Exploring Writing in a Digitally-Dominated Culture – Options for Formal Learning in Schools

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Abstract

From a cultural-historical perspective, writing is seen in the dynamic of the digitally-driven development of culture that is characterized by disruption. The multimodality of cultural resources for representation is one such disruption that is changing traditional linear and standardized writing. This disruption forces education to open writing to the variety of representational modes that also form a substantial element of everyday life or digital mass communication. Here, the development of multimodality as part of changing societal and cultural structures is discussed by investigating German and British school projects that have explored the practical application of multimodal forms of writing since 2000. A leading question was how students who are disengaged from learning in schools or in the process of migration deal with the multimodality of everyday life within formal learning, and what kind of agency of the students drives this. Within a society of individualization, a key element of change in the learner's agency stems from what is seen as a contribution to and result of the cultural disruption, where reality is constructed as individualized egocentric worlds based on personal experiences. In addition, this happens in the societal process of individualization, leading also to learning as meaning-making in contexts. A question for education now is how schools can react to such cultural disruptions in order to support learners in their personal development. The innovative school practices investigated here are based on a conversational, constructivist and situated design for formal learning. Student interventions to multimodality within this learning design were analysed and will be presented in respect of the students' agency.

Keywords: media literacy, media education, multimodality of representation, individualization, meaning-making, digitally-dominated culture.

1. Introduction
Disruption: characteristics of transition processes in our culture with relevance to writing within school practices

The *digitally-dominated culture* referred to in the title of this paper hints at an ongoing cultural transition. The possessive pronoun *our* as an explanatory element of *culture* could be substituted with *global*, which summarizes another spatially-oriented element of cultural transition. Applying the adjective *global* to culture widens the view to worldwide processes, to which belong both the global normality of individualized digital mobile devices and the mobility of migration. Individualized digital mobile devices remain at the school entrance, or are reached as

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tools owned by the school in formal teaching and learning practices. However, migration, a regionally-oriented element of the ongoing cultural transition, has fully reached schools in Europe. The school examples discussed in this paper show that the mobility of migration is a normal feature of European schools. Migration requires the appropriation of a second language; furthermore, the identity of the learners with different, divergent and conflicting cultural contexts is an essential part of the learning process. The practice described here not only deals with the new second language through exploring the lifeworld, but combines this with student photo portfolios that capture their learning processes and reflections on their identity.

Beside individualized mobile devices and migration, there are further cultural changes. These are other elements of disruption in the cultural and societal transformation of digitalization that belong to the dynamic around global modernity. "Disruption" refers to the German term *Umbrüche*, used by Cornelia Koppetsch to describe and explain global modernity in terms of "unresolved epochal disruption" ("*unbewältigter epochaler Umbruch*") (Koppetsch, 2019: 14-15).

Keywords hinting at cultural disruption in learning

The following keywords try to make visible the transformation through which digitalization became dominant for learning and that is enhanced by digitalization. They are indicators for the transformation of education and formal learning.

Firstly, the keyword for considering writing — the topic of this paper — is focused on the *multimodality of representation*. While this is normal in our culture, it is not so in schools, where linear writing with characters is dominant.

Secondly, the formation of reality is changing in and by the process of *individualization*. Reality is constructed through individual perception, which is formed, generalized and validated through social processes and peers. At this time, in Western democracies this individualized formation of reality becomes visible as polarization; for example, in the form of belief in the peer group's access to the world, e.g. the trustworthiness of information in the media (Jackob et al., 2019).

The risks of living are individualized through the building up of small personal lifeworlds, where the individual takes personal responsibility (Beck, 1986). Cultural products are acquired through the individual's personal experience of their lifestyle and living environment, in which everything is important that confirms the reality of their own small personal lifeworld. This access to describe and explain the actual mode of agency in the egocentric world of *my* experiences and *my* feelings stems from Gerhard Schulze's concept of the "Erlebnisgesellschaft" or "sensation society" (Schulze, 1992), and correlates with the theoretical access of "reflexive modernity" (Beck et al., 1994) (The translation of *Erlebnisgesellschaft* as "sensation society" is based on Ulrich Beck's (Beck et al., 1994: 31) and Scott Lash's (Lash, 1994: 163) explanation of the double meaning of the German word *Erlebnis* as *Erfahrung*, the objective side of experience, and its subjective side, *Erlebnis*. Schulze's concept and analysis of *Erlebnisgesellschaft* / "sensation society" verbalizes the shift from an objective interpretation of the "world" and reality to a dominant subjective interpretation through the lens of "my personally experienced and constructed lifeworld", which replaces the idea of the objective reality of the Enlightenment).

Formal education is limited to this appropriation of cultural products within the frame of reference of small personal worlds and through subjective, personal experience. The principle of an objective, universally valid world is a fundamental part of the educational model on which the school curriculum is based. However, learners who are disengaged from school bring into learning the contradictory personal perspective of their own experience, which guides their appropriation of cultural products. This contradiction between the school curriculum and the small personal lifeworld as a frame of reference for appropriation is an educational challenge in designing instruction. Disengaged is characterized by becoming "in distance to school". An example of this can be seen in among eight 13 year-old boys who refuse to write in the traditional linear way with characters, but do this when producing a rap poem in a semi-professional rap studio outside of the school.

The term "disengaged" is used to describe those students who fail in school, not necessarily due to a lack of intellectual capacity, but due to being in an unconscious but active opposition to the school because of the dominant social frame of the school does not fit to the student's social habitus. Referring to Pierre Bourdieu's concept of cultural capital (Bourdieu, 2006) the disengaged students do not like or oppose acquiring the cultural capital offered by the school curriculum. This

follows and widens the argumentation of Basil Bernstein about the class orientation of school by accepting or excluding language codes, e.g. the restricted code of the working class or the elaborated one of the middle class (Bernstein, 1987). However, nowadays learners exclude themselves from formal learning in school by opposing the school's learning.

Thirdly, learning is *meaning-making*. Kress's summary of learning in a society of individualization leads to an understanding of formal learning in schools that contrasts with learning as teacher-guided instruction on objectified learning subjects (Kress, 2010). The new digital options enhance learning as meaning-making in user-generated contexts, which are defined as comprising the following elements:

A context is a frame for optional combinations of actions, representational resources inclusive media and literacy, virtual and local sites or social sites like socio-cultural milieus. (Dourish, 2004).

This definition of a user-generated context continues and extends the cultural situatedness of knowledge to recent digital forms of learning. For the model of situated learning in pre-digital times, John Seely Brown et al. claimed: "that knowledge is situated, being in part a product of the activity, context, and culture in which it is developed and used" (Brown et al., 1989: 32).

The affordance of communicative forms of teaching and learning to situated and/or contextual learning is educationally relevant. User-generated contexts are related, and are likely based on constructivist (Scardamelia, Bereiter, 1999), situated (Lave, Wenger, 1991) and conversational (Pask, 1976; Laurillard, 2002) designs for learning and teaching. The conversational affordance of formal learning with the pre-given curriculum can be associated with the term "re-interpretation"; that is, learning is conversational meaning-making and re-interpretation in the society of individualized risks in contexts.

2. Methods
Structuration model: structures, agency and cultural practices

The keywords are now considered according to the rationale of Anthony Giddens' concept of structuration, which includes the dialectic of societal structures and the agency of the individual (Giddens, 1984). Multimodality is seen as a societal, cultural structure, while agency refers to the individual's capacity to act (application; see Pachler et al., 2010; Bachmair, 2018). It is helpful to add cultural practices, such as formal learning in the school, to this concept, providing a three-sided dialectic of societal transformation. This triple dialectic approach attempts to investigate multimodality in formal learning as a complex that corresponds with Michel Foucault's concept of the dispositive (Foucault, 1978).

