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Culture of Sharing

A Critical Examination of a Key Concept of the OER Movement

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Abstract

In the light of the contemporary socio-political debate on the appropriation of OER in schools, the paper asks how the culture of sharing and the function of the school are intertwined and what circumstances create tensions between the two. The argumentation unfolds in three steps: looking at discourse, institution and practices. We first discuss what sharing means in the context of the OER discourse and what socio-political challenges are associated with the understanding of the culture of sharing. Secondly, viewing the functions of school as an institution of education, from the perspective of school theory, we identify the achievement principle and the community principle to be analytical lenses. Finally, we apply these lenses to the analysis of the practices of sharing in a classroom observation. As a result we conclude that the understanding of the culture of sharing diverges in these two instances, despite schools and OER discourse having contextual overlaps. The resulting tensions go some way to explaining the limited use of OER in schools at present while also providing a spring board for interventions from education policy-makers and practitioners. The paper closes with a call for further research into OER and proposes using the three steps developed here as a theoretical reference framework for future empirical approaches.



Zusammenfassung

Ausgehend von der gegenwärtig gesellschaftspolitisch geführten Debatte zur Verwendung von OER in der Schule, wendet sich der Beitrag der Frage zu, in welchem Verhältnis die Kultur des Teilens und die Funktionen von Schule zueinander stehen und wo unter Umständen Spannungen bestehen. Die Argumentation folgt dabei einem Dreischritt mit Blick auf Diskurs, Institution und Praktiken: Zunächst diskutieren wir, was Teilen in der Debatte über OER bedeutet und welche gesellschaftspolitischen Forderungen mit dem Verständnis einer Kultur des Teilens verknüpft sind. Dann beschreiben wir aus schultheoretischer Perspektive die Funktionen der Institution Schule und identifizieren dabei das Leistungs- und das Gemeinschaftsprinzip als analytische Linsen. Diese dienen uns im dritten Schritt zur Untersuchung von Praktiken des Teilens im Klassenraum am Beispiel einer Unterrichtsbeobachtung. Als Ergebnis arbeiten wir heraus, dass das Verständnis des Begriffes ›Teilen‹ in der Schule und im OER-Diskurs trotz inhaltlicher Überschneidungen differiert. Die sich daraus ergebenden Spannungen sind zum einen Erklärung dafür, warum OER in der Schule aktuell wenig verwendet werden und bieten gleichzeitig Handlungsimplicationen für Bildungspraxis und -politik. Der Beitrag endet mit einer Einladung zu weiterer OER-Forschung und schlägt den entwickelten Dreischritt als theoretischen Bezugsrahmen hierfür vor.

Introduction

Open educational resources (OER) are currently being discussed by education policy-makers in Germany as a complement to traditional educational media. The discussion surrounding them not only concerns economic and technical considerations, but also emerging practices and socio-political issues (Alquézar Sabadie et al. 2014; Edwards 2015; Fischer et al. 2015; Knox 2013, Ehlers 2011; Conole and Ehlers 2010). Central to the OER debate is this last point, which concerns changes to the school as an institution and the democratisation of education. The socio-political debate surrounding schools oscillates between change and continuity. There is, on the one hand, a sense of hype surrounding the *culture of sharing*, which in the field of education has been firmly tethered to open educational resources and linked with expectations of a revolution in education. On the other hand, schools are institutions, required to generate and evaluate individual learning success and simultaneously to reproduce the societies in which they are based (see for example (Kiper 2013; Kolbe and Reh 2009).

Despite the widely discussed potential attributed to OER their use is not yet broadly established, certainly not within German schools (Bock 2016; Panke and Seufert 2013, 117). This can be explained by the assumption that materials alone are not sufficient to stimulate an educational revolution, rather in contrast, a shift in social practices is a prerequisite for the innovative use of OER (Orr, Rimini, and Damme

2015; Albrecht and Revermann 2016; Ehlers 2011). This realisation is a significant starting point, yet still falls short if the ultimate goal is for OER use to become more firmly established in schools. The debate concerning OER has, to date, avoided a discussion that both critically reflects its socio-political dimension, specifically the ideal of the culture of sharing, and also seriously contemplates schools as institutions with their own internal logics. We therefore investigate where tension occurs in the relationship between the culture of sharing and the specific functions of the school.

