

Exams To Go – Open Learning Motivation through Accreditation

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Introduction

“OER are understood to be an important element of policies that want to leverage education and lifelong learning for the knowledge society and economy.” (Schaffert/Geser 2008: 15) As part of this understanding the OECD (2007) recently published a report on the world wide ‘emergence of open educational resources’. Though it mentions a set of difficulties (e.g. financing, quality management, interoperability, and dominance of English)¹ it is rather optimistic in regard to the further development of OER and its role for general development in the field of learning. So the report even raises the question, if “the term ‘education’ should be replaced by ‘learning’ and a better term would be ‘open learning resources’.”

This optimism is partly based on the success of Free-and-OpenSource-Software (FOSS). A major reason however for this success was the participation of profit-seeking companies and thus the development of customer-oriented products. So on the one hand there are a number of important differences, particularly in the field of quality assessment, and on the other hand a similar commercialisation of OER is up to now hardly discussed in relevant circles (e.g. UNESCO OER Toolkit 2008). The optimism might thus only be due to the unspecific mass of ‘supply’ but not to real impact on learning cultures.

The fundamental change in the process and organisation of learning fostered by OER would particularly apply to higher education and lifelong learning. Here the self-regulated acquisition of knowledge is of high importance, i.e. the whole process is not teacher-centred but learner-centred. In this field however diplomas and degrees are also of high importance, as they provide access to certain career and payment options. Not only considering a well known type of spam mail offering degrees without (learning) effort, one could ask what students are willing to pay for. On first sight they are paying for knowledge (instruction) and/or (branded) degrees.

The question mainly discussed in this paper is thus how these – seemingly contradictory – topics: the development of OER and the commercialization of Higher Education, can be thought together: Does the willingness to pay for degrees provide options for an OER business model, solving some problems of OER development. Where there is money to earn there is customer-orientation.

The concepts of ‘commons based peer production’ (Benkler 2002) or the ‘GPL form’² of interaction between FOSS sponsors and adopters (Demil/Lecocq 2003) derive from the fields of institutional and informational economics, which started with the questions of how information is transmitted in markets by prices and which institutional setting (market, hierarchy, network) is most effective for which problem. These new concepts of decentralized non-market-like institutions of information processing are assumed to be the kernel of the production und distribution processes of (digital) public goods. Nevertheless also in this field the respective function of market prices can be useful to have things done, which would not be done otherwise.

¹ Atkins et al. (2007: 26) also mention granularity – see below – as a problem.

² The General Public Licence (GPL) and its equivalents are a copyright regulation which sets that a (digital) product may be used and advanced freely, if the advancements are also made open for public use under the same condition.

Until now the development of OER is production driven, be it for instance on the basis of an individual will to share and to establish an educational commons, or be it for instance on the financing power of philanthropic foundations and public authorities (cf. Downes 2006). Business models however based on payments by donors, contributors (!) or by advertisers often miss the specificity of information provided by the mechanism of prizes paid by customers.

Thus it could be worthwhile to think of a more customer-driven approach. There might be an option for a service additional to OER which could be priced high enough to gear the prize mechanism in a way that highly reusable OER would be made accessible: the accreditation of knowledge and competencies acquired by open learning. To conduct exams is already often charged with a specific fee.³ A major problem in current educational developments, i.e. not only regarding the usage or user-orientation of OER, is the assessment and accreditation of competences, which have not been gained in formal educational contexts – particularly the reference to accreditation of prior learning in the Bruges-Copenhagen- or Bologna-Process is part of this general problem. Also there are already legal and administrative frameworks, e.g. in France or Finland, which foster the accreditation of informal and non-formal learning by granting access to exams independently of how competences are acquired.

In the remainder of the paper we want to explore the idea of commercial exams and their repercussions on OER a bit further. The paper will deal in details with the following issues:

We will start by shortly describing the two basic functions of the (modern) educational system: on the one hand fostering learning and on the other hand selecting for careers by providing degrees (this includes failing to acquire a degree). It is exactly the tension between these two functions that is guiding the argument regarding OER, which seem well adapted to the first function, but lack relation to the second.⁴

Second, we try to describe relevant specificities of OER comparing it to FOSS in regard to its possible marketability. A major problem is related to quality control and assessment, which implies lacking ‘customer-orientation’. The quality of an educational resource can only be judged in relation to a certain goal of learning, thus it cannot be assessed on the general level completely.

