gjennom lek og dramatisering**
- **beskrive opplevelser gjennom språk og bevegelse**
- **utforske og leke med kroppsspråk og mimikk**
- **leke med og presentere rytmeuttrykk i ulike tempo**
- **utforske og beskrive noen dramatiske grunnelementer (e. 4. trinn)**
- **dramatisere enkle handlingsforløp alene og sammen med andre (e. 4. trinn)**
- **improvisere ulike former for bevegelse til ulike rytmer og aktiviteter (e. 4. trinn)**
- utforske, utvikle og bruke enkle kostymer og rekvisitter (e. 2. og 4. trinn)

NORSK E. 2. TRINN:
- **lytte til og samtale om sakprosa på bokmål og nynorsk**
- **uttrykke tekstopplevelser gjennom lek, sang, tegning, skriving og andre kreative aktiviteter**
- **utforske og samtale om betydningen til ord og uttrykk**
- **kombinere ulike uttrykksformer i sammensatte tekster (e. 4. trinn)**
- **beskrive, fortelle og argumentere muntlig og skriftlig og bruke språket på kreative måter (4. trinn)**
- lytte, ta ordet etter tur og begrunne egne meninger i samtaler
- beskrive og fortelle muntlig og skriftlig
- skrive tekster (med funksjonell håndskrift) for hånd (2. og 4. trinn)
- holde muntlige presentasjoner uten digitale ressurser (e. 4. trinn)

MATEMATIKK E. 2. OG 4. TRINN:
- **utforske tall, mengder og telling i lek og musikk, representere tallene på ulike måter og oversette mellom de ulike representasjonene**
- **lage og følge regler og trinnvise instruksjoner i lek og spill**
- utforske og beskrive strukturer og mønstre i lek og spill (4. trinn)

KUNST OG HÅNDVERK, E. 2. TRINN:
- utforske ulike visuelle uttrykk og bygge videre på andres ideer i eget skapende arbeid
- eksperimentere med rytme
- studere form gjennom å tegne
- forestille seg og beskrive framtiden gjennom tegning og modeller

SAMFUNNSFAG E. 4. TRINN:
- lytte til andre si meining og samarbeide med andre om å finne konstruktive løysingar (e. 4. trinn)

KRLE E. 4. TRINN:
- sette seg inn i og formidle egne og andres tanker, følelser og erfaringer (e. 4. trinn)

NOTATER

Figure 17: Theme 16 Viruses2 (Norwegian); Subject aims from National Curriculum (LK20) listed.

Hungary

The national curriculum in which the Art of Learning curriculum is connected to is *Hungary's National Core Curriculum* (NCC) from 2020, as described in chapter 3.3.3.

The curriculum connections were made with the prescribed subject content and the key stages, in a two-way direction, for each theme, and for each subject (See Figure 18). The curriculum links were shared with the schools, including the teachers responsible for preparing the timetables, and with all program participants. A visual representation of the curriculum connections and their set-up is presented below; firstly, the themes with their corresponding subject content, and secondly; each subject is listed along with the corresponding themes that connect to it (separately for 1st and 2nd grades).

1.osztály					2.osztály		
TM témák	Kapcsolódó tantervi témák	Mikszáth	Bártfa	Pécsi S.Isk.	Mikszáth	Bártfa	Pécsi S
1.téma Az én-től a mi-ig	Anyanyelv : Beszéd és kommunikáció.	15 óra	10 óra	14 óra	15 óra	15 óra	10 óra
	Anyanyelv :Előkészítő időszak Betűtanítás kezdete. Olvasási készséget megalapozó részképességek fejlesztése,	70 óra	36 óra	70 óra	36 óra		10 óra
	Etika :gondolatok és árzelmek kifejezési módjainak gyakorlása	12 óra		6 óra			
	Etika Az én világom, Társaim – Ők és én, Gondolataim és érzéseim kifejezése	12 óra	13 óra	6 óra			
	Etika Közvetlen közösségeim				18 óra		6 óra
2.téma A mi otthonunkban	Anyanyelv :Helyem a közösségben család és iskola, helyem	4 óra	4 óra	4 óra	14 óra		10 óra
	Etika:Társaim ők és én	12 óra	6 óra	6 óra		7 óra	6 óra
	Technika:Otthon, család, életmód	7 óra			7 óra		
3.téma Barátság	Etika:Társaim ők és én	12 óra	6 óra	6 óra		7 óra	6 óra
	Anyanyelv .helyem a közösségben	4 óra	4 óra	4 óra	14 óra		10 óra
	Etika közvetlen közösségeim				18 óra	13 óra	6 óra
	Anyanyelv :Betűtanítás kezdete. Olvasási készséget megalapozó részképességek fejlesztése						
4.téma A szavak kincsesládája	Betűtanítás. Olvasási készséget megalapozó részképességek fejlesztése	64 óra	50 óra	70 óra	21 óra	16 óra	10 óra
	Anyanyelv :A nyelv építőkövei: hang/betű, szótag, szó	18 óra	14 óra	24 óra	15 óra	15 óra	20 óra
	A nyelv építőkövei: hang/betű, szótag, szó , szöveg	2 óra	5 óra	15 óra	18 óra	23 óra	40 óra
5.téma A saját történetek létrehozásának inspirálása, a történetmesélés alapvető dramaturgiájának és technikáinak megismerése és gyakorlása.	_	15 óra					
	Olvasás, az írott szöveg megértése 1. - az olvasástanulás előkészítése	25 óra	18 óra	18 óra			
6.téma az eddigi témák feldolgozásának összefoglalásaként bemutató tervezése, szervezése	Technika Tárgykészítés különböző anyagokból, építés, szerelés	12 óra			15 óra		
	Anyanyelv :beszéd és kommunikáció	30 óra	140óra		15 óra	15 óra	10 óra
	Vizuális kultúra : vizuális információk, média használat	6 óra	6 óra	6 óra	6 óra	6 óra	6 óra

Tantárgy	Mikszáth	Bártfa	Pécsi S.	TM téma			
1.o.					2.o.		
Anyanyelv	Mikszáth	Bártfa	Pécsi S.		Mikszáth	Bártfa	Pécsi S.
Beszéd és kommunikáció.	15 óra	14 óra	14 óra	1.6.7.8.10. 12.téma	15 óra	15 óra	10 óra
Előkészítő időszak Betűtanítás kezdete. Olvasási kész	70 óra	36 óra	70 óra	1.4.téma	36 óra		10 óra
Helyem a közösségben család és iskola, helyem	4-14 óra	4 óra	4 óra	2.3.7.téma	14 óra		10 óra
A nyelv építőkövei: hang/betű, szótag, szó	38 óra	24 óra	24 óra	4.5.téma	15 óra	15 óra	20 óea
A nyelv építőkövei: hang/betű, szótag, szó, szöveg	14 óra	15 óra	15 óra	4.5.téma	18 óra	23 óra	40 óra
Etika							
Gondolatok és árzelmek kifejezési módjainak gyakorl	12 óra		6 óra	1.téma			
Az én világom, Társaim – Ők és én, Gondolataim és é	12 óra	13 óra	6 óra	2.téma			
Társaim ők és én	12 óra	13 óra (1-2	6 óra	1.2.3.7.8 .11.téma	14 óra	7 óra	6 óra
Közvetlen közösségeim					18 óra	13 óra	6 óra
Technika: Otthon, család, életmód	36 óra			1.6.9.10.12.téma	7 óra		
Vizuália kultúra							
Vzuális információk, média használat	6+6 óra		6 óra	6.9. téma	6 óra	6 óra	6 óra
Síkbeli, térbeli alkotások	28 óra	28 óra	6 óra		28 óra	28 óra	28 óra
Matematika							
Összefüggések, kapcsolatok, szabályszerűeségek, ren	9+4+4 óra	9 óra	9 óra	7.8.10.téma	10 óra	9 óra	9 óra
Alakzatok geometriai tulajdonságai, alkotás térben é	4+ 6 óra	4+6+2+5	5+6+3+4	7.8.10.téma	6 óra	6 óra	6 óra

Figure 18: Hungary: Visual representation of the curriculum connections and their set-up.

4.4 The Curriculum Development Process

The themes have been developed as four prototypes, in four consecutive periods of time (see Figure 19). Once the 1st Prototype (theme 1-6) started to test in schools, the evaluation process started (with feedback meetings and observations), and revisions were instantly installed in the development of the 2nd Prototype (theme 7-12), which was developed parallel with the evaluation process. In the same way, the 3rd and 4th prototypes (theme 13-18 and 19-24) were developed, tested and evaluated. The formative evaluation is further described in chapter 6.

Figure 19: Timeline presenting the Curriculum Development process

For each theme to be developed, one of the two main authors was in charge, working together with one or two of the content developers. The developers chose themes which they found engaging and had lots of ideas for. Each theme was first sketched, often with a suggestion of what the main dramaturgy of the theme should be, suggestions for main artform, main activities, warm-ups and/or reflections.

Figure 20 shows a screenshot of an early stage of the development process of theme 7-12, shared in a Padlet.

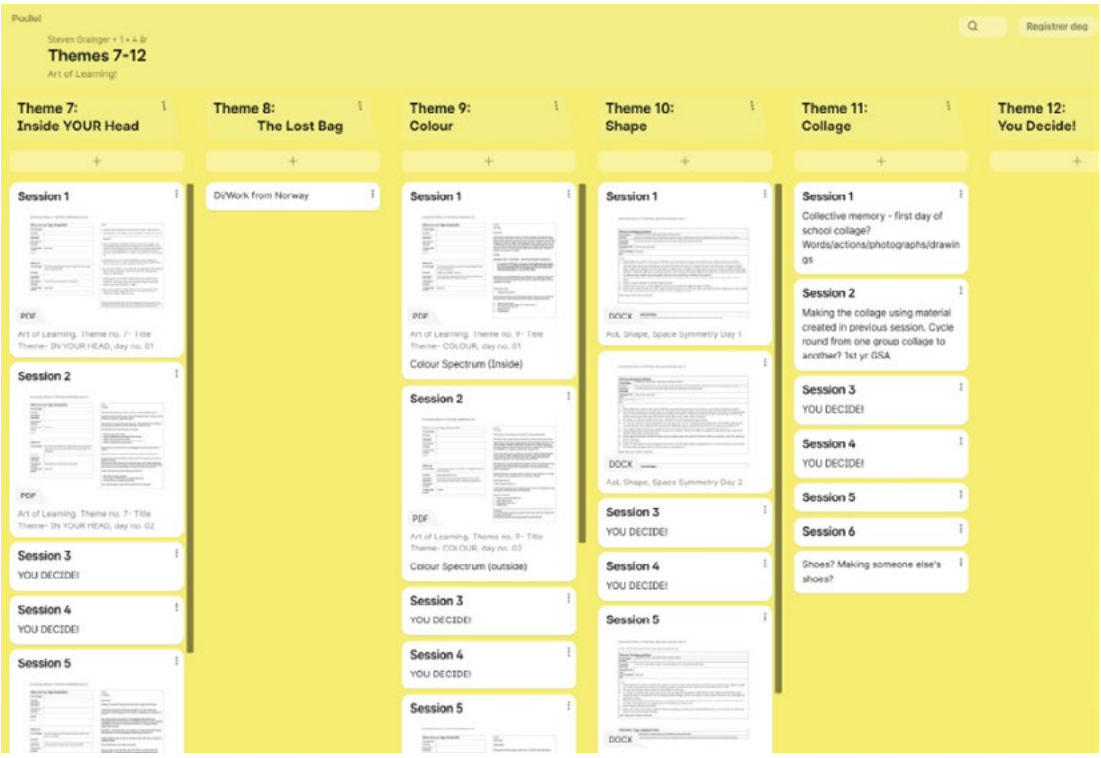


Figure 20: Ideas for theme 7-12 in padlet. Cred. Steven Grainger.

The sketch was then discussed in a digital development meeting. In this meeting the conceptual framework was consulted, tweaks and alternations were suggested, before one of the developers worked to bring the idea into a full-blown concept. This concept was then again discussed in a digital development meeting, where the conceptual framework was consulted again. Questions emerging in these meetings could be, ia. How can we make the activity more open-ended? Could this be moved to a more real-life setting? How are they split into random groups? Could this activity be made more fun? Could the teachers be doing this on their own on a teacher-led day? Based on the feedback from this meeting, the concept was written out in detail.

When each theme was written out in detail, it consisted of a set of 6 sessions of 90 min, each session included a warm-up, main activity and a reflection, and the chosen activities reflected the complex and interconnected elements of the conceptual framework in a satisfying way.

The finished theme was revised by the development forum one last time, and sometimes also in the reference group. Feedback from the development forum and the reference group led to additional revisions of the theme, before it was finalised. Finalising the theme included the writing of the overview sheet presenting the theme in presentation mode for teachers, preparing all the digital resources needed to implement the theme (templates, soundtracks, artwork lists), and writing a list of tools and material resources that needed to be available in schools or purchased.

After a theme was finalised, it was translated into Norwegian and Hungarian, and the connections with Norwegian and Hungarian National Curriculums were made accordingly, if they were not already present.

The final step of the process was for each theme to be set into the design framework. The presentation-mode of the curriculum needed to be in a format that was usable for teachers and artists in school (Nieveen 2010: 90-91). The main considerations made here were the following:

- As a teacher / artist you should only need to bring one piece of paper into the classroom each session: By fitting each session on a 2-sided A4-sheet, this was made possible.
- The visual design of the Art of Learning project should be recognisable in the theme design: This was solved by using colours from the visual profile of Art of Learning as background colours, using the typo from the visual profile and adding the logo.

Other design wishes like making the design look more visually appealing, more playful and less rigid were not able to be achieved due to a large amount of text in each theme, in combination with the limited time available at the time the first six themes were designed, for them to be ready for implementation start. Later, the decision was made to keep the same design in the themes to come, to maintain a consistent visual appearance.

4.4.1 The Curriculum Development Team

It was essential to include a broad set of experience and skills in the team developing the Art of Learning curriculum; a deep understanding of the conceptual framework of the Art of Learning curriculum, artistic expertise from various art fields, pedagogical and special education expertise, insight into the national curricula and school systems in Norway and Hungary, experience from the Art of Learning pilots or similar work with arts in education, teaching experience and insight into the age group. The main authors were the developers of the pilot curriculum (Fisher-Naylor) and the adaptation made for the 3rd pilot (Hundevadt). Contributors in content development were artists with experience from one of the previous pilots. The list of contributors grew as the process progressed, eventually including artists

and teachers from the ongoing Art of Learning project. The reference group was consulted in ensuring that the structure of the content met the curriculum and pedagogical needs of the school, and the research goals of developing EFs.

