

Knowledge 2.0 – tensions and challenges for education

Nina Bonderup Dohn

*Institute of Business Communication and Information Science, University of Southern Denmark,
nina@sitkom.sdu.dk*

Abstract

The aim of this article is to discuss tensions and challenges posed to education when Web 2.0-practices are introduced as learning activities in educational settings. This will be done through, first, a section which seeks to give a characterization of Web 2.0; two, a section which pinpoints basic aspects of the teleological and epistemological views which Web 2.0- and educational practices, respectively, instantiate; and three, a section which looks more specifically at the conceptual and practical tensions and challenges, which result when the former is introduced into the latter.

Keywords

Web 2.0 in education, concepts of knowledge, concepts of learning, epistemology.

Situating the paper

Communication on the World Wide Web (WWW) is currently evolving from the one-to-many display of information on homepages to the interaction of many participants in the construction of social networks, communities of practice, 'bottom-up' encyclopaedias like Wikipedia (<http://www.wikipedia.org/>), and collaborative content sharing systems like the one being built in the Connexions project (<http://cnx.rice.edu/>). This shift in the role of the WWW, and of communication on it, is characterized as the shift from Web 1.0 to Web 2.0 (Downes, 2005; O'Reilly, 2005), and, correspondingly, the technological tools that enable the shift are designated Web 2.0-technologies. Likewise, the new communication practices can be termed Web 2.0-practices.

In many educational programmes (at the Open University, UK; the University of Birmingham, UK; Lancaster University, UK; and the University of Southern Denmark, to name just a few) Web 2.0 technologies and practices are being introduced into the teaching and learning activities. The reasons for doing so can be manifold: One argument would be that employing in the service of learning some of the communication practices that young people are already using will ease the transition into the learning practices of the university, both in respect of the motivation of the students and of the skills required of them. Another argument is that the centrality of participation, production, and dialogue in Web 2.0-practices make them ideal as elements in programmes focusing on the learner's active engagement as a prerequisite for learning. Still a third reason is that many of the possible future jobs of the students will require competence in the use of Web 2.0, and therefore a new task of educational programmes arguably is to support the acquisition of such competences along with other subject-related competences.

However, introducing Web 2.0-practices into learning activities in an educational setting in many cases leads to tensions in practice. The aim of this paper is to discuss these tensions, arguing that they are the result of conceptual tensions in the teleology and epistemology implicit in Web 2.0-practices on the one hand and the educational system on the other.

What characterizes Web 2.0?

In the literature on Web 2.0, there is quite a lot of hype about the potential of the phenomenon for liberating ideas, connecting people, producing and sharing innovative knowledge, and changing our lives and identities – expressed in video-form by M. Wesch (2007) and illustrated by enthusiastic proclamations such as “the emergence of the Web 2.0 is not a technological revolution, it is a social

revolution” (Downes, 2005, section 3) and “[Web 2.0 is] a “participatory platform... a means whereby just about anyone can contribute to an ongoing “conversation” in which knowledge is both discovered and constructed” (Freedman, 2006, p. 13) – but rather little specific agreement on characterizations of what it is. In this paper, ‘Web 2.0’ is viewed from a practice perspective, i.e. as denoting certain forms of activities or practices, rather than being the name for a set of specific technologies. More specifically, these activities are characterized by

- collaboration and/or distributed authorship
- active, open-access, ‘bottom-up’ participation and interactive multi-way communication
- continuous production, reproduction, and transformation of material in use and reuse across contexts
- openness of content, renunciation of copyright, distributed ownership
- lack of finality, ‘awareness-in-practice’ of the ‘open-endedness’ of the activity
- taking place on the WWW, or to a large extent utilising web-mediated resources and activities

This latter point is meant to indicate that though of course the term ‘Web 2.0’ implies that the activities must in significant ways involve the WWW, they are not necessarily restricted to taking place within an online environment. Such a restriction would seem an artificial constraint, firstly because it would be in opposition to the other characteristic aspects mentioned of open-endedness and use/reuse of material across contexts, and secondly, because it would seem to indicate a partitioning in the lives and practices of people engaging with Web 2.0 between activities taking place in virtual and in physical settings. Whereas in actual fact, such activities may very well cut across physical and ‘real life’ environments.

