Unblack the Box.
Foundations for Media and ICT Education
International Campus Waldorf
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"We live inside in a world which is produced by human beings, which is formed according to human thoughts, ***which we use and of which we understand nothing.*** *This fact that we understand nothing of something that is formed by man, which is basically the result of human thoughts, has a great significance for the entire human soul and spirit mood. People just have to actually numb themselves so that they don't perceive the effects that are enacted from this side. [...] The worst thing is to witness the (hu)man-made world without putting a focus on this world. The art of education and teaching must be thoroughly permeated by this realization. " (Steiner, 1974, p. 162).*

"Ask yourself whether there are not numerous people today who use the telephone, the tramway, and one can even say the steamship, without having any idea of what actually happens in the steamship, inside the telephone, and in the movement of the tramway car. Within our civilization, man is completely surrounded by things whose meaning remains alien to him. This may seem insignificant to those who believe that only that which takes place in conscious life has meaning for human life. Certainly, in consciousness one can live quite well if one just buys a tramway ticket and rides to the station to which one wants to go, or if one ***receives a telegram without having any idea how it came about, without ever having seen anything of a Morse apparatus****. For the ordinary consciousness, one may say, this is indifferent; but for that which takes place in the depths of the human soul, it is precisely not indifferent; man in a world of which he makes use, and* ***the sense of which he does not understand, is like a man in a prison*** *without a window through which he could look out into the open countryside." (Steiner, 1985b, p. 253ff.)*

"Media education must follow the course media evolution" (te Wildt, 2015) .

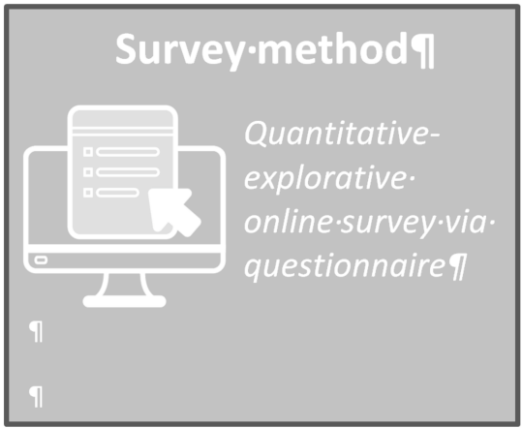
Justifiable compromises ("berechtigte Kompromisse"). Steiner, 2015, adress of August 20, 1919)

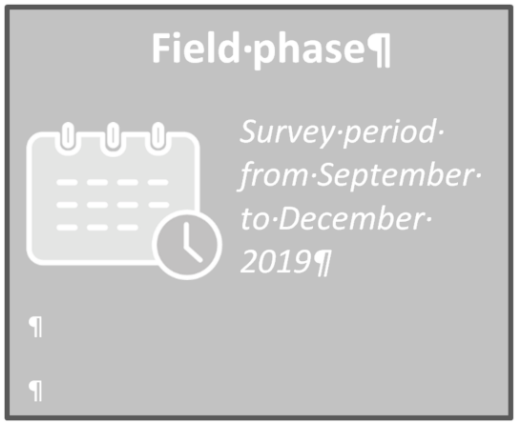
"We must have a lively interest in everything that is going on in time today, otherwise we are poor teachers for this school. We must not only apply ourselves to our particular tasks. We will only be good teachers ***if we have a lively interest in everything that is going on in the world****." (Steiner, 2015, p. 20) .*

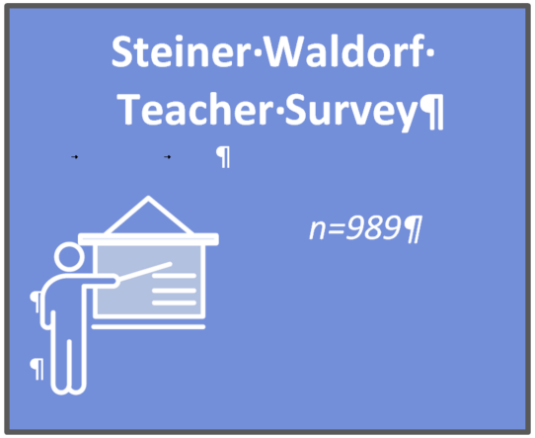
"Therefore, because I am not a program-man, because I do not give programs and utopias, but because I am one who wants to have reality grasped as reality, therefore I do not care at all that all my suggestions are carried out to the last detail. If at any point one will begin to work in the way that is in the spirit of what I have said today, then ***let not one stone of the content I have conveyed be left upon another****; something quite different will perhaps result, but it will then still be something that is justified in relation to real life." (Steiner, 1985a) .*

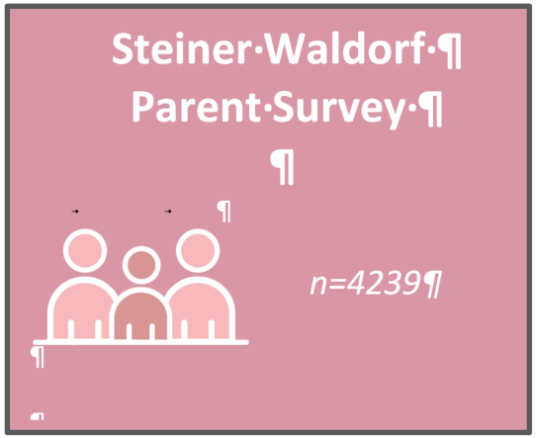
"Humankind sleeps with all its inventions and achievements at the edge of an abyss. We must turn our gaze from the outside of the conquered world back to our retarded inside." (Maria Montessori, Die Macht der Schwachen, S. 108).