The table below presents the curriculum development team:

The curriculum development team	
Main authors: Diane Fisher-Naylor (CCE) Marie Othilie Hundevadt (Innlandet County Council /ICC)	**Reference group:** Ulrika Håkansson (repr. Neuropsychology, Institute of Psychology, HINN) Bente Knippa Vestad (repr. Teacher Education, CCL, HINN) Jill Harviken (repr. School owner, Lillehammer Municipality School office)
Content development: Svend Erichsen (artist) Steven Grainger (artist) Rose Marie Aker (artist) Malin Vik (artist/ dramapedagogue) Adrian Taxth Skrattegård (artist/ dramapedagogue) Anne-Tove Mygland (artist/special needs teacher) Szilvia Nemeth (Educational researcher) Kriszti Vladar (artist)	**Also contributing:** Children aged 6 - 8 years old, in AoL-schools Teachers in AoL schools Hedda Roterud Amundsen (artist) Bintang Emilie Sitanggang (artist/ dramapedagogue) Helena Wik (artist)
Revision, contextualization and translations: Anita Kaderjak (Educational researcher) Claire Quinn (administrator) Mária Zágon (pedagogical expert) Amália János (teacher) Shelli Lake (artist / dramapedagogue) Gillie Hatton, Sixth Element Publishing (editor)	**Design:** Gyorgy Zador

Table 4: The curriculum development team.

5

THE ART OF LEARNING: INTERVENTION

"It was very noticable how, in the beginning, the children kept looking for a correct answer. They would come and ask, 'Can I do it like this? Is this okay?' But over the year, they understood that they got to decide for themselves. I thought that was fantastic. Especially that creativity. That childlike imagination that is so creative and magical - they got so much more room to express it."

(Teacher 8, Nemeth 2025: 28)

The Intervention at a Glance

The intervention of Art of Learning is the core of the project. Through the intervention, learners finally gain access to and actively participate in the carefully developed curriculum and teaching methods built throughout the project. This initially meant a big upheaval for the participants, and a change in daily routine, before a gradual transition from traditional subject-based teaching toward a more student-centred, art-based approach happened. Teachers collaborated closely with professional artists, and their feedback informed both the curriculum and the system supporting the intervention, such as professional development programs, school visits and meetings.

The complete set of guidelines, templates and training materials from the Art of Learning intervention can be accessed (open access) here: artoflearning.ktoa.hu/handbook

The Art of Learning Intervention: Testing and Refinement

The purpose of this chapter is to provide an insight into the intervention. During the intervention the potential effects of the curriculum and the intervention started to show. The intervention revealed that both the curricula and the intervention design needed refinement, contributing to the ongoing cycle of design, development, testing and refinement described in chapter 4.

The intervention consisted of three components in phases; **1) Preparations,** including selection and recruitment of schools, teachers and artists, as well as practical preparations for implementation, **2) Implementation** of the intervention, including 9 schools in Norway and Hungary having 270 minutes of art-based learning each week over a 48 week period, a tailor made professional development programme for teachers and artists, as part of an ongoing support system which also included observations, artist- and teacher reflection meetings, and finally **3) Evaluation,** including final reflections and evaluation of the intervention. The rest of this chapter will be structured based on these three phases.

5.1 Preparations

5.1.1 Selection and Recruitment of Partners

5.1.1.1 Recruitment of Schools

Drawing on insight from the pilots, the involvement of dedicated school leaders, and the engagement and support of municipal school authorities were seen as crucial for a successful intervention. The school recruitment process was specifically designed to secure these elements. The recruitment process was done differently in Hungary and Norway, as each country adopted the approach best suited to identify suitable schools. Additionally, the Hungarian partner T-Tudok, joined the process later, leaving them with less time for recruitment.

In Norway, the recruitment was based on an open call directed towards school authorities in regional municipalities. In the open call, schools and school authorities were invited to apply if they were interested in the following: Development of competence that could contribute to more creative, practically oriented and varied teaching; Tools for implementing all levels of the National Curriculum (LK20); Ways to strengthen learners' well-being and increase their motivation for learning or for learners to have more art and culture integrated into their learning. Also, as stated in the call, the project looked for schools aiming to be involved in school development work with a large international research project, with school leaders who believed in the project and were committed. The interested municipalities were visited by the project management, presenting the detailed project and mapping the interest

and engagement amongst school leaders and local school authorities, before schools were chosen.

In Hungary, the recruitment was based on insight and experience from several years of working with schools in Creative Partnerships, and schools previously involved in this project, which also had committed and engaged school leaders and supportive local school authorities, were chosen as possible Art of Learning schools.

The final allocation of the participating schools in the project was chosen based on the dedication and engagement present in local school authorities and school leaders, taking into account geographical distribution and school size. The final list of 16 recruited schools were split into control and intervention schools: nine as intervention schools and seven as control schools. The participating schools were primary schools from the regions of Lillehammer and Nord-Østerdalen in Norway, and from the regions of Budapest and Pecs in Hungary.

5.1.1.2 Recruitment of Artists

What is the Artists' Role in the Art of Learning?
The professional artists are central to the delivery of the Art of Learning project, and their role is multifaceted and challenging. They are creative thinkers and idea generators in their school, drawing on their practical and creative experience to respond to each school's and class's individual needs, as well as being in charge of following and translating the tailor made Art of Learning curriculum from theory to practice in the classrooms. They need to be able to work successfully with large groups of young learners (6-9 years old) in the classroom, to build trust with learners, and establish and maintain well-functioning and trusting partnerships with schools (school leaders, teachers, wider school staff). The artists are, however, not just any external part coming into school and classrooms, they are also representatives of the project. In their role, they need to be supporting schools by acting as a critical friend. This can mean asking challenging questions within a supportive context. Doing this as a representative of the project puts them in a sort of expert-role, which they need to handle in a way that both upholds the teachers' professional integrity, and their own professional integrity.

The Artists' Competencies in Art of Learning
To be able to fulfil the multifaceted role of the artist in Art of Learning, the set of competencies required for artists to work successfully, is quite vast. The identification of the required competencies is supported by a previous EU-project. CCE, T-Tudok and ICC were partners in the International Creative Education Network (ICEnet) TRaKSforA (Training Requirements and Key Skills for Artists and creative practitioners to work in participatory settings). In this project, a "Self-Assessment Competency Framework for Creative Practitioners who work in educational settings to develop the creativity of children" was developed. This framework defines five key competencies for artists working in school: 1) Artistic and creative practice, 2) Organisation, 3) Working with others, 4) Face to face delivery and facilitation and 5) Reflection and evaluation. Each of these five competencies comes with added detailed behaviour descriptions (Jágriková 2025), and the insight from the development of this framework has been used as a basis for recruitment of artists both in the Art of Learning pilots, and in this project.

In addition to the skills from the artist competency framework, the artists in Art of Learning are expected to work across a range of arts and creative practices, not just their own, as they will need to cover the whole spectrum of the Art of Learning curriculum in their designated schools. This is a change made from the pilots to ensure trust and good relations between artists, learners and teachers over time. Also, the experience from

the Norwegian pilot showed that artists with a background from either theatre, drama or dance with their broad skills and experience in working with larger groups of people seemed to give them an advantage in educational settings compared to artists from other arts backgrounds. This experience resulted in the Norwegian recruitment process to prioritise artists with a drama/theatre/dance background. The Hungarian recruitment process, however, did not prioritise any art form before others.

The Recruitment Process
As previously described, the role of the artists in Art of Learning is both challenging and central to the project, and the competencies needed are vast. The recruitment process of artists is consequently key to the success of the intervention.

The Hungarian recruitment process
The Hungarian artists were selected from a pool of experienced artists who had previously collaborated with T-Tudok within a similar programme, the Creative Partnerships program. They were previously recruited through a similar recruitment process as the Norwegian recruitment process (see below). It was essential that they were well-suited to work with first- and second-grade learners, and their geographical location was also an important consideration. Among the four selected artists (two based in Pécs and two in Budapest), three were visual artists and one was a drama pedagogue.

The Norwegian recruitment process
The Norwegian artists needed to be recruited from scratch, and the first step was to put a job announcement in national job portals and art-based magazines. From the list of applicants, twelve qualified candidates were chosen to participate in a 5-hour digital workshop interview spread over 2 days. The workshop interview was planned to be a face-to-face two-day workshop, but due to Covid-19 restrictions the workshop was changed to a shorter, digital version. The workshop interview was jointly planned and facilitated by facilitators from ICC and CCE, and pilot artists from Norway were appointed as co-facilitators and advisors in the following selection process.

The aim of the workshop interview was to get to know the artists, find out about their way of thinking, and their skills. The workshop interview consisted of information about the project, activities to get to know one another (introducing participants to each other, exploring what we value about school, the types of learning that we feel are important and the overall purpose of education, building tolerance of ambiguity, exploring the ability to see from another's perspective, listening skills, openness to others' ideas etc.), activities getting participants to engage physically, socially and emotionally with the workshop, and getting participants to reflect on their experience of the workshop in a vivid and collective way (aspects inspired by what AoL is all about).

From the workshop interview, a shortlist of six artists were chosen for individual, digital interviews. The interview consisted of three parts; first a part where the candidate interviewed the project management (flipped interview), followed by two cases for the candidate to reflect upon, and then information about the project, work tasks and some questions for the candidate at the end. The cases in the interviews were about collaborative relationships and challenges in the classroom and about the understanding of the content of the AoL sessions. From the interviews, three artists were selected as the Norwegian Art of Learning artists. At a later stage, two additional artists from the same shortlist were selected as substitute artists.

5.1.2 Preparing the Start in Schools
The following section is focussing on the preparations done in the intervention schools. In the control schools, informing parents was the only relevant preparation.

5.1.2.1 Informing Teachers and Wider School Staff

As soon as the schools were selected, a representative from the project management invited themselves to present the project at staff meetings in the intervention schools. At these meetings, the school leader gave an introduction as to the school's reasoning for participating in the Art of Learning, before a representative from the project (T-Tudok / ICC) gave a presentation on the project's aims, its theoretical backdrop, project partners, how the intervention would be conducted, and the research arrangements. School staff were invited to reflect on some core questions along the way, and to ask questions in the end. These meetings were an important first step in establishing ownership within the schools.

5.1.2.2 Allocating Space and Time in Schools

The school leader, teachers, artists and the Art of Learning team negotiated and created space and time in the school timetables for the intervention. Both time for the AoL-sessions and meeting times were allocated and set before the intervention began.

5.1.2.3 Distribution of Art Materials

Art materials and other resources needed for the Art of Learning sessions in each school were divided into two categories: Items expected to be available at the school, such as scissors, writing paper, glue and floor mats, and items that needed to be provided, such as mini speakers, clay, magnifying glasses and large rolls of paper. The lists of items to be provided were handed over from the curriculum development team and purchased. The materials were then packed at the ICC and T-Tudok offices respectively and delivered to the intervention schools.

5.1.2.4 Informing Parents

After schools were recruited, parents both in control and intervention schools were informed about the AoL project and their children's participation. This happened at parent meetings at the beginning of the consecutive school year (autumn 2021). At these meetings, the school leader (or a well-informed teacher) gave an initial introduction to the school's reasoning for participating in the Art of Learning, before a representative from the project (T-Tudok / ICC) gave a presentation on the project's aims, its theoretical backdrop, project partners and how the intervention would be conducted. These meetings were also used for the research team to present the research arrangements, hand out consent forms to parents, and answer questions.

5.2 The Tailor-made, Ongoing Support System

The system surrounding the intervention consisted of professional development training and reflections for teachers, school leaders and artists, school visits with observations and meetings, digital meetings, and evaluations. These activities served several purposes.

A. To validate and further develop the intervention and the curriculum concepts to be workable and fit for survival in real life contexts. Involvement of practitioners is key to gain clear insight in potential curriculum implementation problems and to generate measures to reduce those problems, in addition to involvement being key to build commitment and ownership (van den Akker 2010: 46-47). To capture the insight from practitioners in the support activities, the PD & Support team recorded respondents' reactions and suggestions in both training, meetings, reflections and evaluations. This material is presented and analysed in Chapter 6.
B. To evaluate the intervention's effect. Observation- and meeting-notes were collected, along with recordings of semi-structured interviews with teachers, school leaders and artists. These materials were analysed as part of the evaluation of the project, and the results are found in the Art of Learning evaluation report. (Håkansson 2025).
C. To give teachers support to experiment in the classroom and develop own teaching

practice. An extensive professional development program was developed and implemented to support this.

5.2.1 Professional Development of Teachers

To improve chances of a successful implementation (Van den Akker 2010: 43), professional learning and development of all participating teachers, school leaders and artists has been key to the Art of Learning. To provide an extended but intensive professional development opportunity, giving teachers support to experiment in their classroom and collaborate successfully with artists, a professional development program was implemented before, during and after the intervention.

The Professional development program for teachers included (see Figure 21):

1. A two-day initial professional learning program, where one day was designated to teachers and school leaders only, and the second day was for teachers, school leaders and artists together
2. Digital professional development and feedback meetings for teachers
3. School visits from PD & Support team at least four times during the intervention for each school. These visits included observing AoL activities in the classrooms, followed by informal meetings with teachers and artists
4. A one day midterm professional development workshop for teachers and school leaders, after the first half of the intervention was implemented
5. A final one-day professional development reflection session, for teachers, artists and school leaders, after the intervention had come to an end

The whole spectrum of the professional development program for teachers was carefully tailored to the specific target group and context, using highly experienced specialist facilitators from CCE, ICC and T-Tudok they developed the program on vast experience from the professional development programs implemented in the AoL pilots and from Creative Partnership Programmes. The

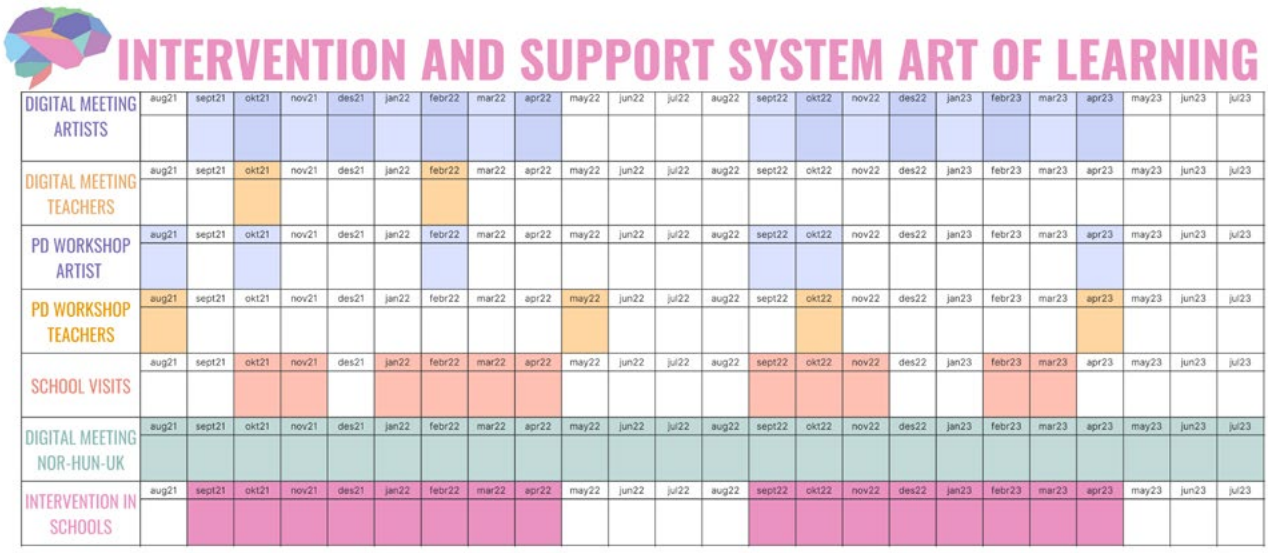


Figure 21. Intervention and support systems in AoL.

program aimed to model the good practice identified in a report called “Developing Great Teaching” (Cordingley et.al 2015) by integrating the key features necessary for a Continuing Professional Development for teachers to be successful (ibid). A key feature implemented from the report was that school leaders during the full program were required to participate fully, act in an advocacy capacity and to be active in the planning and implementation of the professional development program. The content of the program aimed to challenge existing theories on ia. learning, creativity, teaching and engagement in a non-threatening way, providing the teachers with the knowledge base and the research which underpins the Art of Learning program and engaging with it. This was done by making sure the content was explored from multiple angles, modelled by the facilitators in a variety of practical, creative and art-based approaches. These approaches were connected to day-to-day-experiences in the classroom through practical reflection and analysis, which, along with the other features mentioned, are key to a successful professional development program for teachers (ibid.).

