

# Mapping our way to the Future of Knowledge Transfer

*Development of a Wiki in an  
Evidence-Based Practice  
Physical Therapy course*

Anita Hamilton, Pat Edney, Susan Armijo-Olivo  
of Rehabilitation Medicine, University of Alberta



# Acknowledgements

Teaching and Learning Enhancement Fund

The office of the Provost & Vice President  
(Academic) at the **University of Alberta.**

# Terminology

- Digital technology literacy
- Information literacy
- Web 1.0
- Web 2.0
- Web 3.0
- Social software

# Aims of this presentation

1. To overview the social software tools that have evolved through Web 2.0 technology.
2. To highlight the potential of Web 2.0 tools in health care practice knowledge transfer.
3. To specifically look at the role of wikis in health care practice knowledge transfer.
4. To tell you about our wiki project currently underway at the Faculty of Rehabilitation Medicine at the University of Alberta.
5. To consider the applicability of wikis in health-care settings.

# Key Web 2.0 Social Software tools

- Blogs
- Collaborative writing
- Podcasts
- RSS (Really Simple Syndication)
- Social bookmarking, collaborative tagging and tag clouds
- Social networks
- Video feeds
- Wikis
- Second life



facebook



For a comprehensive list of Web2.0 applications see final slide and <http://www.seomoz.org/web2.0>

# Web 2.0 technology for knowledge transfer

Web 2.0 technology is a user-centred form of information management and retrieval using collaborative creation and tagging of digital knowledge repositories.

Web 2.0 technology has the potential to advance online learning, knowledge sharing and knowledge transfer beyond traditional methods of knowledge delivery.

(Boulos & Wheelert, 2007)

# Importance of getting health practitioners online

- Most online health resources are not created by healthcare professionals
- A significant number of so-called health information sites have no professional input
- “How do we garner the benefits of the internet... while maintaining safe and good practice?”
  - Traditional Internet interventions, with content by healthcare professionals, can only be part of the answer.
  - We should recognize the value and popularity of user-generated content in non-health contexts and...better integrate it into online healthcare resources”

(Boulos & Wheelert, 2007;Potts, 2006)

# Embedding digital literacy in health care education

Kift, tells us that higher education curriculum is too full to “bolt on” advanced digital literacy skills, she suggests that we embed these skills in existing curriculum.

Therefore we need to embed use of Web 2.0 technologies so that it is seamless and enhances the practical learning outcomes for the next generation of graduates.

(Kift, 2003)

# The potential of Web 2.0 tools need to be explored

Web 2.0 offers great potential to creative medical and health educators (and practitioners), but many of the associated possibilities still need to be fully identified, explored in various settings/scenarios, and carefully researched and evaluated to document best practices and pitfalls to avoid, before they can be used in daily teaching and learning (and practice) activities.

(Boulos & Wheelert, 2007)

# This is why this type of project is important...

Web 2.0 offers great potential...but needs to be explored in various settings/scenarios, and carefully researched and evaluated to document best practices so that it can be embedded into the curriculum, not “bolted on”.

(Boulos & Wheelert, 2007; Kift, 2003)

# Objective of this project

To provide our students with the opportunity to utilize Web 2.0 technology (specifically a wiki) so that they graduate as a new generation of health care professionals equipped with the skills to participate in health-care knowledge transfer using the online environment.



# Wiki: Means “*Quick*” in Hawaiian

A wiki is:

- A collaborative software that allows a group to collaborate
  - Users add content and edit others’ content
- Able to be developed, edited and modified with no knowledge of programming or HTML
  - making it accessible to everyone, not just the tech-savvy!
- Able to be maintained equally by all users
  - however you can elect to put administration restrictions on some pages

<http://www.commoncraft.com/archives/000644.html>

You can **support Wikipedia** by making a tax-deductible donation.

[Log in /](#)

- article**
- discussion
- view source
- history



**WIKIPEDIA**  
The Free Encyclopedia

navigation

- [Main page](#)
- [Contents](#)
- [Featured content](#)
- [Current events](#)
- [Random article](#)

search




interaction

- [About Wikipedia](#)
- [Community portal](#)
- [Recent changes](#)
- [Contact Wikipedia](#)
- [Donate to Wikipedia](#)
- [Help](#)

toolbox

- [What links here](#)
- [Related changes](#)
- [Upload file](#)
- [Special pages](#)
- [Printable version](#)
- [Permanent link](#)
- [Cite this page](#)

# Wiki

From Wikipedia, the free encyclopedia

*"Wiki wiki" redirects here. For other uses, see [Wiki \(disambiguation\)](#).*

*"WikiNode" redirects here. For the WikiNode of Wikipedia, see [Wikipedia:WikiNode](#).*

