Abstract
This article endeavors to denote and promote pedagogical experimentations concerning a Free/Open technology called a "Wiki". An intensely simple, accessible and collaborative hypertext tool Wiki software challenges and complexifies traditional notions of - as well as access to - authorship, editing, and publishing. Usurping official authorizing practices in the public domain poses fundamental - if not radical - questions for both academic theory and pedagogical practice.

The particular pedagogical challenge is one of control: wikis work most effectively when students can assert meaningful autonomy over the process. This involves not just adjusting the technical configuration and delivery; it involves challenging the social norms and practices of the course as well (Lamb, 2004). Enacting such horizontal knowledge assemblages in higher education practices could evoke a return towards and an instance upon the making of impossible public goods” (Ciffolilli, 2003).

Résumé
Cet article décrit et promeut des expériences pédagogiques qui ont recours à une technologie libre et ouverte désignée sous le terme «wiki». Un wiki est un outil hypertexte collaboratif fort accessible et d’une très grande simplicité, qui remet en question et rend plus complexes les notions classiques de paternité d’une œuvre, d’édition et de publication. Le détournement des pratiques officielles concernant la paternité d’une œuvre dans le domaine public pose des questions fondamentales, voire radicales, tant du point de vue de la théorie académique que de celui de la pratique pédagogique.

Le principal défi sur le plan pédagogique est celui qui relève du contrôle : les wikis sont en effet plus efficaces lorsque les élèves peuvent exercer une plus grande autonomie sur le processus. Il ne s’agit pas uniquement de configuration et d’exécution; il est aussi question de remise en question des normes sociales et des pratiques d’enseignement (Lamb 2004). La réalisation de tels assemblages de connaissances dans le monde de l’enseignement supérieur pourrait évoquer un retour vers «l’impossible bien collectif» (Ciffolilli, 2003) et constituer un exemple concret de ce bien collectif.

Definition

Wikis as public palimpsests

What is a wiki?
A wiki is a collection of web pages that can be edited by anyone, at any time, from anywhere [1]. The overriding goal of a wiki is to become a shared repository of knowledge with the knowledge base growing over time (Godwin-Jones, 2003). According to its original creator Ward Cunningham, “a wiki is the simplest on-line database that could possibly work.” (Leuf & Cunningham, 2001). It is “a freely expandable collection of interlinked web pages, a hypertext system for storing and
modifying information - a database, where each page is easily edited by any user with a forms-capable Web browser client“ (cited in Schwartz, Clark, Cossarin & Rudolph, 2004). Browser-based access means that neither special software nor a third party webmaster is needed to post content [2].

**What makes wikis different?**

What is unique about wikis is that anyone in the world can change anything in a wiki page. That is, no one authorizes the creation of wiki pages. Everyone is automatically (by default) authorized to write, edit and publish. However, not only can people write, edit and publish their own work, they can rewrite, edit and even “un-publish” the work of others. This “un-authorization” in terms of ideas and their dissemination applies not only to content, but also to the organization of contributions. Hence, by definition all wiki content is “work in progress,” or, in wiki language, WorkInProgress. (Some important theoretical and pedagogical implications and consequences of open editing are outlined in the Pedagogical Potential section.)

**What are wikis like?**

Wikis have been described as analogous to “open, three dimensional ThreeRingBinders” (JohnDeBruyn in reference Category Wiki-1), as “FlyPaperForIdeas” (References, Category Wiki-5) as collaborative stories (References, Category Wiki-8) and as “mindmapping using keywords” (References, Category Wiki-5). A seemingly apt metaphor for a wiki is a *Palimpsest*.

**What does the word “Wiki” or “wiki” mean?**

Wiki is Hawaiian for quick. (Yes, there is a real “wiki” in Hawaii: a bus at the international airport in Honolulu). "Wiki" (with a capital “W”) is shorthand for the WikiWikiWeb, otherwise known as “WardsWiki” (Ward being the author who created the original wiki website). A “wiki” (with a small “w”) is a site that operates along the same principles as WardsWiki. The best-known wiki is probably *Wikipedia*, the free encyclopedia.

**How does a wiki work?**

Wikis are lightweight collaborative technologies. They are people-centred tools (Brereton, Donovan, & Viller, 2003). As such their design is intentionally basic. While images can be added, wikis are primarily text-based. One can write text directly within a wiki page on-line or copy and paste text from a word processor. Text formatting to date has been extremely simple, with each wiki determining own simple markup language styles. However, more and more wikis, especially in educational contexts, are being configured to use what is referred to as a “What You See Is What You Get” (WYSIWYG) interface. (SeedWiki [3] is an example; see also http://www.ariadne.ac.uk/issue42/tonkin/)

**What permits wiki technology?**

Wikis are Open Source Software and are often part of the Free Software Movement -FSM (free as in freedom). Wikis typically use GPL (the Gnu Public License) [4]. “The underlying philosophy of the FSM (and these wiki tools) sees the source code as a public good, not to be owned nor controlled by any one group or person.” Daignault (in process; 2001) makes the case that the values underlying the FSM model of public knowledge dissemination and mobilization have both strong ties with and important implications for educational theory and practice. The underlying technology of these new tools is XML (extensible markup language). XML separates content from formatting, encourages the use of meta-data, and enables machine processing of Internet documents. “The latter is key in the ability to link automatically disparate documents of interest to individuals or groups.
The new collaborative opportunities this enables have led some to consider the growing importance of XML as the signal of the arrival of the second-generation Web” (Godwin-Jones, 2003).

**What is the difference between a wiki and a blog?**

Blogs are often quite structured, while wikis are more flexible. Blogs are chronological whereas wikis can be organized in innumerable ways (subjects, categories, hierarchies, etc). Wikis include a search feature, whereas many blogs do not. Once a blog message is posted, it cannot be edited by others. Wiki pages can usually be edited by anyone. (Wiki pages are, by default, open but they can be configured to give selective access, or may even be entirely closed.) And while blogs can be highly personal, wikis are intensely collaborative (Godwin-Jones, 2003). [5]

**Why examine wikis?**

The tools we use may matter. According to Idhe "Technologies transform our experience of the objects in the world non-neutrally." (1994). Daignault (2001) argues that if this principle of non-neutrality is upheld, technology will reflect the interests of a given collective and will give rise to both creative and destructive tensions concerning its use. The collective tensions created by wikis — for those who dare to risk living them — may radically alter pedagogical praxis. Wikis’ collective, open structure redistributes the traditional (i.e. academic) knowledge-power nexus along non-authoritative lines. Some ensuing concerns for academics writ large are presented in the About Research section.

**Why not Wiki this text?**

You are invited to co-author and rework this text. Perhaps in this “WikiWay”, we can build a critical and creative database about these intensely collaborative and particularly open (which is to say, leveling) tools. Go to WikiPedagogy to contribute in English, and/or WikiPédagogie to contribute in French if and when the text gets translated.

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**Form**

**Wiki Workings**

**How do wikis work?**

Wikis are lightweight collaborative technologies. One can write text directly within a wiki page online or copy and paste text from a word processor.
Text formatting to date has been kept extremely simple, with each of the many types of wiki determining its own simple markup styles. However, more and more wikis - especially in educational contexts - are choosing (or configuring their wikis to use) what is referred to as a “What You See Is What You Get” WYSIWYG Interface. Specific guidelines for How to WikiWork are in the Production Section.