Illustration: Teacher reflecting on today’s Professional development session. Credit: Mariann Bjelle / Art of Learning.

In school visits too, Cordingley’s report has been modelled, making sure the visits are giving teachers support to experiment in their classroom, followed by a reflection and analysis of the observed AoL sessions and the teachers’ general and specific experiences with the AoL program implementation in their classroom. In these visits, as in the whole professional development program, Nordin-Hultman`s (2004) perspectives are upheld by the PD facilitators by keeping a focus on the pedagogical context (ia. time, space, tasks, adult role and instructions) and reflecting on the effects the pedagogical context might have when challenges occur in the day-to-day situations in the classroom. A part of this is to consequently move the focus away from individual children’ characteristics, and challenge potentially fixed ideas existing within the dominant school discourse (see Chapter 3.2.2), showing its vast possibilities.

As described in chapter 3.1.3 Performative Learning Theory and 3.1.4 Artists’ Signature Pedagogies Project, the teachers’ role in Art of Learning is more about being a dramaturg or mediator giving impulses, structuring the learning and setting up a well-functioning framework for learning activities, rather than being the mediator of knowledge. Challenging the teacher role, taking the risk of trying new approaches to teaching as intended in the intervention, were also topics highlighted in the professional development program, including in school visits. In the same manner other topics from Performative learning theory and Artist’s signature pedagogies, ia. the focus on inclusion and building the class community,

collective ways of working, the artists' practice, learners as central learning resources, play and games as part of the learning, was pin-pointed whenever observations and/or the meetings made them relevant. Then, they were analysed and reflected upon.

5.2.2 Professional Development of Artists

The professional development program for artists was integrated into the program for teachers and school leaders, building on the same features identified by Cordingley (2015) as key for successful professional development programs. This also included the view that all participants (teachers, school leaders, learners, artists and facilitators) are learners in the process, and in the integrated parts of the program where teachers, school leaders and artists were together the topics of communication, collaboration and learning from each other was emphasised and modelled through varied practical exercises.

The content of the designated professional development program for artists was based on the insight gained from the "Training Requirements and Key Skills for Artists and creative practitioners to work in participatory settings" (TRaKSforA), as described in chapter 5.1.1.2, and extra attention was made to explore the artists' role in the intervention. Initially, emphasis was made on equipping the artists with additional knowledge and insight into school policy documents and dominant school discourses, and to build a professional learning network of artists. This network met with the PD & Support team in digital biweekly meetings during the implementation of the intervention, supporting each other by reflecting and analysing day-to-day challenges in their designated schools and sharing ideas. These meetings also served as key input arenas for feedback on the AoL curriculum and intervention design. Preparing the artists for the content and activities planned for the following prototype/set of six themes was a key part of the midterm professional development workshops for artists during the intervention.

The whole professional development program for artists included (see Figure 21):

1. A four-day initial professional learning program, where three days was designated artists only, and the fourth day was for teachers, school leaders and artists together.
2. Biweekly digital professional development and feedback meetings for artists during the whole intervention.
3. School visits from PD & Support team at least four times during the intervention for each school. These visits included observing AoL activities in the classrooms, followed by informal meetings with teachers and artists, and sometimes school leaders. Separate school leader meetings were held at least twice during the intervention for each school.
4. Four two- day midterm professional development workshops during the implementation of the intervention.
5. A one day final professional development reflection session, for teachers, artists and school leaders, after the intervention had come to an end.

5.2.3 The Intervention Development and Support Team

The support system for the intervention was structured as follows: A) An overall PD development team had overall responsibility for the PD programme and provided guidelines for the wider support system in each of the two implementing countries. Members of this team went on joint school visits, and held joint PD training, thus being able to capture similarities and differences in support needs in the different contexts and adapting to PD accordingly. B) In each country, a team was responsible for the day-to-day support in the schools, and for the implementation of the PD programme in each country.

The Intervention Development and Support Team (PD & support team):

Overarching PD-development team:
Diane Fisher-Naylor (Main author AoL Curriculum, PD expert, CCE)
Marie Othilie Hundevadt (Theatre artist, Pedagogue, Project manager AoL)
Szilvia Nemeth (Educational researcher, Project manager AoL Hungary)

Head of support-team Norway:
Marie Othilie Hundevadt (Main author AoL Curriculum, PD expert, CCE)
Anne-Tove Mygland (Visual artist, Special needs pedagogue)

Head of support-team Hungary:
Szilvia Nemeth (Main author AoL Curriculum, PD expert, CCE)
Kriszti Vladár (Visual artist, AoL artist)

5.3 Implementing the Art of Learning Intervention

In this section, the intervention is described with support from one of the participating artists in Norway, and the descriptions are based on her detailed insight, elaborating on the general descriptions.

5.3.1 Initial Preparations in School

Prior to the start of the AoL intervention in the classroom, artists and teachers dedicated a significant amount of time to establish a foundation for effective collaboration. This included discussions about subject areas, personal and professional interests, perspectives on learning and learners, as well as individual motivations, preferences, and needs. A key focus was to clarify mutual expectations regarding the partnership.

Some of these conversations took place during the joint training sessions for teachers and artists, while others occurred during the schools' planning week at the beginning of the academic year. Central themes included expectations and organization related to planning and implementation, the roles of teachers and learners, the use of materials and frameworks, and the overall structure of the intervention.

Several of these themes, along with additional insights that emerged during the implementation phase, will be explored further in Chapter 6: Formative Evaluation.

5.3.2 Weekly Planning and Preparing

Each week, artists and teachers participated in a joint planning and evaluation session lasting 60–90 minutes. These sessions took place at the beginning and midway through each theme. This ensured coherence and flexibility throughout the implementation. The sessions had two primary purposes: preparing for the upcoming AoL curriculum activities and evaluating the sessions that had already been completed.

At the start of each AoL theme, artists presented the upcoming theme to the teachers. Participants were expected to prepare in advance by reviewing the theme material and

noting down any questions or reflections. These could relate to the execution of specific activities, necessary adaptations for individual learners, or planning of teacher-led sessions. Planning also included reviewing the thematic framework, organizing materials and resources (e.g., printing materials, gathering equipment, creating templates, learning songs or melodies, testing activities), and determining practical details such as teaching locations (e.g., classrooms, music rooms, art rooms, science labs, outdoor areas, or stage), group sizes (classes ranging from small groups of 10 to large classes of up to 54 learners, where the learners are working individually, in pairs, groups etc.), and time allocation per activity. Additionally, roles and responsibilities were clarified, including which teacher or artist would lead specific parts of the session and identifying learners who might require additional support.

The mid-theme planning sessions offered an opportunity to revisit and refine the teaching plan based on the experiences so far. This included completing unfinished preparations, addressing new questions or challenges, and discussing necessary adaptations—such as the use of sign language, translation into other languages, or the need for differentiated support. These sessions also provided space for reflection on the evolving roles of teachers and learners (e.g. in which situations should teachers intervene and provide extra guidance versus letting learners figure it out for themselves?, how to adapt activities to both strong and weak learners? etc.), strategies for grouping, time management, and how the art-based methodology contributed to learner engagement and learning.

In addition to joint planning with the teachers, the artists carried out their own planning and preparations between meetings. This ensured that they were well-prepared to present the theme to the teachers, as well as the theoretical foundations of the project.

5.3.3 Implementation Structure

In the intervention group, the implementation of the Art of Learning (AoL) program resulted in significant changes to classroom practices, with professional artists being employed to collaborate with teachers in delivering pre-planned, arts-based activities. These sessions were held twice a week, each lasting 90 minutes. Additionally, on a third day each week, teachers independently facilitated similar, partially pre-planned activities with the learners, also lasting 90 minutes (see Figure 22). The artists' schedules varied significantly. Some artists worked at multiple schools and with several small classes, while others worked at just one school and with several larger classes.

Overall, learners in the intervention group participated in 270 minutes of arts-based activities per week. These activities were structured around six interdisciplinary themes, each lasting 12 weeks per semester across four semesters (see Chapter 4.3 for an overview and an in-depth example of a theme within the AoL curriculum).

As outlined in Chapter 4.3.1 *The Overall Structure,* all intervention schools followed a curriculum comprising 24 interdisciplinary topics, organized into 24 interconnected themes that built on one another, creating a progressive learning experience over a period of 48 weeks. Of these 24 themes, 20 were pre-written, while the remaining four were "free choice", where content was decided collaboratively by the teacher and the artist in each participating class, based on a set of core criteria. The curriculum was specifically designed for learners aged 6–8 years.

The sessions were art-based and designed to be delivered in a fixed, consecutive order, adhering to a shared dramaturgical structure. They followed a standardized format, with detailed guidance on space setup, materials, curriculum goals, preparation requirements, and instructions for the delivery of activities.

Each AoL session lasted 90 minutes, consisting of three components: a warm-up, a main activity, and a reflection exercise at the end (see Table 4). While the structure remained consistent across all sessions, the first session in each theme typically began with a "trigger" activity designed to engage learners' curiosity and activate their interest in the upcoming theme. Similarly, the final session (session 6) of each theme concluded with a comprehensive reflection that encapsulated the theme as a whole. Although the warm-ups and reflections were consistent across the sessions, they evolved and became more complex as the theme progressed.

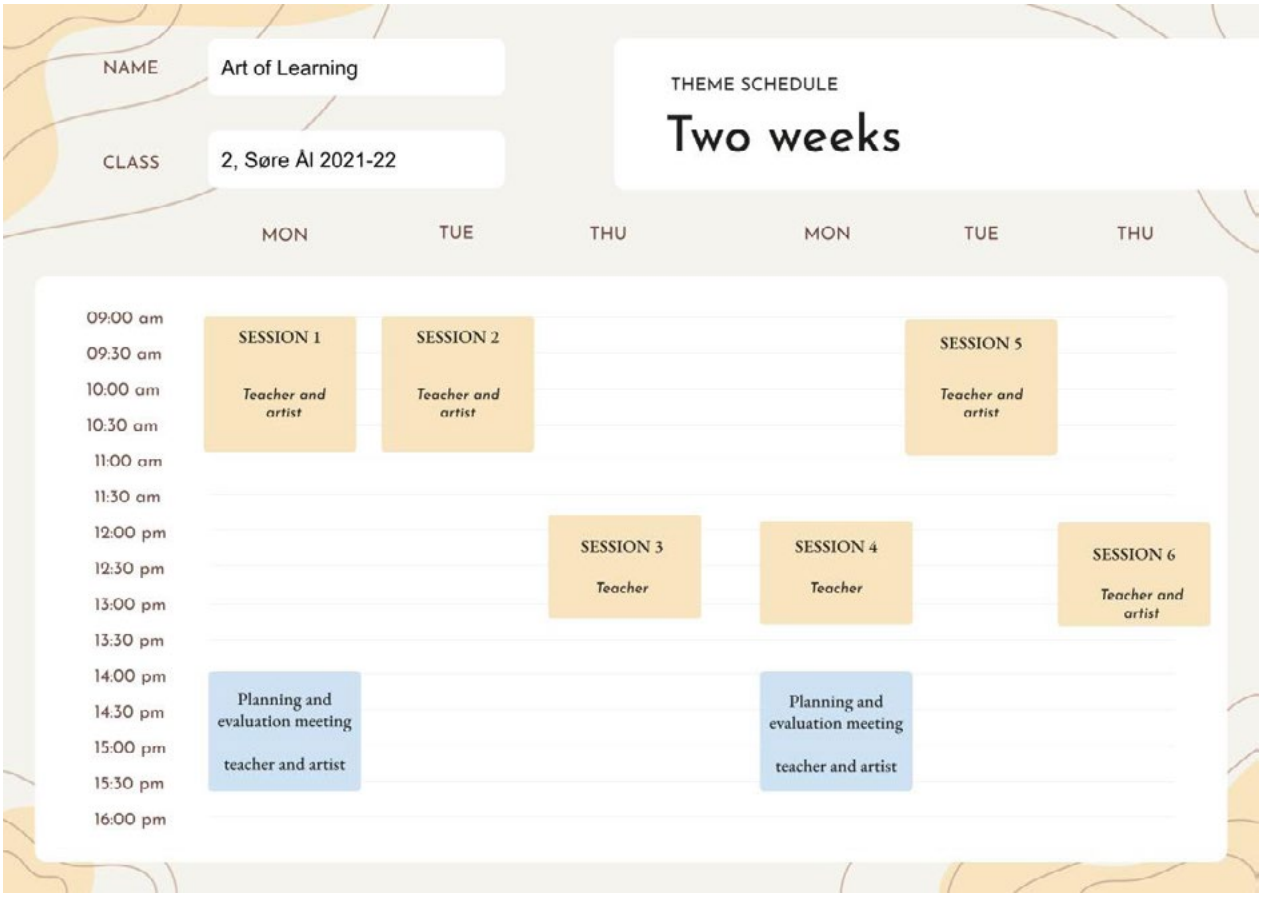


Figure 22: Timetable from Søre Ål school (Norway) with Art of Learning sessions and meetings inserted.

Each session's structure	**Warm-up:** Repeated with advancement					
	Session 1 Main activity	**Session 2** Main activity	**Session 3** Main activity	**Session 4** Main activity	**Session 5** Main activity	**Session 6** Main activity
	Reflection: Repeated with advancement					

Table 4: Each session's structure.

To ensure consistency and replicability of the curriculum and intervention, as needed for the research, the artists reported any major deviation, or changes made from the original pre-scripted lesson plans in the AoL curriculum. Table 5 is an example of this, from theme 1, translated from the original report into English.