The structuration model is helpful in looking at the interrelation of cultural changes, with a view to the development of linear writing as a cultural resource to the multimodality of writing. One question to consider is if and how school, as the dominant cultural practice of formal learning, accepts and develops multimodality in its school contexts. Multimodality is a feature of societal and cultural *structures* that is used by learners in school projects, while school is the *practice* of formal learning.

In terms of the methodological argument, this looks to the learner's *agency* in our individualized society (i.e., the structure) in respect of the *structural* change from linear representation to multimodal representation and its correlation with the learner's *agency*. The question for learning is how meaning-making and re-interpretation in contexts works from the individual perspective of *my* personally defined and experienced life world.

Relevant societal and cultural structures as prerequisites for writing

The keyword *knowledge-based economy* refers and points to the cultural and societal structures that become visible, among others, through the standardization of education. The dynamic comes from the usability of knowledge, the exploitation of knowledge as an objectified result of learning for economic utilization. The utilitarian development of education leads to standardization through, among other things, the metrification of learning. This standardization conflicts with the individualization dynamic characterized by "*my*" personally defined and experienced lifeworld. The personally defined formation of social reality is embedded in the rationale of the delimitation (Beck, Lau, 2004) and provisionality (Kress, 2010) of generally valid and binding structures. Metaphorically speaking, this results in a world in flux and a disparate culture (Bachmair, 2016). The "mobilities paradigm" comprises the structures of

"multiple and intersecting mobility systems" (Urry, 2007: 44), and includes travelling, e.g. migration and "virtual communication" (Urry, 2007: 63), as well as "societies and systems on the move", with their "intertwined social practices" (Urry, 2007: 63, 185, 59). Zygmunt Bauman's *Liquide Times: Living in an Age of Uncertainty* (Baumann, 2007) focuses on the social side.

With regard to social semiotics, Gunther Kress foregrounds the multimodality of representation. This concept makes overt the issue of writing, which has to deal with the detraditionalization of the linear mode of writing with characters (like the writing of this paper). Multimodal writing, according to the rationale of delimitation and provisionality, will be the leading idea in opening the school to related practical forms of writing: writing for self-expression and investigation of the individual's own identity, writing for reflection on the student's learning process, writing within history studies, writing for investigation of local sites of learning, and writing for investigation of second languages in the new lifeworld of migrants.

Multimodality of texts: The writing of non-linear texts within a provisional culture

The process of the multimodal transformation of writing does not have an immediately visible conflicting function in the cultural transitional process. Multimodality does, however, represent a conflict in scholastically-defined cultural resources. Writing is a central cultural asset, established as a normal and ubiquitous resource through formal learning in schools. This was, among others, a cultural-historical impact of industrialization and its standardization from the nineteenth century onwards. In later times, new forms of representation appeared through the widening of genres in print media, such as comics, or through forms of media like television and its individualized mode, the video. The question is how the school, as the convenor of the writing and reading of linear forms of text, is reacting to having a variety of forms of texts which have already reached the level of a dominant cultural resource. Social semiotics (Kress, van Leeuwen, 1996; 2001; Kress, 2010) explains and defines the multimodality of texts: "Modes are semiotic resources which allow the simultaneous realisation of discourses and types of (inter)action. Designs then use these resources, combining semiotic modes, and selecting from the options which they make available according to the interests of a particular communication situation. Modes can be realised in more than one production *medium*. Narrative is a mode because it allows discourses to be formulated in particular ways (ways which 'personify' and 'dramatise' discourses, among other things), because it constitutes a particular kind of interaction, and because it can be realised in a range of different media. It follows that media become modes once their principles of semiosis begin to be conceived of in more abstract ways (as 'grammars' of some kind). This in turn will make it possible to realise them in a range of media. They lose their tie to a specific form of material realisation" (Kress, van Leeuwen, 2001: 21).

The educational task for formal and institutionalized learning – that is, learning in the school is to determine the school's relation to multimodality, not least to avoid disruption for learners who are disengaged, and for formal education more widely. Within the triangular model of structuration, the educational task is to look at how to introduce multimodality in writing as a cultural resource into the school's practice, and to look at successful examples of how this has been achieved. This intention is based on the motive to reduce inequality in education. John Rawl's "Justice as Fairness" refers to institutional tasks as part of the fair options for citizens (Rawl, 1971: 3), which must include the task of a school to open its view on multimodality and, further, to see the rather new cultural phenomenon of multimodality as part of the personal life course within lifestyle milieus and individualized value systems. Amartya Sen emphasizes that "Justice is ultimately connected with the way people's lives go" (Sen, 2009).

Multimodality within cultural development is driven and enhanced by the internet and its social platforms, by websites and communication apps, and by ubiquitous mobile smartphones and tablets. Obviously, the educational task is to integrate multimodality into writing with the intention of widening the representational options of the traditional linear text. This corresponds clearly with the mobile devices of everyday life, which provide a wide range of options for writing, from typing SMS and phone calls to photos and videos, established media platforms like YouTube, plus a large variety of multimodal communication apps like WhatsApp (Adami, 2017; Jewitt, 2008; Lotherington, Jenson, 2011).

Modes of representation in school workshops on multimodal writing: the educational perspective

It is perhaps not surprising that the integration into the professional and economic world of the ongoing structural development of digital technologies is the driving force behind the school system's adaptation to it in formal learning. This brings multimodality of representation in writing into school, more generally, as a standard for learning. With the objective of the development of learners in mind, the educational reform agenda should look to support students in dealing with the structural change to multimodality, not the least, as already stated, because the multimodality of writing and reading also reaches into the everyday lives of learners. Therefore, the emphasis is now on the school to deal positively with the competences of multimodality in and of everyday life.

Case studies of educational practices around these competences were identified as a way to find educational answers around the flexibility of writing modes within school practice for different types of writing, writing situations, purposes and impulses for writing. Target groups included learners who are disengaged from formal school education. In the case of learners in the primary school setting, the target pupils were those who had settled into school life without tensions. Further, students in the process of migration were considered. Over several years, projects like "text and image-workshops" were offered in Germany and the United Kingdom.* (The German school projects were supported by the Rotary Club Augsburg-Römerstadt and by the Heimatpflege, Regierungsbezirk Schwaben). "Projects" refers to learning in the sense of a constructivist (Scardamelia, Bereiter, 1999), situated (Laver, Wenger, 1991) and conversational (Pask, 1976; Laurillard, 2002) design for learning and teaching, rather than a design based on teacher-guided instruction. The intention was to enable students, especially those disengaged from learning in school, to use the multimodal resources of their everyday lives to write about their identity. These workshops about self-representation of the students' identity were widened to a subject orientation, in 2014 and 2015, to multimodal writing about war as history subject. To support those students in the process of migration, students were given the option to find regional locations for learning, e.g. a bicycle workshop, arts workshops, a workshop in the botanical garden. Their writing about the workshop should enhance their reflexivity about their learning process. Students were invited to produce a multimodal portfolio based on photos taken during the workshop, using PowerPoint slides. Further workshops for migrating students were on German as a second language, with the aim of discovering and investigating the visible, written German language in their lifeworld by means of the photo application of mobile devices.

Writing as a narrative collage: affordance of workshops to school practice

Workshops are a learning and teaching design focused on constructivist, situated and conversational learning and teaching. Mobile learning was applied in the sense of opening learning to contexts and generating context by means of mobile digital devices. The workshops were aimed at a variety of learning subjects, including self-representation as part of social learning, war as a historical and actual issue and as part of the school curriculum, finding options for situated learning outside of the school precinct, and German as a second language. The design for the workshops was orientated to the narrative collage, which uses not only simple, narrative or summary text forms, but also photographs and images or texts from the internet. In the traditional school environment, only written text essays are available.

