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a cura di Alessandra La Marca e Antonio Marzano



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XII.

Sulle possibilità di trasformare le conoscenze digitale dei bambini in alfabetizzazione mediatica - Deliberazioni didattiche basate su uno studio qualitativo nelle scuole primarie dell'Alto Adige

On opportunities for transforming children's technical Media skills into reflexive media literacy - Didactic Deliberations Based On A Qualitative Study in South Tyrolean Primary Schools

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Abstract

To give young students a bright start to a prosperous educational biography, every teacher should arrange suitable didactic offerings that are connected with the learners' individual knowledge and experiences from everyday life. Hence, fostering media knowledge and digital competencies for its reflected consumption ought to be an interdisciplinary objective of all lessons. As part of a documentary classroom research, access to the media cultural context of six- to nine-year-old children is initiated through freehand drawings and subsequent verbal specification of their media experiences. The youngsters' verbal descriptions clarify their subjective attribution of implications and reveals orientation patterns. Thus, the data-based evaluation provides insight into the media experiential spaces of students and lighten their specific media competence. Amidst these results, didactic considerations are developed picking up the students' habitual media use and constructively reflect on it by providing implication for teaching-learning situations.

Per dare ai giovani un inizio brillante di una prospera biografia educativa, ogni insegnante dovrebbe proporre offerte didattiche adeguate, collegate alle conoscenze e alle esperienze individuali degli studenti nella vita quotidiana. Pertanto, promuovere la conoscenza dei media e le competenze digitali per il loro consumo riflessivo dovrebbe essere un obiettivo fondamentale delle lezioni. Nell'ambito di una ricerca documentaria in classe, l'accesso al contesto culturale mediale di sei-nove anni studenti della scuola primaria viene avviato attraverso disegni a mano libera e la successiva

descrizione verbale delle loro esperienze medialì. La descrizione letterale degli studenti chiarisce l'attribuzione soggettiva delle implicazioni e rivela i modelli di orientamento. In questo modo, la valutazione basata sui dati fornisce una visione degli spazi esperienziali medialì e ne illumina la competenza mediale specifica. Dall' questi risultati, verrà sviluppate considerazioni didattiche che riprendono l'uso abituale dei media da parte degli studenti e le riflettono in modo costruttivo su attraverso situazioni di insegnamento-apprendimento prospettiche.

Keywords: media literacy, digital skills, orientation patterns, documentary classroom research

Parole chiave: alfabetizzazione mediatica, conoscenze digitali, modelli di orientamento, ricerca documentaria in classe

Abstract

1. Introduction

The European Qualifications Framework for Lifelong Learning (EQF, 2008) identifies «critical analysis, evaluation and synthesis of new and complex ideas» as a key competence for any educational biography. Outside the European Economic Area, this educational goal is better known as 21st Century Skills (p21). The education policy administrative units take up these catchwords and mandate its application in the educational system. In South Tyrol, this task is anchored in the controlling instruments of the regional government, such as the framework directive for the autonomous German-speaking primary schools.

“Primary school promotes the acquisition of cultural techniques and the further development of different forms of expression through a holistic approach and interdisciplinary teaching. It creates the framework conditions for engaging with different areas of learning in order to expand basic competences and to open up the world. Through subject-specific and interdisciplinary teaching, the secondary school pursues the expansion and deepening of knowledge, skills, abilities and attitudes, independent and critical engagement with oneself, fellow human beings and the world” (German Directorate, 2009, p. 17).

Furthermore, from the perspective of educational science the implementation of the 21st century skills or the EQF should be endorsed by scientific arguments and be guided by pedagogical lines of reasoning as well. In 2015, the Joint Research Centre¹ (2015) conducted a qualitative study aiming at exploring young children and their families' experiences with digital technologies such as smartphones, tablets, and computers. One of the key findings highlight that in Belgium, Czech Republic, Finland, Germany, Italy, and UK children are daily in contact with digital tools. While surfing the internet or watching videos, children and teen aged are subliminally confronted with attitudes, views, and truths. In doing so, they get in touch with search engines and its algorithms that play an increasing role in opinion formation. If «the hit list and each individual hit [...] generates itself an evaluative statement in response to a user query» (see Hartl, 2016) one is only spinning around his own axis. The speed, quantity and accessibility of information have created a perfect terrain for disinformation and fake news to influence people of all ages and their decision making as well. From a scientific perspective, the development of critical thinking (CT) is a necessarily prerequisite for the capability of determining the cognitive value of information (see Rivoltella, 2012; Gross, Schumacher, 2019). To facilitate learners reaching this level it is coherent to foster and support them in reflection on certain topics, self awareness and the processing of learning or rather CT in an age appropriate manner (cf. Ennis, 1989, Buckingham, 2009).

