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## **Wiki Tool in Higher Education: An Australian Perspective**

### **Abstract**

This paper aims to examine the challenges of and perceptions about promoting students' learning, communication, and interaction via the Wiki tool in the black-board platform. Wiki intends to sustain and advance students' professional and personal skills, the former ones including reading, writing, research, information, critical thinking, decision making, technology, digital oral presentation, drawing (i.e. concept maps), teamwork, and languages, and the latter ones including motivation, leadership, negotiation, communication, problem solving, time management, reflection, self-management, and self-appraisal. Additionally, integrating Wiki in teaching and learning will improve students' work performance, productivity, and self-confidence, as these skills are needed for not only the current study, but also the workplace in the future. Additionally, using this tool in teaching and learning, especially in the higher education, can bring some challenges to the lecturer and students, particularly in the presentation and marking. This paper will discuss the Wiki implementation in the postgraduate unit at an Australian university. The study results confirmed that using Wiki in the postgraduate unit at an Australian university enhanced students' personal and professional skills; in addition, students learned and absorbed the new concepts and cutting-edge-knowledge of the ITS65 unit, i.e. sustainability and Green IT.

**Keywords:** Wiki, challenges, perceptions, skills, postgraduate unit, Australia

## Introduction

The Wiki tool consents students and lecturers to add, update, and modify contents on the website including blackboard platform. Wiki intends to sustain and advance students' skills in communication (writing, interpersonal interaction, and presenting), critical and creative thinking (problem-solving and decision-making), technology literacy, and information literacy. Additionally, the incorporation of the Wiki tool in teaching and learning practice will improve the quality of students' work, their productivity, and self-confidence.

This paper examines the implementation of Wiki's assessment in the post-graduate unit at an Australian University. The unit is Information Technology Seminar 65 (ITS65), and it aims to raise students' awareness of sustainability, Green IT, and sustainability strategies proposed by recognised scholars within the field of strategy and sustainability (Rainey, 2006; Teece, 2009).

In order to improve their learning skills, especially in communication and interaction, students must complete a set of challenging activities – as groups or individuals – via Wiki. The activities are focused mainly on: analysing and evaluating actual case studies, drawing concept maps based on unit materials and special topics, and sharing cutting-edge news, both national and international, relevant to the ITS65 unit. Students are required to upload their work as individuals or as teams to Wiki under the blackboard platform. Later, each group or individual presents their findings to the class as a PowerPoint or concept map presentation to attain feedback from their colleagues, and produce creative argument and discussion in the class.

The Wiki mark is based on quality not quantity; 15% marks is allocated for Wiki students' contributions, and the lecturer checks the students' Wiki contributions twice a week, namely on Tuesday and Friday afternoons. During the term, the lecturer provides formative feedback to improve the Wiki presentation and its quality before the final submission. In addition, the Wiki tool aims to improve the communication and collaboration between students and lecturers, to encourage teamwork and collaboration between students, and to improve their writing, reading, debating, written presentation and oral skills, and drawing (i.e. concept maps) (Diggins, 2004; Worley, 2008; Matheson, 2009; Cowan & Jack, 2011; Isaias & Issa, 2014). Furthermore, the lecturer provides summative feedback at the end of the term for all Wiki contributions based on Wiki's rubric, concerning content, organisation, appeal, contribution to group discussions, and accuracy, structure, and quality of writing.

The research approach for this study is based on students' informal feedback which is collected during the term to report students' perceptions about their learning experience including the teaching process. Informal feedback is a teaching and learning innovation requiring students, during the term, to provide their

anonymous feedback regarding the unit structure, layout, and assessments. This feedback assists the lecturers to improve the delivery of the unit before the end of the term.

The study outcomes indicated that Wiki assessment provided students with a better perception of the unit including the new concepts and cutting-edge knowledge of sustainability and Green IT. Wiki assessment aims to increase communication and interaction among students as the majority of students found Wiki motivating, exciting, and interactive. Students indicated that incorporating Wiki assessment in the ITS65 unit enhanced their communication, collaboration, and interpersonal, writing, reading, search/research, problem-solving, and decision-making skills, which are required for this study and for the real life in the future. In addition, students show their satisfaction with this assessment, as it develops specific skills for their current studies and for the future workplace, especially in terms of cultural awareness, cutting-edge technology, sustainability, and Green IT.

