

Beyond Learning and Sharing Information: Voices for Liberal Education Democracy

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Abstract: Open educational resources (OERs) have dramatically expanded vertically to provide resources for learners at different levels and horizontally by extending the creation and distribution of educational resources beyond the boundaries of traditional educational institutions and textbook publishers. At the same time, community organizations such as Wikibooks have had a significant impact on the open education movement by fostering the co-creation of open learning materials. OER environments enable both content producers and users (learners) to collaborate and share resources. This paper reports on a study which explored the motivations of ‘producers’ (Bruns, 2008) of OERs. The findings from online interviews undertaken with contributors to Wikibooks suggest that they are motivated by a range of factors beyond sharing of knowledge purposes. The paper reports voices of the producers, their experiences and implicit reasons of OER engagement OERs which provides valuable insights into the strategies required to harness and sustain free education participation for all nations.

Key words: Open educational resources (OERs), Wikibooks, motivation, interviews.

Introduction

Wikibooks is a website that hosts a collection of open-content textbooks. This website is one of Wikimedia Foundation (WMF) projects (Wikibooks, 2003). WMF uses wiki technology to run their projects. Wiki is a tool for online collaboration (Leuf, 2002; Leuf & Cunningham, 2001) which enables collaborators to work on the same document regardless of their cultural background. Indeed, patterns of contribution to open content web pages like Wikipedia or open educational resources like Wikibooks may differ according to their cultural backgrounds (Hanna, 2009; Pfeil, Zaphiris, & Ang, 2006; Stvilia, Al-Faraj, & Yi, 2009). Wikibooks depends on online volunteers who work collaboratively to write educational

content to its open textbooks. The ‘Wikibookian’ (Wikibooks, 2003), is anyone who can edit and is familiar with the subject. Wikibookians are mainly those students who are motivated to use Wikibooks in class settings and those contributors who edit texts from the general public (Sajjapanroj, Bonk, Lee, & Lin, 2006).

There is little, if any, research on motivation for contribution to open content textbooks. Open source software (OSS), such as Linux, Mozilla and Apache (see Feller & Fitzgerald, 2002 for more information about OSS), is well researched domain of knowledge (Bitzer, Schrettl, & Schröder, 2005; Hars & Ou, 2001; Hertel, Niedner, & Herrmann, 2003; Lakhani & Wolf, 2005). Nov (2007) attempted to discover what motivates Wikipedians to write to its articles. Nov (2007) adopted Clary et al.’s (1998) functions of volunteers (*values, understanding, social, career, protective, and enhancement*), but he added another two functions, *ideology* and *enjoyment*, that are exclusively considered as motives for programmers in OSS.

Although Nov (2007) has attempted to distinguish between ideology and value, it remains difficult theoretically and practically to distinguish between ideologies and values. Helping behaviour is not always subjected to a rational decision-making process. Some individuals accidentally volunteer when assistance is needed [*sudden need*]. This explains why newcomers to Wikipedia become contributors by participating in some simple tasks such as correcting vocabulary (Bryant, Forte, & Bruckman, 2005). Following the tenets of many religions, helping others is a fundamental religious value [*religion*] (Borne, Thornton, Ryckman, & Gold, 2004).

Moreover, many programmers to OSS act consistently within the norms as they feel obliged to contribute to OSS for others to use this free OSS [*obligation toward community*] (Lakhani & Wolf, 2005). Furthermore, it has been found that programmers to OSS seek developing their ego-gratification by working on developing peer recognition [*recognition*] (Lerner & Tirole, 2005). Killing time itself may be a reason for volunteering [*killing time*]. For example, administrators in Wikipedia who have more personal time and have weaker social connections may tend to have this motive for being administrators (Liang, Chen, & Hsu, 2008). For example, a Wikipedia’s administrator said “It’s the best way I’ve found so far to kill time while I’m at work” (Baytiyeh & Pfaffman, 2010, p. 136).

In Wikibooks, Sajjapanroj *et. al.* (2007) found that contributors who write to its texts were motivated by different aspirations such as making a learning contribution and sharing knowledge, learning new ideas from others, publishing their work, experiencing new technologies, and self-exploration. Other reasons may include the belief of the freedom of information, valuing of helping others and also enjoying the processes of contribution (Metzer & Hanna, 2011 in press). However, there have been attempts to explore reasons for contributing to a virtual organization such as Wikibooks (Metzer & Hanna, 2011 in press; Sajjapanroj, et al., 2007), those reasons may not be enough to understand volunteering to contribute to open textbooks as the voices of those contributors themselves may uncover.