A **wiki** is a page or collection of [Web pages](#) designed to enable anyone who accesses it to contribute or modify content, using [markup language](#).<sup>[1][2]</sup> Wikis are often used to create [collaborative websites](#) and to power community websites. The collaborative encyclopedia [Wikipedia](#) is one of the best-known wikis.<sup>[2]</sup> Wikis are used in business to provide [intranets](#) and [Knowledge Management systems](#). [Ward Cunningham](#), developer of the first [wiki software](#), [WikiWikiWeb](#), originally described it as "the simplest online system that could possibly work".<sup>[3]</sup>

"Wiki" (/wɪkikiː/) is originally a [Hawaiian](#) word for "fast"<sup>[4]</sup>. It has been suggested that "wiki" means "What I Know Is".<sup>[5]</sup> However, [backronym](#). "Wiki Wiki" is a [reduplication](#) of the same word.

## Contents [hide]

- 1 [History](#)
- 2 [Characteristics](#)
  - 2.1 [Editing wiki pages](#)
  - 2.2 [Navigation](#)
  - 2.3 [Linking and creating pages](#)
  - 2.4 [Searching](#)
  - 2.5 [Software architecture](#)
- 3 [Trust and security](#)
  - 3.1 [Controlling changes](#)
  - 3.2 [Trustworthiness](#)
  - 3.3 [Security](#)
- 4 [Communities](#)
  - 4.1 [User communities](#)
  - 4.2 [Research communities](#)
- 5 [See also](#)
- 6 [Notes](#)

# A wiki's content is generated by its users

- The users are responsible for the direction and content of the wiki web site over time.
- Everyone that uses the wiki has the opportunity to contribute to it and/or edit in the way that they see fit.
- This allows a wiki to change constantly and morph to represent the needs of the users over time.
- Wikis grow to represent the community of users.

<http://www.commoncraft.com/archives/000644.html>

# Wikis promote...

**Creativity**

Opportunity for learning

**Co-operation**

Openness to group ideas

**Collaboration**

Ownership of product

# Creativity and Co-operation

- Creativity through development of a website that evolves iteratively and collectively as a group.
- Creativity in developing a website with evolving information and knowledge built in/by a group.
- Co-operation and team work in a non-hierarchical way. The focus is on the group rather than the individual.
- Roll-back capacity in “history” tab can remove accidental loss of data or enable group to restore content or return to a previous version.

(Bray & Boufford, 2006; Samarawickrema, 2007)

# Collaboration

- Democratic and horizontal assemblage of participants, making it possible for anyone in the group to contribute.
- Usually no central authority controlling or managing information or ideas
  - however you may assign roles when there are tight timelines or it is a new approach for the participants
- Use a distributed knowledge building model that encourages new and different ways of sharing tasks.
- Create a resource that is developed with peers, able to be viewed by others. (Samarawickrema, 2007)

# Opportunity Openness Ownership

- Opportunity for participants and end-users to learn.
- Openness to new ideas through a combination of individual and group participation.
- Ownership of contributions by team as all input is able to be monitored and a lasting record of the content and the contributors is available

(Bray & Boufford, 2006)

# Wiki's in healthcare

Wikis can be used:

- For collaboration on projects and research
- As a continuing professional development tool:
  - Connect rural practitioners to city practitioners
  - Develop communities of practice
- As a tool for clients:
  - For sharing knowledge (encyclopaedia-style wiki)
  - Create resources for ongoing use by clients (eg: home modification resource)

# What problems can Wikis have?

- Wikis are vulnerable to attacks from spammers, flammers and disrupters:
  - However, you can lock a wiki from the public to prevent this and,
  - All contributions are able to be traced.
- Some people are reluctant contributors
  - working online can be challenging,
  - editing other people's work can be seen as a risk and,
  - posting when it could be changed can be confronting.
- Wikis are *not* the best solution to every social software dilemma
  - There's always blogging, podcasting, vid-casting, etc...

# Wikis in the Faculty of Rehabilitation Medicine

Physical Therapy project:

Development of a Wiki in an Evidence-Based Practice Physical Therapy course.

Outline:

Students will collaborate in small groups in the online environment to investigate current best practice evidence for treatment options for a case study client. The information will be developed and delivered in a wiki.