Third, we will locate OER and its usage by self-regulated learners with regard to the differentiation of formal, non-formal and informal learning. The goal-setting of these learners might easily go beyond the mainly non-formal character of OER. Aiming at a certain career the accreditation of one’s learning as well as information regarding the quality of an OER in this context could be worth something to a learner.

Fourth, we look at the discussion of quality evaluation in educational systems and lines of discussion regarding accreditation of prior learning. OER-related services would have to focus on competence-based certificates, because in such a framework only the performance of learners/examinees is relevant.

Fifth, we will discuss the possible service infrastructure of degrees based on open learning. Particularly the problem of quality assessment and specification of resources in relation to the educational context could or should be solved.

³ For the development a self-sustaining service from examination fees a specific cost analysis would be necessary; it is however not in the scope of the current paper to outline such an analysis.

⁴ These functions and their relation to funding is also reflected in the ‘Modernization Agenda for Universities’ of the EU (2006).

Sixth, we will show that E-Portfolios, which are implemented in order to document individual learning processes in the nowadays, cannot solve the problem of signalling the level of one's competences to employers etc. The multiplication of 'sources' of OERs and other informal and non-formal resources even aggravates this problem.

Seventh, we will reflect the discussion in regard to accreditation of prior learning and give a few examples of institutionalized schemes which are accrediting competences including openly acquired competences.

Basic Tension of the Educational System

The modern educational system has two basic partly contradictory functions for society: fostering learning and selecting for careers by examinations and providing (or refusing) degrees. Both functions have a significant temporal structure. The selection function is mainly oriented to a future labour market, thus producing a differentiated output of possible workforce. The education function however in regard or conscious disregard of the divergent (past) socialization of the pupils and students is to proceed according to equality (homogenisation of learning group by classes of age, by standardized test etc.). The allegedly necessary monitoring of education, i.e. mainly of the individual learning process, with methods like grades, certificates, degrees is generating means of selection. And other societal systems, particularly economy, are selecting according to these means.⁵ Educational 'reform' is thus oscillating between aspects of the two functions (cf. Luhmann 2004: 218ff): equal chances to all, individualized learning, optimal output, merit-orientation ...

OER are promising in regard to the education function. Therefore the optimistic interpretation of OER might also be dependent on an inclination towards this function. OER seem to offer educational possibilities with equal access.⁶ As learning, particularly adult learning, is becoming more diversified and more self-directed, the 'openness' of OER is valuable, because the possibilities to learn are thus increased in the system.

At the same time the interest for 'quality' is increasing because the sources of content are hardly controllable anymore.⁷ However without control of who is accessing which resource and the ascription of learning paths to a certain educational resource, the evaluation of their respective didactic quality is impossible. There is no accreditation of the quality of the acquired competences, i.e. their usability or improvement of the learner's employability. So OER do not contribute to the selection function. There is no (official) documentation of how an individual learner is using them and no inference regarding the feasibility of a certain resource in the specific educational context.

One does not have to like the selection function but it provides sustainable structures, even commercial ones. The awarding of certificates and degrees, i.e. the dividing line between formal learning on one side and informal or non-formal learning on the other, is the operation where in the educational system power is transformed – and partly exchanged for money.

⁵ The human capital theory assumes that certificates provide employers with a screening device. They will be successful if they choose the right personnel and certificates support them with criteria to find employees with characteristics and attitudes which make an efficient employment plausible (Woodhall 1994, 23).

⁶ At least for Western countries the access to hardware and bandwidth is not to be considered a major problem for our context anymore.

⁷ Students are conscious of this problem. In general they call for quality of educational resources. In four of six countries (France, Germany, Italy and Spain) quality of information was rated the most important characteristic of e-learning material in a formal higher education context. Students from the Netherlands and Sweden rated 'ease of use' most important shortly followed by quality of information. Further categories were: speed, interactivity, up-to-date-ness and - rated least important by all - design. (Lam/Ritzen 2008)

Degrees pay off. At least in national contexts where there is a focus on formally acquired knowledge like in Germany (cf. Colardyn/Bjornavold 2005: 40). Even in countries without such a focus, certificates are important to succeed in the labour market. In relation also to the diversifications of learning processes this problem is discussed under the headlines of accreditation of prior learning or formalization of informal learning.