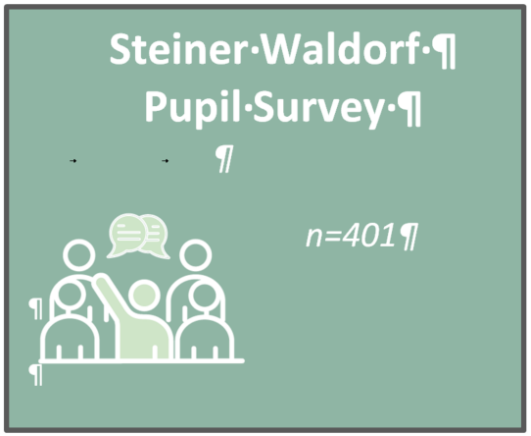
MünDig Study: Mündigkeit und Digitalisierung (= Maturity and Digitalisation) Montessori, Waldorf, Nature/Outdoor educational institutions. Results from the Steiner Waldorf Sample
https://www.alanus.edu/fileadmin/user_upload/MuenDig-study__Preliminary_version.pdf











Domain Structure from Media Competence Framework (Medienkompetenzrahmen NRW)

Closely related but not congruent to European DigComp Stucture

DigComp	Media Competence Framework NRW
1 Information and data literacy	2. Search, judge and organize information
1. Operate and Apply	
1.1	2.1; 2.2
1.2	2.2; 2.3; 5.2
1.3	1.2; 1.3
2. Communication and collaboration	2. Communicate and Cooperate
2.1	3.1; 1.2
2.2	3.1; 4.1
2.3	3.3
2.4	3.1
2.5	3.2
2.6	5.3
3. Digital content creation	4. Produce and present 6. Solve Problems and Model
3.1	4.1; 4.2
3.2	4.1; 4.2
3.3	4.3; 4.4
3.4	6.1; 6.2; 6.3
4. Safety	1. Operate and Apply plus all last row (x.4) in all domains
4.1	1.1; 1.3; 1.4
4.2	1.4; 3.4; 4.4
4.3	2.4; 3.4; 5.3; 5.4; 6.4
4.4	(1.1; 1.2)
5. Problem solving	6. Solve Problems and Model 1. Operate and Apply
5.1	1.1; 1.2; 6.1; 6.3
5.2	1.2; 5.1; 6.3
5.3	4.1; 4.2
5.4	-
Not explicitly covered	5. Analyse and Reflect

European Parliament resolution of 25 March 2021 on shaping digital education policy (2020/2135(INI))

E. whereas mastering **basic transversal skills**, such as numeracy, critical thinking and social communication skills, is a **fundamental prerequisite** for the acquisition of digital skills and competences […] whereas the Digital Competence Framework for Citizens acknowledges the importance of soft skills, including communication, collaboration and content creation, which are often taught **through the humanities, arts and social sciences**;

N. […] whereas **teachers' freedom to choose the best combination of teaching methods** and content should remain at the heart of the educational process.