The study results and findings will make significant influences, from the theoretical and practical perspectives to the current literature, especially by implementing and using the Wiki tool in the higher education sector with a particular focus on the postgraduate units. The study outcomes will assist academics and researchers how to implement the Wiki tool in teaching to enhance personal and professional skills for the current study as well as for the real life in the future. Finally, a Wiki marking guide will be discussed in this study. The study's limitation is that it has been conducted only in Australia.

This paper is organised as follows: Introduction; What Is Wiki in Higher Education Sector; Methodology and Research Question; Participants, Unit, and Assessments; Results; Discussion and New Findings; and Conclusion.

## **What Is Wiki in Higher Education Sector**

Wiki is a website which allows students to create, edit, and delete pages collaboratively. Ward Cunningham is the founder and creator of the Wiki, who has led to the creation of Wiki Wiki Web (Laughton 2011). Wiki technology has the potential to enhance connection, communication, and cooperation between both students vs. students and students vs. lecturers, especially in higher education, and to enhance their personal and professional skills (Ng, 2016; Chu, Reynolds, Tavares, Notari, & Lee, 2017). The word Wiki was derived from the Hawaiian Phrase "Wiki Wiki," which means quick to swift (Issa, 2014).

Wikis have been productively employed in education as early as in 1999 (Guzdial, 1999) as a tool for collaboration. Several studies (Bruns & Humphreys,

2005; Lund & Smordal, 2006; Tsinakos, 2006; Ben-Zvi, 2007; Chao, 2007; Cubric, 2007; McDonald, 2007; Parker & Chao, 2007; Schroeder, 2009; Gibbons, 2010; Karasavvidis, 2010; Ireland, Atack & Sandy, 2013; de Arriba, 2016) confirm that Wiki amalgamation in the education sector becomes critical and vital as this technology will promote the unit aims, namely: sustainability and Green IT for teaching and learning, including creating (documents, images, and presentations), editing, deleting, searching, discussion, interaction, debating, sharing, and arguing.

Based on the current literature review (Biasutti & EL-Deghaidy, 2015; De Smet, Valcke, Schellens, De Wever & Vanderlinde, 2016; Wang, 2016), the use of Wiki in the education sector is increasing, and has been adopted by many different departments in higher-education institutions. A recent study by Issa (2014) confirms that integrating Wiki in learning and teaching, especially in the postgraduate units, will promote professional skills – reading, writing, research, information, critical thinking, decision making, technology, digital oral presentation, drawing (i.e. concept maps), teamwork, and languages – and personal skills, such as motivation, leadership, negotiation, communication, problem solving, time management, reflection, self-management, and self-appraisal. Therefore, this study will examine the literature findings and identify the challenges and perceptions of using this tool in the ITS65 unit at an Australian university.

## **Methodology and Research Question**

This paper investigates the following questions: “How can Wiki enhance postgraduate students’ professional and personal skills?” and “How can Wiki enhance postgraduate students’ knowledge regarding sustainability and Green IT?” To address and answer these questions, the researchers adopted the informal feedback. The informal feedback is a teaching and learning initiative that assists the lecturer to improve and enhance the unit before the end of the term by refining certain aspects during the course to cater for students’ needs and improve the methods of teaching and learning. Questions in the informal feedback included: What are the positive aspects of this unit? What do you like about the lecturer? Do you have any suggestions or recommendations for how the learning experience can be improved? (Please provide specific suggestions.) What do you need the lecturer to continue doing, to stop doing, and to start doing?

## Participants, Unit, and Assessments

The study participants comprised 150 postgraduate students, and students were mainly from Australia and Asia (i.e. China, Vietnam, Malaysia, India, Indonesia, Iran, Middle East, Pakistan, and Sri Lanka), Russia, South America, and South Africa. This cultural mixture assisted students to learn from each other by sharing knowledge, skills, and cultural perspectives, and this led them to the development of self-esteem, communication skills, and self-confidence.