Users' Motivations and Problems of OER

There are specificities of OER comparing it to FOSS in regard to their possible marketability. A major problem is the lacking 'customer-orientation' and in direct relation to that the problem of quality control. The user (or customer) of FOSS is often a software-developer himself and thus likely to improve the product; the user (or customer) of OER is often a learner who does not have much opportunity and incentive to feed back on the product or to the producer systematically.⁸ From the perspective of FOSS the main problem of OER is not the motivational question: why they are produced and published 'openly'? The main problems are rather to be found in the IT-based communication or exchange structure and in the contextuality of quality.

On the motivational level the success of FOSS gives reason for optimism and actually the basic motivation does not seem to be the major problem of a successful OER movement. On the one hand teachers are usually paid – meanwhile many FOSS programmers are too – so they have to create teaching materials and learning objects in any case. And on the other hand teachers put often more effort in their materials than they are paid for – maybe because they like to teach, maybe because they compete with colleagues in certain ways or out of other reasons. "The range of motivations will be diverse – from self-expression to love of knowledge, from participating in a community of teachers to frustration with the outputs of the tightly controlled textbook markets and a wish to have better materials to work with." (Benkler 2005) The motivational potential of the producers is thus not the problem.⁹

Looking at FOSS we have however a problem in relation to the form of communication structure of OER. It is the absence of a central communication structure which makes the crucial difference between FOSS and OER. OpenSource initiatives show a very centralistic attitude regarding the communication between the contributing 'hackers'. Responsibility for the coordination of one project is clearly given to one person and so called forking, i.e. looking for different solutions to the same problem, is held as an exception and needs very good reasons to be accepted by the community (Raymond 1998). There is strong feedback between users-producers, so that there can be spoken of 'user-driven innovation' (Hippel 2002). These characteristics are even more obvious in view of Wikipedia, where there is usually – except for very specific wikis and the like – one per language. With such centric structures information about what is done and has to be done in regard to a certain task is easily communicated and self-ascribed (Benkler 2002).

In contrast, the production of OER though based on the same Internet-technologies is highly dispersed. If made publicly accessible in the Internet (and not part of a wider initiative) educational resources are to be found on the website of the teacher's employing institution. And even if a server for exchange of materials exists resources will probably not be uploaded or referenced on this server in addition to the home server of the producer. So it is possible to find a set of different resources on the same topic at different sites. And even if the motivation to produce OER is taken for granted this does not imply the motivation to adhere to general standards of metadata and interoperability (in the case they existed). There is thus

⁸ Atkins et al. (2007: 55ff) thus recommend an „open participatory learning initiative” with peer learning as major part.

⁹ It has to be monitored if 'commercial' recommendation of certain OER will lead to a crowding-out effect.

also no established system to publicly and systematically review OER in order to generate more transparency in the world wide thicket of learning objects (cf. Kollock/Smith 1996).

These obstacles could be overcome with good and specialized search engines.¹⁰ OER are however not only dispersed in a technical sense but also content-wise in a qualitative sense. Educational resources are usually produced to fit to specific educational contexts.¹¹ Such contexts are rather complex and need (hermeneutic) interpretation as they include, e.g., age and experience of students, the wider course curriculum, the preferred didactical methods of the providing institution, and – last but not least - the personality of the teacher.¹² The production of educational resources implies a certain concept of their usage, i.e. the educational setting in which the intended teaching and learning takes place.¹³ All together it is difficult for a user of OER to find adequate OER and to estimate their quality and usefulness, because quality and usefulness have to be conceived in relation to the context of the user.¹⁴ He needs time and has to 'use' it at least partly, to know the quality.