Text-image collages were the focus of the "text and image workshops", in which PowerPoint slides or posters acted as a medium for narration. In the workshops in 2011 and 2012, rap was added as spoken song based on linear, hand-written or typed text oriented to self-composed or uploaded sound and rhythm. In later versions, the rap was the means of narration. The narrative text-image-sound collages are based on the idea of using the multimedia and multimodality that is taken for granted by young people today. Multimedia and multimodality are a combination of different forms of presentation, such as typed text, images, sound, video and current texts as the basis of narrative writing. Korina M. Jocson discusses the production of text by youth who are disengaged from formal education and in non-dominant racial and ethnic backgrounds in terms of how literacy changes when the separation between the school world and the world outside of school begins to dissolve, referring to a "proliferation of space" (Jocson, 2012: 298). This idea of

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proliferation corresponds with the approach of situated learning (Lave, Weniger, 1991) and Gordon Pask's proposal for a conversational, communicative relationship between digital technology and humans based on humans having developed the rationale of technology and software (Pask, 1976). The educational option is to open the school, with its formal learning, to the multimodality of the lifeworld and the range of resources of digital and other media.

Explicitly referring to art, Jocson sees the assembling of the ready-made, pre-made material of youth culture as an "assemblage" based on "do-it-yourself" forms of action (Jocson, 2012: 299). She adds another form of action to do-it-yourself: narration. Narration is an established concept of interpreting collages/assemblages as communicatively condensed experiences of a chain of events. From this perspective, narration and collage are a form of appropriation that also appears in printouts of internet clips, with photos or pictures on posters, or in linearly designed PowerPoint slides, as well as in the complex, self-composed chant of rap. The forms of representation (printouts on paper, photos or videos on a mobile phone display, texts on a computer screen or digital blackboard, posters and drawings on paper, chanting, etc.) are diverse, multimodal and use several traditional and new digital media.

The appropriation of narration and collage means that students bring their own world of media and everyday life with them into school. For example, one of the participating students is a rapper who writes, composes and publishes his raps as videos on the video platform YouTube. On the second workshop afternoon, he presented two of his rap compositions on his mobile phone; while another student brought in a "cover" for the rap song, which he drew himself at home.

In some categories of multimodality, one can see modes for writing designed as a two-dimensional expanse, such as the paper poster with linear handwriting and self-taken photos stuck on, or posters on a computer screen. Using PowerPoint software results in a sequential modality, while video is a kind of spatial modality. The collage as a mode of writing retains and joins the diversity of modes together, supported by a narration, e.g. the narration of self-representation, the narration about family's profession, or the diverse narrations about animals in war, etc.

3. Results
Applied writing modes and student agency within the school workshop: overview

The preliminary question to address is how to present the complex multimodal representation of the students within a traditional linear academic text? The following representation of the students' multimodal writing seeks to identify the leading mode; e.g. a poster, a PDF file, or a spoken rap text within a video. These leading modes are framed by other modes and media, e.g. photos token using a smartphone. Because the school practice is of relevance in interpreting the representational modes, a short description of the workshop as school practice is given, with further information about the visible agency of the students.

The following overview is organized in respect of more linear and extensive modes of writing, to spatial or more dimensional modes of writing.

First case: Poster with photo and images of language markers, handwritten linear text and "smiley" as emotional access to the German language (Germany, 2015)

The learning subject is German as a second language. The workshop was for 20 migrants and refugees aged between 13 and 17. A group of four students in the process of migration and who were already integrated into the school supported and guided the new arrivals through the workshop. The workshop lasted four days and was about exploring the new second language in the lifeworld. The result of the workshop was a poster with glued printed photos and written text, plus a "smiley".

Fig. 1. Final poster produced by migrant students, with images of the new second language

In a shopping centre and on their smartphones, these 20 students in the process of migration took photos of the written language used on goods and products. In order to share for common use, the students each uploaded six to ten photos to a WhatsApp group. Using their smartphones as translation tool, the students translated the words on their photos, glued photos onto posters and added handwritten translations.

Fig. 2. Using a mobile phone for translation and WhatsApp communication

Before and during writing on the poster, the smartphone is used as a multimodal tool for taking photos, translation and communication.

Summary
Applied modes of representation and related media
- Linear handwriting on paper and on a poster for public presentation;
- Photos from language investigation taken by personal smartphone and communicated to peers via WhatsApp;
- Checking new German vocabulary in a dictionary app.

Agency of students (all students in migration)
- Socially integrative, supportive, very motivated;
- Culturally prescribed gender definition is not relevant;
- Peer-learning, experiencing new role of being a learner;
- Exploring conversational and constructivist forms of learning;
- Opening the school site to a context by using the digital tools of everyday life, especially smartphone photos and WhatsApp.

School practices
- Peer learning and constructivist learning with situated learning;
- The students widen their learning context into the lifeworld of consumption and their private communication by means of their smartphones and WhatsApp.

Second case: Investigation of the new school (UK, 2011)
Students with the status *Not in Education, Employment or Training (*NEETs) investigated their new school, combined it with their life outside of the school, and expressed their identity by writing on their own bodies. The two-day workshop began with an investigation of the college through the students' personal mobile phones, followed by an introduction to the presentation software Prezi in the college computer lab. The teacher invited the students to bring in material from outside of the school, e.g. from the internet or from at home. Whilst working on the Prezi

presentation, the students selected one image brought in from outside of the school. This image was printed on a t-shirt.

Fig. 3. Class with t-shirts on which their self-selected images are printed

Generation of contexts

With their t-shirt images, the group of students refer to three diverse contexts: everyday life, the internet and media, and the new school.

Fig. 4. Context: at home, family and friends. The photos are taken from a photo album

Fig. 5. Context: internet, media

Fig. 6. Context: national origin. Image with national flag of origin

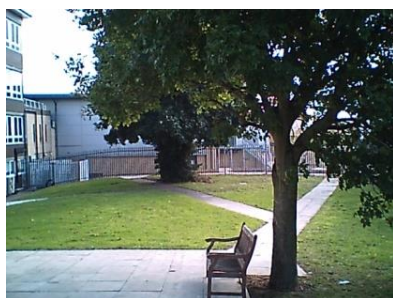**Fig. 7.** Context: vocational offers in the school. Image from the school's tailoring studio

Fig. 8. Context: sites of the school. School garden for relaxing and the toilet.

Summary
Applied modes of representation and related media
- Printed photos from personal smartphone or images from the internet for self-representation on t-shirt;
- Prezi software in the college computer lab.

Agency of students (partly migrants)
- Learning refers to familiar forms of meaning-making outside of the school;
- Making visible the students' own identity within the school by linking photos from outside, the lifeworld, and from inside of the school;
- Widening of the learning site of the school to a student-generated context with the lifeworld through photos, which becomes visible by t-shirt printing.

School practice
- Teacher-guided work on a Prezi presentation of the students' photo investigation of the college;
- Investigation of the new school as situated learning inside the school.

Third and forth cases: Students' report on learning situations

This section looks for the level of reflection that opens learning as meaning-making which also includes reflection. Questions about the process of learning are not usually considered by students in formal leaning, because this is the responsibility of the teacher; reflection comes into learning through assessment of the learning result. Learning as meaning-making is, or can be, embedded in the user-generated context. From this perspective, reflexivity is a task for the learner him- or herself.

A report on students' internships opened writing to a new mode of reflexivity through photo portfolios. Some of the student are second- or third-generation migrants. Narratives in the school about family professions and rap as standing together with writing was not accepted by the students, which seems to indicate conservative habits around modelling their own world of learning. Students prefer the established form of learning, perhaps sticking to their usual school world of learning and keeping their life context separate from school.

The second example concerns photo portfolios on the learning process of situated learning outside of the school. This was intended to offer the target group of migrating students an instrument for reflection in the new language and learning culture. The following three examples of photo portfolios deal differently with options to focus on the learning subject and the identity of the students.