Our argumentation will follow three steps: firstly, we briefly describe the discourse concerning OER and the culture of sharing. We illustrate the significance of the OER debate in Germany and the socio-political demands that are associated with an understanding of a culture of sharing. In a second step we apply school-theory to describe the functions of the school from a macro-perspective. By examining the integration and selection functions of the school (according to Fend 1980, 2006) we identify principles of achievement and community as analytic lenses for an investigation of school practices. Finally, in our third step, we employ a micro-perspective to analyse a classroom observation¹ in order to describe specific practices of sharing in schools and to compare how different understandings of sharing intersect in the framework of the OER discourse. The paper will conclude with a discussion reflecting the tensions between differing institutional logics in schools as expressed through principles of achievement and community and against the background of the sharing debate. It will also identify spring boards for further research on OER, education policy and education practice.

Open Educational Resources: the Promise of a Culture of Sharing

A range of initiatives have been launched in Germany since 2011 aimed at OER expansion. They are affiliated with an international grass-roots movement, started in 2002 and supported by UNESCO, which primarily advocates for freely accessible resources in higher education in developing countries (Muuß-Merholz and Schaumburg 2014, 12–14). In alignment with UNESCO's definition, open educational resources are generally understood in Germany to be educational materials that are either in the public domain or may be published under open licences and used, modified and distributed without charge. «Open» in this definition refers both to unrestricted and gratuitous access and to the licence, which allows the (in some cases restricted) distribution of modified material (Wikimedia Deutschland 2016; Muuß-Merholz and Schaumburg 2014, 6-10; UNESCO 2012). In practice, openness manifests itself in five activities termed the 5Rs by Wiley (2010): retain, reuse, revise, remix and redistribute. The term

1 Excerpt from a large-scale long-term study on digital teaching and learning: a qualitatively designed study involving teachers and pupils, which gathered data from 2014 to 2017 through lesson observations, semi-structured interviews with teachers and an online questionnaire for pupils; upper secondary level, German school, city in Lower Saxony (Bock and Probst 2018).

share is often used synonymously with the fifth R: redistribute. Sharing is a common activity within digital networks in this sense, while simultaneously being presented as a central criteria differentiating OER from other educational materials: «people sharing what they're doing» (Robertson 2010) is one understanding of OER.

OER are viewed as teaching materials with the potential to be produced and exchanged more practically than has previously been possible, and therefore to support cooperation and collaboration between teachers (Orr, Rimini, and Damme 2015, 12, 18f). There is also the expectation that a culture of sharing between teacher and student can be created with the help of OER (Wikimedia Deutschland 2016, 11; Davis et al. 2010). Certainly since the 2007 Cape Town Declaration OER are held to be considerably more than merely digitally distributed aids for teaching or self-study. They stand for nothing less than a «global revolution in teaching and learning»; for a world of unlimited access to knowledge and a new pedagogy which allows students and teachers to acquire knowledge together (Cape Town Declaration 2007). Thus, OER are placed within a modern narrative of progress, which is about the emancipation of the ignorant through education (Knox 2013, 1). Simultaneously OER supporters refer to the requirements of the digital knowledge society in the twenty-first century: OER support «the kind of participatory culture of learning, creating, sharing and cooperation that rapidly changing knowledge societies need» (Cape Town Declaration 2007). Reference is made here to values such as participation, cooperation and social practices such as a culture of sharing, which are proclaimed to be new visions of society.

This raises the question of how a culture of sharing could manifest itself within educational institutions. The discussion refers back to collaborative or cooperative learning approaches, which – with differing emphasis – illustrate social processes in which pupils follow mutual goals and gather knowledge as a group (Haake, Schwabe, and Wessner 2012, 1; Dillenbourg 1999). The term «collaborative learning» in particular is closely associated with constructivist learning theories based on (Vygotskij 1978; Lave and Wenger 1991; Stahl 2012, 20; Carell 2006, 22).² These approaches have however not yet been ascribed any socio-political ideas. In order to apply principles of cooperation and collaboration in school to education on democracy, Mayrberger developed the participative media education approach (2012, 13). Her argumentation follows democratic education approaches in the tradition of Dewey (1993) that recognise school as a site of democratic practices (Henkenborg 2014). She underlines the necessity of participation being implemented as a process of experiencing and learning, in order to achieve the democratic education goal of creating responsible citizens (Mayrberger 2012, 10; see also Urban 2005). As self-directed collaborative or