The list of characteristics is not meant to designate a set of individually necessary, between them sufficient, conditions for an activity to be defined as ‘Web 2.0’. Rather, the characteristics point to aspects which can be ascribed to paradigm cases such as Wikipedia, Flickr and MySpace (or rather, the activities taking place with, on and through them) and which a given activity may possess none, some or all of, and, for each aspect, possess to a greater or lesser extent: An activity may be collaborative to a high degree, for example, but uphold the requirement of individual authorship/traceability and demand expert approval of ‘bottom-up’-contributions, as is the case on the online encyclopaedia Citizendium (<http://en.citizendium.org/>). “Being ‘Web 2.0’” is not a binary function, but a question of degree – of showing more or less family resemblance with the paradigm cases.

This practice perspective on Web 2.0 is motivated partly by the observation that even characterizations of Web 2.0 focusing on the technological side tend to stress the changed practice (*i.e.* of participation and involvement) that the technology enables for the ‘end user’ or community of ‘end users’¹, partly by the assurance that it could hardly be otherwise since the point of technology is not the technology in itself, but the use to which it can be put, and partly, most relevant in this context, by the focus this perspective brings to the question of which challenges and possibilities Web 2.0 presents to the educational system. Theoretically, it is backed by the Marxian inspired view that the relationship between technology, attitude, and practice is a dialectical one, where technology is developed out of and in relation to certain human practices, that human inventiveness in concrete instances may give form to the use of technology, but that the affordances of technology on its side give form to the activities that humans can undertake and the inventiveness that they can show. The point in this connection being that Web 2.0-practices have not arisen suddenly, because the technology was there, but that the technology is better seen as having developed to support beginning practices, whose further evolution, reciprocally, have been made possible by the technologies so developed.

In the context of educational theory, there are at least two areas which this practice perspective helps to focus on. The first is the role of the specific technology in the educational practice. The point here is that integrating Web 2.0 in education is not primarily a question of the use of specific technologies – it is a matter of integrating certain *practices* (characterized to some extent by the presence of the aspects mentioned above) within an educational programme and/or its specific courses. Specifically, this means, on the one hand, that one can in principle use existing technologies, with which students and teachers are

¹ Cf. for example the description of Web 2.0 from Gutmans, co-founder of the PHP-development company Zend (Gutmans 2006), and the rules for businesses concerning application development proposed by O’Reilly (2006).

already familiar, in new, Web 2.0-related ways. Actually, one might argue that certain teaching and learning practices within the field of networked learning have already to some extent incorporated Web 2.0-ways of acting prior to the adoption of the technological tools normally associated with the term². On the other hand it means that the use of certain technologies, e.g. wikis, blogs, tagging etc., in no way in itself guaranties that the resulting educational practice will be ‘Web 2.0’: Though a wiki, for example, by way of its easy and open access and intuitive design may afford student participation in the form of entry production and editing, a teacher might still choose to use it as a one-directional information delivery system, producing all the entries him-/herself, thereby supplying a more traditional expert-written on-line encyclopaedia for the course.

The second area that the practice perspective allows focus on is the more general question of the intrinsic coherence (or lack of it) between Web 2.0-practices and educational ones in terms of, one, the *telos* of the practices and, two, the *concepts of knowledge and learning* implicit in them. The investigation of this question, of course, naturally leads on to the consideration of the theoretical and practical consequences which a lack of coherence may have when the first kind of practice is introduced into the latter. These two questions are the topics of the next two sections, respectively.

Teleology and epistemology of Web 2.0- and educational practices

From the practice perspective, an important difference between Web 2.0-practices and educational ones is the internality versus the externality of their basic telos: Fundamentally, the Web 2.0-practices of the WWW do not exist in order to fulfil goals outside of themselves, but aim at the participation, communication, knowledge construction and knowledge sharing *of* these practices themselves. This is not to say that Web 2.0-practices cannot be put to use in other activities with other goals – this is precisely what happens when one introduces such practices into educational ones. Rather it is to point to the fact that the *nature* of the goals will thereby change radically, since the basic internal goals will be subsumed under external ones, potentially introducing a significant tension between participating in the practices for the sake of the former and doing so for the sake of the latter. In contrast, the educational practices aim at practices outside of themselves; the most basic, underlying *raison d’etre* being the qualifying of the competences of some of its participants (the learners) so that they can participate in *other* practices *outside* of the educational ones. Putting it bluntly – too bluntly, perhaps – participation in Web 2.0-practices is for the sake of qualifying the participation in them, whereas participation in educational practices is for the sake of qualifying to get out of them³.

