Media Literacy and Informatics: Parental Prejudice and Expectations Regarding a New School Discipline

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ABSTRACT
In August 2018, a new school discipline, Media Literacy and Informatics, was introduced in Switzerland. This article provides an overview of the current situation regarding the new school discipline, and its development. The article shows how schools already taught Media Literacy and Informatics. The article also sheds light on what Swiss parents expect from the new school discipline, and what they actually know about its composition. The results from a small pre-study indicate that parents express different expectations and prejudices regarding Media Literacy and Informatics, depending on the age of their children. The majority of the parents in the sample had a limited understanding of the school discipline.

Keywords: media literacy, Switzerland, informatics, guidance, children, school discipline

Swiss children grow up well equipped when it comes to media (Schoch, Waller, Domdey, & Süß, 2018; Willemsen, Waller, & Süß, 2018). When children learn media literacy skills, there are basically three main agents of socialization on their side: parents, teachers, and peers (Hurrelmann, 2006). The younger the children, the more likely their parents are to set limits, and act as gatekeepers in selecting media content (Hipeli, 2014; Süß, 2003). The older the children, the more likely they also receive media literacy advice at school, and from their peers (Süss, 2003). Many parents are hesitant regarding whether they are capable of giving good enough guidance to their children. Many have expressed doubts about whether they are technically skilled enough (Feierabend, Plankenhorn, & Rathgeb, 2016; Steiner & Goldoni, 2011). When parents are asked about the media experts in the family, the roles seem to be clearly distributed. Although fathers are the specialists in terms of technical aspects, mothers are the most competent in regulating TV content and choosing books. One out of every three parents rates himself or herself as very competent: Men (40%) rate their skills higher than women do (23%). According to Feierabend et al. (2014), parents who show more confidence in their own media skills have a more positive perception of media development in general. Additionally, parents’ critical digital literacy seems to be paramount, for selecting
parental controls, and for coping with the variety of default settings (Zaman & Nouwen, 2016). According to Irion and Sahin (2018), if the family were the only context in which children could enhance their media literacy skills, this would promote social injustice. Therefore, it is regarded as essential that these skills are taught in mandatory school.

To prepare children for a world surrounded by media influences, Switzerland launched a new school discipline in summer 2018: Media Literacy and Informatics (Deutschschweizer Erziehungskonferenz, 2018). The discipline is meant to ensure a more homogenous distribution of knowledge about Media Literacy and Informatics for all children from kindergarten to ninth grade1.

**WHY MEDIA LITERACY AND INFORMATICS WAS DESTINED TO BECOME A SCHOOL DISCIPLINE**

The decision to establish Media Literacy and Informatics as a school discipline may seem like a logical consequence, considering the changes and challenges digitalization is bringing about in society and schools. But the decision in favor of a new school subject did not happen overnight. For several years, the need and possibilities were discussed (Deutschschweizer Erziehungskonferenz, 2018) until 2018, when the final decision was made. This decision had consequences not only for mandatory school (kindergarten to secondary school) but also for the universities that provide teacher education. Not only was the content of the new school discipline yet to be determined, but the terms had yet to be chosen and defined.

Media literacy as a term is commonplace today in the European lexicon; but according to Parola and Ranieri (2010), the term still has no unique definition. In addition, it is obvious that the term is not used in the same way in different countries around the world—not even in Europe (Zylka, Müller, & Martins, 2011). The meaning of media literacy commonly used in Great Britain is used for this article, because this meaning is very close to the German term Medienkompetenz (Baacke, 1996), which entails the following competencies: criticism of media (Medienkritik), knowledge of media (Medienkunde), use of media (Mediennutzung), and organization of media (Mediengestaltung). Many of the more recent definitions (Gapski, 2001) are still based on Baacke’s definition. Table 1 shows a translated version (Zylka et al., 2011) of Schorb’s (2005) definition. The competencies—as in Baacke’s definition—demonstrate a holistic understanding of the different media and the ability to use them in an appropriate, risk-reduced way.