Online questionnaires, as a research method used in many of above mentioned research, are limited to provide in-depth understanding of reasons of contributing beyond what were theoretically identified. Shye (2010) explained that there is a methodological problem in motivation-to-volunteer research; and he believes that there are a number of problems with this methodological umbrella such as: 1) answers to a question to a volunteer of ‘why did you volunteer?’ (Shye, 2010, p. 185) do not qualify as motivation, and 2) this previous question to a volunteer would lead to another problem called the ‘social desirability problem’ (Shye, 2010, p. 186) where a volunteer tends to weight altruistic motivations.

Method

Online interviews were conducted to assess motivations for contributing to Wikibooks as open educational resources. Recruitment to the online interview was through a site notice that was published on the English version of the Wikibooks home page. Interested participants were directed to an online form where they were asked to leave their Instant Messenger (IM) account details. Upon leaving their IM addresses, participants received invitations to add an *interviewonwikibooks* contact. This account was

registered with different IM providers: Trillian Astra, MSN, Yahoo, and Gtalk. Semi-structured interviewing was used to conduct interviews with Wikibooks' users. It is argued that semi-structure interview should be used when there is a less chance to meet the participant again (Bernard, 2000). Trillian software (Trillian Astra, 2010c) was used to conduct the interviews. This software is instant messenger software, which has a number of additional features such as integration of different accounts from different instant messaging providers such as Yahoo, MSN, Gtalk, ICQ, and AIM into one account (Trillian Astra, 2010a).

Trillian Astra software makes it possible to maintain a history of a conversation with time and date stamps and sorted into folders according to instant messaging providers. Trillian Astra also provides a web messenger that enables text-based conversation without the need to download the software (Trillian Astra, 2010b). This feature made it possible to conduct interviews from any PC from anywhere when needed. Text-based conversations took the form of semi-structured interviews. Semi-structured interviews provide an ideal method to uncover aspects of individuals' lives and their intimate experiences (Elliott, 2006). The questions were open enabling the participants to freely express their views, emotions, and thoughts. Participants were able to respond in their own way and qualify their responses by developing their thoughts and getting insights into their own attitudes (Bernard, 2000). The interviews served as auxiliary tool (Kvale, 1996). An interview guide was used to conduct effective interviews. This guide included a list of points that were to be covered in the interview. Such points include participants' age, country, education level, education field, their experience with wikis and Wikibooks, and reasons for writing to Wikibooks. Since interviews were text-based, there was no need for transcription. Any identification details were removed from conversation histories. Names were replaced by pseudonyms for easy citation and to reflect their gender.

Interview analyses and results

Approaches that can be used in interview analysis are to organize the interview texts into meaningful forms of presentation. These approaches include meaning categorization, condensation of meanings, and meaning interpretation. The selection of one approach or another depends on the researcher and on the overall thematic questions (Kvale, 1996). The interview not only provides a picture of respondent, but also a picture of their social reality (Fontana & Frey, 2006). These in turn related to participants' experience and their reasons for Wikibooks' contribution. All interviews ($N= 11$) were analysed to explore the data units, and then they were reanalysed to grasp consistent themes and descriptions (Rubin & Rubin, 2006). Table 1 represents the interviewees' pseudonyms, country, age, gender, education, and occupation and Wikibooks' involvement.

Name	Age	Gender	Education	Country	Occupation	Wikibooks' involvement
Adrian	25	Male	B.Sc Information Technology + Administrative Assistance	USA	Part time IT Assistant	Writer Administrator
David	40	Male	American Law degree	USA	Lawyer	Writer
Clinton	59	Male	Bachelor of biology	USA	Retired physician's assistant and medical sonographer	Writer
Douglass	56	Male	Applied Associate of Science degree	USA and lives now in Romania	Business man	Writer
Greek	21	Male	Did not complete	Greece	Labour Jobs	Writer

			the University degree			
Mark	31	Male	Math & Computer Science	USA but grew up in UK	University student	Writer
Philip	36	Male	MSCA Certificate and self-taught	New Zealand	Code manager	Writer
Ronald	23	Male	NAIT college	Canada		Reader but he does write to other wikis
Roy	22	Male	Psychology	Canada	University Student	Writer (was) Administrator
Steve	49	Male	B.Sc. Engineering	USA	Full time job	Writer
Susan	51	Female	B.Sc.	British woman who lives in Morocco	Freelance Technical Writer	Writer