Third case: Internship report without widening the context for writing (Germany, 2013)

The learning subject was a report on a practice internship undertaken by the majority of the students. The workshop took place in a school for special educational needs with 15 students, aged 16 and 17 years. The report was to be written on a tablet screen using a pre-given form. This was widened through embedding smartphone photos in the section about consideration of career choice, and adding details about the history of professions within the family by inserting excerpts from interviews with family members. Finally, the report was supplemented with a rap production about the family and working.

The only element to be realized by the whole class was the report on the internship. Exploring the family narrative around work and profession was started by three boys with video interviews: only these three students, out of a group of 15, brought in videos from home with interviews about their families' career and professional history. These video interviews were not further processed by the students due to lack of time in the school lessons and lack of interest or explicit rejection by students. Just one student produced, with the support of a professional rap teacher, a rap about family and profession. He presented his rhythmically-designed linguistic expression of his personal themes in a video. Although a video was produced just by one student, one other student sees himself as a rapper and performed a rap in class (see below).

Report: writing on tablet using a pre-given worksheet

After the students' internship, all students worked on a form about ways to get into the professions they had experienced. Using their tablets, the students completed a worksheet, inserting the name of the institution and the activities in the job, and the educational prerequisites for the occupation.
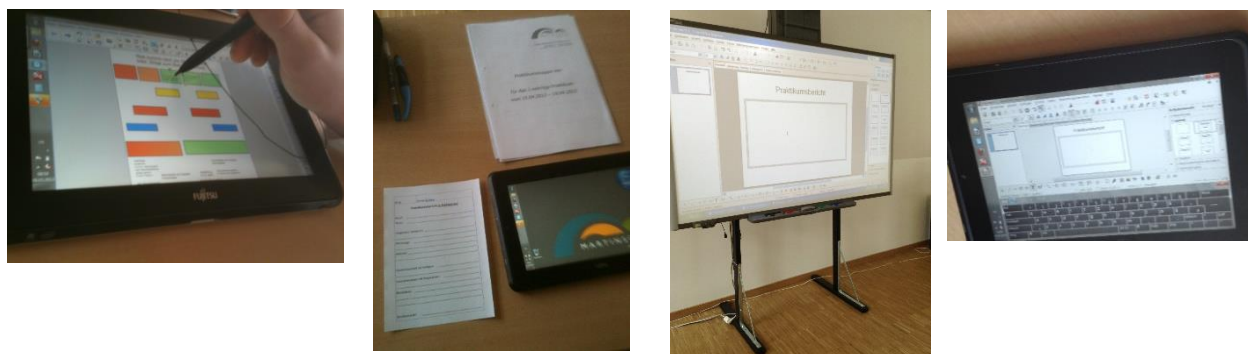

Fig. 9. Tablet with pre-given form for writing, and the linked use of tablet and mobile phone

Students use the tablets to search the internet for images that represented their workplaces, activities, tools and materials. Students who had not completed an internship (for various reasons) looked for pictures representing their possible internship.
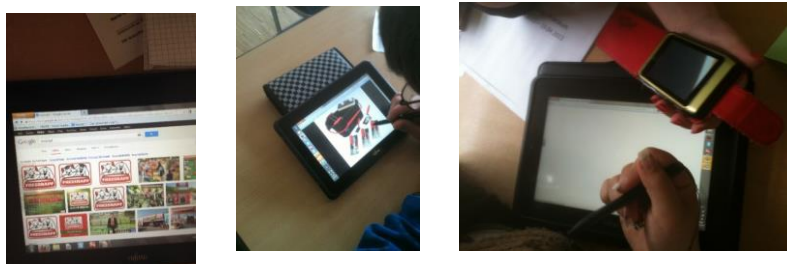

Fig. 10. Images from the internet and own photos for the internship report

The workshop activities included writing by hand in addition to writing with tablet and handwriting and drawing for the report
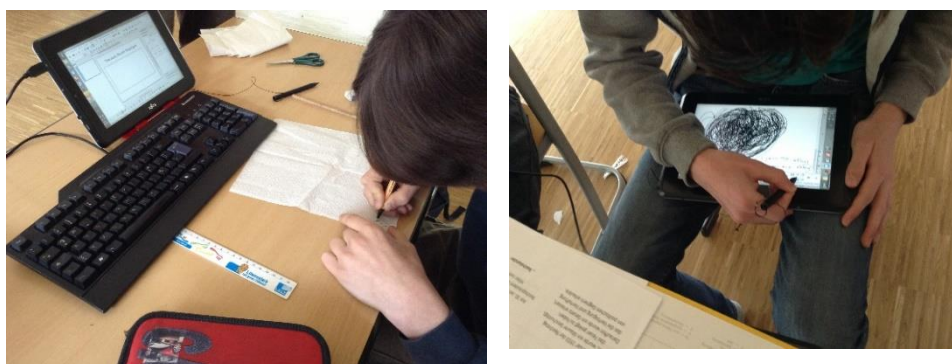

Fig. 11. Multimedia writing and doodling on tablet

Fig. 12. Presentation of final printed report

The idea of producing a handwritten portfolio was introduced by the teacher as students' contribution to the final report of the workshop. Only one student explored how to produce a photo portfolio, but stopped after having finished the first handwritten note about optional photos.

Fig. 13. Handwritten first step to a learning portfolio

Summary

Applied modes of representation and related media
- Linear text with characters written using a pre-given form on the tablet, which was presented using a projector;
- Own photos and copied images from the internet inserted into the text;
- Handwritten list of possible photos for planned learning portfolio;
- Handwritten text as draft for the text of the report on the tablet and as draft for the learning portfolio.

Agency of the students (partly second- and third-generation migrants)
- Students worked cooperatively on their reports using their tablets, with motivation and target orientation, which is important in applying for a job. They are familiar with linear writing and supplementing modes of representation though the internet.
- The majority of students were not motivated to change their learning habits. Two girls actively opposed the idea of introducing a family narration about the family's working and professional lives.
- Three boys made video interviews at home but did not process them due to lack of time in the school lessons and lack of interest or explicit rejection by students. They did, however, start to open the school precinct to further contexts.
- Supported by a professional rap teacher, one student produced a rap about family and profession. He presented the rhythmically-designed linguistic expression of his personal themes in a video. In doing so, he followed the project's offer to widen the formal learning site.
- One other student sees himself as a rapper and sang a rap in class, but he was not interested in producing a video in the school. As such, he separated the contexts of formal and informal learning and representation.

School practice
- School practice is dominated by the official curriculum, but is open to the use of a tablet as device for writing. Conversational learning modes are also welcomed within the established learning routines.
- There is restricted time to develop new forms of learning for exploring multimodal representation, e.g. for writing narrations or using sound for representation.
- The individual learning disposition and intentions of the learners are very respected.

Forth case: Learning portfolios with photos on PowerPoint (Germany, 2012)
The learning subject is German as second language, alongside producing photo portfolios to consider and present the student's own learning process. In so-called transition and integration classes, students in the process of migration, aged over 14, were given the option to participate in practical workshops outside of the school, which follows the concept of situated learning. This offer ranged from bicycle repairing to working with a biologist in a botanical garden and working with artists in an arts centre. The leading idea was to open local sites outside of the school to students for learning, and provide them with opportunities to speak German in the German lifeworld. The students were invited to take photos of their workshops and to deliver a short report on their workshops using PowerPoint slides. The students produced a variety of PowerPoint reports and

presented them formally to their classmates. These PowerPoint reports, with photos and written text typical in PowerPoint slides, have the educational function to practically reflect the student's own learning process. In comparison, the class that wrote reports on their internships did not reach this level of reflection, sticking to the pre-given form of report in traditional linear writing. In workshops outside of the school, the students could develop, test and implement new modes of representation for becoming aware of sites and procedures for learning. They should become familiar with investigating the new local environment as a site, or sites, for learning and production. The following examples give just a small sample of such photo-portfolios. The educational intention was to investigate and use German as a second language in a multimodal way, especially with images.