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1 In Switzerland, public mandatory school begins with two years of kindergarten, followed by nine years of regular school. Kindergarten is part of the school system, and kindergarten teachers are regular teachers.
Table 1

<table>
<thead>
<tr>
<th>Media Competencies</th>
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<tbody>
<tr>
<td>Media knowledge</td>
<td>Media rating</td>
<td>Media processing</td>
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<tr>
<td>Knowledge on functions, structures and for orientation</td>
<td>Critical reflection as well as ethical and cognitive based qualifications</td>
<td>Media adoption, media use, media participation, and media creating</td>
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Source: Zylka et al., 2011 in Schorb, 2005

The term Medienkompetenz (used in the German-language discussion for “media literacy”; Baacke, 1997; Tulodziecki, 2011) is often misinterpreted by parents. They tend to overemphasize the technical component of being able to use a device (Hipeli, 2014). In the media pedagogical discussion, there is also the term digital literacy (Buckingham, 2015), which was not chosen for this article, because that term focuses on a limited scope of media, namely, digital media, and the Swiss curriculum explicitly defines media in a broader sense, one that includes non-digital media (Deutschschweizer Erziehungskonferenz, 2018). Media literacy is certainly not something that is completed once a person reaches adulthood (Hipeli, 2012). Children, young adults, and adults should always have the opportunity and tools to enhance the skills mentioned above, to be able to recognize possible media risks and how to cope with them (Süss, Lampert, & Wijnen, 2013).

The discussion about digitalization clearly shaped the development of the new Swiss curriculum, Lehrplan 21. The questions that arose included how to keep up with rapidly accelerating technological development, how to prepare children for a future that includes digital media, and how schools and learning processes could profit from different technologies. The discussion was not one-sided: There were critical and positive arguments regarding digital media in the classroom. Critics said that digital media is “bad for children,” “not worthwhile in class,” and “doesn’t function anyway” (Döbeli, 2017, p. 176). Döbeli (2017, p. 80) also described four arguments for digital media in classrooms:

1. The environmental argument: Children are surrounded by different media, and for this reason, schools must naturally prepare children to cope with media’s risks and benefits.
2. The future argument: Schools must be able to teach children skills for their future private and professional lives, and this includes being able to understand different media.
3. The learning argument: The learning potential of media in class must be evaluated, and taken into consideration.
4. The efficiency argument: This argument focuses more on teachers and the possibilities, including digital media, for making their teaching and preparation more efficient.
During the development process, the Informatics discipline was paired with media literacy, and it became apparent that there were three different perspectives that needed to be considered, if the aim was to offer children some holistic Media Literacy and Informatics knowledge.

![Diagram of the Dagstuhl Dreieck triangle]

Figure 1. Dagstuhl (Dagstuhl Dreieck) triangle (Salzmann & Döbeli, 2018).

The Dagstuhl (Dagstuhl Dreieck) triangle was created in 2016. Its three perspectives on our digitally connected world have been important for the implementation of Media Literacy and Informatics in the Swiss curriculum, and in the creation process of teaching material. The three perspectives are as follows: the technological perspective (How does a technology work?), the socio-cultural perspective (What impact does a technology have on society?), and the user-oriented perspective (How do I use this technology?) (Missomelius, 2016). Based on these perspectives, the three basic areas of the Media Literacy and Informatics school discipline were defined: Media, Informatics, and Application.

The development of adequate media literacy skills is a task that needs pedagogical guidance. Although parents can teach their children some skills with different media, it is obviously also the task of the school system to address the issue with pupils of all ages. This means that teachers must be properly trained to enhance children’s media literacy skills, which vary with age. According to Bachmair (1994) and Eder, Orywal, and Roboom (2008), teachers must be able to understand and interpret children’s media-related comments correctly in the context of the children’s developmental stages. For example, children between four and eight years of age often use symbolic material from their culture to deal with personal topics, and media figures and media heroes can help children do that. Bachmair (1994) stated that teachers must be able to recognize these media tasks, regardless of whether their pupils are younger or older. As mentioned above, media
literacy skills for kindergarten children vary from those taught to older children in primary school or secondary school (see also Table 2).