2 Collaborative and cooperative learning are sometimes used synonymously and at other times divergently. Cooperative learning is differentiated from collaborative learning by some authors, who define the former as a process structured beforehand by the teacher, in which the pupils divide the work between them and compile their results at the end. See: (Carell 2006, 21–24). On the breadth of the term cooperative learning see (Konrad, Klaus and Dominik Bernhart 2013).

cooperative learning is challenging for students, graduated models of participation (Arnstein 1969; Schröder 1995; Fletcher 2005) could provide support (Mayrberger 2012, 17-20). Participative learning is then characterised by teacher and pupil jointly adopting responsibility for the design of the learning environment, which enable «the results of both individual and mutual, collaborative learning processes to be shared» (Mayrberger 2014, 52). The creation and implementation of OER could support this approach. Sharing therefore becomes a catchword for participatory teaching aimed at pupils' involvement in the design of the learning process, which in turn democratises education (see also Neumann 2014; Esken 2014).

Wiley and Green (2012) view the potential of OER in terms of sharing to be equally emancipatory, but with slightly different emphasis. They postulate that the OER approach is well suited to the field of education precisely because teaching represents the sharing of knowledge:

«Education is, first and foremost, an enterprise of sharing. In fact, sharing is the sole means by which education is effected. If an instructor is not sharing what he or she knows with students, there is no education happening.» (Wiley and Cable 2012, 82).

Through its close connection with the term *education* the culture of sharing seems to become a moral obligation for educators. Separating himself from institutional logics, Wiley believes that institutions and individuals appear to have forgotten the essential values of education: «sharing, giving, and generosity» (Wiley 2010). The term *sharing* serves here as a key word for an anti-institutional understanding of education and is perceived to be an emotionally charged act, with subversive potential. This perception seizes on anti-modernist arguments from pedagogic debates surrounding the tension between education and school (see also Benner 2009, 15; Kemper 2009, 681), whereby the scepticism expressed towards education institutions follows the radical criticism of schools set out by (Illich 1973).

Whilst Mayrberger, for example, understands sharing as a form of collaboration, cooperation and participation within the institutional context, others, such as Wiley, stress the anti-institutional character of the concept and use the term as a positively loaded antonym for proprietary educational media. The latter point is also associated with factions that view sharing as an anti-capitalist concept. The culture of sharing is construed by some authors to indicate the beginning of a new economic and societal model, which will engender a return to the intrinsically cooperative and friendly human character (Grassmuck 2012). The advantage of the *sharing economy* over capitalism is substantiated by its more efficient and more motivating production and distribution modes. In this view, sharing presents an insurgently connoted «crime against capitalism» that prefigures a way of life beyond capitalism (David 2017, 175).

The utopian potential of sharing as a new economic and societal model does, however, have its challengers. John highlights the ambiguity of the term *sharing* which denotes a category of speech, an activity in social networks and an economic activity. Due to this ambiguity, positive values, such as openness, trust and a sense of community, that are associated with the meaning of sharing as an authentic interpersonal speech act, are being transferred to activities in social networks and economic activities. The term subsequently suggests that sharing will humanise economies and societies based in the capitalist economy while the designated activities do not necessarily fulfil these promises (John 2017, 4, 148, 154). Other authors refer to the power relations within digitally shaped capitalism: where private digital platforms are powerful agents that appropriate content, material or personal data shared by individuals (Sarikakis 2012, 41; Srnicek 2017). Selwyn takes up this criticism and applies it at the debate surrounding OER, which, he attests, masks power structures and political control (Selwyn 2014, 65). A scenario in which broad masses of teachers and pupils are actively empowered is unlikely given the background of capitalist dynamics (Selwyn 2014, 78).

As demonstrated in this short overview of the discourse concerning OER, the concept is closely bound with the term *sharing*. Superficially, *sharing* describes everyday activities in digital networks and, as a synonym for *redistribute*, pertains to a central criterion of the openness of educational resources. Yet, as the term is associated with positive emotional values such as openness, trust and a sense of community, there is an association at a deeper level with a culture of sharing in educational institutions, collaborative practices, participatory development in teaching or a return to core pedagogic values. Finally, on yet another level, the term offers an anti-capitalist reading and therefore a utopian dimension, which is equally based on its association with values such as community.