The results of the study presented here pick up the current debate on digital media and can contribute in a meaningful way the 2020-2023 programme measures of the South Tyrolean Pedagogical Department of school governance, regarding «Learning with and about digital media» and «Developing media concepts and integrating them didactically» (German Directorate, 2020).

2. Documentary classroom research: scientific discourse and methodology

Children create their own media culture by interpreting, reproducing, and negotiating all culturally mediated forms and rules. Therefore, the respective media cultural context could be clarified by means of freehand drawings. On the one hand, the drawing serves as an introduction to the topic;

1 JRC is the European Commission's science and knowledge service.

on the other hand, it can provide a first insight into the social media imprint by assigning media and users at home. The drawing primarily serves to specify the media experiences of the 7 to 11-year-olds. The use of narrative interviews or group discussions in combination with collages or drawings has proven to be significant (Neuß, 2001), as they provide access to the children's subjectively perceived media reality. In most cases, the linguistic description given by the child clarifies the subjective understanding of meaning and reveals orientation patterns that can be reconstructed by applying the documentary method. **The evaluation of the text data from the transcription of the interviews is then carried out in a multi-staged process (Bohnsack, 2003, S. 134-155).** Additional information is recorded in a postscript. This includes information, e.g., observations and statements during the drawing action, special features within the interview situation, the child's facial expressions as well as his gestural cues in the picture related interview, e.g., the child points to certain elements with his finger while explaining.

Two central gatekeepers, head of the regional school directorate and an expert for digital media in the department for subject didactics in the German education directorate, promote access to the research field and to the sample as well. Following the basic principle of contrasting (urban and rural school, the primary school in Velturmo (rural area) in the district of Klausen II and the Goethe School in the district of Bolzano (urban area) were named and contacted in December 2021.

The respective principles, selected for their part the classes, considering the structural differences and after consulting the teachers (see Tab. 1). The interviews were video recorded with both the consent of the parents and the pupils. Before conducting each interview in spring 2022, the children repeated their agreement. Only recorded interviews were included in the evaluation.

	male students	female students	no parental consent
Velturmo (Vo) N 29			
class 3A	8	10	2
class 3B	9	2	3
Bolzano (Bz) N 57			
class 5A	4	5	3
class 5B	8	10	3
class 4R	7	4	4
class 5R	10	9	2

Tab. 1. Sample

Aim of formulating interpretation within data analysis is to obtain an overview of the communicated topics addressed in the interviews statements. The reflective interpretation serves in a next step to elaborate orientation patterns divided into conjunctive and communicative knowledge (Asbrand, Martens, 2018, p. 54f.). Finally, the results are classified amidst media competence dimensions (see Tab. 2, 3) according to Baacke (1973).

Media Criticique

- The analytical sub-dimension means having a background knowledge that does not accept media developments across the board but applies them «discriminatingly» to be able to use one's own media competence appropriately.
- The reflexive sub-dimension aims at the idea that every person must be able to relate and apply their analytical and other knowledge to themselves and their personal actions.
- Analytical and reflexive ability comprise, as a third sub-dimension, ethical concern, which aligns and defines analytical thinking and reflexive reference as socially responsible.

Media use

- There is a receptive-applicative sub-dimension. Today, not only reading texts but also watching films requires receptive competence.
- In addition, there is the area of prompting as an interactive action, such as publishing photographs or self-produced videos in open or closed user groups.

Media knowledge

- The informative sub-dimension comprises classical knowledge. In the present context of the study, the focus is on the question of which application programmes are of effective use for personal purposes.
- The instrumental-qualificational sub-dimension means, in addition, the ability to operate the new devices but also the software.

Media design

- Aims at the innovative change or further development of the media system within the applied logic.
- The creative emphasis on aesthetic variants of design and thematisation within private and public communication culture.