Table 1: Wikibookians' demographic details

How interview participants see contribution as part of their culture

Western culture is 'liberal' (Roy). It is 'liberal in the European sense' (Roy). It promotes 'the free culture movement that stems directly from classical liberal theory' (Roy). So, 'sharing amongst community members is important as part of liberal Western culture' (Roy). This is why 'community is very important' (Roy). However, not all Western people see Western culture as positive as Roy explained it. Western culture can be seen as negative as Mark pointed out: 'Its [Western culture] degree of capitalism and related mass media' make people seek 'entertainment rather than more philosophical goals' (Mark). This culture that 'originally developed in Europe has spread to much of the world' (Mark). This is why the 'Far Western culture does not encourage [contribution]' (Mark). However, 'it encourages other things, so people might not often think about contributing to open content benefit them' (Mark). Not all people spend their time to achieve beneficial and philosophical goals: Adrian 'often [has] free time' and he enjoys 'being productive with [contributing rather] than wasting time playing games all the time like some of [his] peers in schools' (Adrian). Peers, particularly, may discourage contribution. For example, people around Philip 'cautioned [him] against doing too much too soon' (Philip).

Users' reasons for contributing to Wikibooks

Analyses of interviews revealed that there were significant reasons that motivate Wikibookians to write to its open texts. These motivations are as follow:

Sharing information and helping others to learn

Adrian is hoping to be able to help others out by sharing his knowledge. Adrian also said 'If I can help solve another person's problem or further their knowledge on a subject, I can feel better about my impact on the world'. Similarly, David commented that 'a child in a country which has limited resources should be allowed and empowered to learn maths, geography, and language'. Clinton 'would like to share his opinions with others'. Moreover, Mark hopes [his contribution] 'helps education'. Philip 'know[s] several scripting languages, but [he] love[s] to help others with JavaScript which [he is] comfortable with'. Moreover, Philip commented that he likes 'discussions about tricky issues related to programming

techniques until a common consensus regarding misunderstood issues is reached'. Roy sees that 'the belief in creating free/valuable educational resources by collaboration with Wikibooks is more useful than Wikipedia'. Another reason that Steve mentioned was: '[he] want[s] to help disadvantaged students with free texts especially because [he] was poor when [he] was a student'.

Enhancement

Adrian said 'If I can help solve another person's problem or further their knowledge on a subject, I can feel better about my impact on the world'. Moreover, Adrian often has free time and he enjoys being productive rather than wasting time in playing games as his peers in the school do. Philip 'tremendously enjoy[s] programming. [He] feel[s] great when [he is] able to contribute'. Philip sees that there are some rewards of his contribution: gaining knowledge and feeling of achievement as he believes that there is a value in what he achieved. Roy 'like[s] the idea that what [he] write[s] helps someone else to learn'. Steve commented that 'people around are amazed at how good [he is] in writing'.

Learning

Adrian 'was looking for learning resources for [his] certification and [he] found some ways to improve these information technology subjects based on [his] previous knowledge, and then [he] extended his efforts to the rest of the site'. Adrian considers that 'Wikibooks improves [his] ability to interact with others by collaboration'. 'Discussions of Wikibooks users on [Adrian's] discussion page help [him] to improve the way [he] contribute[s] as they are constructive' (Adrian). Philip stressed that 'the experience of investigating common themes relating to how the books were laid out and the information they are to convey, and coming up with a plan on how to improve things, were all agreeable to people involved' (Philip). According to Philip, 'gaining knowledge is a reward for his contributions' (Philip). Roy thinks that 'by contributing [he] get[s] feedback from others who applied theory' (Roy), while Steve 'enjoy[s] the friendly argument with other writers' (Steve).

Recognition

Adrian has a discussion page associated with his username. 'Other users send [him] extensive messages that relate to [his] contributions or about ideas for Wikibooks' (Adrian). Clinton 'would like to share [his] opinions with others'. When Clinton contributes, '[he] write[s] using [his] real name because [he] believe[s] in honesty especially if it is related to controversial opinion' (Clinton). Greek contributes under his name, and 'most of [his] contributions are in English because they have more chance to be read' (Greek). Similarly, both Mark and Philip use their real names for their contributions. Philip 'want[s] to keep track of [his] contribution as [he] believe[s] [he has] nothing to hide'. Roy argued that 'contributions to Wikibooks are published immediately and are a lot easier than publishing in academic journals' (Roy). Roy 'socialize[s] with other contributors and gain[s] respect from community'. Steve commented that 'people around are amazed at how good [he is] in writing' (Steve).