Sense of Community and Achievement orientation – on the Functions of the School as an Institution

The ambivalence of the term *sharing* gives rise to the question of where tension arises between a culture of sharing and the social functions of the school. Based upon the argument that the idea of sharing is associated with social ideals but does not take into account the logics of the market economy, it is of particular significance to examine how relevant the concepts of community and economy are.

For this reason it is useful to return to an identification of the relationship between school and society that was developed in the 1970s. With reference to structural functionalism approaches (Parsons 1964) Fend (1980, 2006) distinguishes between several core functions of school (see also Blömeke and Herzig 2009). He underlines first the dual function of the education system; consisting of the *reproduction of*

society and the development of *personalities*. Then he identifies four social reproduction functions: the enculturation function, which refers to the reproduction of cultural values; the qualification function, by which the acquisition of skills for the employment market is meant; the selection (1980) or allocation function (2006), which maintains (unequal) social structures, and lastly the integration function, which concerns the transfer of political contextual knowledge and civic principles and should therefore stabilise the political system. Fend (1980) assumes tension between social reproduction functions and the individual function of personality development, as social and personal interests do not always align. In his new theory of schools, Fend reacts to the dynamic character of modern societies by expanding the social reproduction function of the school to include aspects of innovation (Fend 2006, 49). In addition he combines the structural theory approach with an action- and design-oriented perspective (2006, 169).

We wish to expand the structure theory approach, similarly to Fend, through a praxeological perspective (referring to Schatzki 2010) and look at school as a site of social interaction framed by the functions of school. The teachers derive their orientations for classroom action and practices from the institutional logics founded in the school functions. Empirically, they are to be defined on the one hand as norms in the statutory educational objectives of the 16 federal states and on the other hand can be observed in concrete teaching practices.

As we are interested in the points of friction between the culture of sharing and the function of school, our focus now turns, informed by the discussion on the *sharing* debate described above, particularly to tensions related to the concept of community and market economy. From a structural theory perspective these two concepts are associated with the integration or selection function. We will clarify the way in which these functions are translated within education goals and the roles played by the concepts of community and the market economy, in order to establish the normative actions taken by teachers.

In reference to the integration function, school can be understood as a site of civic and democratic orientation. This function is of enormous significance in school laws of all German states: many such laws state that teaching and education are bound by the federal constitution and that of the respective state. Civic education aims generally consist of an «exercise of one's constitutional civic rights and responsibilities».³ Democratic education goals incorporate the fundamental values of freedom, democracy, human rights, tolerance, respect for other beliefs, peace and

3 «Wahrnehmung ihrer verfassungsmäßigen staatsbürgerlichen Rechte und Pflichten» (§ 1 (2) Ed. Act Baden-Württemberg).

international understanding.⁴ In certain states values such as equality and solidarity are also included, thus embedding a sense of community within general societal values.⁵ Many education acts also highlight the character of the school as that of a social community, in which a sense of responsibility should be felt towards common welfare: «Schools should be designed so as to realise shared teaching and learning and mutual education of pupils, inequities should be balanced out and equal opportunities created».⁶ Democratic opportunities for pupil involvement are derived from this: «The pupils are involved in decisions regarding lesson design, appropriate to their age and development, as well as activities outside the classroom and the school community. An important school mission is to create such opportunities for pupil involvement».⁷ Several state education acts aim to also actively teach democratic action such as the critical use of information, formation of opinion, living together without prejudice, conflict resolution, reflecting upon other cultures, critical examination of social structures and volunteer work.⁸ A sense of community expressed through active democratic practice is therefore an important principle that should be communicated through schools as sites of civic and democratic orientation.

As the institution of the school is located within a market economy, it performs a selection or allocation function for society, according to Fend's theory. This consists of measuring and comparing the efforts of individuals and allocating them appropriate education and career paths with the aid of examinations and qualifications. Competition for qualifications leads to the principle of individual achievement orientation being enshrined in the education system. School is therefore a site of dissemination for market economy principles. Education objectives contain formulations such as «achievement motivation and personal responsibility»⁹ explicitly establishing the

4 The KMK (Standing Conference of the Ministers of Education and Cultural Affairs of the Länder) reached agreement on these objectives in the resolution «Zur Stellung des Schülers in der Schule» on 25.5.1973. See Beschluss der Kultusministerkonferenz: Zur Stellung des Schülers in der Schule. Beschluss vom 25.05.1973, p. 2f.: http://www.kmk.org/fileadmin/veroeffentlichungen_beschluesse/1973/1973_05_25_Stellung_Schueler.pdf.