Formal, informal, non-formal learning – self-regulation

The problem of context dependency can be specified concerning the different contexts of formal and informal or non-formal learning. OER is rather typical for what is called non-formal learning.¹⁵ Typically non-formal learning is not provided by an education institution. It is, however, structured in terms of learning objectives, learning-time or learning-support. Non-formal learning is intentional from the learner's perspective. This is the main difference to informal learning, which is more or less the unintended side-effect of other practices (cf. EC 2001). Formal learning is mostly detached from action contexts thus it does not take its motivation from the direct relation to practice and the aims inherent there.

In regard to informal learning it is thus difficult to define in advance which piece of information is an educational resource. What is educational in one context is not necessarily educational in another. As already mentioned educational resources are usually made to fit into a specific social context of teaching and learning. Nevertheless the OECD report mentioned above states – rather casually – the impact OER will have on the process and organisation of learning. OER are expected to “bridge the gap between non-formal, informal and formal learning.”

The importance of informal and non-formal learning is growing due to the increase of social and economic differentiation. The accelerated multiplication of practical contexts cannot be dealt with completely in the framework of formal learning. Centralized curricular planning is systematically lagging behind these developments. The (decentralized) multiplication of certificates and degrees is however a reaction and one would assume that the adaptation is faster if it proceeds in a kind of market form than by centralized administration. At least partly

¹⁰ E.g. <http://search.creativecommons.org/> or <http://opencontent.org/googleocw/>.

¹¹ It is thus doubtful if OER can close the gap between “teaching and learning as framed and maintained by typical educational institutions and the fabric of work in a knowledge-based economy ‘out there.’” (cf. Schaffert/Geser 2008: 15)

¹² “The most significant problem in education today is the problem of significance itself.” (Wesch 2008)

¹³ This is a main difference to FOSS, to which standardized computing machines are the ‘context’; cf. Remmele 2006.

¹⁴ ‘Open learning resource’ would actually better express the context dependency of OER and their integration into educational contexts and learning processes.

¹⁵ Additionally, the teacher's role as a supplier of and a guide to learning materials is diminishing. If teachers in this context have any influence on the learner at all it will rather be a kind of pilotage. “Teachers should change their role from dispensers of knowledge to facilitators of open educational practices that foster learners' own activities in developing competences and skills.” (Schaffert/Geser 2008: 19)

this process is a formalization of informal learning. Such formalization is intended to facilitate the access to certain contexts/careers.

For the learner this implies a high degree of self-regulation not only regarding the question how to learn, but also what and to which end to learn. To make full use of OER and to actually bridge this gap between non-formal, informal and formal learning this type of learner is needed. A self-regulated learner is setting his learning-goal, allocating resources necessary for the learning process, and monitoring the learning success himself. Such autonomy is however easily frustrated if the conditions for successful learning are rather constraining. This might apply to the choice of learning resources in accordance to his goals and to the uncertainty regarding how will he be able to verify his efforts and how to prove he reached his goal for others but also for him self. Thus OER are only partly adequate for self-regulated (and other) learners – their goal setting (content-wise and regarding better access to career paths) and their interest in learning efficiency might go beyond the scope of 'openness'.¹⁶

Marketability of Competence-Based Certificates

What could be additional features that would cover this lack and how could they be provided? The additional features we assume are two. First the 'didactical context specific quality assessment' of the resource would make the learner's deployment of means for learning more efficient. Regard efficiency a (self-regulated) learner would try to avoid assessing the quality of an OER for himself. Assessing the resource would at least be partly using it and this costs time. He would thus be interested in curricular or didactical specifications and quality assessment of educational resources – done by others. So at least the reduction of this uncertainty could be worth something to a learner. Surely it would not be worth enough for him that his willingness to pay would suffice to run a business. Learners probably would not pay for that but at least a proportion of this group might reciprocate by evaluations of resources of their own. In a suitable context some social software applications (grading, tagging etc.) could harness the provision of quality information on different OER.

The second additional feature to complement OER could be the possibility to (officially) document one's learning, as this would even enhance goal setting. A quick high quality adaptation of examinations to (labour market) requirements could further exploit this issue. Also a context where the function (and quality) of a certain educational resource could be specified is in relation to a certain degree. If a learner wants to foster his career with his learning efforts, he might be willing to pay for accredited proof of his acquired competences. The question is if this would be so valuable for an OER user that he would pay enough to run a business on it. Could it even provide at least in certain fields relevant curricular specification and quality assessment of OER.