Value of knowledge

David believes that 'creation of free curricula for the future is critical'. He continued to say 'nothing should prevent a child from drinking from the fountain of knowledge'. Clinton believes that 'knowledge should be free'. Clinton continued to explain 'if knowledge is freedom, then more knowledge is more freedom'. Greek believes that 'knowledge should be passed for free and in a more efficient way'. He explained that 'collaboration of different minds make knowledge evolve rapidly'. Mark contributes to Wikibooks because he 'hope[s] one day textbooks are to be copy-lifted'.

Career

'Learning about structuring textbooks and writing to a specific audience more effectively enable[s] Roy] to be considered as technical writer' (Roy). Although '[he has] no financial reward, the skills [Roy] developed [have] landed [him] a job' (Roy). Similarly, Susan 'was looking for a job as a freelance technical writer' and '[she] get[s] paid to write and maintain a software manual in Wikibooks website' (Susan).

Discussion

Wikis facilitate collaboration and sharing information among learners (Bold, 2006; Bruns & Humphreys, 2005; Mindel & Verma, 2006), develop writing skills (Kessler, 2009; Lee & Bonk, 2009; Wheeler & Wheeler, 2009), facilitate interaction (Augar, Raitman, & Zhou, 2004), allows instant revisions and feedback (Borja, 2006), support reflective learning (Chen & Cannon, 2006), increase efficiency of writing documents cooperatively (de Pedro et al., 2006), support collaborative storytelling skills (Désilets & Paquet, 2005), support the positive transfer of information (Elgort, 2007), and develop critical thinking skills (Kaufman, 2008; Lamb & Johnson, 2009).

Indeed, without the benefits exceeding the costs (efforts and time), individuals would not contribute. Individuals usually balance between the cost (the risk) and the expected values of their behaviour (Atkinson, 1957; Atkinson & Raynor, 1974). The net benefit from engaging in any activity is 'equal to the immediate payoff (current benefits minus current cost) plus the delayed payoff (delayed benefits minus delayed cost)' (Lerner & Tirole, 2005, p. 57), which means that users of OERs have sufficient incentives to innovate. This explains why the 'liberal culture' of 'information sharing' is not the central point of motivation towards contribution to OERs. Indeed, the 'capitalism' and the rational decision-making process in the Wikibooks' users' minds make those users balance cost (in terms of time and efforts spent in contribution) and the benefits of their contribution. Indeed, although many interviewees commented that they contribute because they value information sharing and helping others to learn, they would not get any benefits from contribution without actually having to contribute. From the capitalist point of view, Wikibookians contribute to open textbooks because they seek enhancement of their ego, learning, recognition and career maximization.

Moreover, Ghosh (2005) found that the most important motivation to contribute to open software was to learn and develop new skills, learning and developing writing skills; as revealed in the interview analysis, this was also one of the important reasons for our participants to contribute to Wikibooks. Similar to OSS (Lakhani & Wolf, 2005), results of the current study revealed that there are some contributors to Wikibooks who get paid for their contribution.

Although culture might not support contribution and philosophical goals, awareness of the benefits people might gain from achieving these goals may promote contribution to open educational resources. This has the potential for opening minds for possible benefits for teachers, students, learners, schools and the education system as whole from adopting and using open educational resources may enhance learning and teaching activities, as discussed above, and at the same time students and learners would feel the benefits they gain while writing to OERs. Once OERs' users are rewarded of their contribution, the sustainability of these open educational resources is ensured. This explains why many of interviewees were not students or in their young age. In other words, benefits which *producers* (Bruns, 2008) receive extend contributions from the general public beyond students, learners, and young users.