5 For example in states dominated by left-wing political parties, such as Brandenburg, Bremen and Hamburg (§ 4 (5) Brandenburg Education Act, § 5 (2) Bremen Education Act, § 2 (1) Hamburg Education Act). See also Helbig and Nicolai 2015, 305f.

6 «Die Schule ist so zu gestalten, dass die gemeinsame Unterrichtung und Erziehung sowie das gemeinsame Lernen der Schülerinnen und Schüler verwirklicht, Benachteiligungen ausgeglichen und Chancengleichheit hergestellt werden» (§ 4 (2) Berlin).

7 «Die Schülerinnen und Schüler werden ihrem Alter und ihrer Entwicklung entsprechend in die Entscheidungsfindung über die Gestaltung des Unterrichts, des außerunterrichtlichen Bereichs und der schulischen Gemeinschaft eingebunden. Es gehört zu den Aufgaben der Schule ihnen diese Mitwirkungsmöglichkeiten zu erschließen» (§ 4 (4) RP).

8 These objectives are also most prominent in states dominated by left-wing political parties, such as Brandenburg, Bremen, Hesse or Mecklenburg-West Pomerania.

9 (§ 1 (2) Education Act Baden-Württemberg), and likewise: § 3 (3) Ed. Act Berlin, § 1 (2) Ed. Act Rheinland-Palatinate, § 1 (2) Ed. Act LSA, in addition «eagerness to learn» (§ 2 (9) Ed. Act North Rhine-Westphalia (NRW), § 1 (4) Ed. Act Saxony,), and «strengthening of achievement and motivation» (§ 2 (2) Ed. Act Hamburg, also § 5 (3) Ed. Act Bremen).

link to the selection function. A common formulation is that pupils should be taught to learn and achieve goals individually and jointly with others,¹⁰ which sets the principle of individual achievement in relation to the school as a community.

Schools are both sites of civic and democratic orientation and sites for the dissemination of market economy principles. On the one hand, the dissemination of a sense of community follows from the civic and democratic orientation, which strengthens the integration function of the school. On the other hand the principle of individual achievement is embedded in the school through the manifestation of the selection function, even if it is relativised at a rhetorical level by the sense of community. If this observation is related to the discourse about sharing it is possible to detect a close affinity between the terms *sharing* and *sense of community*. The discourse surrounding the culture of sharing is, however, missing a counter argument, whereas the education objectives of the schools explicitly name the principle of individual achievement as an abutment, which must be balanced by the sense of community. The following empirical examination of sharing in school practice should clearly illustrate how a sense of community and achievement orientation are reflected in schools; prior to the introduction of open educational resources.

School Practices – The Tensions between the School Functions and the Culture of Sharing in Everyday School Life

The functions of school as established in education objectives are expressed through institutional logics, which are in turn translated into school practices by the teacher in the classroom. On the basis of praxeological approaches (including Schatzki 2010; Schäfer 2013), we understand practices to be the expression of an implicit understanding by individuals regarding the manner in which they should interpret established institutional rules in everyday situations. Our observation of an everyday teaching situation is therefore viewed as a «rich point» in the sense of Agar (2006; Bock 2018) and we reconstruct the institutional logics with the observed pedagogic practices in mind. These institutional logics manifest themselves in the design of the lesson, the choice of teaching and learning arrangements, the formulation of the exercise or task, or the guidelines given by the instructor on how to complete the task. In the third of our three steps we explore teaching practices as they can demonstrate how sharing comes to life in the classroom. In addition we hope to gain a deeper understanding of how the principles of achievement and community are interpreted by teachers and pupils and how they are visible in practices.

10 (§ 3 (2) Berlin Ed. Act) and similarly: § 4 (5) Ed. Act Brandenburg, § 5 (3) Bremen Ed. Act, § 2 (3) Hesse Ed. Act, § 1 Ed. Act Meck-West Pomerania, § 2 (1) Ed. Act L. Saxony, § 2 (6) Ed. Act North NRW; §1 (5) Saxony Ed. Act, §4 (4) Ed. Act Schleswig-Holstein.