This fundamental difference between the practices points to a further, very important difference concerning the views of knowledge and competence which are intimately connected to the practices, whether implicitly or explicitly: Since the aim of Web 2.0-practices is participation itself, competence here, banally, first and foremost is ‘competence in participating’. Now, this does not in itself entail that competence *is* participation, understood as doing or action. One might theoretically argue that being ‘competent in participating’ resides in having an ‘inner’ disposition or ability to act in specific ways, and perhaps further, along the lines of Piaget, that this disposition is due to mental representations or schematas of action. However, taking this point of view, it would seem, depends upon abstracting from the very dynamicity, distributivity, open-endedness and flexibility pinpointed as characteristic of the Web 2.0-practices, and, furthermore, *in* this abstraction, presupposing a focus on the individual. This view, therefore, is artificial, at best, or, less charitably viewed, in contradiction to the practices in question. The practices themselves, concerned more with the continuous production, use and reuse of material by participants in collaboration than with inner mental representations held by the participants, seem to instantiate a much more dynamic and distributive view of competence. A view, according to which competence is situated doing, *i.e.* is only fully realized, ontologically speaking, *in* the acting in concrete situations. In contrast, the *raison d’etre* of the educational practices imply a view of competence as ‘*a something*’ – be that an entity, state, disposition or ability – which is possessed by the individual in abstraction from the concrete situation and which therefore can be acquired in one kind of practice,

² This point is argued for specific networked learning practices in Dirckinck-Holmfeld *et al* (2008).

³ This, of course, does not rule out that actual participants may have other goals for their participation in both kinds of practices. The claims made here concern the intrinsic goals of the *practices*, not the question of whether participants in fact might engage in them for other reasons than to attain their intrinsic goals.

transferred from here to another to be exercised there without (major) loss. This latter view, it should be noted, does not have to be endorsed theoretically by the individual participants in the educational practices (the teachers and learners), who may have diverging understandings of what competence is, and may even agree between them on such an understanding. The point is that, regardless of the individual or collective theoretical persuasions of the participants, the objectifying view of competence is part of the rationale of an educational system where the practices of learning (aiming at the *acquisition* of competence) are separated from the practices of acting (where the 'acquired competence' allegedly is *exercised*). Nonetheless, the consequence for the participants is that in practice they will be committed at least to some extent to the implications of the objectifying view, whether they agree with it or not.

A possible objection here would be that the appearance of divergence between the views on competence implicit in the educational and the Web 2.0-practices, respectively, actually is exactly and only that, an appearance, and one stemming from a confusion of the concept of 'competence' on the one side and the concepts of 'knowledge' and 'skills' on the other. The educational practices do not aim at competence, so the argument would run, but at knowledge and skills, which are prerequisites for competence, but do not constitute it, precisely because it is a more flexible and situated phenomenon. Disregarding the easy rebuttal of this objection, that this simply is not so⁴, and assuming for the sake of the argument that it is, the objection then as a matter of fact only underscores the point put forward here: The justification for the objection would be that the knowledge and skills to be acquired in the educational practices were prerequisites for later competent work practice because of their (alleged) general, abstracted nature, which would ensure that they covered and were applicable in a large variety of specific situations in professional life. But this claim only solidifies the epistemological view implicit in the educational practices that their 'outcome' has the ontological status of an object that can be transferred between practices. Looking to the Web 2.0-practices, however, the implicit view of knowledge and skills would seem to ascribe a similar dynamic, transitory and situated ontology to these phenomena as to the phenomenon of competence, given the centrality of open-ended knowledge construction, knowledge transformation, and communication in these practices. Knowledge, in other words, seems best described along the lines of Wenger as "a matter of competence with respect to valued enterprises" (Wenger, 1998, p. 4), or perhaps even better, shifting to a more dynamic focus: "*Knowing* is a matter of participating in the pursuit of such enterprises, that is, of active engagement in the world" (*ibid.*, italics added, NBD).