Topic/ Week	Session	Note/Change
1	1	Entire session executed. Used red and green lights and just began with variation: bell.
1	2	Entire session executed. Some first graders received their own A3 sheet to draw on as an adaptation.
1	3/4	Entire session executed.
1	5	For Grade 1: The school had a mandatory trip day when session 5 was scheduled (21.09.21). Consequently, sessions 5 and 6 were combined and conducted on the same day as session 6.
1	6	Using a matchbox, keyring, and bell. Not all groups (one in Grade 1) managed to reach the variation: bell, but all got to try the matchbox and keyring.
1	1	Entire session executed. Used red and green lights and just began with variation: bell.

Table 5. Example of deviations or changes reported by one of the artists in the project.

5.3.4 Reflections in School

Since part of the focus of The Art of Learning is that everyone; teachers, artists and learners are learners in the process, we reflected continuously throughout the project, both during the sessions and in the planning and evaluation meetings. Important points to discuss in depth were noted and addressed in meetings, both between artists and teachers and together with the PD & Support team. Additionally, the project's knowledge base and the theories underpinning it were frequently analysed and reflected upon by both teachers and artists in planning sessions in school. The reflections captured from the formative evaluations in school will be elaborated on in chapter 6.

5.3.5 One day in the Art of Learning Intervention

The World Needs More Geometric Art!
Each theme in the Art of Learning program begins with a "trigger" — an activity designed to spark curiosity and engagement among the learners. In the theme 10: Shape Explorers , the trigger involves a news bulletin announcing a severe shortage of outstanding geometric art, with learners encouraged to contribute by creating more geometric artworks. This task is introduced through several sessions, where learners take on the role of "shape-explorers," engaging deeply with the artistic process.

Below is an example of how one of these sessions is structured in terms of content and activities. Join us in exploring how learners are empowered to create their own geometric art!

Warm-up: The Queen Says "Hold a triangle under your chin"!
Each session begins with a warm-up. In *Shape Explorers,* the warm-up is a playful variation of the classic game "Simon Says," here renamed as "The Queen Commands" and evolving around geometric shapes. Each learner has an envelope containing a set of geometric shapes cut out in various colours, which are used in every warm-up throughout the theme.

The learners sit in a circle on the floor with the shapes spread out in front of them. They must now follow the queen's commands — but only if the sentence begins with "The Queen Commands."

"The Queen Commands: Find a circle!"
Most learners recognize the circle immediately and pick it up without hesitation.
"Find a rectangle!"
Some learners are tricked and raise a rectangle even though the queen didn't say "The Queen Commands." Laughter follows, and the game continues.

The warm-up activity is developed step by step throughout the sessions in the Shape Explorers theme, with various adaptations and an increasing level of complexity. Examples include: a) The Queen holds up different shapes than the ones she tells the learners to find; b) "Dracula Commands" means learners must do the opposite of what Dracula says (e.g., if the

Illustration: Warm-up activity "The Queen Commands", from Miksát Kálmán Elementary School in Budapest. Credit: The Art of Learning / T-Tudok, Hungary

teacher says Dracula commands you to "hold a circle in front of your head," the learners must hold it behind their head); and c) The Queen becomes mysterious and describes the shapes only through their characteristics (e.g., "it has three corners").

The World Needs More Geometric Art!
At the end of the warm-up, the teacher suddenly appears distracted, looking serious while checking their phone. The atmosphere shifts as the teacher interrupts the session and announces an urgent news alert that must be read aloud immediately:

"News flash! Reports indicate a global shortage of outstanding geometric art. World leaders are deeply concerned. Join the effort — create more geometric art!" In Shape Explorers , this news flash serves as a trigger, motivating learners to take on the creative mission of contributing to the world's supply of geometric art.

Illustration: Examples of "geometric artwork": To the left: Behind the Red, by Violet Polsangi, To the right: [unknown title], by Hans Ragnar Mathisen

Illustration: Creation of Geometric Art. Credit: Mariann Bjelle / The Art of Learning.

In this session, learners will take a closer look at a selection of artworks from around the world, which are largely composed of geometric shapes (see the illustrations). They will search for the different shapes within these artworks, counting how many of each they can find. The results will be recorded in their individual "Shape discovery books".

Next, the learners will sketch a new, personal geometric artwork, drawing inspiration from the pieces they have just studied, as well as from the shapes in their Shape discovery books (from earlier sessions in the theme). The task is simple: they can create whatever they like, but only geometric shapes are allowed.

"What does it mean to make a sketch?" This is a common question among learners, and they are

reminded that a sketch is not the final artwork. It is a test — a space to experiment, try out ideas, and explore what their piece might look like. Learners will be given A3 paper, pencils, and coloured pencils to work either in groups or individually.

Earlier in the theme, learners were given other shape explorer assignments (see the illustrations). They searched for geometric shapes both indoors and outdoors and categorized their findings into tables, diagrams, and maps. After this session, they worked on creating their final geometric artworks. At this stage, they had access to a broader range of materials (such as tape, fabric, napkins, thread, paint, or recycled materials). Their artworks were eventually displayed in an exhibition — one that everyone could visit and see. (Illustration below: Sketch and final artwork 1 and 2).

Illustration: Sketch and final artwork side by side. learner work. Credit: Shelli Lake / The Art of Learning.

Illustration: Sketch and artwork side by side. learner work. Credit: Shelli Lake / The Art of Learning.

Illustration left: Working on artwork based on the sketch. Credit: Shelli Lake / The Art of Learning.

Illustration: Shape reflection: Drawing a shape representing their feeling in the moment on a partner's back. Credit: Marie Othilie Hundevadt / The Art of Learning.

What Shape did Today's Session Have?
Each session ends with a reflection, and in *Shape Explorers*, this reflection is naturally a shape reflection called "Shape feelings". The learners close their eyes and think about how they feel in that moment, considering which shape best represents that feeling. The teacher pairs the learners up, and in silence, they draw the shape they have chosen on their partner's back. After both have drawn on each other's backs, the learners try to guess which shape the other was thinking of.

The reflection part at the end of each session is getting more advanced throughout the *Shape Explorers* theme, with increasing variation and complexity. Examples of this progression include: a) Drawing the shape in the air in front of you with your hand; b) In a standing or sitting circle, where the whole group simultaneously draws the shape on the back of the learner in front of them and then guesses what was drawn on their own back; c) Using their bodies to create the shape in a specific colour; and d) Drawing the chosen shape with a pencil on a piece of paper right next to a peer's ear, so that they can guess which shape was drawn (and yes, it's possible!).

Seaching for geometrical shapes outdoors, using "shape finders" ("magnifying glasses" in different geometrical shapes). Cred. Marie Othilie Hundevadt / Art of Learning.

6

FORMATIVE EVALUATION

"It was more difficult for us to achieve the right common rhythm, as the tasks brought by the artist did not always follow the school customs, but then the collaboration became successful when we saw how well the children responded."

(Teacher 11, Nemeth 2025: 18)

In this chapter, insight into the assessments and evaluations of the Art of Learning curriculum and interventions are provided. Systematic reflection and documentation are the final steps in the design research process, however the formative evaluation activities have been continuous during all cycles of the process.

Different forms of formative evaluations that have been carried out in the project will be shared here: The first one is a formative evaluation aiming to refine the curriculum and intervention, carried out by the internal curriculum development team (4.4.1) and the Intervention PD and support team (5.2.3), the second one is a formative observational evaluation, carried out by an external evaluator from Hungary, and the third is a non-formal formative evaluation, aiming to understand the program's practical implications, carried out by a participating professional artist in the project. This last evaluation is quite unique. This is a type of evaluation that in most cases is lost as they happen as part of the day-to-day practice at school and are not recorded. However, in this case one of the artists has recorded the evaluations from her school during the intervention, and her reflections and rich descriptions will be shared here. This chapter will be structured based on the order listed above.

6.1 Formative Evaluation: Revision of Curriculum and Intervention

The methods used for evaluation have been chosen to get a mix of quick feedback and rich inputs from practitioners, summaries from partners, and to get first-hand insight from testing in the classroom. Most of the evaluation was done within each country, ia. The Norwegian artists' digital meeting and the Hungarian artists' digital meeting were two separate meetings. The information from these meetings were shared in digital meetings NOR-HUN-UK. However, a school visit "tour" was arranged twice in both countries, where visitors from the other intervention country (teachers, artists, curriculum developers) were part of observations and reflection meetings. Also, as part of one of these "tours", one workshop was held in Hungary with teachers and artists from both Norway and Hungary. The full system of formative evaluation looked like this:

- Digital meetings with artists (NO): Regularity: Bi-weekly meetings after every theme was tested in classrooms. Evaluating: The specific theme tested, and the intervention. Respondents: 3-5, Collected data: Notes from meetings.
- Digital meetings with artists (HU): Regularity: Bi-monthly meetings. Evaluating: The themes and the intervention. Respondents: 4, Collected data: Notes from meetings.
- Digital meetings with teachers (NO): Regularity: Every 4th month. Only held twice. Evaluating: The themes within prototype 1 and 2. Respondents: 5-8. Collected data: Notes from meetings.
- Workshop artists: Regularity: 4-6 times during the whole intervention. Evaluating: Rich inputs on the themes within each prototype, including improvement suggestions. Respondents: 3-5 (NO), 4 (HUN). Collected data: Notes and ideas from workshop.
- Workshop teachers: Regularity: 4 times during the whole intervention: Evaluating: Rich inputs on the themes within each prototype, including improvement suggestions. Respondents: 30-40 (NO), 6 (HUN). Collected data: Notes and ideas from workshop.
- School visits: Regularity: Every month of the intervention. 2-4 visits per school, mix of planned regular visits and extra visits when in need of support. Evaluating: Observation of activities in the classroom, followed by a meeting. Respondents: 40-50 (NOR), 6 (HUN). Collected data: Observation notes and notes from meetings.
- Digital meetings NOR-HUN-UK: Regularity: Every Friday 09.30-10.30 CET during the whole intervention and beyond. Evaluating:

Summaries of formative evaluation from digital meetings, workshops and school visits in Hungary and Norway accordingly. Respondents: 3-8. Collected data: Agendas and notes from meetings.

The formative evaluation carried out from this broad range of material, contributed to quality improvement of the curriculum and intervention during development and testing. To structure the inputs, the evaluation material was first sorted under the following three categories:

1) Simple defects

Simple defects meant minor defects that didn't take any further considerations, other than ensuring they are corrected asap. Examples of simple defects detected were missing text, wrong amount of art materials and spelling errors. One example of a simple defect that was detected and solved instantly was described in the feedback from an artist:

"Didn't understand it [theme 21 Maps] at first, and neither did the teachers. Then came the message that there was a part of the text that was missing. Then the theme became very good (laughs)."

Once a simple defect like this was detected, it was immediately picked up by the curriculum development team and/or the intervention's support crew, who would be correcting the curriculum, and in this case also informing the participants in the intervention about the defect and providing them with the missing text.

2) Curriculum considerations and improvement suggestions

The material that belonged to this category was the key materials for proper quality improvement of the subsequent prototypes of the curriculum. The suggestions for improvements or need for changes in the curriculum were all given proper consideration, and most of the input led to changes or adjustments in the curriculum's subsequent prototypes.

3) Implementational considerations and suggestions

The material within this category, informed the refinement of the intervention and its support system. The suggestions for improvements of the intervention and topics needing to be addressed in PD were all considered valuable contributions, and most of it was taken into account and thus built into the support structure of the intervention.

While all the materials have been considered in the actual formative evaluation of the curriculum and intervention, for the case of this report, a selection has been made. The selection was made to highlight the most frequent topics as well as those offering valuable insight for potential future implementations of such a program.

6.1.1 Standardized Lesson Plans

One common topic in the early part of the process was the artists' role, and to what extent they were "allowed" to edit and change the curriculum to serve the specific needs of their specific learners and their specific context. This quote exemplified this: *"Trust" was a big and difficult concept [to learn/teach]. [The Artist] became unsure of her own role and how much she could edit."* The standardized and pre-scripted curriculum in the AoL was key to the research assessment of the project and was a central component to ensure consistent application of the intervention across schools and educational settings. For this reason, at the beginning of the project the PD & Support team was clear that the teaching should be following the pre-scripted curriculum to the letter, e.g. in relation to the language used and to get everything done according to plan. This initial rigidity was communicated to ensure schools wouldn't start cutting corners and move away from the pre-scripted curriculum. However, it was always intended that adjustments were

to be done to fit the curriculum to different class sizes, individual learners' needs, differing school facilities etc., and that the artists for each school would register major deviations from the curriculum. In the first few months of the implementation, it became clear that the message about following the script had reached the teachers and artists and was, thus, incorporated in the teaching and learning, but not the message about adjustment. As an effect, the initial implementation became too rigid and not sufficiently customized to the learners' needs. This, of course built frustration between teachers and artists, followed by either a sense of not being able to make the AoL as intended (blaming themselves), or a sense that the AoL is not working (blaming the project). Once this glitch in communication was detected, it was communicated clearly to all schools and artists in school visits and PD, that certain types of adjustments were allowed, even necessary, and that part of the project and the artists' responsibility, was to register deviations. In the further process, the participants were able to balance the consistency required, with opportunities to make individual adjustments for learners, use of space and time, execution of activities, formulation of instructions etc., and major deviations were registered by the artists. This made a huge difference in the intervention's implementation, and in its support amongst the participating teachers and artists.

6.1.2 When does learning happen?

A common topic from the feedback was reports of teachers and artists having discussed pedagogy, and one topic was especially prominent: When can we consider something to be learned? How does learning happen? Can one learn something by doing it in a task, or does someone need to teach it in advance? This quote gives an example: *"We cannot do the task of making timelines, because they don't know how to make timelines yet."* These questions have been main discussion points from school visit meetings. In the case of the quote, which relates to theme 7: *In your shoes*, the learners were in groups, and the groups were given a photo of a child. They were encouraged to imagine who this child was. In this session, it was revealed that the image was taken a long time ago, maybe 20 or even 35 years ago. To understand how long this was, they were tasked to make a timeline to visualize the number of years passed. As seen in the quote, the teacher was emphatic about needing to teach the learners how to make a timeline before the learners could attempt to make a timeline on their own.

In the AoL, however, the pedagogy emphasises learning by doing and creating tasks that invite novelty in innovation. In this case, this meant letting the learners attempt to create timelines in groups, based on a real-world, practical case and a need for counting backwards to understand. By doing the interpretation of a timeline on their own, there is of course a risk of them not grasping the concept, and obviously a risk of the timelines appearing very different, some might become short, long, systematic, unsystematic, a line, a spiral etc. A key component in the Art of Learning is to focus on the process, the creativity, the exploration, and the learners getting a real challenge to figure out in collaboration with each other.