We use a classroom observation to analyse teaching practices.¹¹ Analysing an example of group work is useful in three ways for the reasoning in this paper. Firstly, group work is a learning arrangement, which supports sharing in the form of collaboration and cooperation between pupils. According to constructivist theory, we understand collaborative and cooperative learning to be social processes, in which pupils follow a common goal and acquire knowledge as a group (Haake, Schwabe, and Wessner 2012, 2) and we describe this process using the term collaborative learning. Secondly the work situations analysed are typical examples of common teaching practices and represent many other observations made during field research for the project. However in this form of group work there is generally only rudimentary collaboration. As the instructors usually provide the topic and design the learning environment by themselves, this can only really be described as a preliminary stage of participatory learning (Mayrberger 2012, 18). Finally the example of group work illustrates central principles of teaching practices that highlight the tensions between a culture of sharing and the functions of the school, namely:

1. the community principle expressed through collaborative work towards the (creative) production of a mutual product as well as
2. the principle of achievement as expressed through the assessment of the individual performance of the group participants.

The following excerpt from an example of classroom observation focusses on the lesson structure and dynamics within working groups but excludes a description of the specific subject content. To introduce the group exercise the instructor (Horst) presents a range of informative material (links to a YouTube clip and web pages, a PDF document with text and diagrams, the printed textbook, digital version of the textbook pages). The pupils were randomly divided into three groups (group A: eleven pupils, group B: eight pupils, group C: seven pupils), whereby they were responsible for the organisation of their own groups, the distribution of material and tasks and for nominating two pupils from the group to present its results to the class. The observation pertains to group B, which during the lesson divided itself into two working groups with four girls in one group and four boys in the other:

¹¹ Year 7 grammar school pupils. Excerpts from the project «Digital Teaching and Learning» from which data was gathered between 2014 and 2017 through lesson observations, structured interviews with teachers and an online questionnaire for pupils; secondary level, German school, State of Lower Saxony (Bock and Probst 2018).

Horst: «When you log on you will find material and tasks. Wait a moment, first listen. There are three work groups and the first task is to find out which group you are in. I have given them individual tasks, there is quite a lot of material, you can also conduct your own research, but the material there should be sufficient. [...] and bear in mind that you must be able to present your results from the front of the classroom. OK, now you are free to start, timeframe, I would say, half an hour.» [...]

Group B (four female pupils and four male pupils): *All pupils look at the material on their own laptops and tablets. Two male pupils have already plugged their headphones into their tablets; the other two are sharing headphones. One pupil allocates the tasks, he says to the group of four female pupils next to him:*

«you do 1 and we'll do 2.»

The four male pupils and four female pupils divide themselves into two respective groups of four sitting a little distance away from each other, but still at the same group of pushed together tables.

The four female pupils quickly agree to present their findings in a PowerPoint presentation (PPP); each individual begins to create their own PPP. The four female pupils have their textbooks open in front of them; they have selected a diagram from the printed version of the book to use in their PPP. They copy the selected diagram from the online version of the textbook. The group is busy with the design of their PPPs. [...] One of the group shows the other the blue background on her power point slide, her fellow pupil replies:

«I want to choose a colour too.»

One of the group, who already commented that they should work on the content first, says:

«Lets fill it out first, before that.»

Her neighbour, who can see the other girl's screen, asks:

«Why are you putting that on a slide?»

She is referring to the two diagrams that she had cut and pasted. The girl replies:

«Well, because it's the comparison.»

All four group members work simultaneously on creating their individual PPPs, one of the group asks:

«Who's going to upload it?»

None of the other three responds. The four male pupils in group B are also working on their task: one boy, sitting alone on one side of the table is wearing headphones and watching the YouTube video, the other three are creating a Word document. Three of them are sitting in front of a tablet, the boy sitting in

the middle is writing on the tablet, the other two are talking to one another and dictating. [...]

Horst tells the four female pupils in group B:

«Now you're each making a PowerPoint presentation, it would be more sensible for one of you to do that and the others to think about what you want to say. You don't need to write so much about the diagrams. You can send each other the final result.»