The ITS65 unit was developed subsequent to the repercussion of the global financial crisis in 2007, as businesses and users were struggling to survive, especially in the area of information technology/systems. ITS65 aims to provide students with an understanding, knowledge, and experience of Organisational Sustainable Strategy and Green IT. As for the learning outcomes, on successful completion of this unit, students: 1) demonstrate awareness of and sensitivity to the importance of sustainable development and business strategies at a time that is crucial for people and the planet in addition to profit; 2) display an understanding of the fundamentals of Green IT; 3) apply conceptual tools and frameworks to critically analyse and apply business decision-making practices and policies; and 4) translate the theories, concepts, and analytical techniques learned into practice. As for the unit's assessments and syllabus, mainly designed with university graduate attributes in mind, see Table 1.

Table 1.

*ITS65 Assessment Activities and Unit Syllabus for ITS65 Postgraduate Unit*

Unit	Assessments	Unit Syllabus
ITS65	<ul style="list-style-type: none"> <li>• Three Journals 30%</li> <li>• Individual Presentation of an IT Sustainable Strategy &amp; Report Writing 55%</li> <li>• Wiki for Collaborative Writing 15%</li> </ul>	The ITS65 unit is mainly focused on issues relating to strategic development, IT business, sustainability tools and Green IT, and other related issues

## Results

To address and confirm the study aims and objectives, this section will present the study findings based on the students' informal feedback regarding the Wiki integrating in the ITS65 unit. The informal feedback indicated that using Wiki in the ITS65 unit was an outstanding and exceptional experience from the students' and lecturer's perspectives, since Wiki assisted students to improve their personal

and professional skills in communication, leadership, time management, problem-solving and decision-making, all of which are essential for their current university studies, as well as the workforce in the future. The Wiki tool has become very fashionable in higher education; as students endorsed, it makes the classes more interactive and cooperative. By the same token, several studies (Brooks, 1997; Ammarell, 2000; Edwards, Cordray & Dorbolo, 2000; Godwin-Jones, 2003; Matheson, 2009; Muscarà & Beercock, 2010; Su & Beaumont, 2010; Tharp, 2010; Bayliss, 2013; Issa, 2014) indicate that the Wiki tool usage in education has become a beneficial – if not vital – tool to improve and advance students' communication, collaboration, writing, research, and to reassure social interaction among students, especially in teamwork activities.

Students were very generous to share their reflections and attitudes towards using the Wiki tool in the ITS65 unit with us. Some of their comments are as follows:

*My communication skills were improved, through the use of the wiki, as I was encouraged to collaborate and build on others' ideas. I also learned to consider the opinion of others and learn about the opinions of different people from different cultures and countries by using the wiki. I learned how to communicate with people of different cultures and nationalities.*

*My business skills were improved by the presentation and report assessments. In these assessments I was forced to consider current business processes and infrastructure and then consider how to improve the sustainability of IT in these situations. My business skills were improved as I learned about intangible effects of improving sustainability practices, such as the benefits of having an improved reputation and being able to market the organisation as being socially responsible. I learned about the direct benefits of sustainability to a business including a reduction in costs and wasted resources.*

*My presentation skills were improved by the presentation assessment. This assessment required me to consider an audience and required me to prepare an appropriate presentation which considered the use of proper language, content and delivery. My ability to communicate to an audience was improved by this assessment.*

*My reading and comprehension skills were improved by the journal assessment, which showed me how to effectively determine the themes of an article and determine the arguments of the authors. My writing skills were also improved by this assessment as I was required to record my observations and form my own conclusions after reading the articles.*

*My research skills were improved by the journal assessment as I was required to seek evidence supporting or disputing the views of the four prescribed articles. The presentation assessment also taught me to use only up-to-date references as it restricted students to using articles published in 2010 or later.*

