# Is the Tail Wagging the Dog? An Exploratory Study of Pedagogical Value of Wiki Technology

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Slides available from:

http://www.sunilhazari.com/education





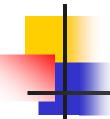
- Web 2.0 Tools
- Wiki Technology
- Types of Wikis
- Research Design
- Findings/Conclusions
- Recommendations



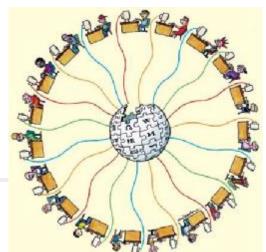
#### What is Web 2.0?



- Second Generation of Web Services
- Read/WRITE Web
- "Mashup" of text, video, images, audio
- Active collaboration among users
- Examples: Blogs, Podcasts, Wikis

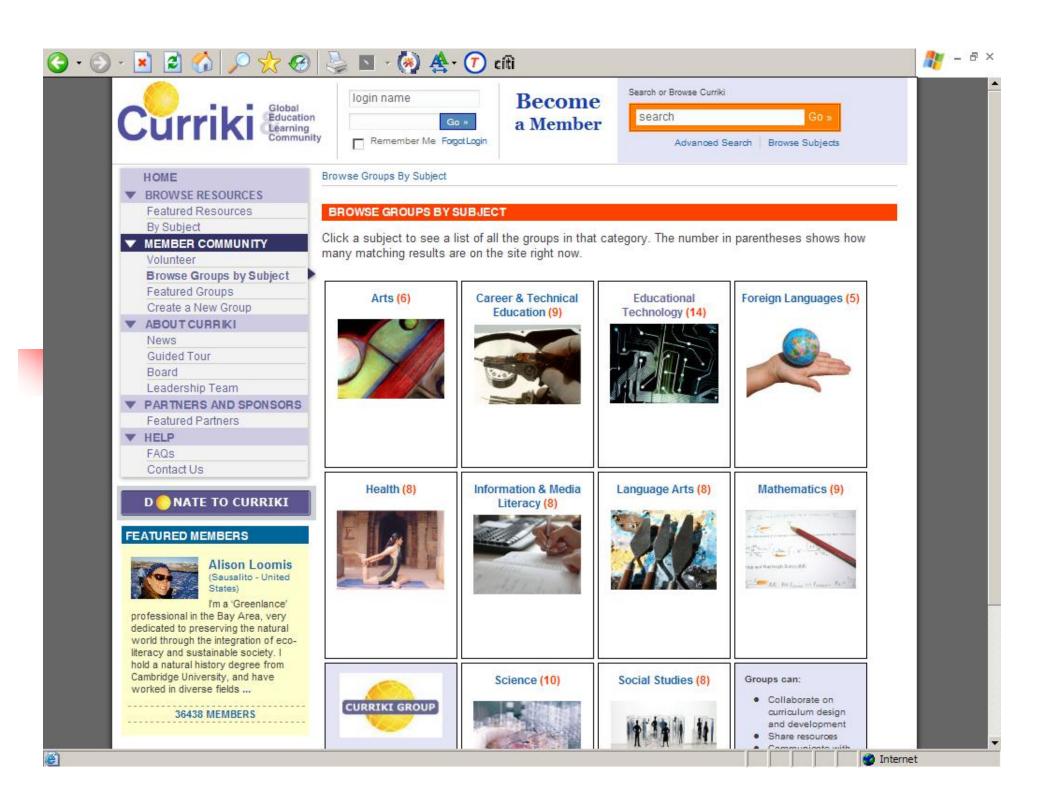


#### What is a Wiki?

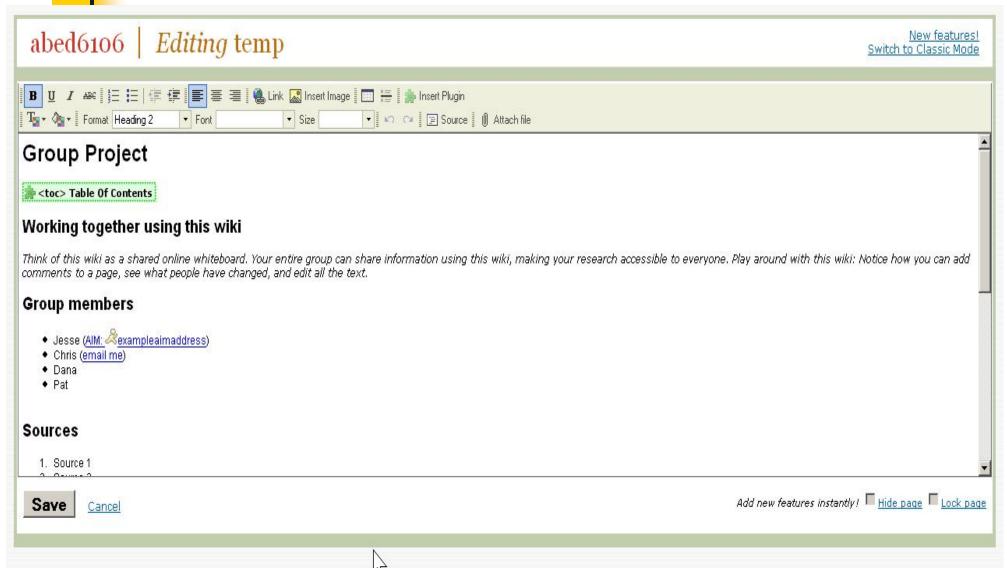


- Collaborative document editing web-based system
- Individuals collaborate to edit a common document

Insert audio, video, graphics, hyperlinks







#### Wikispaces



According to "Don't Hate Meetings, Make Them More Effective", "business meetings are supposed to provide time to listen, learn and make plans" (Wilson & Karlin, 2003). When meeting, Block says to "show up on time, engage with your peers in powerful conversations, leave your personal interests at the door, and help create a better future" (2008). As such, Stan should continue having the monthly staff meetings, but "introduce structures likely to make meetings productive" (Wilson & Karlin, 2003).

The first order of business will be for Stan to take a personality assessment and then administer the same assessment to each function separately. The psychodynamic approach to leadership advocates accepting "the features and idiosyncrasies of followers" (Northouse, 2007). By exploring the personality similarities and differences within his team, he can "identify the particular