[...] The pupils continue to each make their own PPPs despite Horst's advice, one in blue and the other in green. [...] The three male pupils in the other group are still all looking at the tablet together, the pupil on the right types something on the tablet keypad, pulls the tablet towards him and then pushes it back.

He says: «Your keypad is strange... or I'm not used to it.»

The pupil, to whom the tablet belongs, continues typing, while the pupil with the headphones on reads another text on his tablet. One of the three working together on the other tablet asks the boy with headphones:

«What are you doing anyway?»

He replies: «I'm still reading».

His fellow pupil asks:

«Why are you reading so slowly?»

Reply: «because I'm listening to music at the same time.»

[...] The four female pupils in group B are discussing whether to have a closing slide; one of the pupils says to the girl sitting next to her:

«She wants to finish by putting "Thank you for your attention".»

Her colleague replies:

«We don't need that, the three slides are the most important thing.»

The first pupil asks:

«Which one shall we upload then?»

Second pupil:

«We'll ask Mr. [Horst].»

The pupil with the presentation without a closing slide quickly gets Horst to show her on the tablet how to upload the presentation. The decision seems to have been made regarding which presentation to use, the other pupils do not appear happy with this (one pupil pulls an irritated face). [...]

Horst: «3 more minutes, then we must start with the presentations. Apart from one group, that's not a problem and you'll have to speed up a bit now, even if your presentation isn't perfect». [...]

Horst: «So upload them now please.»

He starts a countdown:

«10, 9,...» [...]

From this description we construe how Horst initially allows his pupils a certain degree of freedom: by providing a range of different material, allowing them to structure their groups freely and also underlines this by saying, «now you are free to start». By adding «timeframe, I would say, half an hour» he simultaneously reminds the pupils of the structural restrictions surrounding the task. The lesson lasts for 45 minutes and all three groups must present their work and be assessed. Hence Horst saying: «3 more minutes, then we must start with the presentations», whereby he stresses the «we must». In this instance, Horst does not specify the person determining the «must» or, for example, his interpretation of institutional pressures (available lesson time, or curricula guidelines regarding the scope of the subject), he did however refer to guidelines from the school administrators and curriculum in interviews with us.

The pupils are requested to produce a group product, which is to be presented to the class by two representatives of the group. The supposed jointly-produced product is, however, in this case more of an individual effort. One of the pupils bypasses the process of negotiation with her group by quickly uploading the slides viewed by her as «the most important», with the help of the teacher. Upon closer examination the group of four male pupils did not appear to be working closely with one another either. One pupil was listening to music and reading. He was sitting opposite the other three group members and could not see what was happening on the tablet, neither could he follow the progress of the work. He combines his need for entertainment (listening to music) with the requirements of the task (reading), but does not make fast enough progress in the eyes of his group, which asks «Why are you reading so slowly?» The pupil sitting in the middle inputs what his neighbours dictate to him. While this joint production of a text can be described as a collaborative learning process between three pupils, there is no process of negotiation in the shape of a common working process.

The manner in which the group of female pupils addressed their group results provides an example of the tension that exists between the principle of achievement and that of community. One of the pupils clearly states that she knows what the «important», or «correct», information is, and ensures that her slides form the basis for the assessment of the presentation. The behaviour of the pupils could be interpreted as reflecting the contradiction of the situation as, on the one hand the instructor has composed as collaborative a framework as possible for the work, yet on the other hand, has also made clear that the final output will be assessed according to the usual rules. The pupils' behaviour is therefore influenced by the fact that they know their group will be assessed on the basis of their presentation. The pivotal nature of the achievement principle, for both teacher and pupil, is underlined by Horst in an interview following the classroom observation, «naturally you can never set aside the role (of teacher), you're the one that has to assess the results».

Based on these classroom observations we assume that institutional logics frame the practices of sharing. This is particularly visible in the pupils' behaviour which suggests that they have internalised, and subsequently perpetuate, the institutional logics of the assessment of individual achievement. The principle of community, which should actually be promoted through collaborative forms of learning, is consequently neutralised. The rationale behind the pupils' behaviour would be: I am working in a group with good students, I can get a good mark without putting in too much effort and, I'm not going to bother with long negotiations or discussions, I shall go directly to the teacher as the decision maker. I like colours and design and would like to take more time over that aspect, but there is only a limited amount of time so I shall quickly find material that I trust for my content, which means I shall use the textbook and everything the teacher has already selected.