The new curriculum (*Lehrplan 21*) was originally created to harmonize the education system between the 21 German-speaking cantons in Switzerland, each of which is in charge of its own school system. The national education department decided to modernize the system, and now, instead of focusing on academic knowledge, the focus is on competencies, and a far more practical approach to learning. These competencies were subsequently assigned to three different cycles (Deutschschweizer Erziehungskonferenz, 2018):

- Cycle 1: for children from kindergarten to second grade of primary school (approximately 4- to 8-year-olds)
- Cycle 2: for children from third grade to sixth grade of primary school (approximately 9- to 12-year-olds)
- Cycle 3: for children in secondary school (approximately 13- to 15-year-olds)

Tables 2 and 3 illustrate how the new Media Literacy and Informatics school discipline aims to enhance children’s competencies in an age-appropriate manner. The cycles and competencies build upon one another, starting fundamentally with the youngest children, and proceeding to more advanced and more complicated tasks, as the children become primary- and secondary-school pupils.

At first glance, these competencies might seem like a large new addition to the previous school curricula. However, as a matter of fact, many of the competencies were being taught across disciplines: in language courses, mathematics, applied sciences, crafting and other artistic disciplines. The introduction of Media Literacy and Informatics as a school subject will certainly not change these implementations. However, it puts a more binding character on the school subject itself.

Table 2
*A Summary of the Three Cycles and Media Literacy*

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Media Literacy</th>
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| 1     | The pupils learn to talk about their media experiences  
The pupils get to know different kinds of media reports, and talk about them  
The pupils start to decipher the world of advertising  
The pupils use different kinds of media for learning, and use them to acquire information  
The pupils learn to express their feelings that arise during media consumption  
The pupils experiment with different media  
The pupils present different products they have created using media  
The pupils communicate using different types of media |
The pupils learn to reflect about positive and negative experiences with media
The pupils know what consequences different media (mis-)use can have
The pupils name basic functions of different media
The pupils know about different qualities of information sources, and how to gather information
The pupils use media to present work assignments
The pupils learn about privacy and personal information
The pupils use media to communicate and discuss, minding safety rules and rules of conduct

The pupils get to know rules and value systems related to media
The pupils reflect on positive and negative consequences of media in their lives, and about social behavior related to media
The pupils reflect on the influence of media on people and society
The pupils learn about media impact
The pupils learn to estimate what the intentions of media producers may be
The pupils know about different media organizational forms and forms of financing
The pupils can make their own media reports, considering copyrights and sources
The pupils can experiment with different media (individually and in groups)
The pupils can use media for cooperative learning
The pupils use media to publish their own ideas and opinions

Source: Deutschschweizer Erziehungskonferenz 2018, 11–17, translated by Hipeli
Table 3
*A Summary of the Three Cycles and Informatics*

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Informatics</th>
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</thead>
</table>
| 1     | The pupils learn to sort different objects according to self-chosen characteristics  
The pupils are able to follow simple instructions (forms of algorithms), to obtain a desired result |
| 2     | The pupils learn to use symbols, charts, and tables to illustrate information  
The pupils know how to encode different cryptographs  
The pupils learn about analogue and digital presentation of data  
The pupils know about different document types  
The pupils know about tree structures and network structures  
The pupils know about error-detecting and error-correcting codes  
The pupils approach problems with trial-and-error strategies  
The pupils know about branching and looping, and are able to depict them  
The pupils know that computers follow only predefined instructions |
| 3     | The pupils know about tree structures and network structures  
The pupils know about error-detecting and error-correcting codes  
The pupils learn to file documents, so they can also be found by others  
The pupils learn to use logical operators  
The pupils know how to work with databases  
The pupils know about different forms of data replication  
The pupils solve problems using loops, instructions, and parameters  
The pupils learn to compare different types of algorithms  
The pupils are able to create their own algorithms |

*Source:* Deutschschweizer Erziehungskonferenz 2018, 11–17, translated by Hipeli

**MEDIA LITERACY AND INFORMATICS PROJECTS AT SCHOOL**

How do teachers enhance media literacy skills at school? According to the new curriculum (tables 2 and 3), active media projects should start in kindergarten, and then be continued until the end of secondary school. However, the way Media Literacy and Informatics is taught varies considerably. In addition, teachers in the field report that they sometimes face difficulties interpreting the new curriculum: Many of the competencies seem to leave some margin for interpretation, and that is what seems to make the realization of media projects more complicated. Currently, various teaching materials are being produced to make the implementation of the new school subject easier for teachers. What is more, teacher education universities are extending their Media Literacy and Informatics course portfolios, to prepare future teachers (and experienced long-term employees) for the new task.
In the field, there are basically two approaches when it comes to media projects. In one approach, scholars do active and experimental exercises with media, and in the other, pupils discuss certain aspects and media phenomena, to understand the intentions of media and production mechanisms.