*My technology skills were improved, as I learned about energy efficiency and Green IT. I learned about new and emerging IT such as virtualisation and using cloud computing. I learned how physical devices can be configured to save energy. I learned that I need to consider the recyclability of new IT devices and I need to decommission obsolete IT devices properly. Furthermore, I learned how to develop and create concept maps, and using endnote software for the references.*

*ITS65 has also helped me develop confidence in public speaking, as well as new techniques in presenting information. Firstly, by requiring students in every class to present their findings not only helps with collaboration, it helps to provide a safe environment to discuss different ideas and perspectives. This has helped me develop confidence in discussing my ideas and perspectives on topics, as well as the confidence of presenting this information to a group.*

*ITS65 has required the use of new methods of presenting information. For example, the use of mind maps/group maps to present information in class has allowed me to learn and adopt new styles of presenting information to stakeholders, whether they are students, future clients, or future managers. Furthermore, the wikis also provide an interesting platform in which to share information. The nature of wikis also allows the collection and presentation to the group. As such, the wiki assessment has demonstrated to students the benefits of the platform to collaborate with each other and also use.*

The comments above indicate that the majority of students think that the use of Wiki in the ITS65 unit has empowered them to attain information and data in various realms including sustainability and green IT, and to improve their professional and personal skills, including teamwork skills, since Wiki entails them to complete vast activities individually or with a group. In the ITS65 unit, the lecturer initiated during the term 13 Wiki activities/exercises intended for group and individual activities. The Wiki activities focused mainly on specific topics, including: sustainability and Green IT in students' countries, IT environment problems, cloud computing applications, mobiles, sustainability and Green IT, new Green IT technologies, news behind sustainability and Green IT, and case studies.

Using Wiki for these activities, students were encouraged to append their voice and give their viewpoint on these topics in groups or as individuals. All the activities were posted to Wiki and the lecturer provided her feedback using the Wiki rubric. Students also shared their views about the use of Wiki in the ITS65 unit generally and specifically to learn the unit materials, i.e. sustainability and Green IT.

*Wiki is a good channel of communicating and sharing ideas, we can read many concise concepts and provide feedback for them, also to question the vague areas and open a discussion of interesting topic. There are many news and interesting events happened in the world, it might not relate to our life, but it is good to know them through wiki, which will help build our knowledge from these information, and giving us the wisdom when we apply those kinds of theories into the real life.*

*This class was collaborative and interactive learning as we were made to discuss, organising, exchange the ideas and debate and argue our opinion on what others came up with same or different topic. We were also made to contribute exchange and interact via wiki on same or different topic. All these interaction, reading and contribution helped to improve our analysing skills, writing skills and most importantly as we were made to present and argue out thought and opinion on the topic we gained the capability of presenting and facing the crowdion, and giving us the wisdom when we apply those kinds of theories into the real life.*

*I think the wiki is the best way to collaborate between group members; however, student groups still need a tool to use for collaboration, such as project management tools for group members. In other words, I do suggest a long-term wiki work contribution between the student members, in this project where students are required to add new work each week. Also, students should be required to use cloud project management tools, so they can communicate together using the cloud to realise the power of sustainability tools as well. There are many cloud collaboration tools on the web and most of them are free for one project with a small group.*

*I learnt a lot in this class particularly about the importance of having a sustainable practice in a corporate environment and basically to integrate the practices into the organizational culture, the classes also fostered an interest in such activities such as writing in wiki's and discussing concepts with your peers.*

*The use of wiki is another interesting and yet important tools in this unit. It changes the traditional way of teaching to active modern teaching.*



*It enables the students to actively seeking updated information and shares it among other students so that students can exchange information and having discussion regarding the unit. It allows the student to think out of the box and generating new ideas.*

*Wiki activity broadens my knowledge in different realms. Sharing this knowledge with my lecturer as well as my class mates is a good idea. Furthermore, from Wiki activity in the class I have learned how to work as group and sharing my idea with my class mates and listening to their feedback. This activity helped me at improving my communication skills as well as reading skills. I have learned from the activities that my classmates shared on the blackboard especially the videos one the global environmental issues in different counties around the world; and how these issues participating in polluting the environment.*