talents and gifts that each member can bring to the task" (Sample, 2004). In this case, the Myers-Briggs Type Indicator (MBTI) is recommended because the MBTI describes differences positively (Willock, 2006), is non-judgmental and designed to help people understand how they and others take in information and make decisions (Fuller, 1988). The basic goal of the personality assessment is to teach people with different personalities how to work together for joint benefits (Fuller, 1988).

Because external facilitation is "essential for meetings between people who are in conflict with one another, who are from diverse backgrounds or who face complex problems" (Wilson & Karlin, 2003), Stan should engage an external meeting consultant to help make his staff meetings more productive. The consultant can administer the MBTI to each of the employees and then meet individually with them to discuss the findings from their personality assessments. The consultant can provide information and materials to explain each of the personality types. This will allow team members to learn more about their

## Challenges of Wiki implementation for instructional use

- Research has lagged Practice
- Comparison to WebCT (discussion vs. collaboration)
- Group Size
- Frequency of Participation
- Editing/Formatting
- Setup: Project Plan, Project Leader, Discussion, Communication (beyond email),
- Grading (individual vs. group | product vs. process)

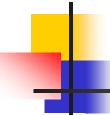


### Assignments – Fall 08

Course	Group Size	Assignment #1	Assignment #2
ABED6146 (LEADERSHIP)	4-5	Journal Article Critique	Management Consultant Case Report
ABED6106 (EVALUATION & ASSESSMENT)	6-7	Journal Article Critique	Education Consultant Case Report NCLB 2.0