Several factors have an impact on whether—and to what extent—teachers conduct active media projects with their pupils. The first factor is the preparation time for the project. The second factor is the teachers’ intrinsic motivation for using media in their classroom, and becoming familiar with new apps, software, and devices. The third factor is the availability of media (particularly devices) in their school buildings. As mentioned, the new curriculum provides a more defined framework for Media Literacy and Informatics at schools. Primary and secondary school teachers, for example, now have to pass mandatory additional training,\(^2\) to teach the new school subject. If we look at schools in the field that have already put active media projects into action and represent good practice, this is what they do (across age groups, with the level of difficulty rising with age).

Exercises with photography: The pupils experiment with different perspectives, create their own photo stories, comics, or stop-motion movies, and manipulate pictures in different ways.

Exercises with audio media: The pupils experiment, by recording their own voices and creating different sounds by using different objects and materials. The pupils may also record their own radio plays or songs.

Exercises with video: The pupils experience how media can apply tricks and create illusions by using stop-trick technology (for example, to make people or things disappear).

Exercises with robotics: Very young pupils take their first steps toward programming by programming themselves (by making up different codes for directions). They then get to know different age-appropriate tools that can be programmed.

In media projects like these, the pupils will also get to know age-appropriate software solutions. The pupils experience not only different media but also a change of paradigm, from being media consumers to becoming active media producers (Fhtenakis, 2009).

Experimenting with media is important. However, to develop an understanding for media phenomena and intentions, “unplugged” conversations about media topics are also crucial (Döbeli, 2018). Surprisingly, many teachers in the field seem to underestimate the importance of these conversations: The teachers focus on using media devices for their teaching, and application competence in general. Talking about media topics also includes reflection about media use and media phenomena. To meet this requirement, schools in the field are advised to not look at Media Literacy and Informatics as a separate topic, but to team media-related conversations with other school disciplines, whenever possible, for example, by talking about copyright laws and the quality of sources when giving pupils research homework in history class, by discussing the effects of advertising on how we feel by making students produce their own commercials, or making

\(^2\) Provided by several teacher education universities
students reflect on their own media use and behavior during class councils. The new teaching material produced for Media Literacy and Informatics often intertwines active media project work and conversations about media topics. However, it will take some time for these ideas to penetrate the field profoundly.

Although schools handle the introduction of Media Literacy and Informatics pragmatically, it is interesting to observe that the reactions accompanying the introduction of the school discipline since the summer of 2018 have been ambivalent. A small pre-study conducted at the Zurich University of Teacher Education sought to reveal more about parental prejudices and expectations regarding Media Literacy and Informatics at school.

**PARENTAL PREJUDICE AND EXPECTATIONS: FINDINGS FROM A SMALL PRE-STUDY**

To determine the kind of reputation the new school discipline has from a parental point of view, and what kinds of prejudices and expectations exist, a small (non-representative) pre-study, conducted in 2018, examined a sample of 203 parents (133 mothers and 70 fathers) via an online questionnaire (quantitative data). All participants were of middle socioeconomic status (SES). The sample included parents of children of all ages, from kindergarten to secondary school. The survey was conducted in the canton of Zurich from September to November, just after the new school discipline had been launched at local schools (in August). The pre-study sought to address the following research questions: What do parents know about Media Literacy and Informatics, and what do they expect from the new school discipline? What kind of prejudices can be determined?