Nonetheless, the postulated dynamic view of knowledge and skills only relates to the implicit epistemology of the Web 2.0-practices when viewed from the side of the activity. Now, for some of the practices concerned, this is reasonable, given that these practices aim primarily or solely at the activities themselves, not at any specific outcome of the activity. Cases in question would be social and dating sites, since the aim of the communication here, somewhat crudely put, is the communication itself, not the specific subject matter of the communication; many activities on the 3D-world Second Life (for the same reason); and the type of blogs that is constructed along the lines of a diary and therefore aimed mainly at expressing views, experiences etc. with the wider aim of presenting and negotiating personal identity. For other practices, however, the activity side, though definitely important, is just one of two relevant perspectives from which the question of knowledge must be viewed. Wikis like Wikipedia and open content sharing systems like Connexions (*op.cit.*) are projects which exemplify practices of this latter kind: Viewed from the activity side such practices involve an implicit view of knowledge as a dynamic, situated, open-ended phenomenon, in that knowledge is seen as the actual production, use, evaluation, transformation, and reuse of material in the concrete situation. Still, given that participation in the production of for example entries in Wikipedia or content in Connexions is not undertaken for the sake of the participation itself, but rather aims at qualifying and/or extending the material available in these systems, it is relevant to adopt an 'outcome' perspective on the practices as well. And viewed from this perspective, Web 2.0-practices such as these must be said *also* to implicitly build upon an object ontology of knowledge, since the point of the participation is precisely the production, editing and transformation of entry-objects, stored in the system, available for later consultation by oneself and others. But in contrast to the object ontology implicit in the educational practices, the object is here not individually possessed, but rather is an attribute of the system, since the entries will in general be a result of numerous alterations by different individuals. Furthermore, viewed as a reified product of Web 2.0-practices, it seems natural to ascribe the concept of knowledge not just to the individual entries, but to the system as a

⁴ Since a trend within educational programmes of today precisely is to formulate educational goals in competence terms (which partly subsume formulations in terms of 'knowledge' and 'skills').

whole, since it is precisely the ‘system as a whole’, with its vastness of coverage and its interrelated cross-referencing between entries, which makes it useful as a ‘knowledge resource’. Far from being an individual mental possession, knowledge from this viewpoint is a distributive attribute of a whole system.

Summing up, inherent in Web 2.0-practices in general are two different views of knowledge, corresponding to the activity and the product side of the practices, respectively. The first is a dynamic view of knowledge as doing, the second is an objectifying view of knowledge as an attribute of a system produced by the practices. Both of these differ from the view of knowledge implicit in educational practices, according to which knowledge is an individually possessed object. Corresponding to the divergent views of knowledge and competence connected to the educational and the Web 2.0- practices, respectively, are two different views of learning. Actually, they have both been touched upon in the preceding paragraphs, but as a way of rounding off this section on teleology and epistemology, they should be mentioned more explicitly⁵. Given the external goal of the educational practices, to let their learners leave with knowledge and skills or competence necessary for their future professional life, and the objectifying view of knowledge, skills, and competence intimately associated herewith; the equivalent view of learning of course is that learning consists in the *acquisition* by the individual of the relevant states, abilities etc. *How* the abilities, states etc. are to be acquired (by which pedagogical methods), and *in what* they more specifically consist, are questions of much debate, with answers ranging from the behaviouristic ‘transfer’ of propositional behaviour from teacher to student through reinforcement, over Piagetian-inspired construction of mental representations and schematas (Piaget, 1950), to Vygotskian-inspired internalization of socially mediated knowledge (Vygotsky, 1978). Common to all of these approaches, despite their differences, is the view that learning is acquiring. In contradistinction hereto, and corresponding to the dynamic view of knowledge and competence as ‘doing’ inherent to the Web 2.0-practices, learning within these practices is implicitly and explicitly (Downes 2005) viewed as participation, in accordance with Wenger (1998): The fluctuation, flexibility, openness and continuous production and reproduction characteristic of the Web 2.0-practices as described above seem very much in line with Wenger’s concept of learning, which stresses the continuous negotiation of meaning and identity in practice in the mutual, though not necessarily harmonious, engagement with others.