The workshop on biology in the local botanical garden was oriented to a learning subject: the botanical garden itself. The portfolio, shown in Fig. 14, sticks to the learning process in the new situation of learning outside of the school in a botanical garden, showing photos of the specific sites and explaining, through linear writing, the process of investigation. It also presents the group of learners within the learning process.

Fig. 14. PowerPoint slides of the photo portfolio of the workshop in the local botanical garden

The portfolio about an arts workshop on graffiti painting is focused more on the learners and their positive self-representation. This photo portfolio cannot deny its descent from the holiday photos of everyday life, and opens a context that is supported by situated learning at original sites, in this case in an artist's studio.

Fig. 15. PowerPoint slides of the photo portfolio on the graffiti workshop

The boys who participated in a workshop in the studio of a stonemason brought to the fore their target orientation of working with stones in their photo portfolio.

Fig. 16. PowerPoint slides of the photo portfolio of a workshop in the studio of a stonemason

Summary

Applied modes of representation and related media

- Photos token with smartphones, well organized on the PowerPoint slides and respectively on the projection surface;

- Framing colour of the PowerPoint slides;

- Linear writing of texts with diverse graphic design, explaining the photos.

Agency of students (all in the process of migration)

- Students represented themselves differently. Some girls were closer to female representation, similar to that found in advertisements, which opens the context to public female gender representation. Boys kept to the learning subject and the work of a stonemason.

- The portfolios are conversational and organized for communication with an audience.

- Only the girls who participated in the graffiti studio workshop opened their portfolio to their world of everyday life.

- Two portfolios (from workshops in the graffiti studio and the botanical garden) contain self-representation of the students.

- No indication that students subordinate their learning in school – here, situated learning – to their personal world view in the sense of the "sensation society" (*Erlebnisgesellschaft)* (Schulze, 1992).

- Students fully accept and like the school learning context being widened to regional sites of practical learning outside of the school, and actively use this.

School practice

- Situated and constructivist learning with conversational integration into the cultural world outside of the school.

Fifth and sixth cases: PowerPoint slides with images, photos and linear text, prepared on paper or on screen, and publicly presented

Fith case: Creative writing with a focus on identity and self-representation (Germany, 2010)

The workshop took place over eight afternoons and ended with a school-public presentation, which was also reported by the local newspaper. On a voluntary basis, the workshop was attended by 12 boys and girls, aged 14 and 15 years; some attended only on a temporary basis. The majority of students were second- or third-generation of migrants; two were first-generation migrants. The workshop offered an opportunity for creative writing using media and representation modes of youth culture in school, with the aim of discovering and presenting of the student's own identity. The principal media were computers with PowerPoint software and mobile phones. The modes were bilingual linear text, alongside photo images and a hand-drawn image (the flower on the first slide, Fig. 19). The workshop started with searching and collecting images on the internet and in the surroundings of the school. Three boys participated in just the photo investigation of the school environment, putting together their mobile phone photos, and looking for similar images on the internet. These photos were not part of the final PowerPoint slides. Texts and images from the internet were used for the final PDF, but mainly self-written linear texts.

Bilder 5 – 8

Fig. 17. Photos from outside the school grounds

With some of the photo images, the students did not go just outside of the school, but transgressed the school as a learning site, opening it to and combining it with the age and gender context of the students' lifeworld. Also, girls challenged the school orientation of the workshop

through a randomly designed doodle on the school blackboard. This scribbling opened the way to the students' bilingual identity, with a Russian or East-European family language and the standard German of the school.

Fig. 18. Informal scribbling in German and the students' family language with the trend to provocation

The PowerPoint result of a group of three boys went from writing on the chalk board and random searching on the internet to clearly structured expression of their identity as being social in an active and aware mode (*Freunde* / friends). In this target-oriented manner, they added to the end of the slides the highly appropriate headline *Collagen unserer Sprache* (Collages of our Language) (see Fig. 19). This final slide contrasts the associative beginning and indicates a rather high level of awareness. In the slides that formed the core of their presentation, they integrated photos from the family photo archive, and present themselves in a selfie as successful at a trade fair for vocational training. In respect of user-generated contexts they open their represented context from school to family with their biography as children to their expected vocational training and profession.

Fig. 19. Slides of the boys with photos, images, and self-written and copied texts

On their slides, the girls introduce themselves as participants of the workshop. They also include girls who had only partially participated in the workshop, and introduce the boys who were in the workshop until the presentation. Using typed texts on the slides they name their themes (friendship, love) as well as their school as the site of working. They show that they are aware of their working method with a language game on the blackboard and with the computer. The core of their presentation are text-image collages with elements obtained from the internet. Finally, there is an arrangement of photos of the class in the schoolyard and leisure area.

Summary
Applied modes of representation and related media
- Typed linear text copied from the internet, self-taken photos, handwritten linear text and symbols in a well-directed collage;

- Media used were PCs, a wall screen for projection of PowerPoint slides, and mobile phones.

Agency of students
- Awareness of own biography, social intention and appearance, of being in school;
- Working in gender-homogeneous groups;
- Opening the context to life outside the school, integration of school activities with the context of biography, family and the way to own profession;
- Communicative and integrative on the school site.

School practice
- Conversational, constructivist learning in addition to the school curriculum;
- Workshop is voluntary, students can leave the workshop.

Sixth case: Animals in War (UK, 2015)

The history project in a school for special educational needs on "Animals in War" aimed to include the production of PowerPoint slides with images, photos and linear text, prepared on paper and/or screen, and finally publicly presented in the school. The participants were nine students, aged 12 to 13 years, at learning Key Stage 1 to 2. Some were first-, second- or third-generation migrants. The workshop consisted of five sessions over five weeks. The first session focused on the students' personal theories about war and how to write a story on "My Favourite Animal". This was followed by a one-day excursion to see working horses at the Changing of the Guard and The Household Cavalry Museum in Whitehall, London, and to the sculpture of vulnerable animals at the Animals in War Memorial. Students then produced their report of the excursion, which led to a public presentation of outcomes in the school.

Fig. 20. Exercise book of a boy with handwriting and hand-drawing, and a later text-book based on the Halftone 2 app, with images from the internet and self-taken photos of an excursion

Writing began with a handwritten story. Figure 9a shows text produced by a boy about animals in war. In addition to handwritten text in his exercise book, the boy used the Halftone 2 app to write two comic strips. Comic strips and handwriting combine linear texts and images in a multimodal way. The difference in results comes from applying the Halftone 2 app using a design for comic strips. The two different writing modes show that the boy opened his learning context from school to reading and literacy in the area of entertainment.