As Brian Lamb (2004) points out, it is risky to talk about wikis as if they’re all the same. Even dedicated wikiheads engage in “perpetual arguments about what constitutes true wikiness. But some fundamental principles (usually) apply” [6]. Lamb comments on four “Wiki Essences” that are particularly noteworthy [7].

• **Wiki Essence 1: Anyone can change anything.** Wikis are quick because the processes of reading and editing are combined. The signature of a wiki is a link at the bottom of the page reading “Edit text of this page” or something similar. Clicking that link produces the page’s hypertext markup, allowing instant revisions. Authoring software, permissions, or passwords are typically not required.

• **Wiki Essence 2: Wikis use simplified hypertext markup.** Wikis have their own markup language that essentially strips HTML down to its simplest elements. New users need to learn a few formatting tags, but only a few. Most wiki tags significantly streamline and simplify their tasks. For instance, the minimum HTML code needed to create a named hyperlink to EDUCAUSE Review on-line, using the text “EDUCAUSE Review”, would be rendered in a wiki within square brackets. The result, [http://www.educause.edu/pub/er/EDUCAUSE Review], saves a minimum of twelve
keystrokes and is significantly easier to remember. Raw URLs (web addresses) typically require no markup tags at all to be rendered live on a wiki page.

- **Wiki Essence 3: WikiPageTitlesAreMashedTogether.** Wiki page titles often eschew spaces to allow for quick page creation and automatic, markup-free links between pages within (and sometimes across) wiki systems. Linking to related pages is easy (you just type in the WikiPage name), which promotes promiscuous interlinking among wiki pages.

- **Wiki Essence 4: Content is egoless, timeless, and never finished.** Anonymity, though not required, is commonplace. With open editing, a page can have multiple contributors, and notions of page “authorship” and “ownership” can be radically altered. Content “cloning” across wikis — sometimes referred to in non-wiki circles as “plagiarism” — is often acceptable. (This attitude toward authorship can make citations in articles a tricky exercise.) Unlike weblogs, wiki pages are rarely organized by chronology; instead, they are organized by context, by links in and links out, and by whatever categories or concepts emerge in the authoring process. And for the most part, wikis are in a constant state of flux. Entries are often unpolished, and creators may deliberately leave gaps open, hoping that somebody else will come along to fill them in.

**What do wikis look like?**

The most famous wiki to date is [Wikipédia](http://en.wikipedia.org).

![Wikipedia example](https://upload.wikimedia.org/wikipedia/commons/thumb/8/89/Wikipedia.png/800px-Wikipedia.png)

Typically a wiki is very "clean". This means there is mostly (or solely) text. However, images can be added.
Information is organized according to the author’s wishes. That is, there is no built-in hierarchy or arborescence. A wiki author can create one very long page or create as many other interlinking pages (subcategories, directories or links) as they wish. These “structurings” can easily be undone or redone. To see possible wiki components, see the Templates and Tools section.

**What have wikis been used for?**

Wikis have been used successfully in education (Collaborative Software Lab, 2000; Guzdial, 1999). Research has shown that teachers and students can get very creative and develop innovative and useful activities for learning (Synteta, 2002). For some, wikis become objects to think with (James, 2004b), for others, wikis can help build an understanding of a community’s shared knowledge.

Specific examples of wiki work are presented below in the Examples Section.

**Examples**

**Wiki enactments**

**THE Wiki par excellence**

The best-known wiki is probably Wikípédia, a free-content “encyclopedia” that anyone can edit.
According to Stallman, “In the past, encyclopedias have been written under the direction of a single organization, which made all decisions about the content, and have been published in a centralized fashion.” With Wikipedia, this is no longer the case. Stallman also elaborates on some of the unique qualities of this service, commenting that “The free encyclopedia will not be published in any one place. It will consist of all web pages that cover suitable topics, and have been made suitably available. These pages will be developed in a decentralized manner by thousands of contributors, each independently writing articles and posting them on various web servers. No one organization will be in charge, because such centralization would be incompatible with decentralized progress.”

What is astounding about Wikipedia as an open, collective knowledge repository is that it worked and continues to work. For an interesting history of how Wikipedia developed (it was not originally intended as such), as well as an outline of the value opportunities created by Wikipedia, see Klemm.

For additional “large” wiki initiatives see the Wikimedia Foundation.

Wiki use in higher education

According to research that looked at 24 wiki uses in Western universities, wikis tend to be used by specific departments or for particular topics rather than on a campus-wide basis. Their use in scheduling, faculty use, learning support materials and course management seems to be rare. Project management is a fairly common function (especially for course-related or group projects in particular fields, notably music and languages). University-based wikis seldom appear to be used for entertainment, student feedback or journalistic purposes. Wikis with a definite purpose or structure appear to be more common than wikis basically left unstructured or for personal student use (Schwartz et al, 2004).

Wikis have been used for a variety of co-web purposes in educational contexts [8], such as co-creating and co-monitoring projects (writing, design) over time (within and between sessions). Specific uses include collaborative concept elaboration (4) (see examples: File Transfer Protocol (FTP), Firewall, chatting, Video Streaming, ICT pedagogy presentations (4) (see [9]).

A particularly innovative wiki use (in this authors opinion) is DramaticIdentity. A DramaticIdentity is a temporary hat that you put on when you assume the role of another (nonhuman) entity, allowing it to speak on the topic at hand. (Peter Mereal in References, Category Wiki-5)
Some specific wiki uses within education

In terms of composition, Barton (2004b) notes the effective use of wikis for:

- Any class project with a reference or encyclopaedic format, including instructions, manuals, glossaries, and the like.
- A class or group project with a bibliographic format. Students could gather websites related to a topic, then annotate, rank, and organize them.
- A letter or statement presented on behalf of the class. These documents occur often enough in the business world, where the "on behalf" basically means that everyone involved signed off on a draft. On a wiki, such a project would offer everyone a better chance to make a contribution.
- A handbook or textbook. Students could build a guide to correct punctuation and be evaluated as a class. Thus, every student would have a stake in the project and would likely benefit from the instruction it contained. Students also become familiar with "textbook" English and its avoidance of personal-sounding prose.
- Any other project that does not require specified authorship or protected documents. Wikis are authored by communities, not individuals.

This last element by Barton is crucial. Some discussion papers looking at what this “open-crowd-authorship” may entail for academia are presented in the About Research section.

The 21st-century Teaching and Learning project at Texas A&M University is built around a wiki, as is the conference planning process of the TESOL CALL interest section. A sample wiki site was set up by Awaji Yoshimana for the JALTCALL 2002 conference (Godwin-Jones, 2003).

Some examples of graduate wiki pages (in French only)

Patrick Plante (French) created a wiki for a graduate course. It includes links to other wiki pages (texts he created for coursework), to his favourite on-line journals, to his personal web site, and so on. What is important to notice is that each person can create whatever and whenever they wish.

Judith Horman (French) presents the papers for a graduate course (students were required to read — and comment — on each others’ work before notifying the professor that the “final” version was ready). She offers links to her personal web site and to the courses she herself is offering, and describes a host of other projects in which she is involved. Hence, there is often a mixture of personal and professional interests, questions, and even “To do” lists that include the preparation of articles like this one.
Some examples of undergraduate wiki pages (in French only)

This includes undergraduate work, where the co-elaboration of "techne" concepts has been developed over one university session. The goal, enforced by coursework requirement, is that each session students (and the professor) will go both deeper (nuances, questionings, critique) and farther (pedagogical examples and implications) in studies of how these concepts do and do not work with and for society. Here is one example, Internet2. Note: these concepts then serve as material for exam questions for students in subsequent sessions of the same course.