The OER-user will be transformed from a user of a common good to a customer by demanding certificates. But who would pay for what. And how does/would he use OER? OER are up to now mainly producer (or sponsor) driven. Goodwill is not user- or customer-orientation. To ask for market-driven developments in the field of OER means to put some light on possible customers. A customer is a person demanding goods on a market and willing to pay for them. The result is a contract between the supplier/producer and the customer. To pay for mere access to OER, which are not published with the intention to earn money, is of course a self-contradiction.

¹⁶ This has to be kept in mind as e.g. the OLCOS-Roadmap (Open eLearning Content Observatory Service) points to further adjusting OER to self-regulated learning as the future of OER (Geser 2007).

To put a price on an educational supply is necessarily combined with a minimum amount of quality-standards. Quality in educational arrangements can be evaluated in relation to three dimensions. Input-quality is evaluated e.g. in respect to standardized curricula, evaluation of learning-materials, requirements on the competence level of the producers (teachers), i.e. having an academic degree or testified teaching experience, technical standards referring the platform and so on. The process-quality can be related to the didactical arrangements, the organisation of feedback-loops and so on. Finally output-quality can be measured by the performance of the learner in a standardized examination, the self-assessment of his learning-progress and so on. It's evident that the second approach does not fit at all with the process of producing and using OER. To provide an assessment of the input quality of a certain selection of OER is however possible, e.g. an education institution can commit itself and its employees to respective standards. But it cannot be done in general; so many interesting resources are left out. To include the third approach could be adequate: certified learning with OER.

We see two possibilities in analogy to methods applied in other contexts. There are monitored self-assessment-procedures like the French 'bilans de competence' (Gutschow 2003) or the similar procedure of the German 'Profilpass', which misses however the legal framework of the 'bilan de competence' (DIPF et al. 2003). People are unsure how to reflect and to write down their own competences. They need intensive mentoring (Piotrowski et al. 2006, 14). In OER-related contexts the guided design of an e-portfolio could be a comparable method. The other method would be fully fletched accreditation of predefined outcomes like in the NVQ (National Vocational Qualifications) in Great-Britain or other procedures of APL¹⁷ (Accreditation of Prior Learning) (Eraut 2003).¹⁸

In 2003 the Ministers of Higher Education of the Bologna Signatory States defined recognition of qualifications as one of three priorities (Berlin 2003). In this context they emphasized the necessity to improve the recognition of prior learning including non-formal and informal learning (EC 2007). These considerations directly relate to the European Qualifications Framework (EQF) which applies both to vocational and higher education as it focuses on learning outcomes and thus mentions the accreditation of informal learning (Hanf 2006, 57). A respective certification always implies a documented third party evaluation usually based on structured exams in relation to fixed standards and reference levels (DIE et al. 2004).

OER-related certificates could only be such 'competence-based certificates', i.e. output oriented and independent of a defined formal learning path. Such certifications can have different functions, e.g.: it can foster intrinsic learning motivation; it provides documentation and screening device for possible employers etc.; it gives access to further (formal) learning paths (Clement 2006, 11).

If one looks at the commercial education market and the focus of pertinent advertisements, then it is quite obvious what could be a business-model for OER that could harness a success story similar to FOSS. Specific knowledge and (branded) degrees are what is paid for. "Relevance and accreditation are themselves information goods, just like software or an encyclopaedia." (Benkler 2006: 12) With OER we have knowledge for free. Thus there will not be any willingness to pay for it or any unstructured compilation. However this knowledge is at least partly not specified enough so that the context dependent quality is difficult to assess. Providing advice regarding OER fitting to a certain certificate would be a reversal or

¹⁷ Regarding the development of APL in the United Kingdom an argument analogous to ours was stated: "There is also a perception that APL has assumed a false importance at the expense of focusing on crediting current competence. Discussions have centred on the relative worth of sources of evidence, when they should be concerned with the quality of the evidence regardless of its source." (CEDEFOP 1997)

¹⁸ Evaluating the definition of the outcomes leads back to the first approach: input-quality.

a recontextualization of the opening-process of OER. The opening of OER is an informalization of often formal materials. They are taken out of their original educational context (if there is such) and 'opened', i.e. decontextualized, for varied individual use. To specify distributed OER in relation to a competence framework is the reverse process.