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>photography</td>
<td>13%</td>
</tr>
<tr>
<td>programming</td>
<td>25%</td>
</tr>
<tr>
<td>knowledge about advertising</td>
<td>36%</td>
</tr>
<tr>
<td>behind-the-scenes understanding of media</td>
<td>48%</td>
</tr>
<tr>
<td>use of PowerPoint</td>
<td>57%</td>
</tr>
<tr>
<td>use of Excel</td>
<td>58%</td>
</tr>
<tr>
<td>social media</td>
<td>66%</td>
</tr>
<tr>
<td>use of Word</td>
<td>67%</td>
</tr>
<tr>
<td>general use of media</td>
<td>70%</td>
</tr>
<tr>
<td>distinguish fake and correct information</td>
<td>76%</td>
</tr>
<tr>
<td>use of a computer</td>
<td>78%</td>
</tr>
<tr>
<td>cybermobbing</td>
<td>78%</td>
</tr>
<tr>
<td>careful and accurate use of media</td>
<td>84%</td>
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</tbody>
</table>
A total of 203 parents filled out the questionnaires: 133 mothers and 70 fathers. We first asked parents which topics they hoped the school discipline would cover. The parents were given 13 choices of topics, and they had the opportunity to mention other topics.

Although photography is associated with basic media educational methods for enhancing children’s media literacy skills, only 13% considered it an important topic for their children. In addition, programming was mentioned, and expected, by only 25% of parents. Dealing with advertising (36%) and gaining a behind-the-scenes understanding of media (48%) were considered more important. The use of different tools, such as Microsoft PowerPoint (57%), Excel (58%), and Word (67%), was more important in the eyes of parents, as was developing general skills for using media properly (70%) and accurately (84%). The use of a computer was especially important for 78% of all parents, as was learning more about social media (66%) and the risks of cybermobbing (78%). In this context, being able to correctly spot fake information of all sorts, and the capacity to distinguish it from accurate information online (76%), ranked high.

Only seven of the 203 parents came up with additional topics, which included the ability to critically think about media and media content, to develop better online search skills (other than Google), to protect privacy and data security, and to understand the consequences of big data. What parents considered to be important topics did not vary much by sex. The largest difference was found with photography (fathers, 5.7%, vs. mothers, 17.3%)—in other words, more mothers thought it was important for their children to learn about photography. The parents were also asked about when they considered it to be the right time for the new school discipline to start: either in kindergarten (4- to 6-year-old children), primary school (7- to 12-year-old children), or secondary school (13- to 15-year-old children).
Figure 3 shows that Media Literacy and Informatics as a school discipline has a more positive reputation among parents the older their children are. For example, only 26% of parents agreed or strongly agreed that Media Literacy and Informatics should be introduced in kindergarten. For children in primary school, 76% of parents agreed or strongly agreed that the school discipline should be taught. Last, 73% of parents agreed or strongly agreed that secondary school children should be introduced to Media Literacy and Informatics.

**IMPORTANT NEXT STEPS IN THE FIELD**

It is certainly not easy for parents and teachers to keep up with all the changes occurring in schools, or to stay informed about new topics, such as media, that continue to change rapidly. When we look at the curriculum and the competencies of all three cycles, it is obvious that there is much more for pupils to learn than their parents are actually aware of. It is also clear that parents were focused strongly on application competences and media-related risks, as well as the careful use of media, when describing their expectations and knowledge about the new school discipline. We assume that this emphasis has a practical basis, as most parents know about these programs themselves, or at least know the programs can be used for scholarly purposes. It was also remarkable that only 25% of all parents connected programming with the new school discipline. This clearly shows a lack of information and transparency regarding Media Literacy, and in particular, Informatics.

What do these findings mean for age-appropriate media literacy education in the context of families and schools? There seems to be a need for awareness campaigns for parents at, for instance, parents’ evenings at schools, where pupils and teachers could present what they have created and accomplished within the
scope of the Media Literacy and Informatics school discipline. In doing so, existing prejudices and false assumptions regarding the school subject could be reduced. To help teachers face the new tasks involved in teaching the new discipline, new teaching material is necessary; such material is currently being produced for all three cycles, and for pupils of all ages. Despite the current digitalization of schools, one should not forget that having media in the classroom alone does not necessarily mean there is enough know-how present to enhance children’s Media Literacy and Informatics skills. Therefore, focus must be placed on teacher education regarding Media Literacy and Informatics. Teachers and parents are important pillars, if we want our children to be capable of using different media and reflecting on that use. That is why we should give our children guidance, involve them in active media projects, and listen to, and answer, their questions.

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