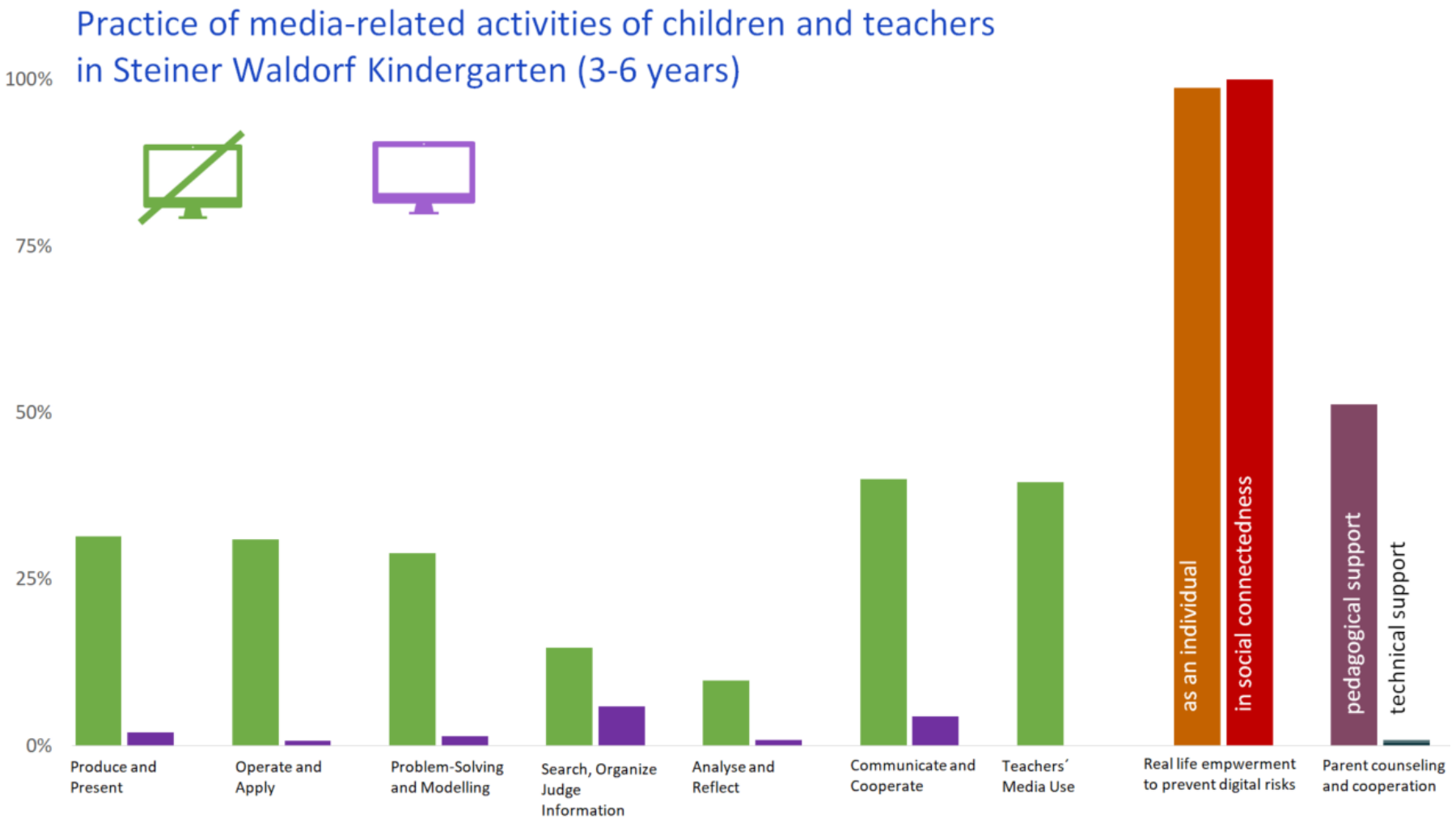
- *Algorithmic recommendation systems of online content*
- *Contact and dating apps*
- *Cost traps, online advertising and advertising violations*
- *Cyberbullying*
- *Cybergrooming*
- *Cybersex*
- *Cyberstalking*
- *Excessive self-promotion*
- *Extremist content*
- *Fake profiles or fake accounts*
- *Fear of missing out*
- *Gender stereotypes*
- *Hate Speech*
- *Health Challenges*
- *Identity theft/"being hacked"*
- *Immersive experience through virtual reality influencers*
- *Internet addiction and excessive use, chain letters*
- *Pornography and posing pictures*
- *Pro-ana/pro-mia forums, profiling and evaluation.*
- *Promotion and distribution of substances hazardous to health using the example of legal highs*
- *Propaganda (incl. Fake News)*
- *Remix and sharing culture (copyright infringement).*
- *Self-injurious behavior*
- *Self-Tracking*
- *Sexting*
- *Smart speaker and connected toys*
- *Streaming/non-linear access to moving images and audio files*
- *Suicide Forums*
- *Tasteless offers*
- *Violent computer/console games and game apps*
- *Viruses and malware.*

Prevention of digital risks

Cognitive-based (deterrence and critical reflection) risk-specific approaches

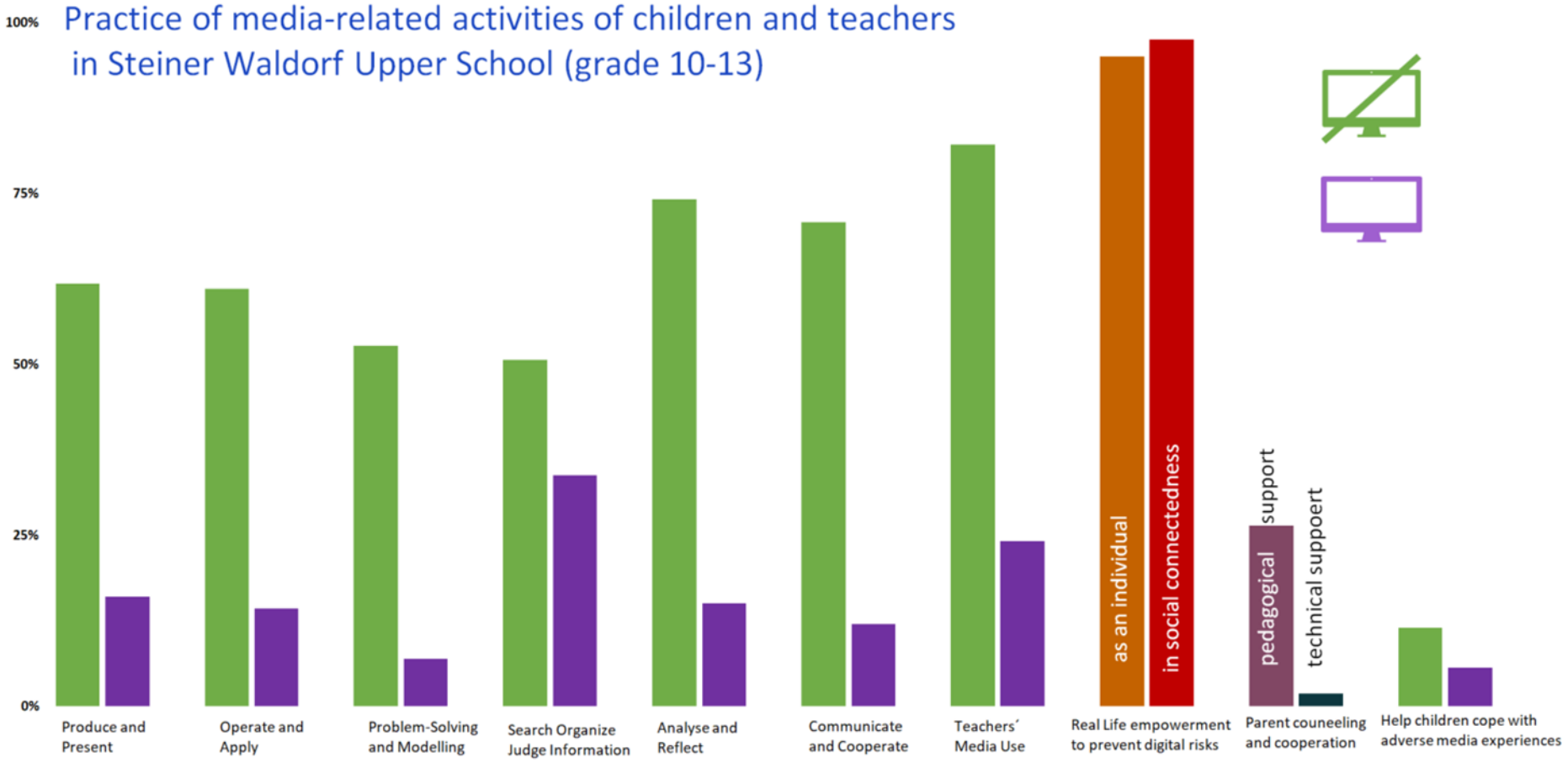
THEREFORE: Look for common risk factors and protective factors for all/most of these risks:
Life Skills Training, Salutogenesis