References

- Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review*, 64, 359-372.
- Atkinson, J. W., & Raynor, J. O. (1974). *Motivation and achievement*. Washington,; Winston; distributed by Halsted Press Division New York.
- Augar, N., Raitman, R., & Zhou, W. (2004, December 5-8). *Teaching and learning online with wikis*. Paper presented at the 21st Australasian Society for Computers in Learning in Tertiary Education (ASCILITE) Conference, Perth.
- Baytiyeh, H., & Pfaffman, J. (2010). Volunteers in Wikipedia: Why the community matters. *Educational Technology & Society*, 13(2), 128-140
- Bernard, H. R. (2000). *Social research methods: Qualitative and quantitative approaches*. Thousand Oaks, California: Sage Publications.
- Bitzer, J., Schrettl, W., & Schröder, P. J. H. (2005). Intrinsic motivation in open source software development: EconWPA.
- Bold, M. (2006). Use of Wikis in graduate course work. *Journal of Interactive Learning Research*, 17(1), 5-14.
- Borja, R. R. (2006). Educators experiment with student-written 'wikis'. *Education Week*, 25(30), 10-10.
- Borne, B., Thornton, B., Ryckman, R. M., & Gold, J. A. (2004). Intrinsic-extrinsic religiosity and university students' willingness to donate organs posthumously. *Journal of Applied Social Psychology*, 34(1), 196-205.
- Bruns, A. (2008). *Blogs, Wikipedia, Second Life, and beyond: from production to produsage*. New York: Peter Lang.
- Bruns, A., & Humphreys, S. (2005, October 16-18). *Wikis in teaching and assessment: The M/Cyclopedia Project*. Paper presented at the WikiSym, San Diego, CA, U.S.A.
- Bryant, S. L., Forte, A., & Bruckman, A. (2005). *Becoming Wikipedian: Transformation of participation in a collaborative online encyclopedia*. Paper presented at the International ACM SIGGROUP Conference on Supporting Group Work, Sanibel Island, Florida, USA.
- Chen, H. L., & Cannon, D. (2006). Using wikis and weblogs to support reflective learning in an introductory engineering design course. In R. K. Jain & R. Prabhakar (Eds.), *Wiki: A new wave in web collaboration* (1st ed.). Hyderabad, India: ICFAI University Press.
- Clary, E. G., Snyder, M., Ridge, R. D., Copeland, J., Stukas, A. A., Haugen, J., & Miene, P. (1998). Understanding and assessing the motivations of volunteers: A functional approach. *Journal of Personality and Social Psychology*, 74(6), 1516-1530.
- de Pedro, X., Rieradevall, M., López, P., Sant, D., Piñol, J., Núñez, L., & Llobera, M. (2006). *Writing documents collaboratively in Higher education using Traditional vs. Wiki methodology (I): Qualitative results from a 2 year project study*. Paper presented at the International Congress of University Teaching and Innovation, Barcelona, Spain. http://eprints.upc.es/cidui_2006/pujades/comunicaciones_completas/doc969.doc
- Désilets, A., & Paquet, S. (2005). *Wiki as a tool for web-based collaborative story telling in primary school: A case study*. Paper presented at the World Conference on Educational Multimedia, Hypermedia & Telecommunications, Montréal, Québec, Canada. <http://it-iti.nrc-cnrc.gc.ca/it-iti-publications-iti/docs/NRC-48234.pdf>
- Elgort, I. (2007). *Using wikis as a learning tool in higher education*. Paper presented at the Australian Society for Computers in Learning in Tertiary Education ASCILITE, singapore.
- Elliott, B. J. (2006). *Using narrative in social research: Qualitative and quantitative approaches*. London: Sage Publications.
- Feller, J., & Fitzgerald, B. (2002). A history of open source software. In J. Feller & B. Fitzgerald (Eds.), *Understanding Open Source Software development* (pp. 27-40). London: Pearson Education Ltd.
- Fontana, A., & Frey, J. H. (2006). The interview: From neutral stance to political involvement. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (3rd ed., pp. 695-727). Thousand Oaks, California: Sage Publications.
- Ghosh, R. A. (2005). Understanding free software developers: Findings from the FLOSS study. In J. Feller, B. Fitzgerald, S. A. Hissam & K. R. Lakhani (Eds.), *Perspectives on free and open source software* (pp. 23-45). USA: MIT Press.
- Hanna, A. (2009, 30 May – 1 June). *Cross cultural motivational patterns of contributors to open content projects*. Paper presented at the Second Global Studies Conference, Dubai.
- Hars, A., & Ou, S. (2001). *Working for free? motivations of participating in open source projects*. Paper presented at the Thirty-Forth Hawaii International Conference on System Sciences, Hawaii.