Following this line of thinking, after the learners' own attempt, the teacher can show standardized timelines, which the learners then are able to connect with their own experience and grasp. Done in this order, the learners will be equipped with a hook, something to hang the standardized timeline learned through teaching on, and the chances of them remembering the timeline-concept is increased. In the opposite order, according to the AoL pedagogy, getting to know the standardized timelines first will turn the learners' practical task into a simple replication task, with a fixed target goal and a standard to measure against. The risk, novelty, excitement and need for collaborating to succeed are all missing.

From this example, and similar ones, implementational considerations were made. The questions: "How do we learn?" and "When

can we consider something to be learned?" was made an assignment for all teachers during PD, followed by a reflection.

6.1.3 Are the tasks too hard?

Especially from the first prototype of the intervention, a common topic from the feedback was how learners have experienced initial frustration and difficulty in relation to tasks. This topic is split between the descriptions of difficulty on the one hand, and the description of the breakthroughs on the other hand, describing how some have overcome the challenges during a session or a theme with a sense of mastery, satisfaction and pride, and others who began withdrawing from activities. Some of the feedback specifically pinpointed tasks where the content was too complex or abstract for the learners.

This topic was thoroughly discussed, and each case was considered individually. In that process, it was discovered that some of the feedback had come in advance, before the sessions and tasks in question were tested in the classroom with learners. It was in other words not a reflection of the actual difficulty levels of the tasks, but rather an expression of concern from some participants regarding specific tasks. This feedback was put on hold until the sessions were actually tested and then considered again. The final view was that the feedback generally indicated that learners were learning, however with some initial frustrations, and that the level of challenge was mostly appropriate.

However, some adjustments were found to be necessary, ia. to use more 'concretes' (support items) when introducing abstract concepts ia. "trust", "empathy" in the activities to make tasks more concrete. Also, some concepts were simplified for the learners to be able to resonate. This, however, needed to be done with caution, to maintain challenge, risk and open-ended tasks in the sessions.

In the specific cases of learners withdrawing from activities, measures were taken in the intervention's support system through school visits, observations and meetings. The aim of these measures was to uncover the underlying issues and implement appropriate support to re-engage these learners. For the learners to be present in the space was mostly approached as the first measure, whether it meant sitting and observing or partially participating. The experience was that this made it easier for the learner to re-engage quickly when he/she was ready.

6.1.4 "I'll go crazy if [AoL] doesn't work soon!"

– About Connecting Art of Learning with National Curriculums

Initially, teachers expressed frustration, not finding the curriculum aims clearly in the AoL activities. Quotes that exemplify this are: "We skim through things, don't work thoroughly enough", "Hard to defend the use of time based on competence aims", and "We are far from meeting the aims listed in the themes". Some show real frustration: "Oh, I'll go crazy if [AoL] doesn't work soon!" The learning outcomes from the national curriculums, and the subject specific competence aims have been frequent and important topics from the feedback. From the teachers, this topic was the most prominent in the beginning, whilst for the artists, this topic is more prominent in the material from theme 11 and onwards.

It was clear from the start of the intervention that the way AoL lessons related to the National Curriculums was quite different from the regular ways of working with the curriculum in most schools. Some teachers, it appeared, even used the textbooks as their guideline rather than the actual curriculum, and Art of Learning became a huge upheaval from their routines for them. This rather large discrepancy showed a real need for support for teachers and artists, and several measures were taken.

First, to make the connection between competence aims in the national curriculums

and the Art of Learning clearer, the most prominent competence aims in each theme were from prototype 3 onwards highlighted in bold. The other aims were to be seen as support aims.

Second, a separate structure where each subject and its national curriculum aims are listed, with their connections with specific AoL themes, was created for Norwegian teachers (see Figure 23). This existed already in Hungarian.

Third, teachers were, as part of the PD, invited to suggest topics for the themes in prototype 3 and 4, as these were not yet developed. Their suggestions included ia. to focus on the subject English (second language), to make contact between Norway and Hungary, Maps and coordinates, Space and Energy, which were all included in the final list of themes for prototype 3 and 4. The illustration (figure 24, next page) shows some of the input on topics collected from teachers in this process.

A fourth measure was inspired from the feedback, where a topic emerged from prototype 2 onwards. This was the aim to gradually wipe out the differences between AoL and ordinary teaching, and how this was experienced as difficult to do. Based on this, measures to bridge AoL with regular teaching and curriculum was included into the PD. program. Here, teachers who did connect AoL and regular teaching fluently already were invited to share best practices carried out in previous themes, as inspiration before the teachers were split into groups working on how to connect upcoming AoL themes with regular teaching, sharing their suggestions with each other. All in order to create a fan of widened understanding, inspiration and practical tips to connect AoL and regular teaching.

Naturfag (NAT0104)

Kunsten å lære

KOMPETANSEMÅL ETTER 2. TRINN	
Mål for opplæringen er at eleven skal kunne	
utforske ulike teateruttrykk gjennom lek og dramatisering	**T1, T2, T3, T4, T5, T9, T14, T15+16, T19, T20, T21, T23, T24**
beskrive opplevelser gjennom språk og bevegelse	**T1, T2, T3, T4, T5, T7, T9, T10, T11, T14, T15+16, T19, T20, T21, T23, T24**
utforske og leke med kroppsspråk, mimikk og håndformer	**T1, T2, T3, T7, T11, T14, T15+16, T19, T23**
beskrive og samtale om kreativ bruk av tegnspråk	
gjennomføre og presentere dans (A), samspill og visualisert sang (B)	**T1 (A), T3, T8, T11 (B), T13 (B), T20 (B), T24**
utforske og bruke kostymer og rekvisitter	T8, **T11,** T16, T22, T23, T24*
leke med (A) og presentere (B) rytmeuttrykk i ulike tempo	**T1 (A), T2 (A), T3, T4, T5, T8, T11, T13, T15+16, T20**
utforske noen instrumenter og bruke dem til lek og aktiviteter	

KOMPETANSEMÅL ETTER 4. TRINN	
Mål for opplæringen er at eleven skal kunne	
utforske og beskrive noen dramatiske grunnelementer	**T3, T4, T5, T11,** T14, **T15+16, T23, T24**
dramatisere enkle handlingsforløp alene og sammen med andre	**T2, T3, T11,** T14, **T15+16, T24**
utforske og sammenligne digitale verktøy og bruke dem i dramatiske uttrykksformer og rytmiske prosesser	**T9, T11, T13,** T14
improvisere ulike former for bevegelse til ulike rytmer og aktiviteter	**T1, T2, T3, T5, T7, T13,** T14 **T15+16, T17, T19, T21, T24**
utvikle og presentere kreativ bruk av tegnspråk, tegnspråkpoesi, visualisert sang og rytmeinstrumenter i enkle samspill	
utvikle og bruke enkle kostymer og rekvisitter	T16, **T23,** T24*
utforske og sammenligne ulike former for kulisser	T24*
utforske og sammenligne ulike sjangre og virkemidler i tegnspråkpoesi fra både Norge og andre land	
analysere og drøfte norske, samiske og andre kulturers uttrykksformer	T9, **T10,** T13, T14, T15+16
drøfte bruksområder for instrumenter og bruke grunnleggende fagbegreper knyttet til temaet	

Kompetansemål anvendt i Kunsten å lære – tema 1–24
Liste over mål og hvilke tema som berører hvilke mål. Feit skrift = ekstra vekt på dette målet.
Tema 6/12/18/24 vil kunne berøre ulike mål avhengige av valg som tas i den enkelte gruppa, og er derfor heller ikke med. Oppgave-forslag dag 3–4 er generelt ikke medregnet, unntatt når det står markert med **(se under).
*Mål som jobbes med dersom oppgaven velges løst på en måte **Mål som kan velges i økt 3–4

Figure 23: Curriculum connection between Nature Science subject aims and all AoL themes.

Figure 24. Suggestions for topics from teachers as part of the PD.

From theme 11 onwards, the feedback in this topic changed. Applied knowledge in different areas of the national curriculum was highlighted, and phrases like "learners have reached a lot of competence aims through this theme" was reported more frequently. How learners showed great positive variation in ways of presenting ia. statistics is also seen in the material. The feedback also included descriptions of individual learners who surprised by demonstrating enormous competence and who become a resource and helped others in specific themes, and learners challenging their own negative relationship with maths. The feedback from theme 11 onwards indicated that the adjustments made were proving to be successful, and the changes were kept in the final prototype and evaluation.

6.1.5 Building a repertoire of didactic tools takes time

The logistics of the sessions in Art of Learning differ from regular practice in school. This is made clear from the feedback regarding group work and grouping, regarding adaptations of the classroom to practical activities and the use of different spaces in and outside school, regarding the use of time in the prolonged sessions and the flexible breaks, and to some extent also regarding the use of materials. The most common descriptions of these logistic elements from teachers are "transitions", "challenging" and "time consuming".

On group work, the explanations for this being challenging is that the learners are new to it, some teachers even say that they consciously have avoided it in the past. The feedback on the use of space is that new spaces cause distractions and includes challenging transitions. Distractions and transitions are taking time away from curricular activities and have been avoided in regular practice in school. Regarding time, the 90-minute lessons were initially conceived as far too long for the learners' attention span. The regular practice was quite often 45 minutes before a break.

From this feedback, it was clear that the regular practice in schools included a lot of routine within limited spaces, time frames and grouping structures, whilst Art of Learning insisted on variation in all of these practices, which was experienced as challenging.

The response to this type of feedback was not to change the Art of Learning, but rather to insist on tasks which included working in

Illustration: Learners practicing collaborative skills. Cred: Barbora Hollan

different sorts of groups, with a mix of random and pre decided groups, in order for the learners to practice and improve their collaborative skills. The response was also to insist on working in different spaces and use existing spaces in a range of ways. More time was included for transitions, but not too much, as experience has taught us that by doing these kinds of things repeatedly, the challenging transitions tend to become less challenging and even go smoothly, once they become part of the new routine.

To support teachers and artists in reaching the point where these elements ran smoothly, the PD-program was refined to include modeling of best practices in grouping and group work aiming to build a practical repertoire for effective collaboration. Routines, and the question of how to expand the repertoire of routines, was also included as a topic in PD (keywords: practicing, repetition, reflection, positive reinforcement, “catch them doing good”, playfulness). Finally, ways in which the reflection in sessions with the learners could be an arena for reflecting together on challenges like transitions, the use of different spaces and group work was also included in the PD.

And from prototype 3 onwards, the feedback in these topics was clearly different. The main focus now is on improved collaboration among learners, and descriptions of those who excel at certain areas such as English or Poetry, are able to shine, and are eager to help others.

6.1.6 Time for reflection?

When reflection is a consistent element present in every single session of the Art of Learning, it is easy to conclude that there has been sufficient space for reflections. However, from the feedback and especially from the deviation reports written by the artists, the topic of sessions being packed with content was quite frequent. Often this was solved by cutting reflections short. In addition, the reflections in the sessions were sometimes too ambitious,

Illustration The term "Irresistible learning" [Uimotståelig læring] in focus. From the Initial Teachers' Professional development training. Credit: Mariann Bjelle / Art of Learning.

Illustration: Learners doing AoL activity. Cred. Barbora Hollan.

as this quote reflects: "There were so many questions, but too little time to go into all of them." While some sessions allowed ample reflection time, others did not.

As described in the previous paragraph, a lot of time was spent on transitions at the beginning, but as the teacher and artist became more experienced, it went faster. However, this process did of course not proceed at the same pace in all schools, and to allow for sufficient reflection time for each school, the local teacher and artist needed to make adjustments. From the feedback deeper reflection without time pressure has not always been achieved in the intervention. From the prototype 3 onwards, the themes are more aligned with the actual classroom situations and real-life teaching and learning, taking into account all the different topics addressed in this chapter, and the result is more time for reflection.

6.1.7 Irresistible Learning

In order to consider whether the curriculum and intervention have worked according to their intentions, one main question is key: Why are the children learning? The answer to this question is important to any educational setting, whether it is in policy making, in the School Principal's Office, or in the classroom day-to-day. In the Art of Learning, the answer is not that learners should become good employers in future. The answer in Art of Learning is that the main aim for children learning is for them to have a good life here and now: To be part of a safe social arena where they are being challenged, are mastering, are motivated, are heard when expressing their opinions and feelings, and where they are having fun. In short: Life is meaningful here and now, and they are thriving while learning. This is true for children as it

is true for all of us, this is what makes life worth living. Throughout the curriculum and intervention development process the term "irresistible learning" has hung on the wall as a reminder of this aim.

To consider whether the Art of Learning has reached its aims of creating "irresistible learning", the feedback was investigated one last time, looking for signs of learners having fun while learning, them being engaged and motivated for learning, or being challenged and experiencing a sense of mastery when overcoming challenges. The following quotes show examples of these findings:

> *"They could have worked much longer on the theme! It's not just about nice moments, but more of a whole. The learners didn't want to stop working, and they visited their habitat both in the afternoons and on weekends."*
>
> *"The theme has been very captivating - both the splash writing and the experiments. And blackout – poetry. They were delighted to destroy books! And to be detectives investigating the text."*
>
> *"Geocaching was a lot of fun, especially outdoors. They didn't walk around looking, they ran! It was great to have treasures in the boxes, and to exchange treasures. It really engaged the learners."*
>
> *"The theme [Solar system] has been very engaging. Many have taken their commitment home with them. Many learners have been able to shine, and perhaps not the same ones as usual".*

The quotes above all show examples of learners exceeding the expected levels of engagement by not wanting to stop, by running rather than walking during a task, by being captivated by the activities, or by continuing their engagement at home by re-visiting the activities/products outside of school hours. The quotes are united by the fact that learners seem to thrive in their learning. From the feedback there are many more similar quotes.

Irresistible learning is present in the *intended curriculum* (Van den Akker) through the goals embedded in the AoL framework ; in the *implemented curriculum,* the actual processes of teaching and learning in the intervention; and finally in the *attained curriculum,* through the learning experiences as perceived by the learners. In summary, "irresistible learning" seems to be present across all levels of the Art of Learning curriculum.

6.2 Formative Evaluation: Hungarian Expert Observations

In 2022, after the first phase of the project implementation, an external expert team visited and observed all Hungarian classes and gave feedback to teachers and artists. A monitoring report concluded and summarized all findings. The observations investigated different aspects of teaching and learning in Art of Learning: Organisation of learning, Development of creative dispositions, Classroom and use of space, Preparing tasks with instructions to ensure a successful solution, Rules, Groups and working in groups, Time use and time planning, Behaviour, discipline and attention, Joint planning and Reflection phase. (Zágon 2022 in Nemeth 2023: 223)

The observation report states, first: "That whilst schoolwork in general follows a subject-based format, and accordingly, individual skill development areas are subordinated to and / or co-ordinated with subject-related objectives. Thus, the Art of Learning lessons continue to focus on development of foundations for learning success" (Zágon 2022: 2-3 in Nemeth 2023: 223).