But most of all degrees and certificates are paid for because it is of major interest to have officially documented one's learning-path and competences, i.e. also to have one's self-regulated non-formal and informal learning processes formalized. Educational institutions or general accreditation agencies could thus specify the conditions for certain degrees etc. and open their examination procedures to self-learners.¹⁹ They could offer 'exams to go'.

Infrastructure of 'Exams To Go'

The degree providing institution would have to explain the exam structure, and could give hints to adequate OER also for enlisted students.²⁰ This would include the partly lacking curricular specification of OER and solve the problem that the specificity of requirements of formal exams and the heterogeneity of OER do not match in the first place.

The degree providing institution could charge fees for different services or just for admittance to the exams. It would also save costs because it would not be necessary to produce and update all materials on its own.²¹

There could be different kinds of additional services around (commercialized) degrees, e.g.:

- *Pre-test and/ or learning contract*

On the basis of different methods, e.g. tests or portfolios (see below), the certifying institute could estimate the possibility of a successful examination process for (enlisted and external) students. This estimation might also be priced with a minor fee because it would save the aspirant expenses for the examination fees if he is not yet ready to take the full exam. They could then even offer a kind of learning contract, referring to knowledge and skills which have still to be acquired and to possible resources for this acquisition, i.e. they would provide specific information of what competences are still to be acquired and where they can be found.

- *OER-quality assessment:*

The educational institution can provide an assessment tool for OER. Staff and students can select and evaluate the quality; they can give advice to their students, customers, and fellows on positive and negative experiences. They give links to educational websites they consider

¹⁹ The importance of FOSS in regard of "the nonmarket and nonproprietary production" and the pertinent changes in political economy (Benkler 2006) are not devaluated here (cf. Remmele in print), however looking at the success of FOSS it has to be acknowledged that the involvement of companies trying to make money with and around FOSS (e.g. services and additional software, partly written by paid programmers) was a major factor for its success in the mass market. The influence of these companies leads to more user-friendliness. The developments were thus much more market-driven. The user/producer driven innovation was supplemented by customer orientation. The legendary installation parties were surely not feasible to attract many paying customers. With commercial distribution of FOSS it became a mass product. Before their knowledge expressed in willingness to pay was not used sufficiently.

²⁰ OER would of course be only one possibility to acquire the respective knowledge and competences. Formal education would probably still be the dominant strategy. Also work place learning could be basis for this, etc. - or combinations of all.

²¹ Depending on the national framing of the educational system, especially the kind of funding of public education institutions, the market for degrees would probably generate a structure with price leaders and quality leaders.

high or low quality and they categorize in accordance with the respective competence framework. This could be organized as 'social bookmarking' and 'tagging' and with different levels of access, i.e. partly free of charge and partly restricted. This would provide a kind of centralized communication for the specific content in regard of the supplied degrees.

- *Improvement of OER*

It might be possible that such a system which is based on individual willingness to pay would generate information that would direct efforts into relevant fields of OER. The above mentioned quality assessment could include feedback (or even payment for improvement from the exam providing institution) to the author of a resource.²² Reputation could be gained by documented usage for certain degrees and reference to respective assessments. This would stimulate quality and maintenance of resources.

Even translations could be triggered.

- *Study centres*

The educational institutions can subcontract (on mutual or franchise basis) local centres to conduct and survey written and/or (online) oral exams. Of course also online exams are possible if personal identity is confirmable and cheating not possible.

E-Portfolio

We mentioned another outcome oriented quality assessment scheme in relation to OER: e-portfolios. An e-portfolio is a collection of (electronic) pieces of work, certificates, reflections etc. assembled and managed by the individual learner/applicant himself – possibly with help from an educational institution. "One of the major promises of e-portfolios is to recognise, record and bring together the outcomes of learning from formal learning programmes, non-formal provision and from informal learning. An e-portfolio can record and support learning taking place in different contexts, including work-based learning and incidental learning taking place as a result of personal interest. To fully utilise such a development requires new understandings of qualification that go beyond satisfactory completion of a course or learning programme. In this respect, an important development in education in the past period has been the translation of qualifications into outcomes and competencies." (MOSEP 2007: 34)

E-Portfolios have two functions relating to the basic tension of the educational system – they are at the intersection of two lines of development: structuring individual learning processes for the individual and documenting/proving competences for an employer or a further education institution. If these functions were fully complementary and not partly contradictory e-portfolios could solve the problem without the marketization of degrees and common good OER.