In developing their personal theories about war and writing a story, students searched the internet and applied other media sources, such as television documentaries, using the school tablet. Students integrated this material into their handwriting.
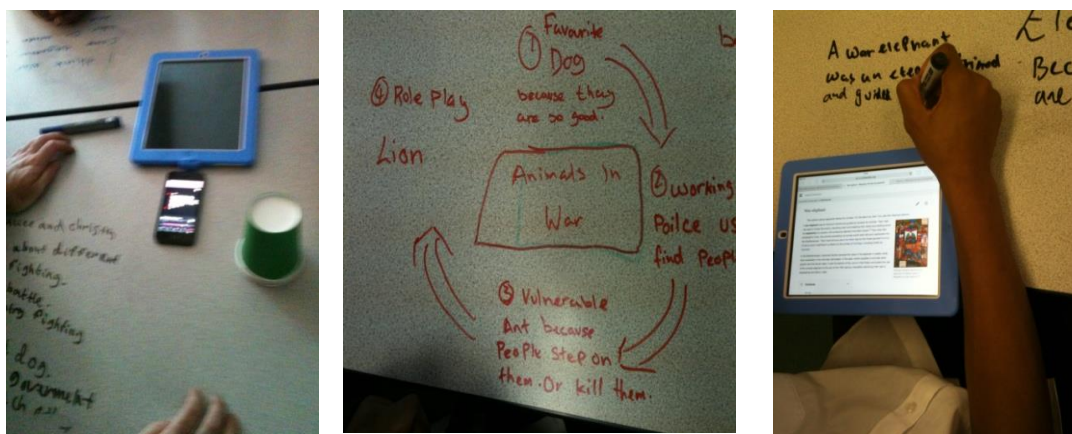
Fig. 21. The process of writing

Examples of PowerPoint slides for the final public presentation in the school consisted of a combination of linear text and images, which is typical for PowerPoint slides.
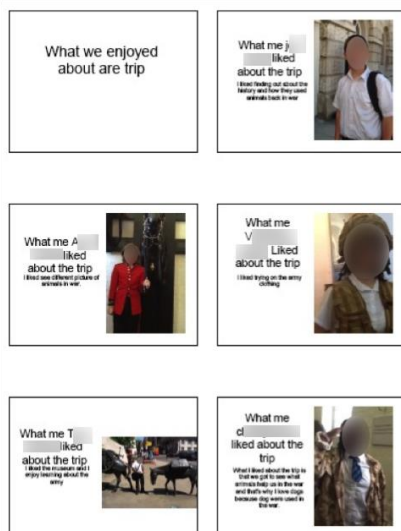

Fig. 22. PowerPoint slides with self-taken photos from excursion and typed comments

Other media of investigation besides the tablet included a smartphone that could be borrowed from the teacher.

One student needed a kind of private booth for retreat in the classroom. When participating in groupwork in the classroom, the booth was substituted by listening to self-selected music from the internet, e.g. from YouTube. This user-generated context was fully accepted by classmates and the teacher. In this context of pop music and pop narratives, he worked, wrote and concentrated successfully (see example in Fig. 22).

Summary
Applied modes of representation and related media
- School tablets for investigation and copying images from the internet;
- Linear writing with characters and images or photos;
- Slide projection on wall screen and computer screen;
- Handwriting on paper with images glued on the paper.

Agency of students, partly migrants
- Students are familiar with conversational and constructivist learning in group work.
- One student uses his internet-related context of entertainment to set up his personal workspace, a user-generated context, for effective linear and multimodal writing.
- Situated learning outside of the school was appreciated in a tourist sense and intensively used for spontaneous investigation in respect of the learning subject by taking photos. Students integrate the respective modes of representation of the contexts offered by situated learning in their self-produced texts.

School practice
- Conversational and constructivist learning with group work;
- Situated learning outside of the school on sites relevant to the learning subject "Animals in War".
- Support from the teacher and teaching assistants for group work and for individual students.
- The teacher offered examples of his own learning from television about an elephant in war.

Seventh, eighth and ninth cases: Writing with video, rap rhythm and sound for composing a text

Seventh case: From narrative collages of copied internet images to a rap poem based on lyrics written by the students (Germany, 2011)

Eight 13 year-old boys, mainly second- or third-generation migrants, refuse to write in the traditional linear way with characters. Offered access the internet and to copy what they liked, except pornography (which had to be controlled with two boys in the group), at school they copied pictures from the internet and put them in a poster. The writing activity was the copying and pasting images. They later went on an excursion to a rap studio in another city, where they wrote their own handwritten rap text. Following this, and under the guidance of a rap teacher, they produced their own rap. During the workshop, the students developed their mode of writing from copying and pasting images from the internet just for fun, to create narrative posters with images from the internet and writing and performing rap texts. Finally, they produced a video with the poster images and their rap. Narratives of text-image-sound collages are based on the idea of using multimedia and multimodality as taken for granted by young people today.

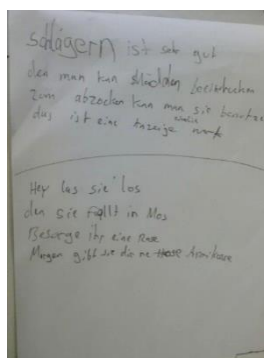**Fig. 23**. Images copied from the internet on a poster

Fig. 24. Handwritten draft of lyrics for rap

Fig. 25. Posters as part of the rap video self-produced by the boys (faces anonymized)

The following text is part of professionally produced transcript of the students' rap video, not written by the students themselves but students sung the own texts. The group worked in a sound studio with their handwritten text on paper.

Rap 1
Today we celebrate and then it goes off
This party without alcohol would have laughed
I dance Disco Pogo have an own logo
It's clear I'm getting into your cart Mr. Free
Mr. Teasie is here on his knees
Get me a beer jo you can you think it
My voice can direct your brain
One more word from you and you'll die right here

Rap 2
Your mother can not cook
Your father has heart-peals
They come with a ray
And at noon, I go putter golf
A boy is made of bone and his name was Jochen

Summary
Applied modes of representation and related media
- Copied images from the internet using the school computer;
- Handwriting on paper to produce a rhythmic, organized text for rap lyrics;
- Sound production in a music studio.

Agency of students
- Depending on their age of development, reinforced in a gender-homogenous group of boys, the students stay in their small cultural world, in which the internet is a dominant cultural resource. Their small world is self-constructed in the rationale of the "sensation society" (Schulze, 1992). They actively refuse to write in a scholastic mode. Their way of writing using a copy-and-paste mode is on a very simple level of reflection.
- The internet is the door-opener to the students' cultural context.
- Getting out of the school site and the school culture and into a site of semi-professional youth culture – the rap studio in a metropolitan town – the boys widen their cultural practices and activate their acquired school competences in writing as a resource for participating to the youth culture of rap.

School practice
- Situated learning opens the students' self-restriction to their context of youth and commercial culture, and enables the students to accept additional cultural resources for their constructivist and conversational learning.

Eighth case: Re-interpretation of war (Germany, 2015)
The workshop's aim was to approach the issue of war 100 years after World War I from the perspective of the students' youth culture. The project was realized through eight three-hour sessions and took place in the school and, mainly, in the sound studio of the local youth centre. Finally, a public PowerPoint presentation was given in the local culture centre in front of a large audience – this was a significant issue for the participants, 12 boys and three girls, aged 14 and 17 years, in the "general school" (*allgemeinbildende Schule*). The majority of the students were second- and third- generation migrants, and their major concern was to get an apprenticeship contract by the end of the school year.

To start with, the students briefly discussed digital war games in their everyday lives, before switching to their family stories about war. Motivation came from students with a Russian family background. Ideas for stories emerged associatively and were formally verbalized through video-recorded interviews, which led to the written text of rap lyrics as basis for a rap production. WhatsApp was the communicative tool used by the students for self-organization. Finally, students

developed a logo for their project presentation and the handout of their two rap lyrics. These activities show the students' awareness of embedding writing in a design.


Fig. 26. Students' awareness of design in a self-produced poster

Students' PowerPoint slides at the final presentation of the rap video in a local cultural centre

These slides were not proposed by the teacher, but are the result of the students' intention to publicly present their rap and their project. The slides also function as a learning portfolio and express the students' awareness about their work.