Tensions and challenges – in theory and in practice

Given the discrepancy between the teleology and epistemology of educational and Web 2.0-practices sketched in the last section, when the latter is introduced into the former a number of tensions result, both theoretically and practically. In general, the tensions are a consequence of three interrelated circumstances of this course of action: 1) It subsumes the internal goals of participation, communication, knowledge construction and knowledge sharing for the sake of these activities themselves, under the external goal of letting learners acquire the knowledge and skills or competence necessary for their future professional life. 2) It enrolls dynamic and distributive views on knowledge and competence in the service of an individualistic, objectifying view of knowledge. And 3) it understands learning as participation as a means for realising learning as acquisition. On the face of it, one might perhaps think that as long as it was clear that the Web 2.0-practices were used, not in their own right, but as a pedagogical means, then resolution of potential conflicts would always in practice be easy and in favour of the educational teleology and epistemology. However, the tensions show up concretely in issues like the role of collaboration in learning, the subject matter and criteria relevant for evaluation, and the status of the material produced by students⁶.

Looking first at collaboration, a characteristic of Web 2.0-practices is that partaking in them is a ‘bottom-up’, non-compulsory action and that one engages with others to the extent that the interaction itself and/or the material co-produced in the interaction are experienced as intrinsically meaningful. Ownership to

⁵ Sfard (1998) gives a very enlightening presentation of contemporary educational research as caught between two metaphors for learning, namely the acquisition and the participation metaphor, and stresses that the two metaphors highlight different theoretical and practical issues. In relationship to Sfard’s argument, the point of this article is that educational practices intrinsically build upon the former metaphor, whereas Web 2.0-practices incorporate the latter to a very high degree.

⁶ The empirical claims in the following build upon experiences with introducing Web 2.0-activities in 2 different BA-courses and 3 different MA-courses at the University of Southern Denmark.

content produced in the collaboration is renounced, and often authorship as well: Because the goals of the practices are internal – participation, knowledge construction and knowledge sharing for their own sake – *who* contributed with what is less important than *that* the contribution was given, and that it stands a chance of being supplemented or qualified through the participation of others. The intrinsic meaningfulness also means that ‘free-riders’ are not considered an important problem: As long as contribution is done for its own sake, it is fully acceptable that others use the resulting material even if they do not contribute with anything new themselves. Evaluating whether any given collaboration has been successful is a question of the extent and meaningfulness of the participation and interaction, from the perspective of this participation itself, and, if the specific practice ought as well to be viewed from the product side, also of the scope and quality of the collectively produced material. It is not however, a question of what individual participants have ‘acquired’ in terms of knowledge and competence, objectifyingly understood, *through* the collaboration. This, in contrast, is the main evaluative question to be asked of collaboration when utilizing Web 2.0-practices within educational practices. Here, collaboration is a means for realizing the goals of the latter practices, *i.e.* it is a means for acquiring individual knowledge and skills or competence. The knowledge/competence aimed at, it should be noted, does not only have to be within the field of the subject matter to be learned; it might just as well (or in addition hereto) be within the field of ‘general academic skills’ or of ‘personal development’. Concerning the latter, for example, one significant goal of collaboration could be the acquisition of ‘competence in collaboration’. The point is that in any case, collaboration is a means to be undertaken not for its own sake, but in order to reach a goal definable independently of the collaborative activity. And, importantly, that this goal is the knowledge/competence of the individual reached through the collaboration, not the collectively produced material itself. This means, firstly, that the voluntariness and intrinsic meaningfulness of participation in the collaboration is jeopardized; secondly, that the collaboration will (and should) be evaluated against other methods to attain the same knowledge/competence goals; and thirdly, that questions of ownership, authorship and ‘free-riding’ become very important both for learners and teachers: Since the point of the collaboration is knowledge acquisition by the individual, learners want ‘credit’ for their contributions and do not wish to share the knowledge they construct if they do not get as much in return. Concretely, this tendency in empirical projects utilizing Web 2.0-practices emerges as a wish from students to have their names on entries in course wikis, as a reluctance to contribute with entries if this is not compulsory (*i.e.* part of or prerequisite for their exams), and as an adjustment of their activity to the activity level of the other students.