Portfolios were conceived as a way to demonstrate individual learning process including formal, non-formal and informal aspects – whereas non-formal and informal learning outcomes ought to be mapped against target competences of a certain domain. These learning records are closely related to a learning plan and should thus be based on feedback from others and self-reflection. Thus they can also include both the results (i.e. pieces of work) and certificates.

²²

Thus there would be relevant similarities to the market transparency in the FOSS market. The publication of software is structured in a way that makes it quite easy for possible (non-professional) users to distinguish the relevant features and the quality of it, e.g. looking for their inclusion into commercial packages or for manuals, commentaries and other sorts of quality control.

This however is only one function/line of development. In earlier days there were printed student portfolios officially issued by the educational institution. And the standardized and officially issued 'certificate supplements' and 'diploma supplements' are part of the 'Europass', which is the basic e-portfolio promoted by EU. Anyway, if the Bologna process really leads to more mobility the planning, documentation and (self) evaluation of learning is becoming even more difficult.

Educational institution might thus want to demonstrate the quality of their students by guiding the compilation process of their students' portfolios in a traditional way (cf. Stangl). In general "teachers and trainers have a key role to play in supporting young people in the development of an e-portfolio." (MOSEP 2007: 51) They could even rank their students according to levels of competence. This calls for public provision of an acknowledged qualification framework to classify the reached competence-dimensions and competence-levels (cf. Clement 2006: 24). They could provide accreditable counselling and adequate curricular recognition, as a key competence.²³ This could lead to a publicly funded, i.e. non-market, alternative to commercial exams. The French system of bilan de competence is financed by a kind of social security tax and employees are legally allowed to take three additional leave days to compile their portfolio. As it is done with specialized counsellors it can also be used for job applications (cf. Moser 2003).²⁴

E-portfolios are a way to deal with the diversification of contexts, resources and respective learning paths in the 'real' and the digital world. However the mainly individual management of e-portfolios and the multiplication of 'sources' due to mobility, OER etc. even aggravate the problem of signalling quality, particularly to possible employers. Generally to exhibit a diploma is a form of 'signalling', i.e. reacting to the information asymmetry between the individual and the addressee.

Even if the usual certificates and degrees are part of a portfolio the questions are now: Are they still 'official' if the students can built it themselves? Can a possible addressee judge the reliability of such a portfolio? The increased openness of e-portfolios fosters the uncertainty of addressees, thus they are looking for means of control. The search for such means ('screening' and 'signalling') leads again to the reliance on certificates of accredited educational institutions.

The following excerpt of a long list of questions in a current overview (Lorenzo/Ittelson 2005) on the e-portfolios reflects exactly the problem of their accreditability:

“ Should an e-portfolio be an official record or a student's work. ...
If an e-portfolio does not include a professional evaluation, should it be an official document? ...
Should alumni be charged a fee to keep their e-portfolios on an institution's server?
Who owns the e-portfolio? ...
Should anyone other than the student be able to make changes to the student's e-portfolio? ...
How are e-portfolios evaluated in a manner that is both valid and reliable?”

The functional dilemma of e-portfolios is not solved yet. “E-portfolios can be introduced outside the traditional assessment system, and many learners, especially those undertaking

²³ E.g. the university of Freiburg/Germany offers courses with credits in the field of career related key competences which include the making of portfolios (<http://www.ccenter.uni-freiburg.de>).

²⁴ The assessment of competences in the framework of a bilan de competence is however systematically in relation to the individual goals of the person undergoing the procedure – whatever they may be. According to its future-orientation it includes propositions of activities in order to promote the individual's further development. Based on a portfolio the bilan de competence is thus a kind of learning contract with oneself.