*Wiki discussion is helpful, at least there is an opportunity to share and see other people's perspectives. Agreeing and disagreeing at times, because of varied opinion which is healthy and encourages the culture of reading.*

*The wiki is an effective tool as it allowed me to collaborate with other students in small groups and talk about sustainability issues and share our different views as well. In the class tasks made me understand that a developed country faces different sustainability challenges compared to a developing country. An example would be I come from a developing country where some parts of the country don't have the basic needs such as clean water so for them the sustainable challenge would be to get water from a sustainable and affordable resource. In a developing country such as Australia getting clean water is not a challenge as one just needs to turn on their tap however, the sustainable challenge WA as a state faces is how to ensure the water available is being used resourcefully.*

*Well, by completing this unit and all those assessments, I gained cast amount of knowledge about the sustainability and the importance of the satiability and the protecting the earth for the future generation rather making use every element that we are having at the monument, If we do so it is so selfish of us. Completing those assessments including Wikis made me think of how the world is responding to the sustainable issues and what measures are they taken to become more sustainable and I can see the point of that we are being individually sustainable, how they become reflects on the society as in whole. For example, we being sustainable, if we tend to buy our goods and services from the sustainable vendors, that will push suppliers to become more sustainable and they will start follow*

*more sustainable measures in order to make profits, as they are the mass producers that they will help the nature to reduce the bad impact on earth from their actions.*

*Working together in groups on wiki exercises during the seminars was my favourite part of the unit. This is because it involves collaborating face-to-face in a group and then using the wiki to share the ideas of the different groups. It is a powerful learning tool which allows the perspectives of many different people to be considered.*

Furthermore, Table 2 displays the skills and knowledge that the students attained by finalising the Wiki exercises. Table 2 confirms that Wiki usage by the ITS65 students enhanced, convalesced, and recuperated students' professional and personal skills for the current study and the workforce in the future. Furthermore, students substantiated that finalising the Wiki exercises allowed them to learn and absorb the unit materials in a relaxed and comfortable method.

Table 2.  
*Themes and Student # for the ITS65 Postgraduate Unit*

Themes (Skills and Knowledge)	Student #
Sustainability	53
Green IT	28
Skills and knowledge	35
Oral presentation	20
Writing skill	20
Reading skill	20
Research skill	30
Search skill	30
Discussion and debate	30
Critical thinking	30
Thinking skill	19
Communication and collaboration	30

In conclusion, the study results confirmed the study aims and objectives, proving that using Wiki in higher education will assist and support students to enhance and expand their personal and professional skills; additionally, students will learn the unit materials by completing the Wiki exercises.

## Discussion and New Findings

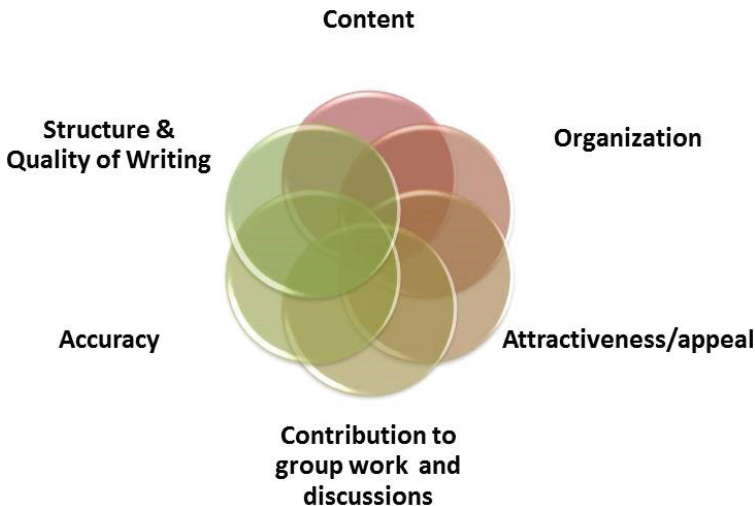
Integration of the Wiki tool in the ITS65 unit was a challenging exercise for the lecturer and students; however, at the end it was indicated that using this tool in ITS65 allowed students to enhance their professional and personal skills, and to obtain new materials about sustainability and Green IT by completing several activities, via Wiki, in groups or as individuals. These days, in higher education, and especially in the postgraduate units, using new technologies in teaching and learning will provide the students with new opportunities to improve their collaboration, communication, cooperation, and connection among their colleagues, but also problem-solving, critical thinking, decision-making, communication, writing, listening, and research skills.