A required part of coursework was to provide public feedback (in French only) on other students’ technology integration lesson plans. This was carried out according to collectively established guidelines. The feedback began in the fall of 2004 (in French only). Each student on this page presents his or her work. The critiques offered by other students are found in the commentary section at the bottom of each page. Critique of this critique will take place in the fall of 2005.

Examples of college students’ wiki pages (French — SSHRCH research project)

Students were required to collectively research one of five technoscientific issues during a 13-week period. The collectives consisted of students (typically six in number) from two science classes (three students from each class). Here is an example of student WikiWork pertaining to stem cell research (in French only), which forms part of our SSHRC research on technoscientific literacy.

NOTE: It is important to reiterate that the student pages listed in the section “Some specific wiki uses within education” could be rewritten, reorganized and/or deleted by anyone, in any way, at any time. There is no supervision of these pages: the students write, edit and publish with no intervening authority [10].

Some wiki lesson plans

- Micro-WikiPedia: Wiki Lesson

Some specific wikis — outside of education

- Wikipedia, a free-content encyclopedia that anyone can edit.
- Sweden’s biggest Wiki website
- The New York Times on the Web: the technical staff really took to wikis in a big way. They wrote 500 pages in just a few months, documenting the internal systems.
- Blams has become a template tool for writing reviews of books, CDs and DVDs.
- Some good examples of wiki pages are found on Gowdin-Jones’ home page.
- For many other wiki links, see the wiki directory.

Important resources

1. Wikiversity is a new idea to create a wiki-based learning community. Here, you might participate in on-line courses or create a course yourself. See this page for some ideas about what the Wikiversity might become.

2. This paper discusses a wiki project under way at Deakin University. This project uses a wiki to host an icebreaker exercise intended to facilitate ongoing interaction between members of on-line learning groups. Wiki projects from across America are outlined and future wiki research plans are also discussed. These wiki projects illustrate how e-learning practitioners are moving beyond their
comfort zone by using wikis to enhance the process of teaching and learning on-line. The evaluation of some Wiki use in educational contexts is presented in the Evaluation Tools Section.

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**Pedagogical Potential**

**General Pedagogical Potential**

Wikis are new to the university context. (Some recent implementation practices are presented in Examples section, and several guidelines for wiki use are offered in Evaluation Tools section). Wiki pedagogy is literally — and figuratively — “in-the-making”. Wikis, both in and by their ontological existence, circumvent traditional power/knowledge relations. What these democratizing tools may — and may not — enact in and across educational settings remains to be seen. While the descriptions about their potential enactment are brief, the issues they invoke are complex and challenging.

Wikis enact knowledge building with and for others. The focus is on the community itself rather than on the individual learner (Holmes, Tangney, FitzGibbon, Savage, & Mehan, 2004). The implications of communal constructivism for the university context are of particular import. In the words of Holmes et al (2001), “What we argue for is a Communal constructivism where students and teachers are not simply engaged in developing their own information but actively involved in creating knowledge that will benefit other students. In this model students will not simply pass through a course like water through a sieve but instead leave their own imprint in the development of the course, their school or university, and ideally the discipline.”

The goal of such “co-curricularization” is to influence the quality of ALL work, not just one’s own [11] Quality is to be influenced OVER TIME (long term sustainability of knowledge) (Ciffolilli, 2003 & Schwartz, 2004), ACROSS collectivities (across students, over classes, over years, over generations; see, e.g., Scardamalia & Bereiter, 1994), VIA open-natured projects and TOWARDS creating “impossible public goods” (Ciffolilli, 2003). While creating assemblages of valuable collective goods is not new, tools that intrinsically incite them — and on such a large scale — may be truly new (Godwin-Jones, 2003).

Like many on-line environments, wikis create the possibility for international “Collaborative Collectors” and interdisciplinary “social webs” that enhance social life through knowledge of and mutual participation in new types of cultural and leisure activities (Mark, 2001 cited in Muirhead, 2004). Networked collectivities purportedly allow for wider, diversified, teamwork (Ciffolilli, 2003). Teamwork is said to invite multiple perspectives, induce higher developmental skills, reduce uncertainty during complex activities, and increase participation (Harasim 2003, cited in Muirhead, 2004).

Several on-line environments (such as forums and news boards) enable such potentially innovative exchange and labour practices. Like wikis, they are premised on a distributed knowledge-building model, wherein information flows freely without having to pass through a central authority. However, in wiki technology, such distribution pertains not only to the exchange of ideas but to the editing and publication of ideas as well. Wikis are based upon a principle of non-exclusive authority. Anyone and everyone gets to decide what will be said (content), how it will be said (organization), and whether it will be said (dissemination). Some potentials and concerns about distributed authorship, open editing, and public as publisher are outlined in the About Research section.

**Specific Pedagogical Potential**
Wikis maximize interplay.

That is, they maximize the written word advantages of reflection, reviewing, publication, of witnessing cumulative written results. It is important to note that dissatisfaction in interplay may be key here. When students do not like what they see — for example, the approaches taken by others — they may act to create otherwise (Scardamalia et al, 1994).

In wikis anyone can play. “This sounds like a recipe for low signal (noise) as Wikis get hit by the great unwashed as often as any other site — but to make an impact on Wiki, you need to generate real content. Anything else will be removed. So anyone can play, but only good players last.” (Reference: Category Wiki-5.)

Wikis are democratic.

“Allowing everyday users to create and edit any page in a Web site is exciting in that it encourages democratic use of the Web and promotes content composition by non-technical users” (Leuf et al, 2001). For an excellent critique of democracy — indeed, a case for its rethinking — see Agamban in the About Research section.

Wikis work in real time.

People take time to think, sometimes days or weeks, before they follow up some edit. So what people write is generally well-considered (References, Category Wiki-5).

Wiki technology is text-based.

The extremely simplified hypertext format may allow for a greater concentration on the text itself, that is, on the content or the writing process (as opposed to figuring out or playing with text tool options or presentations). The lack or small number of images may also enable a greater emphasis on quality content creation and/or comprehension (Fountain, 2005a; Godwin-Jones, 2003).

Wikis permit public document construction, that is, distributed authorship.

Co-authoring is complex, whether in the real or the virtual worlds. There appear to be many ways of writing together. Roles can vary scribe&consultant/parallel writing/joint writing in Mitchell, Posner & Baecker, 1995) dynamics (collaboration alters within and between authors in Mitchel et al, 1995) politics (participation and engagement is not necessarily equal in Fountain 2005a, Hormon, 2005, Mitchel et al, 1995).

Wikis complicate the evaluation of writing.

Since wiki authors are typically anonymous; unless the group is extremely limited and/or identification of textual input is imposed, one will not normally know who the author is. Thus, unlike threaded discussions in which the writer is identified, it is usually impossible to identity contributions to a wiki (Schwartz et al, 2004).