Resource-oriented non-risk-specific approaches to health promotion and prevention



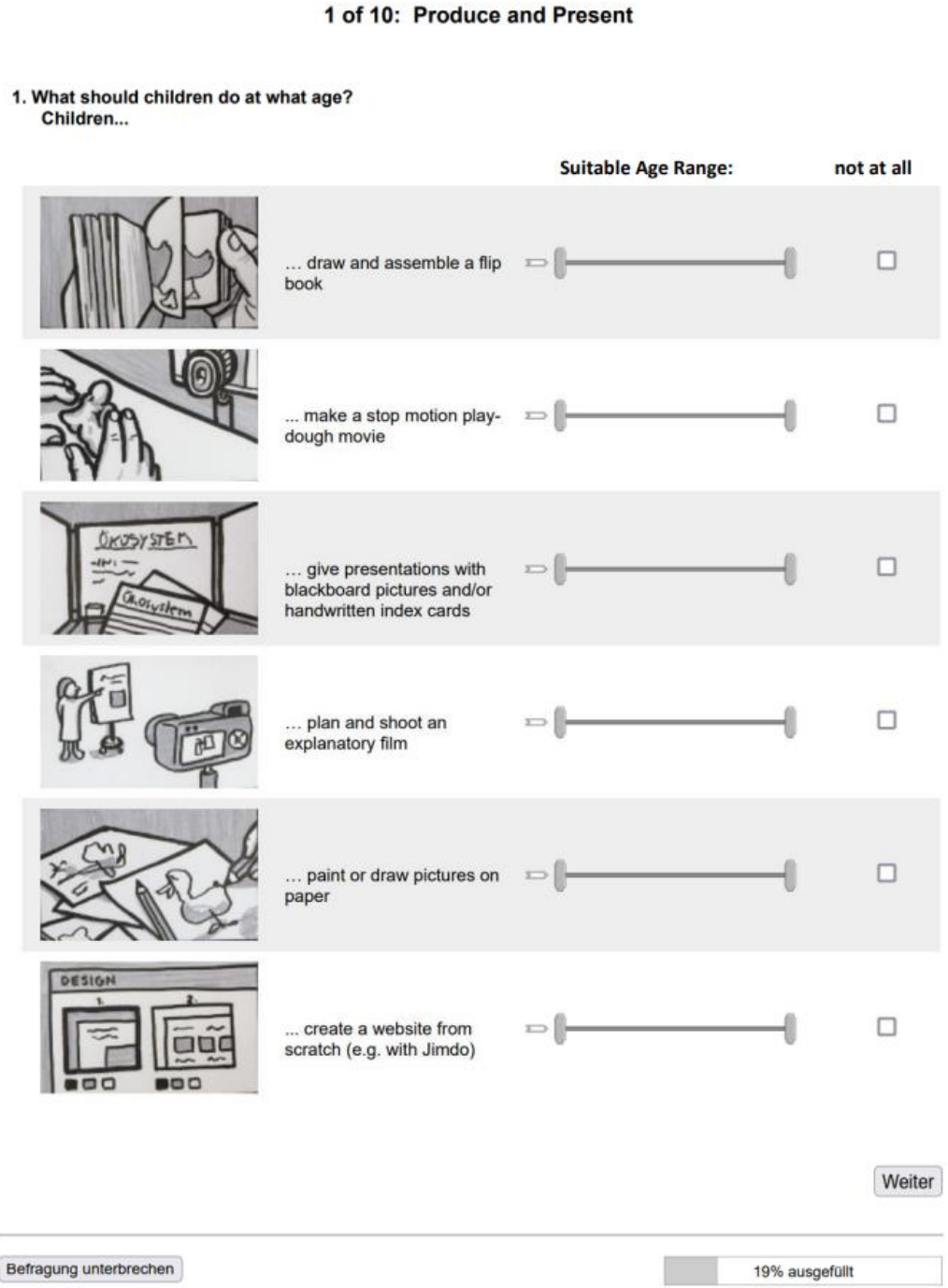
Frequency of putting media-related activities into practice in the ten MünDig domains by children/staff during childcare hours in Steiner Waldorf ECE settings as reported by the teachers (3 to 6 years), cumulated results for “quite often” and “very often”, n=214-303 (Bleckmann et al 2023 - preview of MünDig Study results in English available here (reports on results section))