Second, "there is a fundamental difference between the two approaches to creative dispositions. Creativity is mostly latent in the schools' curricula and is present mainly in the subject 'Visual Culture'. Meanwhile, in Art of Learning the competencies of creativity,

Illustration: Collage portrait made from mix of photos of learners, adults and old people, from theme 7: In your shoes. Credit: Marie Othilie Hundevadt / Art of Learning.

creative work, self-expression, and cultural awareness are developed through opportunities of planning and producing creative works, organizing and carrying out projects, either individually or in groups" (ibid.).

Third, "Socio-emotional skills are developed through drama and role-play, and emotional expression is made possible through musical performances and visual works" (ibid.).

Finally, the report concludes that "the objectives and the methods used to achieve them are important for schools, as they help to overcome several problems in Hungarian public education, including the transition from pre-primary school to school" (ibid.).

The observations from these external experts were an important supplement to internal observations, and showed that the external and internal expertise observed the same tendencies, and gave further support to the teachers and artists in their process. The full report is available in Hungarian in Zágon 2022, whilst a summary in English is available in Nemeth 2023.

6.3 Formative Evaluation: An Artists Reflections from School

In this section, one of the artists in the project has described the formative evaluation as it took place in his/her school throughout the intervention. The descriptions are rich, personal and they provide an interesting insight into the process from an insiders perspective. The artist's depictions add balance to the descriptions of formative evaluation which have so far been quite technical and dry, or assessed from the outside.

During the implementation of Art of Learning in our school, there were frequent discussions about why children learn, if they learned enough doing the Art of Learning, if the use of time and spaces in the Art of Learning had any real purpose, and how and if teachers were supposed to be creative and change their teaching strategies as part of the project. In this section, I will share my perspectives on how the formative evaluation process within one of the nine intervention schools took place. The perspectives are my own and should not be generalised. However, the insights from our school context will hopefully provide some valuable descriptions that could serve as an example of how this process has unfolded. The list of ten components addressing specific questions about the planning and implementation of learning, is used as a means to structure the information in this paragraph.

Rationale

During the implementation of the intervention at our school, there were frequent discussions with both teachers and students about why learners learn. These reflections often highlighted the importance of learning for living a good life here and now, being part of a safe and stimulating social environment where they are challenged, experience mastery, and feel motivated — a place where they thrive while learning. Other recurring themes included developing confidence in facing challenging tasks both now and in the future, learning to express thoughts and emotions, and recognising that learning can and should be enjoyable, relevant, and meaningful in the moment.

Together with the learners, we regularly engaged in discussions about what they found meaningful and relevant to learn, as well as their reflections on why we had chosen the specific topics we were exploring. In the theme "Friendship", the learners emphasized its importance, expressing views such as: "Everyone has friends, and it's important for people to have friends," and "If you have friends, it's more fun—and maybe you learn how to be a good friend, so things become even more fun." The reflections together with the learners felt particularly meaningful to me, as an artist invited into the school space, as it allowed me to get to know the students better—their references, interests, and ways of thinking—which in turn enabled me to tailor the sessions more closely for them and their wishes. In this way, the students became active contributors and co-creators of their own learning experience.

In reflective conversations with the teachers at our school, it became clear that for many, this reflection process felt either new or served as a valuable reminder: to pause and reflect with learners on the purpose and nature of learning. One teacher reflected:

> *"I'm mostly used to teaching learners about a topic, but I may have forgotten to talk to them about why we're learning about, for example, maps or the multiplication table. You're often so focused on moving on to the next step and meeting the next curriculum objective that you forget to stop and reflect on what's being learned—and how it connects to the learners' lives. And that's important too—not losing sight of why we're doing this."*

This highlights that the teachers, in many ways, went through a similar process as the learners—grappling with the rationale behind learning and questioning the underlying purpose of what is being taught. The same process also applied to me as an artist.

At our school we also reflected on how to create irresistible learning experiences — learning that taps into learners' curiosity and sense of inquiry, where they feel compelled to engage, solve a problem, or unravel a mystery. One example of this is the theme "The Lonely Creature." At the start of the theme, the learners were met with an impulsion/ "trigger": a classroom transformed with twigs, sand, and leaves—as

if someone or something had been there. They also discovered a note from someone who was lonely. Before the theme had even officially begun, the learners were already engaged in helping this lonely creature—whose identity was still unknown to them, but whom they felt they simply had to help. As one learner put it: "If it had been me, I would have hoped that someone would help me and comfort me, so I wouldn't be sad and alone anymore." Central to this was the idea of establishing a learning space where knowledge is understood as value-laden, rather than neutral. As a result, when planning sessions that included "triggers," we focused on how these could be designed to create dissensus (Skregelid, 2022: 51) — intentionally contrasting with the norm, disrupting expectations, and sparking curiosity. The aim was to activate learners as active participants in the learning process, and to connect the activities meaningfully to their real lives and personal interests.

Illustration: Trigger from Theme 14: The Lonely Creature / Loneliness. Credit: Shelli Lake / Art of Learning.

As with the learners, these regular reflections with the teachers helped me get to know them and build stronger connections—both in terms of areas of interest, subject combinations, and views on learning. The dialogues contributed to meaningful reflection, strengthened collaboration, and mutual learning across disciplines, areas of interest, and pedagogical viewpoints. This process profoundly enriched my experience as an artist, offering greater clarity about the educational values I wish to advocate for. It helped me articulate what I believe truly matters in learning—including experiences that are exploratory, emotionally meaningful, fully embodied, and grounded in artistic and creative expression.

Aims and objectives

Another key aspect of the ongoing reflective work in the project was the question of learners' aims and objectives. Especially in the early phases—during themes 1 to 9 in our school—several teachers expressed concern about whether the learners would achieve the same academic depth through the project as they would via more conventional, subject-based instruction. This concern recurred particularly among the more sceptical teachers, many of whom preferred to maintain the use of established methods that they trusted and had refined over time. Typical comments included: *"I think this will take too much time and come at the expense of other subjects," and "This way of working feels unfamiliar. I don't see how this is supposed to be better than the routines we already have in place."*

From my perspective, these responses point to several underlying tensions: a fear that the project might consume too much curricular time and space, concerns about reduced focus on core subjects, and a natural resistance to change—especially when existing practices are perceived to be functioning well. Such reactions reflect a broader discourse within education, where standardisation and measurable outcomes often take precedence over exploratory, process-based, or affective forms of learning.

In these situations, it was essential for me to navigate carefully—to offer professional generosity, listen actively, and provide reassurance throughout the process. Rather than positioning the project as a superior alternative, I sought to present it as a supplement—an invitation to variation, creative inquiry, and cross-disciplinary engagement. Emphasis was placed on the idea that pedagogical change is not immediate, but gradual, and requires both trust and long-term commitment to take root.

Over time, I got to experience that several of the initially sceptical teachers began to shift their perspectives. From my perspective, this change was driven by several factors: a deepening understanding of the project's pedagogical underpinnings, partly because they saw positive changes in the learners' learning progression and wellbeing, and a growing awareness of the potential within arts-based approaches. The project offered not only methods for addressing multiple curricula aims simultaneously, but also created space for artistic expression, cultural exploration, and the development of the whole child—intellectually, socially, emotionally, and creatively. As one teacher put it:

> *"At first, I found it really difficult to understand what the project was actually about—it felt like chaos, both for us teachers and for the learners. But gradually, I began to understand the methods, to see how much the learners were learning, how many subjects and curriculum objectives we could address at the same time, and how genuinely happy and engaged the learners were—and then I was convinced. Even the learners who usually struggle with being in the classroom now enjoy it and want to learn. There's a reason why learners mention AoL as one of their favourite subjects during learner conferences."*

In my opinion, this statement illustrates a powerful shift—from initial uncertainty and resistance to genuine pedagogical conviction.

Illustration: Miniature neighborhood, now with WIFI and Solar Panels, made in AoL. Credit: kunzt.no

What initially appeared chaotic and unfamiliar evolved, through sustained practice and reflection, into a meaningful and effective approach to teaching and learning. The teacher's evolving perspective highlights how arts-integrated, process-oriented methods can challenge traditional ideas of structure while fostering depth, motivation, and inclusion. Particularly compelling is the recognition that learners who often struggle in conventional classroom settings were not only participating—but actively thriving. The fact that many learners now identify AoL as one of their favourite subjects underscores its capacity to promote ownership, engagement, and meaningful learning across the group. These reflections from teachers closely align with my own experiences as an artist in the classroom, where I observed similar transformations in learner engagement, confidence, and creative agency.

Content

At our school, another central theme in our reflections throughout the project concerned the content and structure of the AoL curriculum. While some teachers held qualifications in aesthetic subjects such as arts and crafts

or music and were actively teaching in these areas, others had limited experience with both the subject matter and the underlying methodology—some even described themselves as "not a creative teacher; it's just not in my nature." My own background and experience as an artist have primarily centred around drama and theatre, singing and music, as well as arts and crafts. What was entirely new for all of us, however, was the structure of the AoL sessions—comprising a *trigger, warm-up, main activity,* and *reflection*—as well as a learning perspective rooted in embodied learning and aesthetic experience, where the cognitive, physical, emotional, and social dimensions of the learner are activated and interwoven.

Consequently, considerable time was dedicated to familiarising both the teachers and I with the pedagogical framework of the AoL curriculum, its underlying rationale, and its interdisciplinary approach. I spent significant time getting to know each theme and its associated activities, to be able to carefully explain, contextualise, and physically rehearse unfamiliar activities with the teachers during collaborative planning sessions. In the theme *Virus 1*, for example, we participated in a movement-based outdoor game simulating the immune system. This type of experiential rehearsal—characteristic of embodied and performative learning—allowed us to engage directly with the activity, reflect on its pedagogical potential, and adapt it to suit the needs of our students.

In each theme, the first two AoL sessions served as a "learning by doing" phase at our school, during which teachers actively participated in and observed the full structure of the sessions—warm-ups, main activities, and reflections—facilitated by me. From sessions three and four onward, the teachers gradually assumed greater responsibility, applying the methods themselves and leading parts of the sessions with growing confidence and ownership.

In other words, not only were learners exposed to systematic and thoughtfully curated teaching based on integrated arts pedagogy, but the teachers—and I, as the artist—also engaged in a parallel professional learning process. For me, this involved reading about the sessions, applying them directly in practice, and reflecting on how they unfolded in real time with both learners and colleagues. For the teachers, the process began with reading about the sessions, followed by experiencing them in action while I, as the artist, facilitated them, and ultimately applying them in their own classrooms. At our school, this multilayered approach fostered meaningful professional development and contributed to a deeper understanding of how the arts can function as both content and method in education.

In my view, this collaborative and layered approach not only strengthened both the teachers' and my own professional practice but also promoted a shared ownership of the pedagogical process. It deepened our understanding of arts-based learning, enhanced confidence in applying creative methods, and fostered a stronger connection between theory and practice in the classroom.

Learning activities

Arts, creative, and cultural activities—such as music-making, singing, dancing, theatre, literature, visual arts, and crafts—have been central components of the Art of Learning (AoL) curriculum throughout the project.

The way we work in AoL—the methods and activities we use—closely mirrors how I have previously worked as an artist and educator. That said, several activities (such as *The Pen Pal Song in* Theme 13 *Our Friends in Other Countries*) were new to me as well, and contributed to strengthening my professional skills and expanding my pedagogical toolbox.

For the teachers at our school too, some activities were already familiar, while others were entirely new. Games like *Red Light, Green Light* and *Simon Says* were well known to many, whereas role-playing exercises, specific

handicraft techniques, and certain collaborative games were introduced for the first time.

As a result, before each theme, we set aside time to explore these artistic approaches together, while also reflecting on the broader possibilities of what creative and cultural learning can encompass. For some teachers, the word "art" was primarily associated with painting or drawing; for others, with making music. In my view, their perspectives often reflected the school's established practical and aesthetic subjects, rather than a more expansive understanding of the arts—one that includes drama, dance, singing, creative writing, and beyond.

Over the course of the project, we reflected on how the hands-on collaboration between artist and teachers led to a noticeable shift. Both artist and teachers broadened their perspectives, and the teachers gained increased confidence in applying a wider range of arts-based methods in their practice. As one teacher expressed it:

> *"I didn't know there were so many possible ways of doing things—or that all of this could be considered art. I really feel like I've gained a whole set of new tools for my toolbox. And that I've stepped outside my own comfort zone".*

This reflection and the accompanying quote highlight a significant shift in teacher mindset over the course of the project. Through active, hands-on collaboration, and engagement with a broad repertoire of creative methods, teachers not only expanded their pedagogical toolkit but also developed a more nuanced understanding of what art can be in an educational context. Stepping outside their comfort zones became a space for growth, fostering greater confidence, creativity, and flexibility in their teaching practice.

The same applied to me in my role as an artist. The collaborative process deepened my own professional development, challenged me to reflect on my artistic identity within an educational setting, and invited me to adapt and expand my practice. In this way, the learning process became mutual, with both teachers and artist stepping into new territory—together.

Illustration: Working outdoors with the Colour Wheel in Theme 9: Kingdom of Colour. Credit: Art of Learning

The learners in our school also had differing levels of experience with the arts. Some had no previous exposure, while others had strong interests and regularly participated in cultural school programs or extracurricular activities involving visual arts, crafts, band, singing, writing, theatre, dance, and more. An important goal was to ensure that all learners—regardless of background, ability, or prior experience—could take part in a rich variety of creative and cultural activities. For example, in the theme *Kingdom of Colours,* learners were introduced to the colour wheel. In *The Shape Explorers,* they explored geometric shapes, and in *Energy Poetry,* they became familiar with the art of writing poetry.

At our school, both in planning meetings and classroom sessions, there was a strong emphasis on making AoL activities accessible to all learners while also providing appropriate levels of challenge. As collective learning is a central part of the AoL approach, learners who already had experience with the theme or art form were invited to collaborate with and support peers who were less familiar with the material. Most of the activities were designed without fixed answers, offering learners the freedom to dive into exploration, experiment with their ideas, and tackle challenges in ways that were uniquely their own, fostering creativity and individual expression. The structure of the sessions allowed learners to build mastery through repetition, while gradually advancing in complexity. Learners were given space to explore, make mistakes, self-regulate, problem-solve, and express their own ideas. The focus was on inclusion, engagement, and participation, with necessary adaptations implemented where needed. At our school, these adaptations included the use of microphones, sign language interpretation, translations into other languages (such as Chinese, Ukrainian, and Italian), and individual support with regulation and guidance. As one teacher noted: *"This learner is usually unable to stay in class, but now he seems really engaged. He is often drawn to teaching and learning where he doesn't always have to sit still and listen, but where he can explore and play on his own."*

I believe that this highlights an important aspect: that the activities were designed to nurture the whole child—not just the cognitive dimension of learning, but also the emotional, physical, and social aspects. The learning process was active, learner-centred, and rooted in experience. As a result, learners were able to think, feel, create, collaborate, move, express themselves, and actively engage in their own learning journey.