Such anonymity poses enormous questions for academic institutions wherein rewards (grades, bursaries, grants, publications andhirings) are still typically based on individual contributions and efforts. However, it is possible to insist upon authorial identification within any given wiki. But the advantages of “non-identifiable authorship” may outweigh the disadvantages in certain academic sectors. Garcia & Steinmueller (2003) outline three potential advantages:

1) an intensification and diversification of non-ownership/non-proprietary models; 2) an emergence of self/other identification hybrids; and 3) the proliferation of consumer/producer horizontal assemblages, reflecting the multi-authored character of information goods produced through
collaborations.

**Wikis promote negotiation.**

The non-hierarchical decision-making about what counts (or what will remain published) can occur between students, whether within a given course or across extended periods of time (Holmes et al, 2001) [12].

**Wikis permit collaborative document editing, or open editing.**

First, they subject writing to constant scrutiny (Barton, 2004a). Mutually editing content may improve the quality of ideas (concerns about the potential to “destroy” others’ work are discussed in the Production section). In addition, witnessing and participating in the progression of editions, and seeing editing as a political struggle (Barton, 2004a), could lead to heightened creativity and more nuanced critical skills with respect to document production and evaluation (References, Category Wiki-5).

Second, making editorial changes public (as wikis do) could provide excellent data for:

1) quality analysis (in terms of both form and content) pertaining to what counts as improvement or not;
2) political analysis in terms of decision-making (quality according to whom).

Note that this second option is only possible if the authorship of wiki changes is made explicit. The use of egalitarian editorial decision-making seems to enable rotating leadership roles, allowing participants to build on what works (reference: Category Wiki-5).

**Wikis permit the public to publish - Public as publisher.**

Wikis permit the creation of “publics, not masses” (Barton, 2004a). Arming a public to edit means that “an armed society is a polite one” (References, Category Wiki-1). Wikis make texts intensely public and potentially durable. Work is placed for the wider community to see and edit, both in the present and in the future. Writing for a “real” audience seems to be highly motivating, leading towards the desire to attain better language skills, including expression (Fountain, 2005b). It may also lead people to be more thoughtful in terms of content and structure (Godwin-Jones, 2003). Yet, while expression is important, “being heard” may be more so. When one “goes public”, receiving no response can be as troublesome as receiving a bad response. The relationship between “listen” and its anagram “silent” merits considerable reflection. As Oscar Wilde said, “There is only one thing in the world worse than being talked about, and that is not being talked about.” Feedback then, at least in an educational context, is key.

**Wikis make feedback intensely public and potentially durable.**

Educators can insist that students read and respond to others. The elaboration of what constitutes appropriate feedback, and the creation of guidelines for its equitable distribution, are two fundamental issues in educational contexts.

**Wikis work on volunteer collaboration.**

Wikis created in pedagogical contexts wherein collaboration is forced and enforced (since participation is often related to the student’s grade) — a kind of Lacanian “choix forcé” — may prove to be a factor that determines why wikis may not work for some educators. That is, the voluntary aspect of wiki work, which involves an “opting in” to knowledge construction, may prove to be an essential and non-negotiable component of creative and sustainable participation.
Wikis enable complete anonymity.
The import of responsible anonymity (creating and/or responding responsibly and ethically to public speech acts on the web across potentially extremely large audiences) needs no elaboration.

Wikis endorse particular ways of writing.
See the concept of NPOV and OnlySayThingsThatCanBeHeard.
Wikis have no rules; non-interference with respect to creativity is high (Godwin-Jones, 2003).
Wikis require trust: trust the people, trust the process and enable trust-building (reference: Category Wiki-6). Building trust and enabling it in the digital domain, across differing and often divergent times and spaces, may prove to be too great a challenge to ask of educators who already lack time and resources.

Some Queries
We need to question:

• equal participation as actually possible and as always desirable,
• content interest as related to a shared timespace (Garrison & Anderson, 2003, cited in Muirhead, 2004);
• while content gets people involved and creates discussion, what does it mean if we are forcing this content in our coursework (References, Category Wiki-5)? For a critique of discourses of collaborative learning and knowledge construction. (see the About Research section);
• the lack of images, both as good and as bad (Collaborative Software Lab, 2000);
• the value/import of officially unauthorized texts. As James (2004a) puts it, “While just about everything we used to teach was a finished, edited text, the Web now provides us with a gazillion unedited texts”;
• the lack of content moderation: we may need to review content to maximize the signal-to-noise ratio. UseNet became Uselessnet because of lack of moderation (Category Wiki-5);
• the serendipity of wikipages: the wikipage may already exist. See ErikDeBil (Category Wiki-3);
• whether all content should always be openly editable. Open comments, yes but... (Katherine Derbyshire, Category Wiki-1) Possible solution? Two parts to a page — one static part (for text or artwork) and another which is a standard wiki (Daniel Church in Category Wiki-1);
• when writing is neither hierarchical nor threaded. That is, changes are not indicated in each version; one must read for them. This evokes a time element, and poses another question: is it possible to spend too much time reading (Category Wiki-5)?

Guidelines for wiki use
According to Palloff and Pratt (cited in Li, 2003 and Muirhead, 2004) the virtual student wants: 1) communication and feedback;
2) interactivity and a sense of community; and
3) adequate direction and empowerment to carry out the tasks required for the course.
In virtual work, there are typically four types of behaviour upon which to focus: participation, response, affective feedback and focused messaging (Horman, 2005; Burge, 1994 cited in Muirhead, 2004). Of particular importance to effective behaviour are:
1) the degree of social presence;
2) the quality of the feedback received;
3) the intellectual depth of dialogue; and
4) the virtual presence of the instructor (Berge, 2002; Gunawardena, 1995; Swan, 2001 cited in Muirhead, 2004).

Some specific guidelines for wiki work: [13]

**Getting involved**

- Some things that drive others are: recognition, respect, desire to have an impact and desire to participate in significant discourse.
- Making student work available drives up the level of coursework, as other students can more easily understand what is expected of them and thus build to a higher standard rather than reinventing the wheel.
- Include sections that show how the work could make an impact.
- Communicate the value of the activities as much and as often as possible.
- Create extra credit opportunities.
- Recognize that on-line identities encourage more in-depth dialogue.
- Realize that when participants know each other, it makes the process easier, since there is less on-line fear.

**How to wiki work**

- Take time. Be prepared for this; people need to get comfortable, so take a class off and do it on-line.
- To use a wiki, participants need to be in control of the content: you have to give it over fully.
- Get to know your audience (for approaches see the “Issues in Deployment section” in Tonkin, 2005)
- Make the work as open-ended as possible.
- Do not impose strict rules and patterns of usage.
- Use email notification of changes (perhaps time-line dependent).
- Use “hans”. Hans (plural for “han”, a Japanese learning model) are made up of three or four students in a class. It is the responsibility of the han to make sure that all members are able to progress through all materials. (This is a radical departure from Western education where the individual is paramount).
- Less is more; motivation decreases when there are too many assignments and/or too many discussion questions.
- Use wikis across age groups, classes, courses (sections) and over time (courses).
- Get students to comment across projects (i.e. point out parallels and contrasts); choose high-quality, complex projects.
- Make what is to count as acceptable collaboration as clear as possible. Outline ways of acknowledging dissatisfaction.
- Decide whether individual authorship is important. If so, then choose an appropriate wiki that either insists upon identification before writing can occur or that accepts colour-coding of texts (this would only work within and for very small groups).