Practice of supporting children in the acquisition of digital skills and competences – part z: Steiner Waldorf Upper Schools

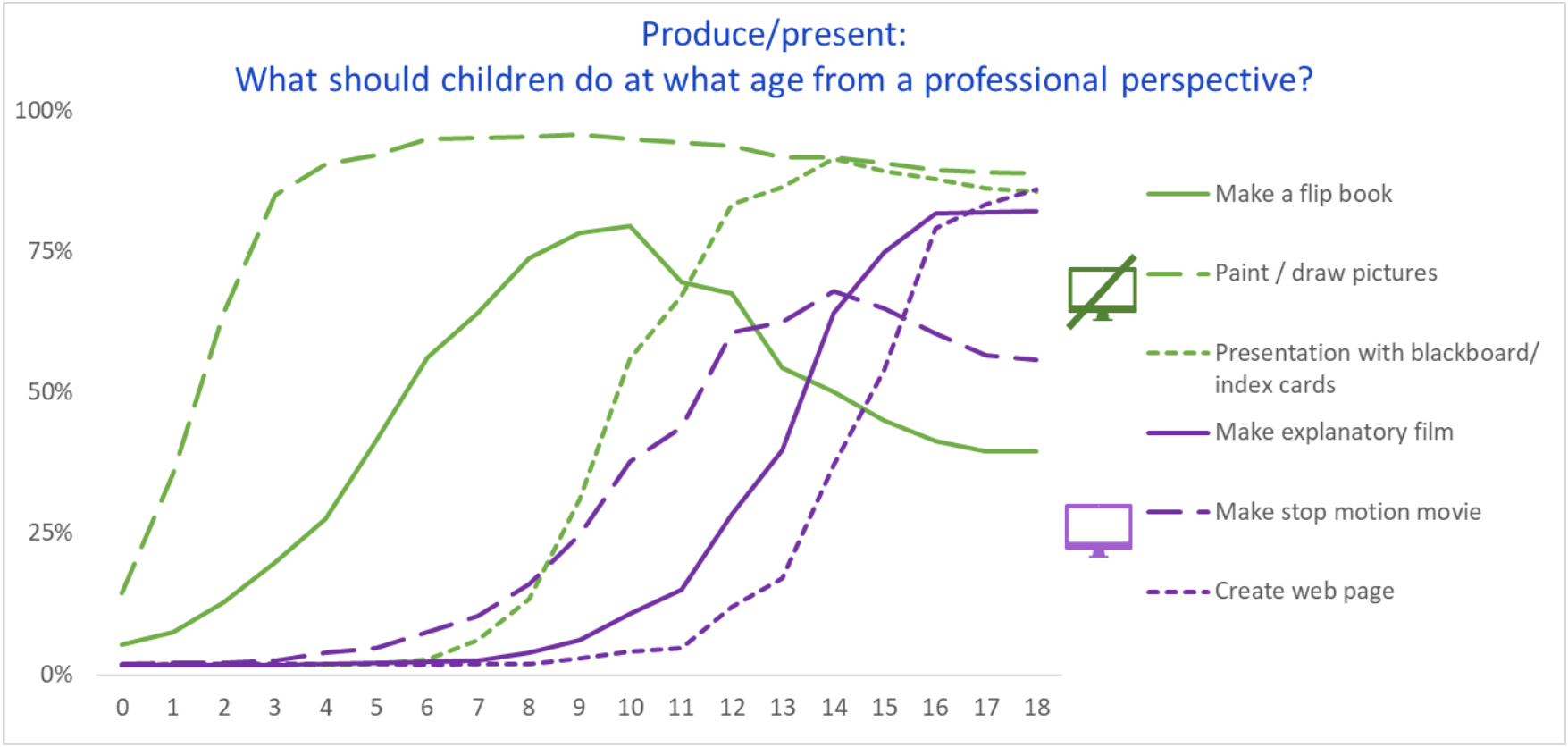


Frequency of putting media-related activities into practice in the ten MünDig domains by children/teachers during school hours in Steiner Waldorf schools as reported by Upper School teachers (grade 10-13), cumulated results for “quite often” and “very often”, n=52-81 (Bleckmann et al 2023 - preview of MünDig Study results in English available here (reports on results section))

Steiner Waldorf Attitudes towards supporting children in the acquisition of digital skills and competences – Kindergarten teachers (3-6 years)
Domain 1: Produce and Present