3. Results

Throughout transcription, letters and numbers replaced children's names. By means of a software for data and text analysis, the statements were assigned considering the underlying orientation patterns as well as the four dimensions of media competences.

Sequences to be interpreted from the interviews with classes of the primary school in Velturno.	Phrasing interpretation. Summarising topics or subjects	Reflective interpretation. Identifying the underlying orientation patterns and dimension of media competences.
Collectable cards are so much fun and because you can do something during the school breaks [GH010005, 5].	Benefit of the activity with paper-based media	Here the interactions carried out during school breaks are described (conjunctive knowledge). Regarding bartering, students practise principles of prompting in their media use.
Because you learn a lot. An excavator fell over at 00:00. [GH010022, 10]	Benefit regarding information content	The description of typical regional news content can be assigned to conjunctive knowledge. What is recognisable here is a receptive-applicative use of media through the perception and reproduction of specific features of a short news item.
How do you know you are a good player? Because I always stay alive. [GH010021, 16-22]	Positive self-awareness	The student knows the rules of the game and has developed expert-level skills during media use (subjunctive knowledge)
Because you become addicted. Kids in China can't walk backwards because they play so much video. And yes, that's why I don't like it. [GH010014, 10]	(Side) effects of media consumption	At this point, it can be assumed that nine-year-olds cannot recognise the signs of gambling addiction themselves and that the diagnosis has been communicated to them. Regardless of the truth regarding the motor skills and abilities of Chinese children, this effect of intensive media use is criticised.
It's mostly about cutting grassland. By the way, the cows never die in the farming simulator. You earn money with them. [GH010022, 21]	Game strategies in simulation games: farming 19	Family members communicated the basic farming information. The student applies his knowledge in the farming simulator (media use) in a situationally appropriate way (subjunctive knowledge)

Tab. 2. Reconstruction of orientation patterns and media competences (Vo)

At the time of the survey, students of the third class in the Velturno primary school do not show any activities in the field of media creation in their private media use and only slightly media-critical considerations (see Ferri, 2011).

Sequences to be interpreted from the interviews with classes of the primary school in Bolzano	Phrasing interpretation. Summarising topics or subjects	Reflective interpretation. Identifying the underlying orientation patterns and dimension of media competences.
I designed a manga video and that went viral [GH010054, 11] Age	appropriateness of other users' posts	Applying technical terms posts and going viral in language use represents conjunctive knowledge. Receptive media use and creative media design by offering media content in a prompting manner.
Not because presentations are difficult, because ... I don't really know. The critique from the others, maybe, I'm not afraid. But I don't like it that much either. [GH010077, 4]	Elaboration of presentations and is performance	Through the metacognitive relativisation of one's own instrumental media competences, the subjunctive knowledge of the interviewee becomes apparent here.
WhatsApp is also quite important. But many people also say that SMS is better. Because WhatsApp looks up the messages, you send. But I still use WhatsApp because there are contracts where you can send as many SMS as you want. But there are also contracts where it costs money [GH010052, 16]	Significance of use in everyday life	The phrase Many people say indicates communicatively acquired knowledge. Although it is assumed that the mentioned communication provider can read the contents of the messages, it is still used for monetary reasons. This behaviour points to the analytically reflexive dimension of media critique.
I heard that children died. And there are challenges like that and once they set fire to toilets in schools, so I don't like it. [GH010047, 10] Then I wrote <i>freefire</i> . It's such a terrible game. My cousin jumped out the window because he lost.» [GH 010050, 11].	Limits of media use	I have heard that refers to communicated knowledge and a source of information whose trustworthiness does not seem questionable. In the analytical self-reference to the facts and the resulting moral concern, media critique competence is shown here.

With Snapchat, you can add different friends and send them funny pictures. Because there are filters like that. And you can turn on your location. But only if you want, and with this location your friends can see where you are. [GH010052, 12-14].	Ways of using the application programme	Conjunctive knowledge is documented by using technical language: add. By sharing the location with specific people, students interactively use or create social-media environments.
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Tab. 3. Reconstruction of orientation patterns and media competence (Bz, part 1)