**How to begin**

- Begin with a period of open use (i.e. a sandbox).
- Use introductory activities (e.g. "who's who", movie reviews) and other not-required-but-useful activities to convince students of the utility of the exercise by generating discussions.
- Get students to post questions and requests for other students to answer; people are happy to
help when someone actually seems to want the help.
- Plan what will be covered in future class meetings.

Where to end
- Don’t.

Specific guidelines for the quality of information

**Neus** offers five guidelines to support a strong collaborative culture and improve the quality of information in virtual communities of practice:

1) Accountability: The prerequisite for reputation
2) Focus and culture: A community charter
3) Trust and identity: Personal profile pages
4) Collective memory: FAQs as efficient knowledge repositories
5) Membership criteria

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Production

How to wiki

All wiki software comes with a “How to wiki” section. Extensive documentation, bugs and requests for new additions are typically located on the home page of the wiki software in question. “How to” documentation is generally available in a variety of languages. This section presents some of the general possibilities offered by most wikis, as well as some initial descriptions of what it means to work (write, edit and publish) in wiki spaces. Remember, wikis are designed to be simple, so that they can be uploaded and altered both quickly and openly. Their strength lies in this simplicity. Pedagogical guidelines for effective integration are located in the Pedagogical Potential section. Some examples of how wikis have been used creatively in higher education are found in the Examples section.

General options

All pages can be edited by clicking on the EDIT link at the bottom of the given page:

Il y a 49 commentaires sur cette page. [Afficher commentaires/formulaire]

Éditer cette page :: 2005-03-10 23:03:11 :: Propriétaire : Charles Nepote :: Références :: Recherche :

or at the top (right) of the page:

All pages have a RecentChanges link wherein you can see all previous versions of the text. No,
nothing is lost!

They all come with a Sandbox where people can practice without worry.

They all come with a page explaining their FormattingRules. (Note: these are always VERY simple).

They all use a WikiWord format to create new pages. This is a word with a mixture of upper and lower case letters using a minimum of two capital letters with no spaces (and no accents).
And, finally, WikiPages that are empty (nothing in them yet) are always followed by a question mark after the WikiPageName. When you click on the question mark you get an empty page that looks like this:

![New Page](image)

**How to resources**

For beginners, BriefIntro (by Ralph Mellor) offers all the information one needs, as well as a tutorial. Mellor also offers links to issues that matter on a longer-term basis. For some of the more elaborate possibilities of wikis, for example, to know more about Deletion Conventions, see explanations offered on the OneMinuteWiki. For those interested in wiki page design, Ward Cunningham outlines a number of important underlying principles.

However, in spite of these very complete descriptions, a brief orientation about how to wiki work follows.

**How to begin**

Creating new wiki pages is extremely simple [14].

First, click the EditText or Edit link on an existing page.

Second, create a WikiWord to create a new hypertext page. This consists of creating a single word
containing a minimum of two capital letters. For example, if you wanted to create your own wiki page within an existing wiki page, you might decide to put your two names together. For example, Richard Stallman would become RichardStallman. But you could also create a longer, more descriptive WikiName. To use the same example, Stallman might create his WikiPage name as: "RichardStallmanTheGreat" or "GNUManStallman". What is essential is that any given WikiName used to create a new wiki page must contain at least two capital letters and have no spaces [15].

Third, when your WikiWord is created, simply click on the Save button. The page that you have just edited will now show your new WikiPageWord. It will be followed by a question mark. This means there is no text on this page, and that it is still empty. Simply click on the question mark to have access to this new page. To edit it, simply repeat the first step outlined above. That is, click the EditText or Edit link. You can copy-and-paste text from your text editor.

In terms of navigation, every time you type an existing WikiWord, an automatic link is made to the page with that title within the local wiki database. An interesting wiki option is that you can click any page title to see a list of all the pages that link to the page within the local wiki database. Hypertext links to other sites can be typed directly; no formatting is necessary.

**Make yourself known**

Create your own WikiHomePage by creating a page with your name (follow the steps above). This automatically creates a UserName for yourself that will show up in RecentChanges. If you login before creating/editing, it can be used as a WikiSignature (to use when appropriate or if you would like to). You can then type this name on any other wiki page (within your wiki database) and a link to your HomePage will automatically be created. Most wikis have login capacities.

Real names are preferred. Yes, it is easy to use someone else’s name. Please don’t, but don’t assume that signatures have any significance other than simple politeness.

**How to write**

The Wikipedia neutral point of view policy (NPOV) states that one should write articles without bias, representing all views fairly. The neutral point of view policy is easily misunderstood. The
policy doesn’t assume that it’s possible to write an article from just a single unbiased, "objective" point of view. The policy says that we should fairly represent all sides of a dispute, and not make an article state, imply, or insinuate that any one side is correct.

When editing you are advised to:
1) Be bold in your editing!
2) If you find a block of text in need of a clearer, simpler explanation — and you have one — then supply it.

And finally...
What about security? There is no security at all. Anyone could jump in and delete content. Some things might get restored. Don’t worry about it; it’s part of WhyWikiWorks. See WhyNobodyDeletesWiki. Security is pointless in this particular software.

Some advice from old-timers
On this Advice from Old-timers page, they suggest three things to do before editing or adding pages:

- Read about aspects such as GoodStyle and WikiEditingCustoms. Or simply read various pages to get the feel of Wiki before you start editing.
- Follow WikiSocialNorms should you wish to be respected by other WikiZens.
- Play nice.

A reminder
Pedagogical guidelines for effective integration are located in the Pedagogical Potential section. Some examples of how wikis have been used creatively in higher education are found in the Examples Section.

Templates and Tools
In this section some of the available wiki programs are presented. This is followed by an outline of the more commonly available wiki features. Following this, a recommendation of wiki software programs is offered, with special emphasis on two that are deemed most suitable for educational use, based on this author’s experiences.

Choosing wiki software
According to meatball wiki (2003), there are more than 200 wiki programs, although only a handful are considered unique. Schwartz et al, (2004) compare the following “unique” wikis (unique in the sense that they offer differing options) in terms of source code, wiki management, page formatting, access control, communications, support and other advanced features:

1. WikiWikiWeb (the first wiki)
2. SeedWiki (a WYSIWYG)
3. DolphinWiki: everything to do with creation of robots using LEGO
4. PhpWiki or here
5. MoinMoin
Common wiki features

Modular construction means that wikis can be very simple or complex according to user needs and skill levels. There are SandBoxes in which to practice, RecentChanges to see changes in any given text, NewRecentChanges for versions of previous pages, search engines through FindPage, UserName for identification, and so on.

Wikis allow for external web links (hyperlinks) and internal wiki links (crosslinks between wiki pages). Creating links requires no particular knowledge of hypertext markup language (HTML); you simply type in a web address (URL) or write the name of an existing wiki page. Links are automatically created. It goes without saying that this permits an extremely interesting referencing system for organizing and linking content.

Participants can be notified about new content by using email notification.

Low graphic use results in pages that load quickly.

Access is flexible: all that is needed is a computer with a browser and an Internet connection.

Particular wiki features

While not all wikis automatically come with all these features, any given feature can potentially be incorporated into any other wiki by accessing and customizing the source code. Those marked with an asterisk are common features in most wikis. According to Leuf and Cunningham (cited in Schwartz et al, 2004), a wiki functions independently of any special add-ons or plug-ins (advanced features such as blogging, polling, calendars, RSS, etc.), and so tends to better meet the needs of a fairly broad audience.