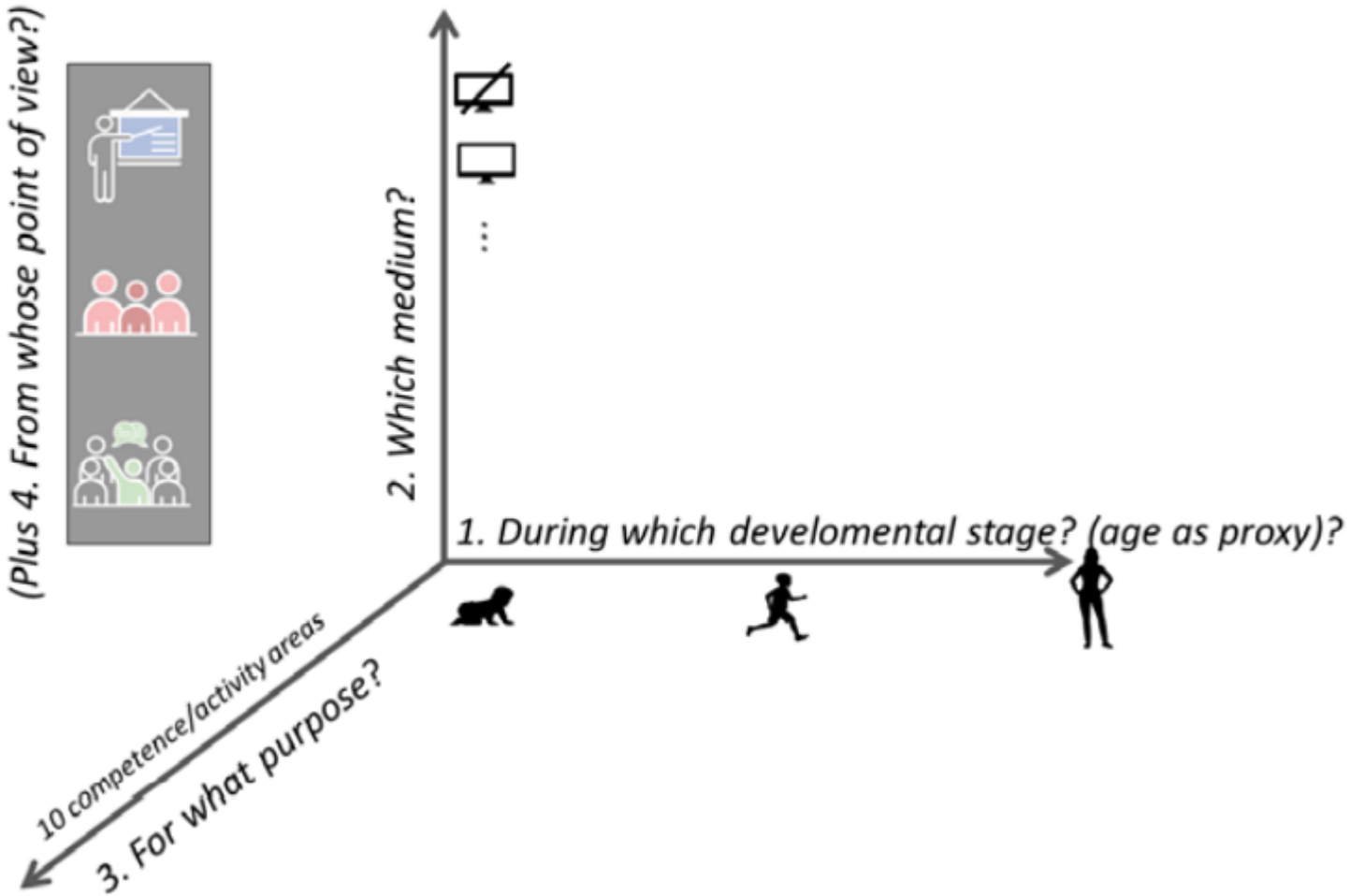


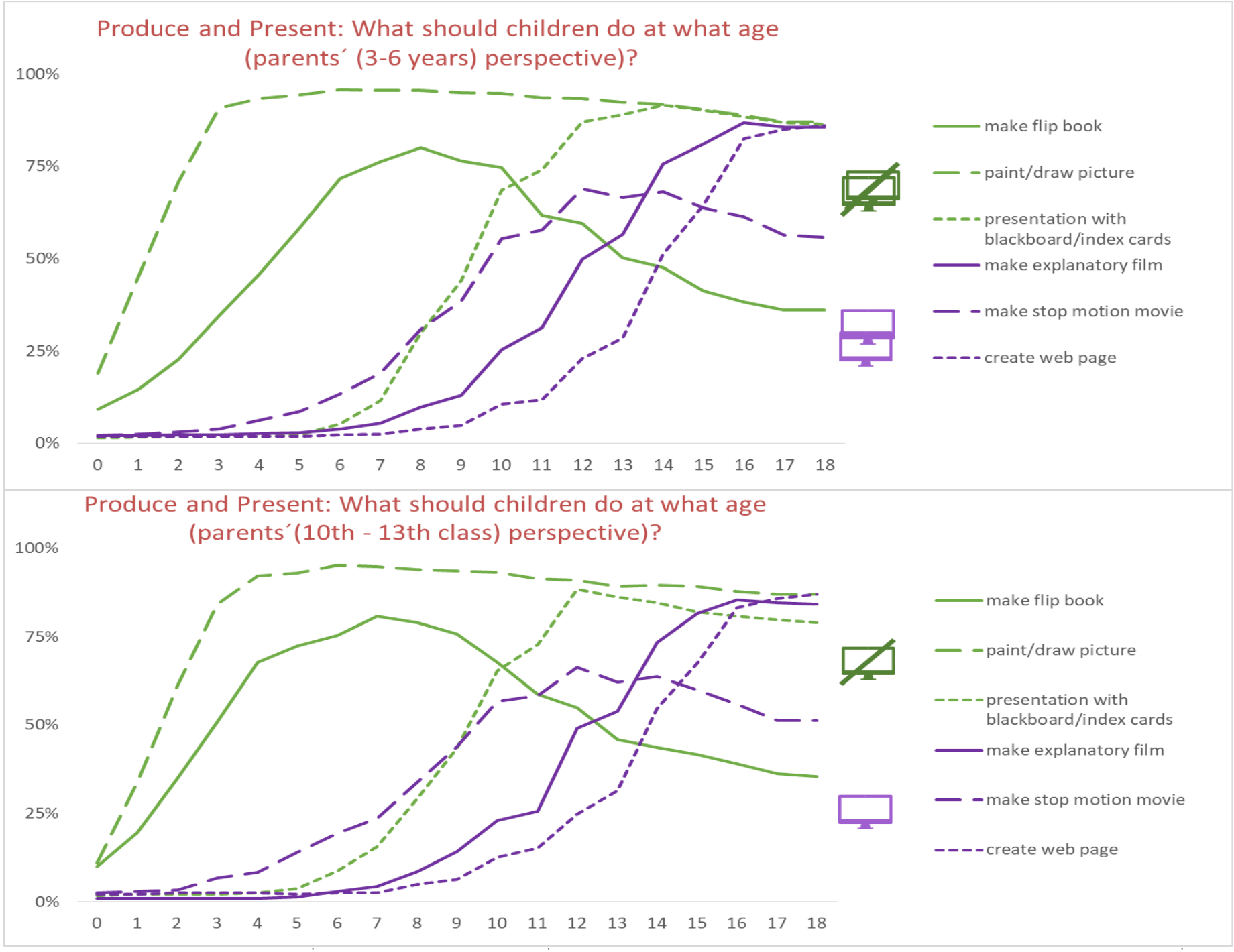
Steiner Waldorf Attitudes towards supporting children in the acquisition of digital skills and competences – Domain 1: Produce and Present



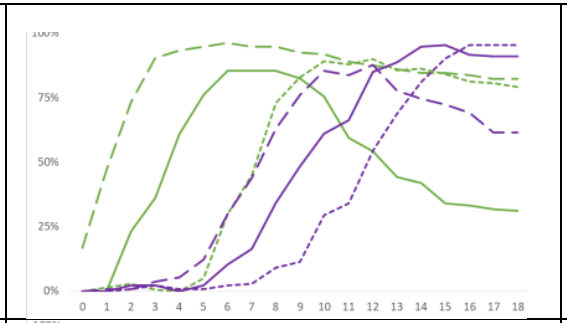