Fig. 27. Students' PowerPoint slides for the final presentation

Steps from handwriting to the final typed rap lyrics about war
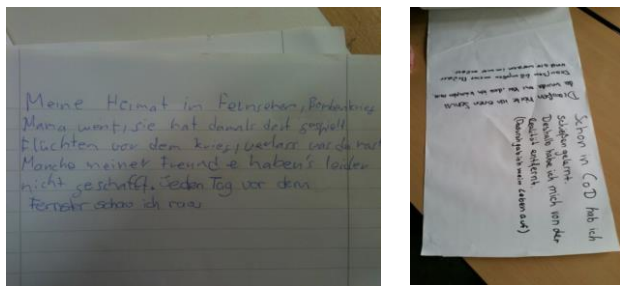
Translation for this paper
Part 1:
Already in CoD.
I learned how to shoot.
That's why I've distanced myself from reality.
So I gave up my life, I threw away the controller and walked out.
Outside I heard a shot and I realized I had to fight. Because my brothers are fighting and they're getting tired. Helping them is my duty, if they die I lose face.

Hook of the final Rap.
Too much war on this earth.
Too much power in the wrong hands ---
Too many people - dazzling you –
Before I die, I want the conflict to end here.
Otherwise the dead will become legends.

Fig. 28. Steps from handwriting to the final typed rap lyrics about war

Communication by WhatsApp for integrating family languages
WhatsApp was used to write the rap lyric in the students' family language, in addition to German. For this paper the German sentences are translated into English and marked with [.

A...j: Mi protef wajni nasha jedinstwinja orschija eta musika

Teacher: A...j, mein Russisch beschränkt sich darauf, dass ich wie ein Erstklässler Kyrillisch buchstabieren kann. Was heißt der Satz oben? [Teacher: A … j, my Russian is limited to being able to spell Cyrillic like a first grader. What's the sentence above?]

A...j: Wir sind gegen krieg , unser einzige Waffe ist Musik. [We are against war, our only weapon is music.]

A...j: Blos was oben in der lyrik ist , ist falsh geschrieben hh [Just what's up in the lyrics is falsh written hh]

A..a: Keine sorgen das hab ich selbst übersetzt ist schon richtig! ! [Do not worry that I translated myself is already correct! !]

A..a: Jaa alsop ich das mit rusischen Buchstaben schreiben würde [Jaa alsop I would write that with Russian letters]

A...j: Mu nie ho4im waynu , paetamu mi delaim etu musiku

Teacher: Das ist eine perfekte Aussage. Mit der sollten wir in Russisch, Türkisch und Deutsch als Überschrift verwenden. [That's a perfect statement. With that we should use in Russian, Turkish and German as the headline.]

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A...j: Mu nie ho4im waynu , paetamu mi delaim etu musiku
Wir wollen kein krieg , deshalb machen wir diese Musik. [We do not want a war, that's why we make this music.]

A..a: Jaa klingt besser auf rusisch [Jaa sounds better in Russian]

A...j: Da ist sogar ein reim drin. Jaaa [There is even a rhyme in it.]

A...j: Also verwendet besser die zeile : [So better use the line :]
Mu nie ho4im waynu , paetamu mi delaim etu musiku
Wir wollen kein krieg , deshalb machen wir diese Musik. [We do not want a war, that's why we make this music.]
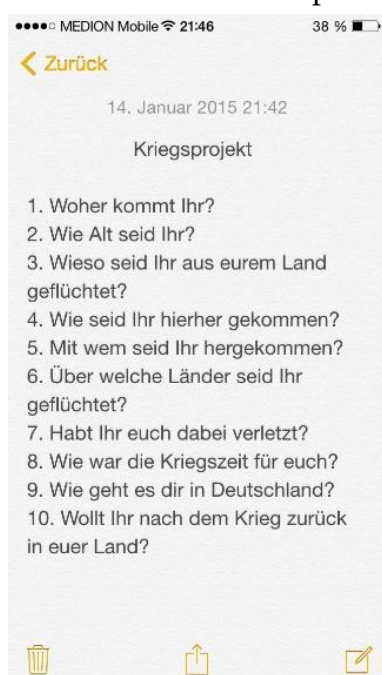
Students' outline for their interview with a boy from Afghanistan
Motivated by the teacher, the students interviewed a boy from Afghanistan about his view on war. The students developed a typed interview guide and transcribed the interview.

Students' interview transcript (English translation)
Transfer student: I used to play in Afghanistan, Turkey, and Call of Duty at my friend's when I was young. My friend recommended and explained it to me. I had fun with it, and I could take them all down.
Class 9a: How old were you when you played Call of Duty?
Transfer student: I was 12 years old.
Class 9a: Were you allowed out alone or were your parents afraid for you?
Transfer student: I was too small to remember, but I often travelled with my parents.
Class 9a: Do you have siblings?
Transfer student: We are 5 children (4 brothers and 1 sister)
Class 9a: Are you the oldest?
Transfer student: No, I'm not.
Class 9a: How old are your siblings?
Transfer student: I am 15, my brother is 13, my other brother is almost 10, my third brother is 8 and my sister is 2½.

Summary
Applied modes of representation and related media
- From linear handwriting on paper to typed text on tablet, smartphone, PC and printouts

with image from internet and book cover;
- Writing oriented to facts and connections;
- Rhythmic writing within the genre of poetry;
- Written rap lyrics, self-sung song with self-produced sound.

Agency of students
- Experiences in self-organization for using the sound studio of the local youth centre;
- Self-organized and target-oriented group communication by means of smartphone and WhatsApp. A few students excluded themselves from cooperation, but did not obstruct the work process. The students insisted on working without a rap teacher outside of the school.
- Connecting the issue of war with the family narrative, especially the family which had migrated from Russia to Germany;
- Being able and aware to use multimodal writing to link different contexts, such as own family, refugees, digital games, school, youth centre, arts centre;
- Awareness of digital technology for text and song production; awareness of the design of a public presentation of text, rap song and PowerPoint slides.

School practices
- Situated learning organized by students in the local youth centre, and based on the experiences of some students, to produce rap songs.
- Conversational learning on the students' experiences with modes of the youth culture was well accepted for the workshop.
- Students' familiarity with constructivist learning in sound production in everyday life was integrated and enhanced for all writing activities.

Ninth case: Rap production about the family and profession (Germany, 2013)

Writing a rap gives the text a form characterized by the rhythm and sound of the rap. As described above, a workshop based around writing an internship report took place in a school for special educational needs with 15 students, aged 16 and 17 years. The intention was to embed considerations of career choice and family history in the internship report. During the workshop, one student who saw himself as a rapper sang a rap in class, but did not join the guided rap production. One other boy, aged 17, did not work on the family narration about profession, but developed his rap about family and profession. The rap phase of the workshop started with two students, but after one of the students left the workshop after the first session with the argument that his mother insisted that he only attend lessons with relevance to his final certificate. Only one student produced his rap about family and profession. He liked his rhythmically-designed linguistic expression as a means of expressing his personal themes around family and profession. The rap production was attended and supported by a professional rap teacher.

The typed song text for the rap about profession and family

Family Master Class (English translation of he German lyrics)
4 bars beat
Two choruses:
Passenger____
of the family master class
she is one cool fat saucer
and floats away
from the grey mass.

1st verse (V)
Dirty Dancing for the 100,000th time
Mother doesn't know it by heart for me normal.

Fast & Furious____exactly our style,
they're drifting____ into every curve.

2nd verse (K)
Pancake, toast, maple syrup and butter
and scrambled eggs____ everything from the mother
Bacon, grapefruit and cocoa
From the USA by the best woman
Two choruses:

...
3rd verse (VK)
On the motorway____every mosquito crashes
with 200__Exactly in every parking space,
Strong in roar and mobile phone gambling
with rice and sugar____Get you off your socks
Two choruses:

...

Summary
Applied modes of representation and related media
- Handwriting on paper of rap text as draft; final text with self-selected design, and ? typed by
  tablet and printed;
- Rhythmic writing within the genre of poetry.

Agency of students
- The student deals with the topic of family and profession as a personal issue, and likes to
  give these personal issues a self-expressed form.
- The student welcomes the intensive support of the rap teacher.
- The student begins to transgress the "small" view of the cultural world of his class.