- editable via major browsers (Firefox, Internet Explorer, Netscape, etc.)
- simple markup formatting instead of HTML [16]
- no markups for links (pages, external links, images, etc)
- supports HTML
- text editing
- image insertion [17]
- hyperlink insertion
- lists (numbered, bulleted, hierarchical)
- media insertion (streaming audio/video)
- link checking
- search engine
- What You See Is What You Get formatting (WYSIWYG)
- spell-checking
- tables
- emoticons

For other comparisons see the sections “Comparing wiki features” in Teaching and learning online with wikis and “Choosing a wiki” in Making the Case for a Wiki.

For a list of many other wikis see the Wiki Directory.

For an excellent list and commentary on Francophone wiki software options, see Framasoft.
• blogging
• polling
• calendar
• RSS feeds
• drawing tools
• equation editor
• synchronous text messaging

Starting your very own wiki

To choose the wiki package that will best suit your needs, think about the features you need. Remember, however, that more features mean more complexity. For example, how much text variety should students be offered? Do you need WYSIWYG formatting? While WYSIWYG formatting can be a distraction — since students can get carried away with the formatting rather than concentrating on the content — they are nonetheless used to these features.

If you work in the francophone world, two wiki packages integrate almost all of the unique elements outlined above. The first is Wikini MST, adapted for educational use by RÉCIT MST Québec. This wiki software program allows for the insertion of mathematical symbols, text highlighting and colours, RSS and many other options that are important for educators. Merci mille fois RECITMST [18]! The second — and most popular — wiki package is MediaWiki, available in English and French. Both of these wiki packages offer extensive documentation and FAQs, and accept requests for additional features to be considered in upcoming versions.

Before you decide to use MediaWiki, please take a look at other wiki engines (see, for example, the list at http://c2.com/cgi/wiki?WikiEngines) and determine whether one of them might better meet your requirements. For small wikis, UseMod (http://www.usemod.com/cgi-bin/wiki.pl) is always a safe bet — it does not need or support a database. The latter is, of course, also a bottleneck in terms of functionality. Requests for new features should be submitted to MediaZilla (http://bugzilla.wikimedia.org).

Important resources :
• Incsub: Open Source Wikis for Education
• Wiki software resources (All you want/need to know about how to begin.)
• OOPS (Opensource Opencourseware Prototype System)

Evaluation Tools

Wiki worth

The value that wikis may hold for educational contexts, through the efforts of the many over time, has not yet been established. Surowieck has suggested that large groups of people are smarter than an elite few, no matter how brilliant; groups are better at solving problems, fostering innovation, coming to wise decisions and even predicting the future. This “Wisdom of crowds” is evinced in the ever-increasing quantity and quality of WikiProjectEndeavours, both inside and outside of education. See, for example, the WikiMedia Foundation Projects (such as Wiktionary, WikiNews, and WikispecieS), EvoWiki (a reader-built encyclopedia of evolution, biology, and origins), SEEK (Science Environment for Ecological Knowledge), Wikibooks (a collection of open-content textbooks that anyone can edit), Wikiversity (a free, open learning environment and research community), OOPS (An Opensource Opencourseware Prototype System for lecture translation at
MIT), and the WikiTravelGuide. The important criteria of project durability remain to be seen. But if the Linux project is any indication of Open Project potential, these typically virtual enactments may prove to be powerful and sustainable creative forces.

Before looking at some specific evaluations of Wiki use in higher education, the following is a brief summary of the literature regarding what Wikis may do best. [19]

**What may “wiki” best...**

Wikis may work best for...

- knowledge building “over time” (through versions and groups);
- progressive problem-solving (particularly open-ended problems, e.g. Brereton et al, 2003) and even problem redefinition (Scardamalia et al., 1994). For example, Wikis could work well for COP (communities of practice) whose goal is to develop solutions to common problems over time in order to improve practice (Godwin-Jones, 2003);
- explaining increasingly diverse and contrary ideas, as well as examining the relatedness of ideas from diverse contexts (Scardamalia et al, 1994);
- combining, synthesizing and evaluating definitions and terminology across disciplines (Fountain, 2005c; Scardamalia et al, 1994; Brereton et al., 2003);
- questioning underlying causes and principles [20];
- critically reading, and responding in a constructive and public way, to others’ work [21];
- learning how to add both nuance and complexity to concepts in a given field, through systematic engagement and analysis with work produced by more advanced students, specialists and experts (Fountain, 2005c; Brereton et al., 2003); and
- learning to observe deeply, stereotype less, and avoid premature judgment (Brereton et al., 2003).

**Wiki project evaluations**

Detailed evaluation of specific wiki use [22] in educational contexts is embedded in a number of papers:

1. CoWeb Catalog (description of classroom activities that students and teachers have invented for the CoWeb at Georgia Tech);
2. Other CoWeb papers;
3. A pilot project for a biology class;
4. How wikis didn’t work (report on a six-week workshop on visual design in web development for non-experts);
5. Wikipedia as participatory journalism.

While the evaluation of each of the aforementioned pedagogical use of wikis is intimately tied to specific contexts (domain requirements, course goals, students’ confidence and competency levels, Internet access, time and timeline allotments, etc.), there are several general points of evaluation:

1. Just bringing in a new tool does not change practice. Co-elaboration and cooperation will not simply occur because wikis are introduced to one’s practice.
2. Content knowledge can be improved, but this takes time and does not work where individuality is upheld.
3. Using new tools in place of other tools works, but it is not the best use of wiki space and potential (i.e. using wikis as overheads).
4. Quality of language can be maintained — or even improved — if versions ready for quality assessment are identified. Students do not want to think about language questions until they are ready; they want to exchange freely, then present the information well.
5. Open authoring (autonomy and non-authority) does not necessarily lead to the destruction,
modification or copying of others’ work.

6. Co-authorship is not a problem for the students if the guidelines for evaluation are clear.

While the following example is not taken from higher education, it is extremely relevant, and may be indicative of how such “problems” get resolved. Grade six students in an elementary school devised their own publishing protocol in a public environment (a blog). They created their own (French version) language work ethic and icon for “how” they wished to create their texts as well as “when” they were ready for their texts to be evaluated grammatically. It is important to note that this quality of language question (“mistakes-gone-public”) was of such significance to both teachers and parents that the entire project almost closed down. It was the students themselves, who took the initiative to create and enforce a language policy so that they could continue to publish online.

Some personal wiki evaluations

Though analysis is still underway, I would like to offer some preliminary comments pertaining to the wiki research work conducted in my graduate and undergraduate technology courses at Laval [23] as well as in our SSRHC project, “Technoscientific literacies via open source enabled virtual research collectives” [24].

Preliminary analysis across these two research projects indicates that the exclusive use of wiki software (asynchronous, text-based technology) to conduct research across digitally-based virtual communities, within which participants did not know each other, complicated student psychosocial relationships. These included frequent misunderstandings due to the lack of virtual and audio clues; the organization of projects was also cumbersome, and synchronous chats were eventually added to address this issue. Yet in spite of these difficulties, students reported that they liked working with wikis. They appreciated the simplicity, the autonomy of access, the ability to share work with others and the ability to view others’ work. [25]

Analysis of the following issues is presently underway. If you are interested in being informed about ensuing articles on these research lines, please write to Renee.Fountain@fse.ulaval.ca.