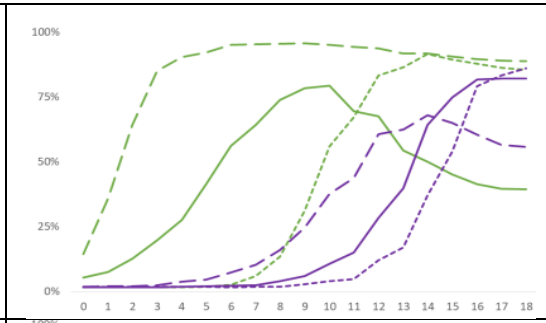
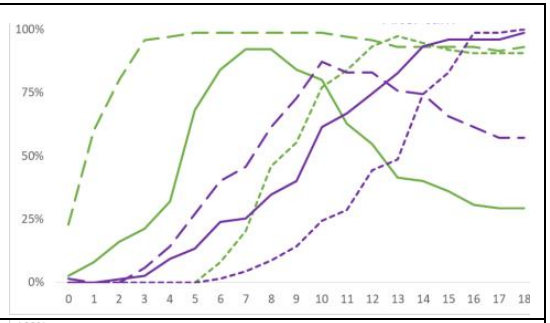
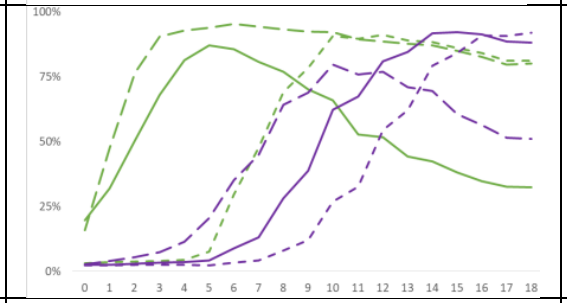
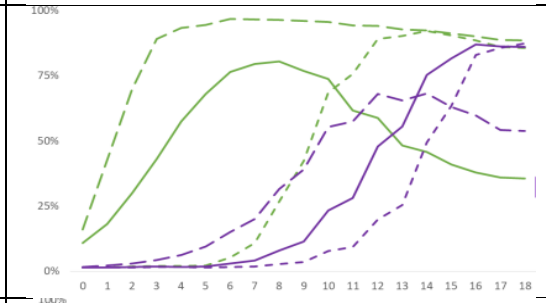
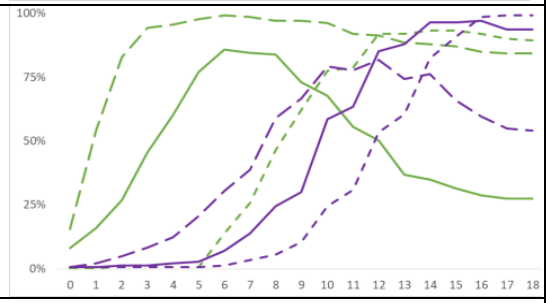
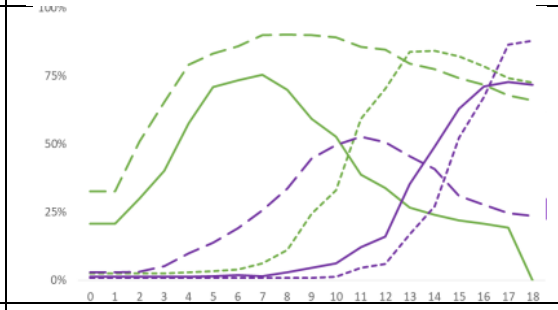
MMM: Media Maturity Matrix