Sequences to be interpreted from the interviews with classes of the primary school in Bolzano	Phrasing interpretation. Summarising topics or subjects	Reflective interpretation. Identifying the underlying orientation patterns and dimension of media competences.
I don't like always sitting like this and then reading and wasting time. Because I don't play Switch all day, but it's my favourite medium. [GH010037, 4]	Differentiation in media use	Reception competence in reading is perceived as a waste of time and is thus conjunctive knowledge with negative connotations. Reflecting on the anatomical posture in reading and playing leads to the same result: squatting. In contrast to reading, playing is associated with a cognitively demanding activity that is also intrinsically motivated.
I watch videos of tubers who have a lot of followers. And I also play Minecraft because there I can creatively construct a lot. [GH010070]	Positive Self-awareness	The student knows the rules of the game and has developed expert-level skills during media use (subjunctive knowledge)
Thank you for the detailed report. I'll be happy to collect the pictures if you let me. Hm, no, that's private [GH010054, 11]	Limits of media use	The labelling of the drawing made by one's own hand as something private suggests a communicatively mediated body of knowledge about copyright. Media critique is evident in the reflexive but eclectic application of rights. Elsewhere, the rapid dissemination of a media self-production is more significant.

Tab. 4. Reconstruction of orientation patterns and media competence (Bz, part 2)

In the media use behaviour articulated by students at the Goethe Primary School in Bolzano, almost all media competences can be reconstructed in dimensions conceived by Baacke (1973).

4. Conclusion and implications for teaching

Findings from biological-psychological cognition research confirm that video games can lead to changes in brain structures and functions within a few days or weeks (Lindenberg, Basten, 2021, p. 215). For individuals with little gaming experience, positive effects can be demonstrated in information processing speed, spatial awareness, and attentional control (Bavelier, Green, 2019). Strategy and simulation games, for example, require concentrated engagement with complex issues over an extended period as well as the blocking out of irrelevant stimuli. In contrast, individuals with an individual disposition to an attentional dysfunction are found to have poorer cognitive performance in long-term memory or sentence comprehension, among other things, when there is parallel distractor information (Madore et al., 2020).

The «broader» processing of information resulting from a more bottom-up driven attention may be an advantage for the parallel processing of cognitively less demanding tasks in everyday life, such as chat communication in social media while watching a video clip. However, understanding complex issues and relating relevant representations in working memory (connecting to knowledge bases) requires focused attention that must be maintained over a longer period.

Regarding assessment tools for primary school grades Imperio et al. (2020, 13) conclude that dialogic teaching appears to play an important role in the development of CT skills and dispositions. When using shared critical thinking as a dialogue-based intervention method or real shared inquiry in the subject didactic teaching-learning context, the logical conclusions on the part of the students can be recognised and jointly questioned. The change of perspective from content-related truth content to orientation patterns enables a precise analysis of the habitualised media competence of students and provides an insight into the media experience spaces shared with parents (or guardians) as well as the individual handling of media.

On the part of the teachers, in turn, a difference in perception could emerge between the experiences in the course of practical exploration and present assumptions. In other words, the presuppositions and conditions necessarily assumed in the planning of the teaching situation may raise questions in critical (self-)reflection. Rivoltella (2012, p. 28) emphasises in this context:

[...] multiliteracy makes it possible not to have to find a specific space for Digital Literacy (and all the other literacies) within the curriculum. The option is a cross-curricular perspective according to which each teacher must be digitally literate and able to educate his/her students in this sense.

Successful learning is not based solely on the technical operation of digital media. It is much more important to be able to select digitally available information or to process the experiences made with digital media linguistically and to reflect on them together. Within the framework of an interdisciplinary project week as well as in subject-specific lessons, different questions can be dealt with in expert or interest groups.

Calvani et al. (2010, p. 12) recommend four focal points for the school problem or task setting within the framework of the conceptual model of *competenza digitale*:

- a multidimensionality in the school problem or task setting through the parallel integration of cognitive, relational, and social skills and abilities;
- a complexity: the different facets of which cannot be captured and assessed appropriately with individual tests. In Calvani's view, the acquisition of partial competencies remains too subliminal;
- an interrelatedness: one basic skill cannot therefore be separated from another with which it necessarily overlaps (e.g., reading, arithmetic, problem solving, reasoning and deductive skills, metacognition);
- a sensitivity to socio-cultural context: it makes no sense to think of a single model of digital literacy. Digitisation seen as always and everywhere valid, but to be rejected in relation to the different contexts of use. Contexts of use (basic education, vocational training, specialised training, lifelong learning).

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