# We aim to promote...

**Creativity**

Opportunity for learning

**Co-operation**

Openness to group ideas

**Collaboration**

Ownership of product

# Phases of the project

1. Obtain ethics approval to research our students
2. Recruitment of participants
3. Preparation of the wiki template
4. Train instructors using the wiki template (October)
5. Inform students, obtain consent to assess learning styles (online survey), inform about purpose and process of wiki task (October)
6. Train student group leaders to use a wiki (October)
7. Students complete assessment task using the wiki (November)
8. Instructors assess using both formative (during the wiki project) and summative (at the completion of the project) approaches (October-December)
9. Evaluate project (December/January)
  1. Analysis of participation by learning style
  2. Focus groups to learn about students' perception of using a wiki for a group work assessment task and students' perceptions of the applicability of wikis in practice.

# Words from a student

In our wiki pilot study

It is easy to see how centralized resources in a wiki, customized for a client, provide an opportunity to increase inclusion. Custom options designed around the client's strengths and information about resources ensure continued usage by the stakeholders (client, family, friends, work). The client retains and maximizes independence, ultimately having the information at their fingertips to manage their own issues.

Creating the custom wiki allowed our team to utilize our strengths. There was a lot of informal and formal collaboration which was evident by good team dynamics.

The most significant benefit of the wiki besides being tailor-made is the portability. It is a resource which clients are likely to utilize in everyday life, albeit with a learning curve for somewhat less technologically inclined. Because the wiki had material that is relevant and based on evidence-based practice it expands the therapeutic relationship without the added burden of service delivery time.

We could have benefited from a formal project management approach where scope, time and cost constraints enhance or limit the quality of the product.

I think the wiki is a great utility, and our product shows promise.

# Preparation of the next generation

In this project we seek to prepare the next generation of health care practitioners to have the skills to participate in knowledge transfer using Web 2.0 tools in the online environment.

How can we ensure that these skills are put into practice and not lost?

# URL's for Web2.0 tools

## Blog creation

- Blogger: <http://www.blogger.com/home>
- Wordpress: <http://wordpress.org/>

## Blog tracking/search:

- Google blog search: <http://blogsearch.google.com/>
- Bloglines: <http://www.bloglines.com/>
- Technorati: <http://technorati.com/>

## Collaborative writing

- Googledocs <http://docs.google.com/>

## Online desktops:

- igoogle: <http://www.google.com/ig>

## Photosharing:

- Flickr: <http://www.flickr.com/>
- Picasa: <http://picasa.google.com/>

## Podcast creation:

- <http://www.how-to-podcast-tutorial.com/>

## Podcast search engines:

- Yahoo: <http://podcasts.yahoo.com/>
- Podscope: <http://www.podscope.com/>

## RSS (Really Simple Syndication)

- <http://www.youtube.com/watch?v=0klgLsSxGsU> to understand how this works

## Social bookmarking, collaborative tagging and tag clouds

- Delicious: <http://del-icio.us/>,
- Citeulike: <http://www.citeulike.org/>

## Social networks

- Twitter: <http://twitter.com/>
- Facebook: <http://www.facebook.com/>
- MySpace: <http://www.myspace.com/>

## Video sharing

- YouTube: <http://www.youtube.com/>
- BBC player: <http://www.bbc.co.uk/iplayer/>

## Virtual worlds

- Second life: <http://secondlife.com/>

## Wikis:

- Pbwiki: <http://pbwiki.com/academic.wiki>,
- Mediawiki: <http://www.mediawiki.org/wiki/MediaWiki>

# References

- Boulos, M. N. K. & Wheelert, S. (2007). The emerging Web 2.0 social software: An enabling suite of sociable technologies in health and health care education. *Health Information and Libraries Journal*, 24, 2-23.
- Bray, B., & Boufford, B. (2006). *Beyond 'Eye Candy': Using Wikis for Collaborative Student Presentation Web Sites*. Paper presented at the IMPACT 2006. Retrieved 30 January 2007, from [http://communities.blackboard.com/bbcswebdav/institution/IMPACT%20Conference/7-13-06%209AM/Beyond%20Eye%20Candy\\_Bray.ppt](http://communities.blackboard.com/bbcswebdav/institution/IMPACT%20Conference/7-13-06%209AM/Beyond%20Eye%20Candy_Bray.ppt).
- Kift, S. (2003). *From bolting on to embedding: How do we progress the seamlessness of online and in-class learning environments to enhance student learning outcomes?* Paper presented at the OLT 2003 Excellence: making the connections. From <https://olt.qut.edu.au/olt2003/Proceedings/OLT%20Conf%20Proceedings.pdf#page=161>.
- Potts, H. W. W. (2006). Is E-health progressing faster than E-health researchers? [Electronic Version]. *Journal of Medical Internet Research*, 8. Retrieved 1 May 2008 from <http://www.jmir.org/2006/3/e24/>.
- Samarawickrema, G. (2007). *Wikis in Higher Ed*. Report. Melbourne: Deakin University.