From the culmination of the classroom observations, we can deduce three aspects which clearly illustrate the tension between sharing practices within the school environment and the expectations of a culture of sharing: 1) working in a group, as instituted by teachers, involves sharing in several respects, i.e. in the sense of dividing, distributing or imparting information, assignments and results within the class. The sharing (communicating) of results within the class using digital networks, that is to say redistribution in the sense of Wiley (2010) does not occur. 2) In the school context the presented (shared) product of the group work primarily constitutes a piece of work to be assessed. In contrast, proponents of OER view the mutual process of sharing materials as decisive (see for example Robertson 2010). Inherent to the process-based understanding of sharing is that there is no final result; rather new versions are continually produced that can be improved upon at any time. 3) The lesson observation suggests that sharing during group work, which requires discussion, agreement and negotiation, is not a practice that comes easily to the pupils. Even the instructor offers only limited creative leeway. The pupils seem to be more focussed on the achievement principle and less on the principle of community. Teamwork arises from similar thought and working processes, from simply being friends or sitting next to one another. Sharing, in the sense of collaborative work or within the framework of active participation in the design of the learning process, as per Mayrberger (2014), only occurred in part.

Conclusion and Outlook

While considering the current debate surrounding open educational resources, this paper has examined where tensions exist in the relationship between the culture of sharing and the functions of the school. Our argument outlined three main steps exploring discourse, institution and practices. Three perceptions of the term *sharing* emerge from the OER discourse: sharing is firstly a common activity related to exchange within digital networks, secondly it is a participatory activity constituting a democratic development in teaching, and finally an ideologically loaded paradigm of community. Integration and selection are two central social functions of schools, when viewed from a theoretical perspective of school as an institution. These functions result in institutional logics, which are manifested in achievement orientation and a sense of community. The tensions between the sharing practices within the school environment and the ideals of a culture of sharing are illustrated by our example of a classroom observation and are manifest in three key points. Firstly school sharing in the classroom consists mostly of division, distribution and communication, with sharing as redistribution playing no part beyond the class group. Secondly schools focus on the product of sharing as a record of achievement instead of on the process of mutual cooperation. And finally the achievement principle prevails over the community principle in the negotiation process.

This paper has demonstrated that a superficial affinity exists between OER and schools, because both rhetorically target the formation and development of a sense of community. However, upon closer examination it becomes clear that institutionally-framed school practices tend to favour achievement principles over community principles. This results in school practices of sharing clashing with the ideals of the culture of sharing, which are ideologically construed by some as the alternative to capitalistic societies. The tensions between an orientation towards achievement and a sense of community as well as those between school practices and the ideal of sharing have been largely neglected in debates concerning OER. Yet, we believe this to be one of the central rationales explaining why schools are hesitant to work with OER. In light of the fact that society in the twenty-first century remains dependent upon the academic selection function, due to its organisation around market economy principles, the achievement principle will retain its prominence for some time to come. This explains the widespread inertia demonstrated by the school as an institution. To put it bluntly: How should schools challenge the achievement principle when they are simultaneously required as institutions to reproduce an achievement-oriented society?

This stable functional context means that current school practices, which were spawned by institutional logics and are perpetuated by it, are difficult to change. If, however, the current debate concerning a shift within schools is to be taken seriously, this would be precisely the point to explore further. For educational practitioners and policy-makers wishing to drive the development of education through advancing their use of OER, our findings are relevant as they illustrate that not all school functions are supported by OER implementation. Although OER are less effective in the context of tasks measuring individual achievement, their potential in terms of other functions of schools, such as personality development and gaining qualifications, is presumably higher. For example, collaborative and cooperative learning could prepare pupils for a changing working environment, in which the co-creation of knowledge assumes greater importance. Yet, relevant education goals can only be realised if schools succeed in creating scope for teachers and pupils to follow other action strategies.

The findings are relevant for research into OER as they interpret the treatment of educational materials in practice, in the context of discourse and institutions. Our argument therefore creates momentum for further studies to empirically investigate the application of OER in schools from a praxeological perspective. The three-step process proposed here; exploring discourse, institution and practice could be utilised for further empirical analysis, as could the theoretical frame of reference.

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