Continuing Professional Development, will have no requirements for assessment, at least in the traditional sense. However, if e-portfolios are to be introduced within the educational curriculum, it makes little sense to decouple the portfolio from the assessment process. But at the same time, effective pedagogic processes for the development and support of e-portfolios require wider forms and processes of assessment than are common at present.” (MOSEP 2007: 40)

Accreditation of Prior Learning

From a European point of view, the accreditation of prior learning in vocational contexts is part of the Bruges-Copenhagen process. In the end, the discussion should result in creating a uniform qualification credit system. It should be insignificant where something has been learnt. Irrespective of whether the competence is a consequence of reflective processes whilst carrying out the work or was gained within the course of institutionalised educational activities or with the use of an OER, the estimation remains identical. To make all these learning results comparable to each other requires an underlying competence model.²⁵ This approach thus implies descriptions of learning results based on complex competence models, which allow differentiation according to general and domain-specific analysis and according to different levels of proficiency (Seeber/Keller 2006). It assumes that an increasing competence level is accompanied by increasing reflectiveness and expertise. The degree of expertise is related to performance in a defined domain (Gruber 1994, 10). Such competence models allow defining tasks and tests for acknowledgeable certificates.

Furthermore, the certification of informally acquired competences is associated with considerable measurement problems and a considerable amount of work. It is true that several measurement processes (Erpenbeck/Rosenstiel 2003) and even standardised and proven certification processes exist now for several years such as the "National Vocational Qualifications (NVQ)" system in Great Britain (Ertl 2003). This system recognises five competence levels.²⁶

There are already different schemes which are accrediting prior learning including openly learned. However up to now the accreditation of prior learning is mainly institutionalized in field of vocational education and training (for exhaustive overviews regarding accreditation the field of VET systems cf. UNESCO 2005, CEDEFOP)

In the UK the national vocational qualifications framework (NVQ) was started in 1986. By 1994 there were 500 NVQs covering 150 occupations, representing 80% of all jobs (cf. QCA). They include the (modular) description of the occupation. APL is now integrated into this framework. Therefore a portfolio is matched against target requirements; there can be tutorial support for the development of such portfolio.

Since 1998 the certification of prior learning on different educational levels is a subjective right in Finland. The Finish VET system allows for competence-based qualifications. “Vocational skills are demonstrated through competence tests, regardless of how and where the skills have been acquired.” (CEDEFOP 2006) For each vocational certificate the necessary competences are defined by a national board. Institutions are accredited to conduct exams. They take fees for their competence tests.

²⁵ Competence is understood here in sense of an ability to fulfil a certain task not in the sense of a mental disposition.

²⁶ The available general competence models are in relation to their domain differentiated into a different numbers of levels. For instance, the European Qualification Framework includes eight levels (including vocational and higher education), the competence model from the PISA 2000 study has five levels, the "Credit Framework Baden-Württemberg" four levels and the qualification framework for German universities three levels.

A similar legal framework with a national register of respective certificates open for 'validation des acquis de l'expérience' can be found in France since 2002. To have their skills assessed the learners have to present a portfolio possibly followed by counselling, assessment at his workplace etc.

A highly interesting project is the Open High School of Utah (<http://openhighschool.org/>) which wants to start 2009 with grade 9 as a public high school, i.e. without fees. It will work with personalized curricula and without necessity to be present. Therefore it will draw on different sources of OER. It will also focus on service learning, i.e. on what students learn while they are working in their local communities.

Conclusions

We argued that the further development of OER at least in limited fields could be fostered if there was a shift from user/producer innovation to user/learner/customer orientation. This specific development would be part of the basic tension of modern education. On the one hand we want to foster self-regulated learning with OER on the other hand we want to funnel it into certain degrees. On the one hand we expect the learner to take knowledge for its own sake, on the other hand we expect him to use it as means for personal career. Somehow this is the reversal of the fundamental paradox of education in a modern society: to educate in a given way in order to breed a free subject (Rousseau 1762). Here we presuppose a free subject wanting to learn and freely deciding to bow before the system.

There is however an unsolved problem: The motivation of the producer of OER could diminish while transferring a common benefit into an individual profit. As mainly the career-oriented users of OER and the institutions/persons offering competence accreditations are benefitting the producers could react with 'closing' resources against this form of free-riding.

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