#### Assignments – Summer 08

Course	Group Size	Assignment #1	Assignment #2
ABED6183 (RESEARCH METHODS)	4-5	Research Problem	Research Article Critique
ABED6128 (INSTRUCTIONAL STRATEGIES)	5-6	Case Study Discussion	Research Article Critique



#### **Instructor Paradigm Shift**



- Provide opportunity for engagement in Wiki (Individual + group)
- Maintain cohesion of the group
- Make learning fun (social collaboration)
- Develop synergy / collaborative work ethic

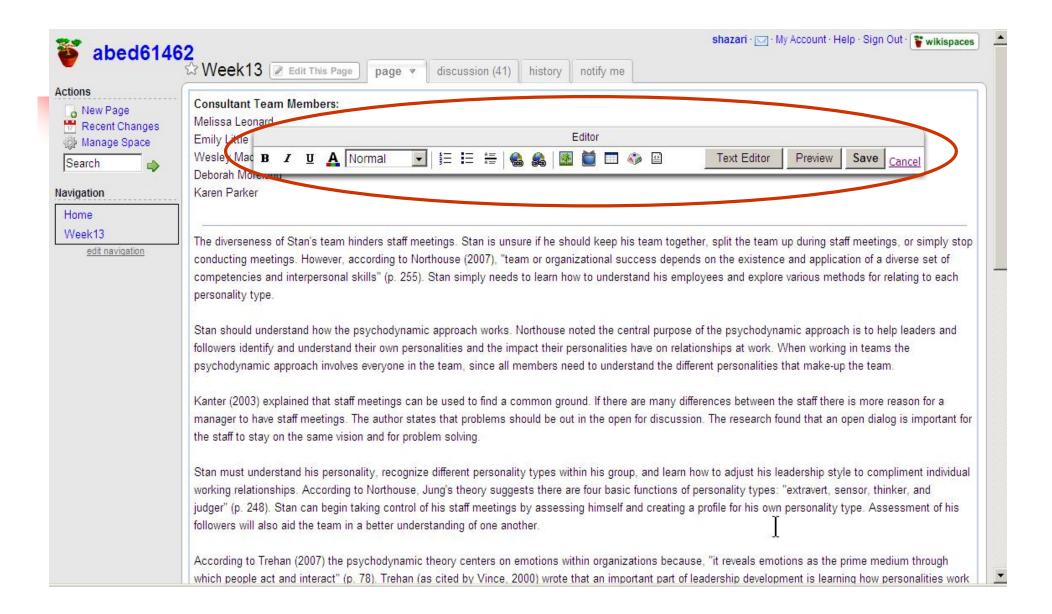
#### Wikispaces



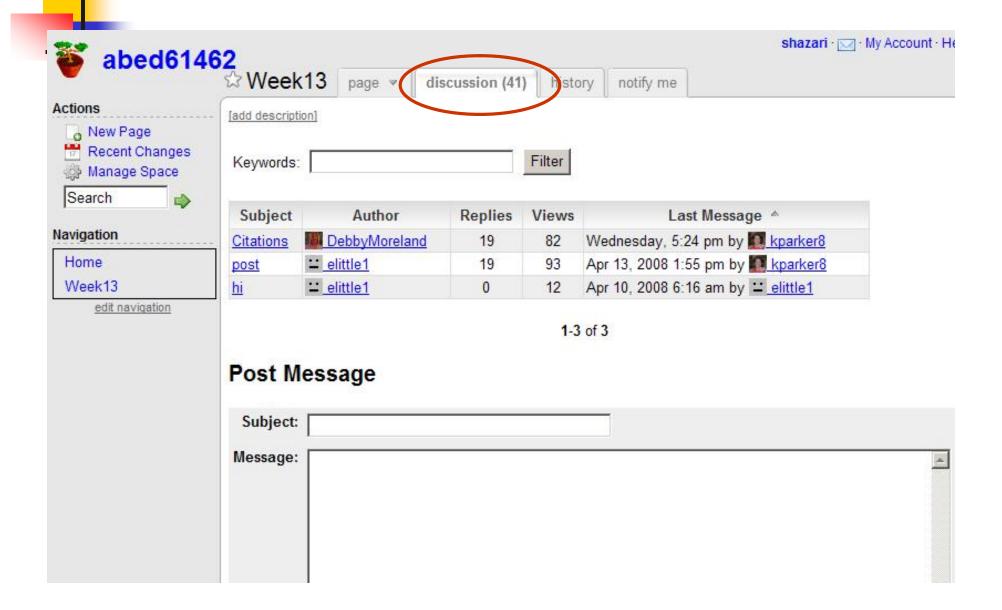
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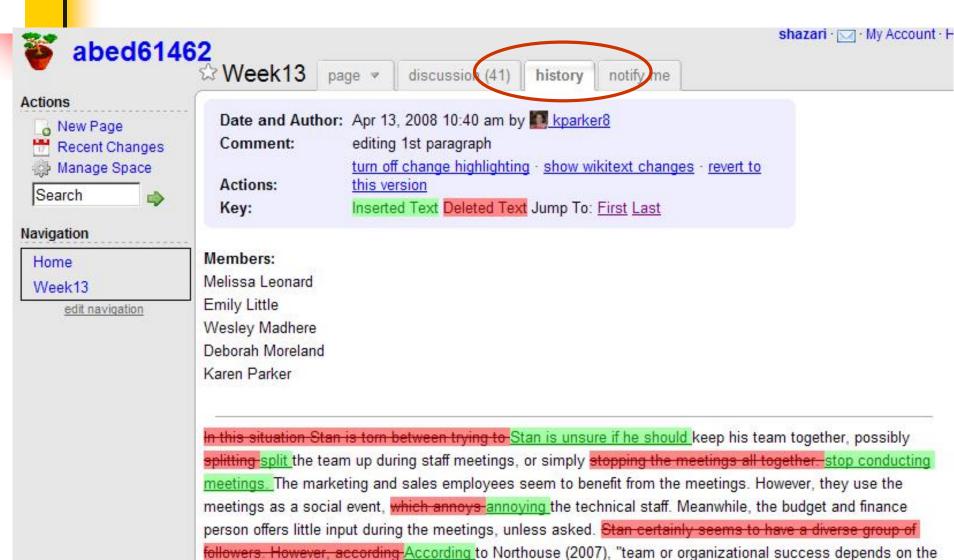
#### Discussion Tab



#### History Tab



#### Tracking changes (History)



employees and explore various methods for relating to each personality type.

existence and application of a diverse set of competencies and interpersonal skills" (p. 255). Therefore, there is hope for Stan to create a unified group of employees. He simply needs to work learn how to understand his





- Did the student participate regularly during the assignment period?
- Did the student promote scholarship by discussing innovative ideas?
- Did the student provide sufficient depth of research (esp. in the ANALYSIS section)?
- Did the student provide constructive comments to others using peer editing?
- Did the student comment on changes made?
- Were sources cited in correct APA format?
- Minimum 'n' posts per week

Source: <a href="http://educators.pbwiki.com/StudentWikiAssessment">http://educators.pbwiki.com/StudentWikiAssessment</a>

#### Theoretical Foundation

- Constructivism which is inquiry-based, discovery learning in which learners construct personal interpretation of knowledge based on their previous experience and application of knowledge in relevant context
- 2. Engagement Theory is more specific to technology based teaching and learning, and provides a conceptual framework that encourages collaboration and student engagement by use of technology tools and systems (Kearsley & Shneiderman, 1999).

#### Research Questions

- What factors contribute to pedagogical value of Wiki technology?
- What is the relationship between these factors?
- Do demographic variables (such as gender, age, work experience, web development experience) affect "Pedagogical Value of Wiki" (PVW) score?