- Hertel, G., Niedner, S., & Herrmann, S. (2003). Motivation of software developers in Open Source projects: an Internet-based survey of contributors to the Linux kernel. *Research Policy*, 32(7), 1159-1177.
- Kaufman, J. (2008). Wikibooks from a student perspective: Not a wacky idea after all. *Quest*, 10(2). Retrieved from <http://www.odu.edu/ao/instdv/quest/Wikibooks.html>
- Kessler, G. (2009). Student-initiated attention to form in Wiki-based collaborative writing. *Language Learning & Technology*, 13(1), 79-95.
- Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Thousand Oaks, California: Sage Publications.
- Lakhani, K., & Wolf, R. (2005). Why hackers do what they do: Understanding motivation and efforts in free/open source projects. In J. Feller, B. Fitzgerald, S. A. Hissam & K. R. Lakhani (Eds.), *Perspectives on free and open source software* (pp. 1-21). USA: MIT Press.
- Lamb, A., & Johnson, L. (2009). Wikis and Collaborative Inquiry. *School Library Media Activities Monthly*, 25(8), 48-51.
- Lee, J., & Bonk, C. J. (2009). Exploring the use of wikis for the improvement of English writing skills: Research, reflections, and recommendations. *International Journal of Instructional Technology and Distance Learning*, 6(6). Retrieved from http://www.itdl.org/Journal/Jun_09/article02.htm
- Lerner, J., & Tirole, J. (2005). Economic perspectives on open source. In J. Feller, B. Fitzgerald, S. A. Hissam & K. Lakhani (Eds.), *Perspectives on free and open source software* (pp. 47-78). USA: Massachusetts Institute of Technology.
- Leuf, B. (2002). *Peer to peer : collaboration and sharing over the Internet*. Boston, Mass. ; London: Addison-Wesley.
- Leuf, B., & Cunningham, W. (2001). *The Wiki way: Quick collaboration on the web*. Boston, MA, USA: Addison-Wesley Longman Publishing Co.
- Liang, C.-Y., Chen, C.-H., & Hsu, Y.-L. (2008). The participation motivation and work styles of the administrators for Chinese Wikipedia. *Journal of Educational Media & Library Sciences*, 46(1), 081-109.
- Metzer, J., & Hanna, A. (2011 in press, 28 March-1 April). *The four big reasons for contribution to open educational resources*. Paper presented at the AACE Global Learn Asia Pacific, Melbourne.
- Mindel, J. L., & Verma, S. (2006). Wikis for teaching and learning. *Communications of AIS*, 2006(18), 2-38.
- Nov, O. (2007). What motivates Wikipedians? *Communications of the ACM*, 50(11), 60-64.
- Pfeil, U., Zaphiris, P., & Ang, C. S. (2006). Cultural differences in collaborative authoring of Wikipedia *Journal of Computer-Mediated Communication*, 12(1). Retrieved from <http://jcmc.indiana.edu/vol12/issue1/pfeil.html>
- Rubin, H. J., & Rubin, I. (2006). *Qualitative interviewing: The art of hearing data* (2nd ed.). Thousand Oaks, California: Sage Publications.
- Sajjapanroj, S., Bonk, C., Lee, M., & Lin, G. (2006). *The challenges and successes of Wikibookian experts and want-to-bees*. Paper presented at the World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education, Honolulu, Hawaii, USA.
- Sajjapanroj, S., Bonk, C., Lee, M., & Lin, M.-F. G. (2007). *The challenges and successes of Wikibookian experts and Wikibook novices: Classroom and community collaborative experiences*. Paper presented at the American Educational Research Association (AERA) Conference, Chicago, Illinois.
- Shye, S. (2010). The motivation to volunteer: A systemic quality of life theory. *Social Indicators Research*, 98(2), 183-200.
- Stvilia, B., Al-Faraj, A., & Yi, Y. J. (2009). Issues of cross-contextual information quality evaluation: The case of Arabic, English, and Korean Wikipedias. *Library & Information Science Research*, 31(4), 232-239.
- Trillian Astra. (2010a). 450+ features of Trillian Astra Retrieved 15 September, 2010, from <http://www.trillian.im/learn/tour-features.html>
- Trillian Astra. (2010b). Trillian for web: Instant messaging whenever you go Retrieved 15 September, 2010, from <http://www.trillian.im/learn/tour-web.html>
- Trillian Astra. (2010c). The ultimate IM for Windows Retrieved 15 September, 2010, from <http://www.trillian.im/learn/tour-windows.html>
- Wheeler, S., & Wheeler, D. (2009). Using wikis to promote quality learning in teacher training. *Learning, Media, & Technology*, 34(1), 1-10.
- Wikibooks. (2003, 1 March 2011). Wikibooks:What is Wikibooks Retrieved 2 March 2011, 2011, from http://en.wikibooks.org/wiki/Wikibooks:What_is_Wikibooks