Teacher role

The Art of Learning (AoL) project was structured around thematic units, each comprising six sessions. Sessions 1, 2, 5, and 6 were co-facilitated by the teacher and the artist, while sessions 3 and 4 were led solely by the teacher(s). Over time, the collaboration between teachers and artists at our school matured, becoming more balanced and dialogic.

From the outset, the project emphasized active, equal participation from all adults in the classroom. At our school, teachers were seen not as observers, but as co-learners and co-creators—actively engaging in games, artistic activities, task adaptation, provided close support to the learners.

At the beginning of the project, one teacher expressed:

> *"I don't see myself as a 'typical' creative educator, but with the right support, I'm always up for trying new things."*

This moment exemplified both the projects and the artist's invitation to teachers to challenge fixed perceptions of their own practice. From my perspective, with ongoing encouragement and support, this teacher gradually built confidence and later reflected:

> *"I've now done things I never thought I would a year ago. It's been exciting to receive so many ideas and inputs from you."*

Another teacher, reflecting later in the project, shared:

> *"At the start, I found it difficult to join in all the games and activities. You really have to step out of your comfort zone. I wasn't used to sculpting with clay, singing, or playing like that. But looking back, I see how much I've grown. It was worth it. I've learned about myself and the kind of teacher I want to be—someone who dares to try new things and have fun."*

In the initial project phases (themes 1–12 in our school), sessions were primarily led by the artist,

with teachers occasionally contributing—for example, by leading warm-ups, facilitating group formations, or guiding reflection. As the project moved into themes 13–24, teachers assumed increased responsibility, eventually engaging in co-teaching as equal partners with the artists.

A central ambition of AoL—and of the artists' practice and role in guiding teachers—was to bridge the gap between educational theory and creative practice, making pedagogical ideas tangible through artistic exploration and co-creation. Underpinning this was the belief that all participants—learners, teachers, artists, school leaders, and facilitators—were learners, actively engaged in a mutual process of inquiry and development, through professional development seminars, co-planning sessions, and ongoing reflective discussions. A strong emphasis was placed on building trust, cultivating open dialogue, and encouraging mutual inspiration—creating a sustainable foundation for professional growth for both artist and teachers. Key pedagogical frameworks presented to teachers included theories on *EFs* by Diamond (2010, 2013), *Performative Learning Theory* by Østern, Selander & Østern (2019), The High Functioning Classroom, and *Artist's Signature Pedagogies* (Thomson et al., 2012).

For both me as an artist and teachers, this meant stepping into a space that encouraged experimentation, risk-taking, and reflection. As I see it, my role was pivotal in supporting the teachers—through sharing practical tools, igniting creative possibilities, and through offering emotional encouragement as we navigated unfamiliar ground together. A clear example of this support was found in the theme *"Shape Explorers"*, where the warm-up activity Carte Blanche involved learners moving according to cardinal directions and spatial coordinates. The artist or teacher acted as a 'geographer,' guiding the learners' movements. In the beginning, the activity was led by me, but as the teachers got to know the activity and grew more confident, they began to adapt and expand it—adding new layers of complexity and playfulness. Most teachers at our school described this process as energizing and professionally enriching. I hope and believe that this experience supported them in broadening their professional identity and in embracing more creative, embodied approaches to teaching.

Building on this, and as a part of the teachers' development, they were encouraged to plan and facilitate their own sessions (session 3 and 4). These lessons emphasized full-body engagement and learner-centred exploration. They often included familiar and unfamiliar warm-up games, and were framed within imaginative, story-driven contexts suitable for each theme. For example, a conventional mathematics task could be reimagined as a high-stakes mission or adventure scenario.

Another central pedagogical challenge addressed in reflections and training was how to facilitate creative learning without constraining learners' autonomy. Together we committed to valuing effort and risk-taking, supporting open-ended processes, and giving learners meaningful agency, choice, and space to reflect. A compelling illustration, from our school, of this approach emerged during the theme 20 *Habitat,* where learners worked in groups to design a living environment tailored to a specific global region. Midway through the process, they were challenged to adapt their design following a simulated natural disaster. The complexity of the task led to emotional tension—frustration, disagreement, and even tears. While our instinct might have been to step in and resolve the issues, we instead encouraged each other to observe and keep a distance. This decision allowed learners to navigate the challenges independently. Over time, they re-engaged, negotiated solutions, and resolved conflicts—demonstrating resilience and creativity. This moment powerfully illustrated the value of trusting learners to manage complexity and reaffirmed the principle that struggle is an essential part of learning.

Illustration: Modelling the activities in the classroom. Credit: Barbora Hollan

Another important dimension of the teacher role in AoL was inspired by performative learning theory. Here, the teacher is not a transmitter of fixed knowledge, but an initiator of impulses, a moderator, and a dramaturg—structuring meaningful frameworks for learning. One example of a framework designed to spark such engagement was the theme 23 *"Energy Inventions"*, in which students took on the role of energy experts preparing for a global energy summit. This narrative structure offered a clear framework while simultaneously promoting creativity, playfulness, and student agency.

At our school, teachers were encouraged to explore and adopt pedagogical strategies introduced by artists—both those brought in through the broader AoL programme and those shaped by the unique practices of the artist working with each school. This included creativity, a willingness to take risks, a strong focus on class community and inclusion, collaborative modes of work, outdoor learning, bodily engagement, and narrative-based task design. Learners were treated as central learning resources, and play was embraced as a powerful learning tool. These values aligned with both *The High Functioning Classroom* and *Artist's Signature Pedagogies*.

One teacher reflected on how the collaboration changed his perception of working with me as an artist:

> *"When I first heard we were going to work with an artist, I pictured a colourful woman with curly hair, a bit of an odd or somewhat eccentric character I wouldn't understand. But you turned out to be completely different from what I had expected—so kind, and someone I've learned so much from."*

For me, this reflection represents something deeply meaningful. I could sense, especially in the beginning, that some teachers carried preconceived ideas about what it meant to work

with an artist—expecting someone eccentric, unpredictable, maybe even difficult to relate to. Over time, as we got to know each other, I saw those assumptions slowly dissolve. What grew instead was mutual trust, respect, and a shared sense of purpose. Personally, I found it incredibly moving to witness that shift. It reminded me how important it is to meet each other with openness, and how powerful it can be when we allow ourselves to be surprised by one another. This kind of collaboration—built on dialogue, curiosity, and shared vulnerability—holds so much potential, not only for professional growth, but for real human connection. I truly believe the exchange was reciprocal. Working closely with the teachers taught me just as much—about pedagogy, creativity, and collaboration—as I hoped to offer them in return.

Materials and Resources

As materials and resources were provided by the PD & Support team, we were able to spend less time sourcing, preparing, or producing teaching materials. For us, this allocation of resources freed up valuable time for pedagogical planning, guidance, and reflection—particularly concerning the use of materials and how to best implement the sessions.

Given the artist and teachers' varying experience with artistic techniques and tools, a portion of the planning time at our school was dedicated to reviewing different art methods and reflecting on material use. These sessions also included discussions on learner autonomy and open-ended problem-solving—serving as a contrast to more traditional school tasks, which often involve fixed outcomes and limited learner choice.

For example, in the theme *"12 Free Choice!"* learners explored the prehistoric world and took on the role of archaeologists. After learning about dinosaurs and engaging in simulated excavations, the learners were invited to sew their own dinosaur plush toy using felt and a simple embroidery method (blanket stitch). Before introducing the theme in class, teachers received training from me in the stitching technique and guidance on how to facilitate it with learners. Importantly, the activity was designed to foster creative freedom: learners chose which dinosaur to make, designed their own templates, and selected the colours and details—resulting in highly individualized final products.

This emphasis on material freedom and learner agency was a consistent feature across all Art of Learning (AoL) themes. Assignments were designed without a single "correct" answer, aiming instead to encourage creative exploration and the recognition that many outcomes are possible within one task.

A similar approach was used in the *"Energy Inventions"* theme. Here, learners at our school brought reused materials from home—ranging from keyboards and computer mice to shoes, CDs, wires, cardboard, and more. They were then tasked with designing and building a prototype for an energy-related invention. Choosing and adapting materials based on the needs of their invention became a meaningful part of the creative and problem-solving process, helping to promote ownership and inventive thinking within a structured yet flexible framework.

Throughout the AoL programme we continuously emphasized and reflected on the importance of how time, space, and materials are organized in the learning process. Inspired by Nordin-Hultman (2004), the use of diverse materials—and their varied applications—was viewed as a fundamental part of meaningful, learner-centred learning. At our school, this involved a continuous process of reflecting on—and aspiring to—intentionally varying the tools used in the sessions, as well as carefully selecting the types of materials. In the theme "Energy Poetry", for example, pens were used instead of pencils in one activity, as it was important that the students' writing could not be erased. We also framed the exploration of

Illustration: Invention from Theme 23: Energy Inventions. Credit: Erik Brandsborg / Arts for Young Audiences

materials and tools as creative experiments—posing questions such as, "What do you think it's like to draw this with oil pastels? Let's experiment and see!", "How do you think the task might change if we create the product in 3D instead of 2D? Let's try it!", or "What if, instead of writing it on paper, we write it in the air? What happens then?"

Additionally, the project embraced the use of objects and materials as learning stimuli, to spark curiosity and initiate new ways of learning. Examples of this include emotion cards, which supported the exploration of feelings through both images and words during the reflection in theme 14 The Lonely Creature; geometric magnifying glasses used to identify specific shapes in the theme Shape Explorers; and the construction of planets to scale—both in size and distance—in the theme Solar System. Materials were also introduced through engaging "triggers"—e.g. a golden chest containing different objects and/or sounds.

Grouping

At our school, already after working on themes 1-6, there were several things that the teachers had noticed in relation to the teaching, among these the diversity and variation in the way in which the groups were divided into random groups and pairs. In the planning conversations with me, one of the teachers shared:

> *"I originally thought I had to assign all the pairs in advance to make sure the learners would be able to work well together. But by letting everyone try out different groupings and collaborate in many constellations, it has led to a situation where all the learners in our class can now work together with anyone."*

To me, it seems that this quote illustrates a significant shift in the teacher's approach to group work—from a mindset of control and pre-selection to one of trust and openness. By allowing learners to explore various group constellations, the teacher observed increased

collaboration skills and social flexibility among the learners. Rather than limiting learners to "safe" groupings, the experience demonstrated that diverse and dynamic groupings can foster inclusivity, adaptability, and a stronger classroom community.

Several of the teachers at our school commented that they had been inspired by the way learner groupings were handled during the AoL sessions, and many had begun using similar strategies in their own teaching beyond the project. Some teachers initially questioned the rationale behind designing the activities this way, which opened rich pedagogical reflections on what these practices contributed to our teaching—such as variety, surprise, and the fact that all learners had the opportunity to collaborate with every other classmate within a short timeframe. As the artist involved, I fully supported this approach and shared the teachers' enthusiasm, as I also experienced how these grouping strategies contributed to increased engagement, social connection, and dynamic classroom interaction.

The theoretical foundation for this approach was based on Adele Diamond's (2013) work on the relationship between EFs and the arts, which emphasizes the importance of social interaction, flexibility, and variation in learning. Accordingly, at our school, we used a broad spectrum of grouping strategies—working alone, in pairs, small groups, larger groups, and as a whole class—and varied how groups were formed: randomly, through games, based on seating arrangements, counting, matching characteristics (e.g., same shoe size), or even intentionally pairing learners with those they hadn't worked with before or were curious about.

To me, it seems that these practices not only brought energy and unpredictability into the classroom but also supported our learners' development of social skills, adaptability, and inclusive collaboration. In this way, grouping became both a pedagogical and relational tool—one that fostered connectedness and helped build a stronger sense of community within the class.

Location

In the AoL programme, we deliberately designed a pedagogical environment characterized by diversity, mobility, and a dynamic use of space. Activities were not confined to traditional classrooms but extended into a wide range of physical environments—indoors and outdoors, in public areas, nature, basements, hallways, and even fictional or reimagined spaces created within the classroom itself (e.g. a forest, outer space, or an energy exhibition space). This approach was inspired by Nordin-Hultman's (2004) posthuman pedagogies, which challenge conventional, anthropocentric learning environments by recognizing the pedagogical potential of materials, spaces, and spatial relationships. It also drew from Diamond's (2013) emphasis on engaging the world around learners as a source of cognitive and creative stimulation, as well as the Artist's Signature Pedagogies (Thomson et al., 2012) and theories of The High Functioning Classroom, all of which advocate for flexible, learner-centred learning environments that promote agency, engagement, and embodied learning.

In the planning meetings at our school, it became clear that this spatial fluidity was new to many of the participating teachers. Most teachers were accustomed to static classroom arrangements—with fixed desks and chairs—and to the occasional use of outdoor areas like the schoolyard or designated specialized rooms such as the gymnasium, playroom, or arts and science labs. What was less familiar, however, was the idea of teaching in non-traditional or mobile spaces, such as hallways, basements, attics, or through "wandering" teaching. Equally unfamiliar was the use of imagined or immersive environments within the classroom. These spatial shifts challenged conventional norms and invited both teachers and learners into new, more exploratory modes of learning.

Illustration: Using familiar spaces in new ways. Warm-up from Theme 15: Viruses, where learners are feeling their own breathing, accompanied by calm contemporary music. Credit: Barbora Hollan

Initially, both teachers and learners found these settings disorienting. As one of the teachers said: "I prefer having the learners behind desks and chairs. It provides a sense of security—for both them and me—to know what we're dealing with." Several teachers reflected that the lack of familiar spatial anchors made them feel uncertain or uncomfortable. Yet, over time, many described a shift: as these new spatial practices became more familiar, they began to feel not only safer but also more creatively stimulating. By the end of the project, several teachers expressed a desire to break further away from the conventional classroom model and actively sought out new and unexplored learning environments—demonstrating what I see as a tangible shift in mindset that aligned with the project's theoretical foundations and intended aims.

Time

Each Art of Learning (AoL) session was structured around three core components: *Warm-up, Main Activity, and Reflection*—with the main activity forming the substantive core. Sessions were designed to last 90 minutes, with built-in flexibility to adapt to the group's energy levels and engagement. If learners were tired, the session could be shortened or include a break; if they were highly engaged, the full duration was used. Importantly, schools were not permitted to introduce fixed breaks or routinely shorten sessions, as this flexibility was intended to support pedagogical responsiveness rather than logistical convenience.

Before the project began, several teachers at our school expressed concerns about learners' attention spans, suggesting that "children

won't be able to stay focused for more than 20 minutes without a break." The role of time quickly emerged as a central theme in reflection sessions among artist, teachers, and the AoL team—especially during Prototypes 1 and 2. Some teachers at our school worried that the 90-minute format would exceed learners' capacity for focus, while others questioned how to fit complex tasks into a constrained time frame. These concerns reflected dominant time logics within traditional schooling—structured around segmented schedules and efficiency-oriented pacing. As Neumann (2021, in Hundevadt 2022: 166–167) argues, AoL represents a counter-discourse to such practices, proposing alternative temporalities for learning.