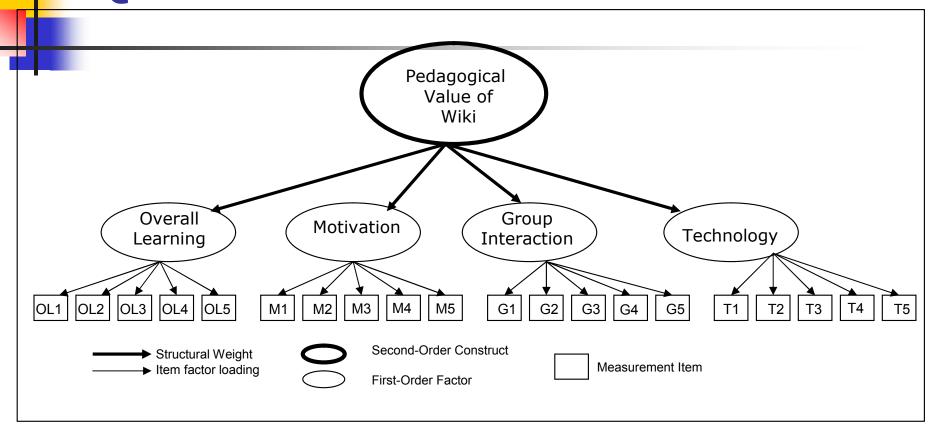


- Factors:
  - Learning/Pedagogy
  - Motivation
  - Group Interaction
  - Technical features



Quantitative & Qualitative Data

#### Questionnaire Schema



Online survey "Pedagogical Value of Wiki"

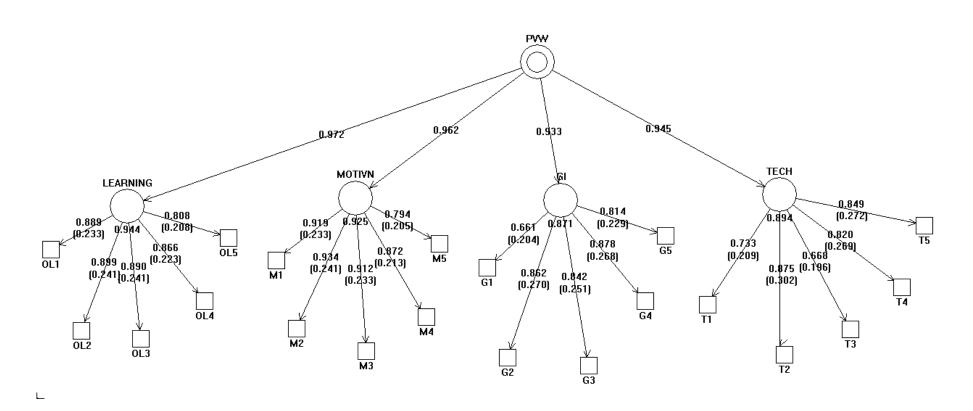
http://www.sunilhazari.com/education/survey/wiki.htm

### Demographics

Measure	Items	Frequency	Percent
	Male	25	35.7
Gender	Female	45	64.3
	1-2 years	13	18.6
	3-5 years	16	22.9
Work	> 5 years	6	8.6
Experience	None	35	50
	18-25	14	20
	26-45	40	57.1
Age	> 45	16	22.9
	Beginner	41	58.6
Web Design	Intermediate	27	38.6
Experience	Expert	2	2.9

# 4

#### Summary of Results



#### Summary of Results

#### Reliability of Scale

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• Learning/Pedagogy (\alpha=.92)
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• Motivation (
$$\alpha$$
=.93)

• Group Interaction (
$$\alpha$$
=.87)