Which media should children use at what age for what purpose from whose point of view?




Produce and Present: What should children do at what age (parents´ (3-6 years) perspective)?
100%
75%
50%
25%
0%
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
make flip book
paint/draw picture
presentation with blackboard/index cards
make explanatory film
make stop motion movie
create web page
Produce and Present: What should children do at what age (parents´(10th - 13th class) perspective)?
100%
75%
50%
25%
0%
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
make flip book
paint/draw picture
presentation with blackboard/index cards
make explanatory film
make stop motion movie
create web page

Montessori vs. Steiner Waldorf vs. Nature/Outdoor Kindergarten Attitudes
At what age should children Produce and Present with which medium (digital vs. analogue)? (Teachers vs. Parents)

	Montessori	Steiner Waldorf	Nature/Outdoor Kindergartens
Teachers			
Parents			
Pupils			

Three Principles of direct Media Maturity Education (in the sense of children using media),
or „Analogue Digidactic“ (see also the contents of the red suitcase)

1. Analogue/screen-free media before digital media
2. Producing before consuming
3. Graspability before Black Box
   (Input-PROCESSING-Output)

GAIMH Position Paper on Early Childhood and Digital Media (p. 23)

As receptive media, screen media primarily appeal to two sense organs, eyes and ears, and as interactive media with swiping and clicking, they also appeal to haptics and minimally to fine motor skills, limited to a two-dimensional surface […]. Three- and multidimensional impressions and experiences with real objects thus shrink to two dimensions, even if the images move. The so-called learning contents are pre-structured by the program, so that **self-initiated, self-directed, creative explorations and experiences with appeal to all senses are thereby largely excluded**. In the presence of a significant other (caregiver) the application is somewhat socially enlivened. However, it does not achieve the effect of self-initiated learning with emotional resonance that contributes to the integration of what is learned. **The use of digital media cannot open up this world of experience. The lively interaction with caregivers and enabling the child´s exploration of the environment are essential and sufficient for healthy development [in Early Childhood].**

UNBLACK THE B〈/〉X

Digitization in educational institutions: The Alternative Checklist

www.unblackthebox.org

We should start by considering…

Are we aware that digital education can also be 'analogue' (without the use of digital technologies)?

Do we want to create the time and space to reflect about data, tools and algorithms, and involve all relevant groups (such as parents, teachers, …)?

If yes, this alternative checklist provides many suggestions for (self-)consciously examining digital technologies in the education sector – in particular in relation to….

If yes, this alternative checklist provides
examining digital technologies in the edu

… design, development and commercial backgrounds:

How transparent is the modelling?

To what extent is artificial intelligence involved?

Where does the data go?

Who consults / trains – and with what rationale?

To what extent is artificial intelligence involved?

Where does the data go?

Who consults / trains – and with what rationale?

Who is behind the tool?

What are education policy backgrounds?

What are the possible health effects (physical)?

What are the possible health effects (psychosocial)?

Which types of learning / education does the software (not) enable?

To what extent does the software provide opportunities for (pedagogical) design adaptablility?

Which types of nudging,

What are the possible health effects (psychosocial)?

Which types of learning / education does the software (not) enable?

To what extent does the software provide opportunities for (pedagogical) design adaptablility?

Which types of nudging, such as gamification or visualisation, are used?

(How much) is education being surveilled?

www.unblackthebox.org

The alternative checklist

Available in German and English

IPO principle (Input Processing Output), binary code (0=no knob=no sound,1=a knob=a sound) with the Gloggomobil, ideal for „coding in kindergarten“ project Analog-Digidaktik for more…

European Parliament resolution of 25 March 2021 on shaping digital education policy (2020/2135(INI))

E. whereas mastering **basic transversal skills**, such as numeracy, critical thinking and social communication skills, is a **fundamental prerequisite** for the acquisition of digital skills and competences […] whereas the Digital Competence Framework for Citizens acknowledges the importance of soft skills, including communication, collaboration and content creation, which are often taught **through the humanities, arts and social sciences**;

N. […] whereas teachers' freedom to choose the best combination of teaching methods and content should remain at the heart of the educational process.

13. […] invest more in interdisciplinary research to assess the long-term impacts of digitalisation on learning and the effectiveness of digital education policies, thereby informing their future design and implementation […] the need for ongoing research into the various **impacts of digital technologies on the education and development of children**, linking education sciences, pedagogy, psychology, sociology, neuroscience and computer science

26. [..] healthcare professionals, educational institutions, civil society and non-formal education providers, **in partnership with parents**, need to **develop an age-appropriate curriculum** to enable learners to make informed and appropriate choices and avoid harmful behaviour.

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