Generalising the indicated question of evaluation, a second (related) issue concerns what precisely is to be evaluated and according to which criteria: One way of taking seriously Web 2.0-practices and the tensions their integration into educational practices introduce, would be to focus evaluation on the activities themselves and the material they result in, without in addition trying to ‘get at’ or ‘extract’ the knowledge and skills acquired by the individual through these activities. Web 2.0 criteria of competence and success would then be the ones to evaluate against. In so far as the educational programme aims at letting its learners acquire the competences needed in possible Web 2.0-activities of their future professional life, this could be argued to be reasonable even from the knowledge acquisition point of view itself. However, in actual practice, several problems are experienced: Firstly, if Web 2.0 criteria are to be used, should student participation be evaluated on participation-internal grounds only (*e.g.* according to the extent to which an entry contributes to the negotiation of meaning and to the identity negotiations of participants) without giving any consideration to the *quality* of the meaning so produced in terms of the subject matter of the course? Given that some Web 2.0-activities like the ones found on friendship sites and on certain blogs have communication itself as their goal, adding course quality restrictions is artificial from the Web 2.0-point of view and would probably be detrimental to the actual authentic engagement by the students in these kinds of activities. Nonetheless, from the point of view of the educational practices, which have the goal of ensuring a certain level of the knowledge/competence held by its students, participation and negotiation of meaning and identity can hardly be enough in itself. Does that mean that educational practices can in point of fact not use such Web 2.0-practices without either changing these practices radically (therefore actually not using them) or selling out on demands for quality?

Secondly, even if educational practices restrict themselves to utilizing Web 2.0-activities which do not only have participation-internal criteria of evaluation, these activities are ‘bottom-up’-activities with peer responsibility and, in general, no designated experts to control the quality of interaction and production, and, as argued above, with an implicit dynamic view of knowledge as always open to re-construction and transformation. On the one hand, it greatly inhibits the openness, peer responsibility and dynamicity of

knowledge production to have the teacher take on the role of quality evaluator. Concretely, in course wiki projects, this shows up as the tendency of students to await and actively seek teacher response on entries, rather than respond to, edit and qualify the entries of their fellow students⁷, and, once such teacher response has been obtained, to regard it as ‘expert knowledge’ not easily contested. On the other hand, if the quality control stays a peer matter, the teacher is arguably not living up to the pedagogical responsibilities posed on her/him by the implicit teleology and epistemology of the educational practices since s/he is not actively engaging in ensuring the quality level of the knowledge/competence demonstrated by the students. In practice, this lack of responsibility can have direct and unpleasant consequences for the students, if they draw upon their Web 2.0-material in later exams or assignments, trusting their knowledge constructions to be adequate by the standards of their education, without this actually being so. The dilemma therefore becomes one between inhibiting the process of continuous dynamic knowledge construction by students sharing a collaborative ownership/responsibility and relegating the material useless for the students because they have no assurance of its trustworthiness, thus putting an effective end to the Web 2.0-use of the material.

Thirdly, utilizing only Web 2.0-criteria, what counts are the usefulness and perhaps the truth/reasonableness of what is produced, but not the origin of its production in itself. This means that a ‘patch-working’ or copy-pasting of resources produced by others with no novel additions provided by the ‘patch-worker’ can in principle constitute a high quality Web 2.0-contribution, providing of course that the ‘patch-working’ is done in such a way that the synthesis shows consistency, coherence and homogeneity of style. From the point of view of the epistemology implicit in educational practices, however, such a ‘patchwork’ will at best count as an unoriginal collection of notes and at worst as plagiarism aimed at cheating. This is so, because the synthesis will not constitute a demonstration of a ‘knowledge object’ individually possessed by the student, since it will not be formulated ‘in his/her own words’ – at most it will demonstrate a skill in collecting relevant material, but not the ‘possession’ (in the form of mental understanding) of the material itself. In contrast, from the Web 2.0-point of view, knowledge precisely is the dynamic using and reusing of material in new situations, of which the ‘collecting of relevant material’ will be an important part: If the material has already been produced by someone else, why spend time on producing it again? Time seems better spent on *using* the material. Furthermore, the synthesis may actually be *better* in terms of usefulness and reasonable argumentation than anything the student could produce ‘in his/her own words’, so from this perspective the distributive knowledge construction and knowledge sharing process of the educational community could actually be harmed by demands for ‘independency’ of material production. This dilemma is echoed empirically in the protests of students when derided for presenting assignments largely consisting of copy-pasted resources that “the quoted authors put the points so precisely – why should I alter their formulations?”