Gradually, however, the teachers at our school had their initial assumptions challenged—and ultimately disproved—as they observed learners becoming deeply engaged in the thematic content and creative tasks. In my view, this shift did not happen overnight; it developed gradually as both learners and teachers became more familiar with, and confident in, this alternative pedagogical rhythm. From my experience, the extended time frames enabled immersion, experimentation, and the emergence of flow-like states of concentration—conditions that are often inhibited by traditional, rigid time structures.

In this context, time was reimagined not as a constraint, but as a pedagogical resource. Teaching practices emphasized learner responsibility, meaningful choice, and space for reflection, risk-taking, and problem-solving. These practices were grounded in pedagogical theories that prioritize agency and depth over efficiency—particularly Thomson et al.'s (2012) concept of Artist's Signature Pedagogies, Diamond's (2013) emphasis on sustained engagement to support EFs, and Nordin-Hultman's (2004) critique of standardized time regimes in traditional classrooms. Collectively, these frameworks informed a shift toward slower, more relational teaching, where learners could self-regulate, explore deeply, and feel trusted in their learning journey.

Over the course of the project, both teachers and learners at our school increasingly embraced this redefined approach to time. The teachers developed strategies for lesson pacing that fostered autonomy and engagement—and many reported that learners often lost track of time due to their high levels of involvement. As Hundevadt (2022: 4, 80–83) notes, AoL's reimagining of time, space, and learning processes represents a deliberate challenge to institutional norms, offering an alternative model for holistic, responsive education.

Final considerations

Looking back on the process described in this chapter, I am struck by how deeply the formative evaluation work influenced not only the learners and teachers, but also my own development as an artist in school. The collaboration created space for reciprocal learning, where professional roles were expanded and challenged through trust, openness, and shared exploration.

The continuous conversations—both formal and informal—played a crucial role in creating an environment where reflection was not separate from practice, but an integral and living part of it. We explored how time, space, materials, grouping, and narrative could be used pedagogically, and we tested these ideas together, sometimes failing, often adapting, and frequently learning.

What emerged was not a fixed method, but a mindset: a way of working rooted in attentiveness, curiosity, and co-agency. I believe this is one of AoL's most lasting contributions—not only what we did, but how we did it. Through this project, I have become more aware of the kind of learning I want to stand for: one that values the whole child, that allows teachers and artists to grow together, and that treats creativity not as a supplement to learning, but as its very heart.

6.4 Formative Evaluations: Summary of Key Findings

The formative evaluation of the Art of Learning (AoL) project revealed several critical insights that transformed both the curriculum and the learning environment.

Iterative Adaptation and "Irresistible Learning": In section 6.1, continuous feedback from various evaluative activities—ranging from internal reflections and classroom observations to detailed discussions with teachers and artists—demonstrated that learning thrives when students are encouraged to learn by doing. Rather than simply receiving pre-instruction, learners who engaged in creative, hands-on tasks (even when these tasks were challenging) ultimately experienced deeper engagement, a stronger sense of mastery, and a genuine enjoyment of learning. The concept of "irresistible learning" emerged as a core quality: when lessons are designed to be meaningful, exploratory, and authentic, students naturally remain drawn to and invested in the process.

External Validation of Holistic Approaches: Section 6.2 provided validation through independent observations by a Hungarian expert team. Their findings confirmed that the AoL methodology not only enhanced academic foundations but also significantly supported creative expression and socio-emotional development. According to their observations, the integration of artistic methods reinforced learners' creative dispositions and contributed to a more inclusive and flexible learning environment, thereby complementing traditional, subject-based instructional strategies.

Reciprocal Professional Growth and Reflection: In section 6.3, the artist's personal reflections shed light on the transformative power of ongoing, collaborative formative evaluation. The process fostered a two-way dialogue where both teachers and the artist expanded their professional roles. Teachers shifted from a mindset of control to one of trust and openness—experimenting with groupings, adapting activities, and gradually taking ownership of the creative process. This mutual exchange not only redefined teaching practices, but also strengthened the sense of co-agency, ultimately enriching the educational experience for all participants.

Collectively, the formative evaluation across these sections underscores that AoL's strength lies not just in its arts-based framework, but in nurturing a reflective, dynamic process that fosters inquisitiveness, co-agency, and holistic development. This positions arts-integrated learning as a powerful and lasting model for holistic education.

Cred.: Erik Brandsborg / Arts for Young Audiences

7

FROM RESULTS TO DESIGN: A SYNTHESIS

"AoL has broken down some barriers, where you have thought, "oh no, you can't do that, how can you justify spending time on this?"- There's so much more that's possible in a classroom than just sitting and reading at a desk."

(Teacher 3, Nemeth 2025: 28)

In this final chapter, the findings from the evaluations are bridged into a set of practical design principles for holistic, arts-integrated education. Drawing on in-depth internal reflections, external expert evaluations, and personal classroom insights, the ways in which creative, process-oriented teaching enhances learners' cognitive and socio-emotional skills are demonstrated. Further, the transformation of teachers into creative co-facilitators and reflective practitioners is highlighted. This synthesis offers a blueprint—the essence of "irresistible learning"—that invites educators to reimagine their classrooms as dynamic spaces where inquisitiveness, arts activities, creativity, and holistic growth are central to every lesson.

The project has resulted in several outputs:

- **The intervention and curriculum:** The first output is the intervention tested and refined during 48 weeks in 9 primary schools across Norway and Hungary, as described in this report, and its curriculum.

- **The professional development program:** The second output is the professional development program of the participating teachers and artists, described in this report, chapter 5.

- **The effect study:** A third output is the effect-study of the intervention, researching the intervention's impact on the learners' EFs, and their learning capacities. This output is summarized in a separate evaluation report (Håkanson et.al 2025), building from the reports ""A Lifeline Through Learning" (Nemeth et.al 2025) and "The Yellow-Red test in the 'Art of Learning' program" (Kleiven and Kaderják 2025).

- **Continuation projects:** A fourth outcome of The Art of Learning is the development of continuation initiatives such as **NYKÅL** (New Art of Learning), which explores how the AoL methodology can be more deeply rooted in school structures through experimentation, dialogue, and iterative practice. **SPISSKÅL** (Specialist Art of Learning) is a further development, driven by one of the intervention school's desire to continue AoL-based work. The project focuses on strengthening teachers' expertise in arts-based methods, offering learners creative learning opportunities, and sharing the AoL approach locally, nationally, and internationally.

- **Design principles:** A fifth output is the knowledge generated from this process, the 'how' and 'why' of the intervention is summarized in a set of 'design principles' for holistic teaching and learning.

The final part of this report is dedicated to the fifth output: The design principles for holistic teaching and learning.

Art of Learning: Design principles for holistic and irresistible learning

The design principles for holistic teaching and irresistible learning are developed based on a view that the purpose of education is for learners to have a meaningful life here and now, where they are part of a safe social arena, they are being challenged, are mastering, are motivated, their voices are heard when expressing their opinions and feelings, they are having fun, and they are thriving while learning.

The Art of Learning project, from which the design principles are derived, have shown effects in terms of growth in a number of areas (Håkansson et. al 2025; Nemeth et.al 2025):

- Executive Functions, including focus, flexibility, and self-regulation
- Problem-solving skills
- Social competences, inclusion and collaborative skills
- Enhanced Engagement and Mastery
- Creativity (experienced by the children as freedom of thought)
- Personal Growth in learners; The project helped ""open up from inside myself", "I dare to speak up more" and "I feel bigger than I was when I started".
- Learners are thriving and having fun while learning

The following design principles aim to capture the key characteristics of the Art of Learning as an educational intervention, and they are designed to illustrate how practitioners and school authorities can implement practices that support holistic teaching and irresistible learning, and to illuminate the ways schools can be redesigned to support all learners.

10 pillars of holistic and irresistible learning

In this model, 10 pillars of holistic and irresistible learning are presented. The pillars are separated and presented individually, but they represent and should be treated as an interconnected whole. The model is based on the knowledge generated from the Art of Learning program; from the theoretical framework, the conceptual framework, the designed curriculum; the tested intervention; and the evaluations. The model has been iterated several times, based on feedback from its users: teachers and artists in school.

How to use the model as a teacher/ artist/ pedagogue

- Hang it above your desk at work and use it as a checklist when wanting to develop your pedagogical practice towards holistic and irresistible learning.
- Use it as a support tool when testing out smaller or larger parts of the Art of Learning curriculum, to understand the pedagogy from which the curriculum has been designed.

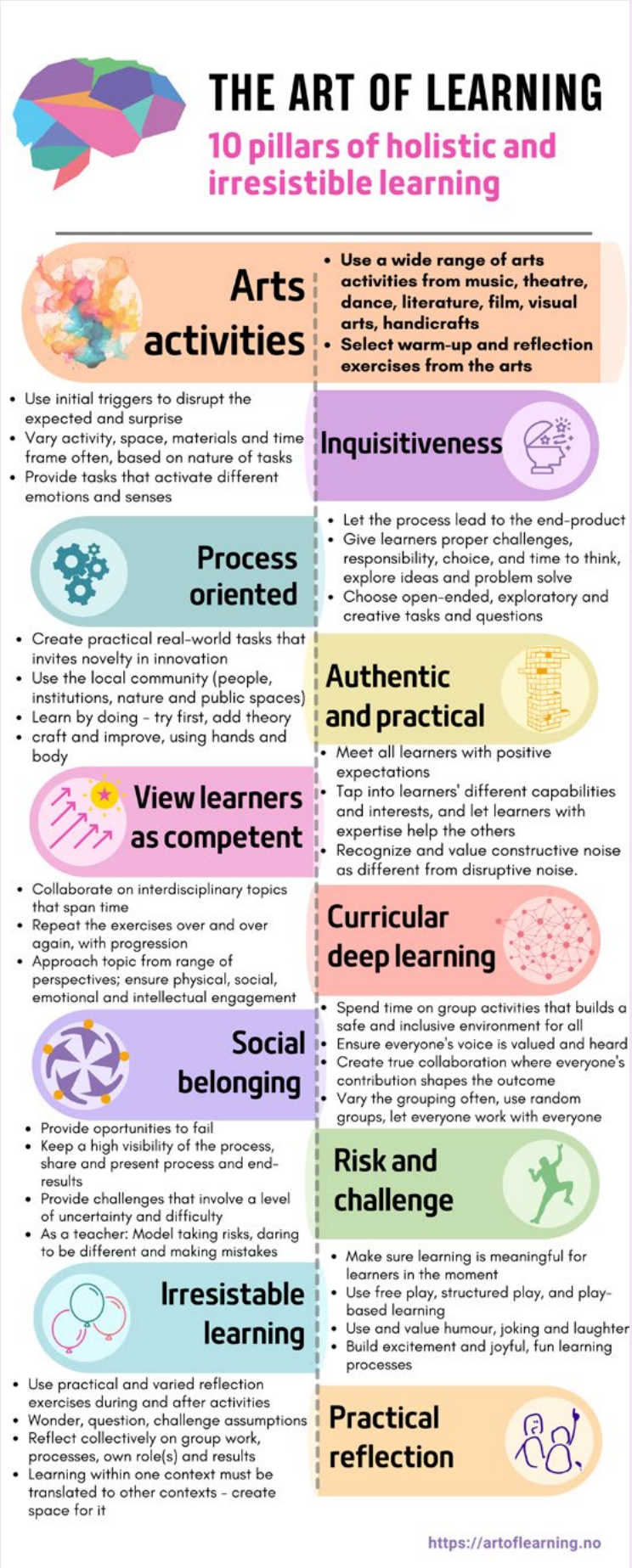


Figure 25: 10 pillars for holistic and irresistible learning.
Credit: Hundevadt / Art of Learning

The support-structure for holistic and irresistible learning practices

As part of the design principles, a set of support-structures has been developed to support the use of Holistic and Irresistible learning. These are:

The Curriculum (Learning sessions – Art of Learning**)**
Here you will find:

- 24 thematic, interdisciplinary art-based curriculums
- All 24 themes are available in both English, Norwegian and Hungarian
- Attachments (templates, presentations, list of materials needed) are available for download in both English, Norwegian and Hungarian

The Handbook (https://artoflearning.ktoa.hu/handbook**)**
Here you will find a complete support system for an intervention, including recruitment and training materials (templates, guidelines, presentations etc.) for:

- Artists
- Schools
- Teachers

The Handbook also includes the Professional Development Program for teachers and artists.

The Webpage Art of Learning (https://kunstenalare.no)
Here you will find:

- News
- Contact information
- Information about the different Art of Learning projects, including the continuations NYKÅL and SPISSKÅL
- Instructional videos showing exercises from the AoL

The structures needed for integrating these practices in school systems

Although the presented design principles will resonate with most educators, they are far from integrated in existing school systems. The integration of these practices can be done in different ways:

A. One teacher a time: Possible if they are supported with a professional development program including an in-school artist as a critical friend (like Art of Learning). This approach is best supported by i) a revision of the hiring policies for education, including arts into the list of basis subjects, thus enabling teachers with masters in the arts and pedagogy to be employed on a par with teachers with basis-subject competencies, ii) encourage and financially support in-service training in practical and aesthetic subjects for teachers, iii) introduce drama and theatre as a compulsory subject in primary and lower secondary education.
B. Integrated into teacher education: By integrating the holistic, arts-integrated and exploratory pedagogy principles in a compulsory course in teacher education, student teachers within all subject combinations will be able to bring the principles into schools as teachers. Such a course needs to be modelling the principles, with emphasis on filling a didactic toolbox with arts-based activities tested in practice. Such a course is best supported by restoring practical-aesthetic subjects as compulsory for all teacher students within all subject combinations, including drama.
C. Redesign policies and practices: If the purpose of education is the equitable, holistic development of each learner, the knowledge generated from this program can be used to redesign policies and practices to create settings that unleash the potential in each learner. The artificial distinction between kindergarten and school pedagogy should be removed, so that all the good research-based pedagogy from kindergarten can be incorporated and effective into school pedagogy. Children born between October and March (this is relevant to Norway, especially) should be given the choice to either wait for another year to start school, or even to start early, based on parents' and kindergarten teachers' advice. This will probably also reduce the need for special needs assistance. And, generally: Children could be allowed one more year in Kindergarten before starting school.

Final Remarks

The set of design principles are meant to support and assist teachers, artists and educators in selecting and applying a holistic and irresistible learning pedagogy where children thrive while learning, and at the same time are developing collaborative skills, problem-solving skills and creativity and practicing their EFs. The set of design principles presented here has been tested in a significant number of schools across different educational systems in different countries, with learners in the age range 5-9 years old. When implemented in a new context, that context may resemble those from which the design principle originally emerged, potentially making the results applicable to a broader group of learners or similar setting. However, every context has its unique characteristics, and the design principles can provide guidance and direction, but not certainties.

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