1. the quality of student articulations [26] as evinced in students’ concept elaborations and “rationality islands” [27];
2. the role students attributed to knowledge — deemed technoscientific or otherwise — in their own and others’ discourse;
3. the ways in which students responded to, negotiated and (re)produced knowledge differences; and
4. their capacities for deliberative, community-inclusive interventions.

About Research

Wiki wonderings

Many of these issues pose fundamental — if not radical — questions for higher education, and, as such, merit considerable discussion. Several references are included for those who wish to peruse some of these wiki-related theoretical and methodological underpinnings.

Authority

Wikis are challenging traditional notions of authority and the criteria of academic legitimation (Barton, 2004a, 2004b; Lamb, 2004). According to Barton (2004a), "legitimation in the wiki world is not solved by censorship," and wiki " does not find its authority in the credentials of authors;
indeed, the entries quickly become autonomous from individual authors and take on their own existence. They are always developing as new collections of individuals aim to refine or destroy them; but each edit only pushes upwards. Gradually the entries connect with one another and thus bring together communities of wiki authors."

- **InsurgenceEmergenceConvergence**: the broad theme of the talk was disruptions in higher education at the fringes of emergent technology. Deleuze: postcript to the societies of control.
- The peer review process so highly valued in academia has been seriously challenged by wiki’s open authorization. An excellent depiction of the consequences of wiki work and peer review is offered by Klemm.
- **Wide Open Spaces: Wikis, Ready or Not**

**Authorship**

Wikis discourage the feeling of authorship and the building of subjectivity. As Barton (2004a) points out, they are not good for those struggling to find their voice and authority. Blogs may prove to be a better tool for this.

Wikis can be created by multitudes of people. Excessive degrees of consensus can foster mediocrity, creating bland discourse (Hopper, 2003, cited in Murihead, 2004). Could this lead to “group think”? For an interesting discussion on the potential and perils of “crowding,” see The wisdom of crowds.

- **WikiAsCulture**
- **When the audience is the producer: The Art of Collaborative Writing.**
- **Social literacies: the use and complications of writing by many authors in social contexts such as wikis, by Ulises Ali Mejias.**

**Communal constructivism**

- **Students constructing learning for as well as with others.**
- **Communal Constructivism and Networked Learning: Reflections on a Case Study.**
- **Scrimshaw: Is Communal Constructivism the best approach?**

**Community and collaboration**

- A critique of Discourses on collaborative networked learning by Catherine Edwards.
- For a critique of community, see Daignault (2005c) in the References section.
- **Connecting Community: On and Offline.**
- Studying online social networks: For a wide variety of links, see Barry Wellman.
- For aspects that may undermine on-line communities, see The economies of online cooperation: gifts and public good in cyberspace.

**Democracy revisited**

- Giorgio Agamben, "We Refugees," translated by Michael Rocke.
- The novelty of the coming politics is that it will no longer be a struggle for the seizure and control of the state, but the fight between state and non-state (humanity): an unbridgeable disjunction of the singularity from state organisation, as articulated in Agamben’s the coming community.
Ethical concerns
Requiring students to make their work public (we do not post their grades publicly) evokes concerns about whether a future employer might go back and see how someone fared. Intermediate measures might be to subsequently delete work, or to insist upon a form of identification known only to the professor.

Impossible public goods
Open source principles are applicable to a wide variety of activities, and models for their application and adaptation are evolving as experience is accumulated through different projects. This emerging experience provides a fertile ground for future research and a plethora of opportunities for new initiatives (Mateos et al, 2003).

Open source, non-proprietary models, impossible public goods
- The Cathedral and the Bazaar Linux is subversive. Then, Linux: A Bazaar at the Edge of Chaos Raymond’s evolutionary view is given an extended and more formal treatment under the terms of chaos and complexity, and chaos and complexity under the terms of sociology.
- Creative Commons
- Incsub: Open Source for Education
- Applying the open source development model to knowledge work

Pedagogical concerns
- Assessment — Necessary assessment areas and processes for assessing student needs. Assessing Student Needs in Web-Based Distance Education.
- Censorship — Fear of how the message will be received inhibits critical expression.
- Challenges — Contemporary On-line Education Challenges
- Collaboration — Students often do not know how to collaborate or resist collaborating (especially from certain disciplines like engineering, math, and computer science) (Guzdial, 2002, cited in Synteta, 2002).
- Communication — Anxiety is paramount, and the lack of facial clues is problematic. There is a fear of writing, and the traces that remain. (Reference: Category Wiki-1 by Walden Mathews).
- Creativity — Encouraging Creativity in Student Online Work. Helping the on-line student break “out-of-the-box.”
- Effort — Students who have to work with other students who are less motivated than themselves is a prevalent concern (Horman, 2005).
- Non-linearity — Many students are still not used to non-linear navigation (Reference: Category Wiki-1 by Kyle Brown).
- Open-ended work — How to work effectively in an open-ended setting when students still want to provide the right answer (Muirhead and Seaton, 1993, cited in Muirhead, 2004)?
- Retooling — Extremely easy to change tools but not to change practice (James, 2004a).
- Writing — What are the effects (pros and cons) of open editing on students’ writing processes and styles?
**Technical issues [28]**

- Wiki as research database: Some wikis (databases) have an embedded “end time.” This is EXTREMELY IMPORTANT to verify for data storage and retrieval in research. However, note that this only poses a problem for recent changes to the pages. Systematic backups make this risk minimal. Systematic backups are also important so that any spam can be eradicated.
- Wiki citations: Quoting within wikis is challenging, since given versions can rapidly change. It is necessary to cite particular versions.
- Edit box empty: In some browsers, if there is too much text (more than 32k characters), the edit box is empty even though the page is full of text. Solution: Try a different browser like Firefox, etc.
- Version changes: Wikis normally do not show changes in a given version, they simply record the new version. ThoughtsWeaver has a differentiating engine for visualizing incremental change.
- Concurrent editing: Wikis can conflate sequential revisions coming from one user into just one revision, making it appear as if all changes were done at one time when they might have taken place over weeks. This is a problem when one wishes to track incremental changes over time. One possible solution is Zope, which keeps track of unlimited versions, uses transactions to handle write-write conflicts and has a namespace system that is both flat and hierarchical (Zope Does Wiki by reference: Category Wiki -5; see Terry Shumway).
- Page deletion: Edits from a single IP are rolled into a single change, so a person from one IP can’t irretrievably delete material (Reference: Category Wiki -5). However, IP level blocking is simple to enable.

**Virtual Learning Environments**

For comments on virtual learning environment for the future, see Scott’s blog entry (January 17, 2005) titled The VLE of the future.

**Wiki Commentaries and Critiques**

A wiki is a primitive newsgroup format; its formatting is primitive, the presentation is boring and the (traditional) lack of security is unworkable. See John Passaniti for a response to these critiques (References, Category Wiki-1). Richard Kulisz (2003) writes about Why Wiki Works Not.

- The Guardian
- All About Wikis

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**References [29]**


CATEGORY WIKI [electronic version]. [http://c2.com/cgi/wiki?]. Retrieved December 5, 2004. Available in HTML. (Many of the following WikiLinks can be found via this Category wiki link.)