School practice
- The school supports situated learning, but does not communicate it to the parents;
- Support of constructivist learning.

10th case: Writing by means of apps (Primary School, Germany, 2016-2017)
The Book Creator app works as a multimodal organizing instrument for exploring the new second language. In a primary school, in a language support course for migrants, twice a week the students from regular classes learn and work with the migrant students in peer groups of two learning buddies, or so-called "learning tandems". Each learning tandem, 10 tandems in total, has its own tablet. Using the Book Creator app, each tandem produced its own individual exercise book in which photos are verbalized through written or spoken language. Some photos stem from the migrants' families, taken on their smartphones and sent to the school's Dropbox account; other photos were taken by the learning tandems during short excursions in the neighbourhood of the school. Using Book Creator, the students added typed comments in German to the photos to produce a digital book on the tablet.
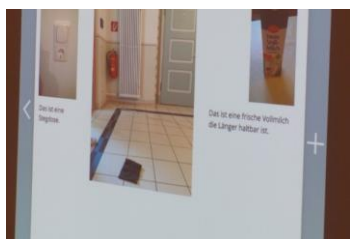

Fig. 29. Page of a book with photos of language markers taken at home and in school, with typed verbalization

On the excursion to school's neighbourhood, students took photos using school tablets and integrated some of these photos in their books, organized using the Book Creator app.
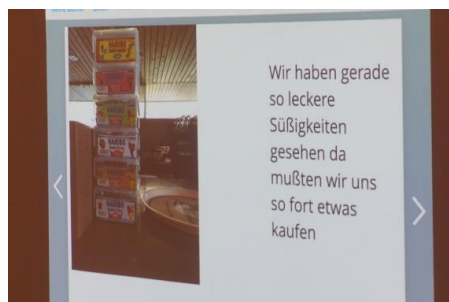
Fig. 30. Pages of a book with photos of language markers taken in and around the school, with the students' typed verbalization

It was also possible to add linear handwriting and drawings of "smileys".

Fig. 31. Book pages with drawings

The Book Creator app offers both multimodal resources in the sense of media such as photos, and the means to combine different modes through design. Offering design modes seems to be the main function of the Halftone 2 app, which was used by a boy in the "Animals in War" workshop. This app is labelled as a "Comic Book Creator", and offers a variety of design resources. The boy used these comic design elements to combine, in multimodal way, linear texts and images. The Book Creator app works in the sense of a new digital book media, which integrates and offers multimodal resources. It replaces the traditional handwritten workbook and leads to the conversational functions of digital tools such as the tablet and the internet. Learner-generated contexts as an element in learning as meaning-making and re-interpretation is part of the rationale of such app-created workbooks.

What was the result of the photo investigation of the vocabulary of lifeworld and working with the Book Creator? In total, the students collectively dealt with 114 nouns, 30 verbs and 53 differentiating words to the 114 nouns. The appropriation of the photographed language markers clearly goes beyond mere reproductive copying. The students wrote their own statements, approached the meaning of the language markers, among others, and explained their meaning. They searched for their own appropriate vocabulary and evaluated it, used colloquial language, created writing contexts, and integrated non-language symbols and drawings. The children also strove for correct spelling.

Summary
Applied modes of representation and related media
- The Book Creator app offers and comprises all relevant modes of representation, including handwriting, linear typed text, drawing, colours, photos, videos, sound, through the medium of the tablet.

Agency of students
- During peer learning, the students try and test the options for representation and integrate them into their book.
- Discovering the new German vocabulary and applying it rather differently, the students combine their exposure to the new vocabulary with their self-representation by means of the app's representation modes.

School practice
- Collaborative learning scenario of peers with different competences in the second language;
- Situated learning for discovering the new second language in the lifeworld;
- Applying the discovered vocabulary on a tablet by means of the Book Creator app.

4. Conclusion

The intention of the participating schools was to enable their students' autonomy for learning, not explicitly the widening of writing resources. This included the creativity of writing as expression within autonomy of learning, and opened the school precinct to everyday life and youth culture with its multimodality of representation. The instructional design was explicitly connected to constructivist learning, with the teacher mainly in a consultancy and supporting function. It also aimed to find situations outside and inside of the school for stimulating the students' creative and autonomous learning.

Peer learning was welcomed and enhanced. Such a design for formal learning was accepted by the school curriculum, but in some schools this was considered as an exceptional event within a restricted time-setting. Some of the school projects were rather far away from curricular guidelines; for example, the workshops using PowerPoint slides or video for self-representation, or video about the family's professional background. Some projects were closer to the curriculum, including the internship report, German as a second language, and the projects about war. The target groups ranged from children in primary school, adolescents, learners with special educational needs, newly-arrived migrant students, and students in families of second- or third-generation migrants.

This breadth of variance does not allow for generalizations on what could be the best learning design for multimodality, but shows the multimodality of writing, how this works within the complexity of pre-given changing cultural structures, and how it can further the learners' agency and the school practice. As such, this study aims to provide case-based models for discussing optional school innovation within the changing culture of writing, from standardization to provisionality.

Rather than generalizing the results of different learning and teaching designs in multimodal representation, the intention is to look for successful and practical examples of the interrelation of writing modes with features of the agency of the students. Further, it is to discover designs for learning and teaching in an innovative way, using new digital, mobile tools, which can be realized within established school practice. Keywords for innovative designs, beside constructivist and conversational, are the orientation to user-generated context in the sense of situated learning and virtual contexts. Argued by means of the cultural disruption that transforms learning to conversational meaning-making in context, the focus is on the learner's capacity to integrate their experiences of everyday life and the modes of representation that they appropriate in everyday life. The agency of the "sensation society" ("*Erlebnisgesellschaft*") (Schulze, 1992), and its changing subjectivity in defining reality from the personally experienced and constructed lifeworld, is also a relevant issue.

There are two evident examples around the dynamic of the learner's agency for learning in school driven by the personally experienced and constructed lifeworld. One example comes from a school for special educational needs and its workshop around writing an internship report, which should be linked to the family narration about profession. In practice, the students were invited to use their smartphones to record interviews with family members, and to write and compose a rap. All but one of the students insisted vehemently that they would not go beyond writing the internship report in its pre-given form of a linear text. However, they welcomed cooperative forms of learning and added familiar images from the internet to their reports. It is probable that the students disliked widening the referential context of work placement and dealing with unknown modes of representation, especially of self-refection by generating a context, as this context would transgress the secure context of school. This example points to the students' agency not to leave the familiar and controlled world of formal learning liked by them. Only one boy accepted and used the school's offer to compose a rap. He wrote a linear typed text about family, which adopted the rhythm and sound of a rap.

The alternative becomes visible in the project involving boys who refused to write in the traditional scholastic way, where linear and typographic writing was replaced by copying and pasting from the internet. When being presented with the offer to produce a rap video in a semi-professional studio, they accepted working with linear handwriting without any complaint. The target of composing their video, inclusive of paper posters, outside of their school was attractive,

and they therefore activated the writing and working competences they had appropriated in school. Comparing these examples under the guideline of the groups' agency, one similarity becomes visible: the formative power of the personal "small lifeworld" as reality, which leads to diverse cultural resources for writing.

For the students not in training or a profession but starting with professional training in a school, the project to investigate the new school context shows how writing with photos, practically (printing photos and words on t-shirts) generates a context for reflexivity. For example, a girl generates a context between home, family, friends and the new school by using photos from a private photo album.

New modes of writing within the multimodality of digital representations include options to challenge the learner's agency for reaching a higher level of reflection, for example though a photo portfolio in which different incidences of agency appear.

Remarkable is the development of apps like Book Creator, which was used in a primary school for discovering the new second language in the lifeworld, and applying the new language using digital and multimodal writing within peer learning. This is a new offer that deals with diverse modes of representation in an integrative way.

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