• Technical features 
$$(\alpha=.85)$$

 $\alpha$ =.97 for the total scale

#### Validity of Scale

- Content Validity
- Convergent and Discriminate Validity

#### Summary of Results

PVW score x Gender	<b>Sig.</b> $(r_{pb}(68)=-0.41, p<.01)$
PVW score x Work exp.	<b>Sig.</b> $(r_s(68)=-0.39, p<.01)$
PVW score x Web exp.	<b>ns</b> ( <i>r<sub>s</sub></i> (68)=0.045, p>.01)
PVW score x Age	<b>ns</b> $(r_s(68) = -0.149, p > .01)$

- Multiple regression analysis was conducted to determine the best linear combination of gender, age, work experience, previous web development experience for predicting PVW score.
- A significant regression equation was found (F(4,65)=7.167, p<.001), with an R<sup>2</sup> of .306. Thus, 30.6% of the variance in PVW score was explained by the model.

#### Student comment



To: Hazari, Sunil <shazari>

Subject: wiki feedback

Dr. H.

I wanted to express my thoughts about wikispaces. I entered a case idea for the project, added some of the objectives and added to the questions all to stimulate thoughts. I was truly surprised at the way the team members responded and the information began to grow. As I checked the site last night, I was impressed at the way the collaborative learning efforts molded to give us this final product. It was a good exercise not only of active/discovery learning, but I saw first-hand how generating/stimulating thoughts can foster learning behavior.

This is extremely beneficial to me as I begin my first year on the high school level in developing an active learning environment.

TGM

#### Student complaint

To: Hazari, Sunil <shazari>

Subject: Problems with group members on wiki critique

Dr. Hazari,

I had a <u>terrible time</u> working with the group members on wiki this week. A member of the group edited my post without my permission and moved in a place where I thought it should not be. I moved it back twice, and she moved it again.

We fought about minor things such as: deadlines, citing the reference in abc order, font style and size, and late students dropping information in the detailed analysis section and leaving, they didn't care if the information flowed or not. In our next project if you can let the students know that it is a group effort and "not my way or the highway effort. Things will be much better.



#### **Summary of Comments**



- Introduces variety and exposes students to different instructional strategy
- Most innovative way of doing group assignments
- Provides opportunities for leadership
- Good collaboration features
- Individual's thought process can be seen in Discussion area
- Interface is user friendly and does not take time to learn
- History feature is useful in identifying procrastinators



- Coordination with students is difficult
- Learning is scattered and frustrating
- Chat feature would be helpful in getting immediate response
- Anyone can make changes to my entry
- Lack of individual's control on grades because it is a group effort
- Does not suit my learning style because I like individual projects
- Benefits were not worth the added learning and technical challenges.



#### A Wiki Prayer...



"Please grant me the serenity to accept the pages I cannot edit

The courage to edit the pages I can,

And the wisdom to know the difference"

Source: Lamb, B (2004). Wide open spaces; Wikis, Ready or Not. EDUCAUSE Review, 39(5), 36-48.





- User Interface is important
- Use single tool rather than combine several
- Instructions should be clear to use the Wiki as an enabler ("more efficiency and less redundancy")
- Peer Editing model is new to students
- Does not accommodate individual learning styles (which student is best suited for Wikis?)
- Assessment: Should faculty grade process or product; individual or group?





- Clear rubric needed. "Demonstration of how to use the tool, and guidance on what type of collaboration is actually expected to receive higher grades"
- Less emphasis on editing the document and more emphasis on process
- User interface (Editing) issues
- Number of students to a group. Maybe assign one Leader for the group on rotation basis?





- Note: This was an exploratory study
- Study did not find a four-factor solution for the scale.
   Scale used as uni-dimensional in construct
- Optimum design of wiki (user interface, features, components)
- Identify assignments & activities suitable for wiki
- A better rubric needs to be developed
- Explore use of common platform that INTEGRATES various Web 2.0 tools (to avoid Cognitive Dissonance)

#### Q&A / Discussion



Sunil Hazari <u>shazari@westga.edu</u> Alexa North <u>anorth@westga.edu</u>

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