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Secondly, I wish to thank a number of people who participated in my wiki research projects:

1. Students in the elementary and secondary education programs at Laval during the 2004 scholastic year; their capacity to tolerate the necessary ambiguities involved in integrating new tools into pedagogical practices was commendable;
2. Two university research assistants, Judith Horman and Maggy Pouliot, who helped conduct the research on the university-based wikis; and
3. Students — as well as teachers Françoise Dulong and Jacques Fortin — from the Lévis-Lauzon and Limoiou CEGEPs in the Quebec City region. They collaborated in our SSHRC project (“Technoscientific literacies via open source enabled virtual research collectives”), which was conducted almost solely using wiki technology.

Thirdly, special thanks goes to technicians Laurent Duschene and Samuel Cossette at Équinux and David Mercier at Lévinux for their invaluable help and patience in creating, adapting and managing all these wikis. Thanks also to Florence Bezier (in charge of faculty computing in the Department of Education at Laval) who has graciously allowed us to autonomously run and manage the open source servers that, together with those situated at Lévinux, house many of our wikis.

And finally, I would like to thank Stephen Downes (and indirectly the National Research Council of Canada, which intelligently employs him) for his highly informative daily newsletters that introduced me to many of the wiki authors cited in this text.

[1] For those interested in wiki history, wikis began in 1995; see Cunningham or Aronsson.
[2] According to Schwartz et al. (2004), this eliminates the need for distribution with the associated risk of virus transmission
[3] There are many different kinds of wikis. For a comparison of nine “original” wikis (original as in offering different options), see http://cde.athabascau.ca/softeval/
[4] The GPL license (often called the GNU GPL) is the most widely used license for Free Software projects
[7] Additions to Lamb’s text (in parentheses) are added to facilitate comprehension for those unfamiliar with certain terms.
[8] To lighten the text and to avoid repeating author’s names, numbers follow each wiki use. The corresponding article for each number is indicated at the bottom of this section. Where we can elaborate from our own research WikiWork, examples are given via direct wikipage links. It must be said that, given their novelty, we simply do not yet know how such open spaces can be used to their full advantage. Certainly, to date, wikis have been successful, in that:

• posting content has become an extremely simple affair. This allows what Tonkin (2005) calls “single user wiki use”, that is, ways of collecting and presenting information over a period of time (8). Students can create their own interactive sites (1), information sources (simple websites easily created) (5), Hot Lists (2) (pointing to useful resources), lab books (8) and Advice pages (2). It allows professors to easily present course information (such as resources, external links, project information, sign-up pages and FAQ’s) (1).
• student interactivity has been facilitated. For example, “class HotLists” distribute the costs of finding resources across the whole class, “collaborative FAQS” allow for the inclusion of nuances and examples, “Help Pages” obviously offer relevant information (these differ from FAQs in that they are created for help and are created before the questions have arisen), as well as “Homework Handin” which lets everyone see what others are doing, creating material for discussion and later linking (with the advantage of peer ratings) (5).
• collaboration has been foregrounded. Anchored collaboration, such as anchored newsgroup-like discussions for reviews (5), focused discussions (forum-like discussions)(5), exam reviews, expert reviews, student-curated galleries, and Fishbowl reviews (wherein students post critical comments) has been prominent (2). Collaborative writing, even collaborative code writing, is on the increase. Specific examples of this include collaborative glossary of terms (2), collaborative game adventure (2) and even collaborative radio (3). Tonkin (2005) suggests that wikis destined for collaborative writing should include: a) a page locking system b) a versioning system, and c) the ability to temporarily remove the edit functionality for a given page.

[9] project integration work — http://wikini.tuxcafe.org/wakka.php... (click on any link), managing a long-term design process (2), student driven-puzzle creation (2), problem solving (5), practising constructive (public) critique of pedagogical projects (4) see commentaries/critiques on project integration work, cross class/courses projects (interdisciplinary projects) (5)

[10] Please write to Renee.Fountain@fse.ulaval.ca if you are interested in following up any of these examples.

[11] Some might say this reflects a kind of of "pay-it-forward pedagogy".

[12] Psychological factors important to negotiation, such as fear and vulnerability, seem to be somewhat reduced when people are familiar with each other (Holmes et al., 2001). Negotiating inter-project writing across courses between students who are strangers requires an ability to support uncertainty and ambiguity, a willingness to develop written communicative skills, additional time and special tools (Fountain, 2005a; 2005b).


[14] However, there is a sandbox if you simply wish to practice. Remember, any text can easily be undone in a wiki; that includes what you deem to be your mistakes!

[15] Obviously one would think that the principal disadvantage of having too long a WikiPageName is directly related to one’s memory retention, that is, if the PageName should ever get forgotten. But this is not an obstacle in wikis, since no text is lost. Each change and each version is archived into a history. Clicking on the RecentChanges feature will give you the latest versions, recuperating what seems lost but which is simply no longer visible.

[16] However, the large diversity of markup formatting (however simple it may be) has led to a lack of standardization across wiki programs.

[17] GIF/JPEG images can be inserted only by referencing a URL; they must be uploaded to the net.

[18] NOTE: Wikinis do not, by default, come with image insertion possibilities. However, this capacity can easily be added to the software. See this Framasoft article for a presentation of WikiniMST features.

[19] Guidelines for effective pedagogical wiki integration are located at the end of the Pedagogical Potential section.

[20] Collaborative renderings may ease the difficulty of learning to identify assumptions, querying attributions of causality as well as imaging implications and consequences associated therein (Scardamalia et al, 1994).

[21] If the ideas are complex (which is arguably to be hoped for), students could begin by pointing out what is hard to understand and/or the inadequacies of explanations to date (Scardamalia et al., 1994).
Again, is it important to note that given the relatively recent emergence of wiki technology, the following evaluations have not occurred over long time periods.

highly recommend Judith Horman’s masters thesis (2005) to those interested in the social interactions that do — and do not — take place in these “forced” digital collectives.

The SSRCH project was conducted by researchers Jacques Daignault (UQAR, Lévis campus), Jacques Désautels, Marie Larochelle, and myself (Laval University). I wish to thank the Social Sciences and Humanities Research Council of Canada for its support in funding this wiki research.

However, the task of publicly critiquing others work proved to be psychologically difficult (afraid to hurt or be hurt) and frustrating (offering, but not receiving quality critique) for many. For a detailed analysis of the psychosocial factors in undergraduate wiki coursework, see Horman (2005).

Questions pertaining to the quantity of text produced — i.e. whether students wrote more and more often — are hard to gauge, as individual contributions to text versions were not noted. However, if individual contributions were important, these could be foregrounded in small collectives wherein each person would write in a specific colour. As was previously noted in the Pedagogy section, chronological version analysis, while rich, is extremely time-consuming, as changes in each version are not indicated. This could, however, be used to enable students to increase their analytical and reading observation skills.

A pedagogical approach used in complex decision-making developed by Fourez (description in English) and Fourez (description in French).

Other than the initial two concerns (Fountain, 2005a; 2005b), these technical issues are taken from References Category Wiki-1, Category Wiki-3, Category Wiki-5 and Category Wiki-8. Authors are identified if their names were indicated on the wiki page.

References pertaining to the suggestions for further reading are not included here. The links for these texts are indicated in the Research Section.