This last problem concerning evaluation points to a further one relating to the status of the material produced by the students. From the Web 2.0-perspective the aim of for example a course wiki, if truly realizing a Web 2.0-practice, is not constructing knowledge for the course, but producing material which can be put to authentic use (including its further editing and transformation) in new Web 2.0-activities in later courses and in future working life. Therefore, the material produced has the primary status of being an authentic, if provisional, reification of potentially useful knowledge. On the face of it, this may seem to fully accord with the telos of the educational practices, to let learners acquire knowledge transferrable to other situations. In practice, however, it does not. This is so, because the necessity of documenting knowledge/competence in practice interferes with the aim of constructing a ‘knowledge base’ genuinely useful later on. An empirical example of this is a student publishing a Web-excerpt (from a site similar to Wikipedia) as a course wiki article without citation. Unlike the example of ‘patch-working’, the student in this case did not even supply an independent juxtaposition of resources, but only eased access to material in principle already available. Viewing the course wiki as a tool for learning (understood as knowledge acquisition) and evaluation hereof, this can only be regarded as cheating. Seeing the wiki primarily as an authentic tool for later use, and noting that the excerpt actually added new, relevant content to the wiki, the action, on the contrary, was one way of realizing non-copyright-based knowledge construction.

⁷ The tendency is underpinned by the discomfort felt by the students concerning ‘correcting’ one another (Lund & Smørdal, 2006) – a discomfort not similarly felt on anonymous Web 2.0-sites like Wikipedia.

Challenges, possibilities – or hype 2.0?

The purpose of this article has been to show that implicit in Web 2.0-practices and educational practices are divergent teleologies and epistemologies, and that because of this, when one introduces the first in the latter, the result is tensions in both theory and practice. These tensions pose challenges to the educational conceptions of knowledge as an object and of learning as the acquisition of this object, and raise questions concerning the status and subject matter of evaluation. By way of rounding off the article, two points should be stressed. First, the emphasis of the article on tensions and challenges is not a denial of the pedagogical possibilities for education of Web 2.0-practices. Rather, given the obvious potential merits that such practices have in terms of student motivation, participation, and collaborative knowledge construction, the point has been to call attention to problems stemming from inherent conceptual discrepancies that must be taken into account if one wants to realize these potential merits in practice.

Second, a critic might question the novelty of the theoretical and practical problems discussed in the article and especially the proposition that they arise as a result of introducing Web 2.0-practices in educational ones. After all, problems of ‘free-riding’ and copy-pasting as well as tensions between documentary aims and authenticity of assignments are well-known issues from other didactical practices like collaborative project work or, at least to some extent, problem-based learning (PBL). So is this article not just part of the current tendency to hype about Web 2.0 and the changes it has brought or will bring to our lives? I would claim not. The paper does not assert that such problems have not been experienced before; the point is that they are accentuated and brought to the fore by the educational use of Web 2.0-practices, in a way they have not been before. And this is so because the dynamicity and flexibility of knowledge construction, the renunciation of ownership, the acceptability of ‘free-riding’, and the collaborative/distributive production of material are all central characteristics of Web 2.0-practices in a way that is not the case for other collaborative practices made use of in education. In short, the dynamic, participatory epistemology and practice-internal teleology demonstrated here to be central to Web 2.0-practices necessarily will either be jeopardized when introduced into practices building on an objectifying epistemology and a practice-external teleology, or jeopardize these practices themselves. This dilemma does not present itself as strongly in relation to other collaborative practices, since their inherent epistemology is less dynamic and more aligned with the objectifying one of the educational system.

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