The study results confirmed the study aims, objectives, and questions, demonstrating that using and integrating the Wiki tool in the postgraduate unit is fundamental nowadays as a teaching tool, as the university's most important stakeholders – the students – will have the opportunity to expand collaboration, communication, discussion, and debate among themselves and take more control of their own learning. Furthermore, students' reflections and perspectives confirmed that the use of the Wiki tool in the ITS65 unit gave them a better understanding of the concepts presented such as sustainability and Green IT. The completion of the Wiki activities was excellent and inspiring knowledge for the students and the lecturer, as the students learned new concepts from their colleagues, and benefited from the lecturer's feedback. The lecturer's feedback comprised formative assessment of the students' Wiki contributions, and this had two advantages: 1) improving communication and collaboration between students and lecturer, and 2) enhancing students' subsequent Wiki submissions.

The lecturer plays an essential role in Wiki's success, as her role in the learning process is that of a facilitator, providing cutting-edge knowledge, and fundamental and quality opportunities to all students through the learning process. Her teaching philosophy approach is "learning to learn," which is vital and dynamic, especially in higher education. This approach makes it possible for her students to be responsible on their own, learning through the provision of the appropriate tools (i.e. the Wiki tool) to allow more participation, debate, and discussion among students and lecturer in various activities, including real case studies. This exercise allows students to develop and enhance their personal and professional skills, which are essential not only in university studies, but also in the workforce, as most businesses require these skills in their employees.

Finally, to assess students' contributions to Wiki, a rubric was used (see Figure 1), which reflected the following criteria: content (i.e. the topic(s) is/are covered in detail with excellent examples; knowledge of the subject matter is outstanding), organisation (the issue is well-presented and organised, using

headings or a bulleted list to group related material), attractiveness/appeal (to enhance the Wiki presentation, a student uses the excellent choice of font, colour, graphics, effects, etc.), contribution to group work and discussions (a student contributes to and develops the class Wiki, by providing her/his opinion regarding her/his colleague's Wiki contribution), accuracy (student's observations and perspective are presented, explained, and demonstrated well), structure and quality of writing (it is well structured (e.g. paragraphing, sentence structure, spacing, spelling, proofreading), no HTML errors in Wiki, i.e. broken links, missing images, the above average standard of expression and presentation, the excellent overall expression and presentation, the accurate acknowledgement of sources). The informal feedback will encourage students to engage with the unit and will provide an exciting, memorable and motivating experience.



*Figure 1. Wiki Marking Guide – prepared by Tomayess Issa.*

Generally, the study results indicate that students endorsed and substantiated the research questions and aims, namely that working with Wiki activities consents them to advance and expand many professional and personal skills, and that the Wiki activities allow students to understand the ITS65 materials better through formal discussion and informal conversation. Similarly, several studies (Godwin-Jones, 2003; Tsinakos, 2006; Ben-Zvi, 2007; Chao, 2007; Cubric, 2007; Parker & Chao, 2007; Höller & Reisinger, 2008; Trentin, 2008; Cole, 2009; Matheson, 2009; Schroeder, 2009; Witney & Smallbone, 2011; Heng & Marimuthu, 2012; Adcock, 2013; Issa, 2014; Zein, 2014) affirm that the use of Wiki in higher education will boost students' professional and personal skills and create independent learners who are capable to firm their own learning objectives and reveal their learning processes and conclusions.

## Conclusion

This study discussed the challenges and perceptions to promote student's learning, communication, and interaction via the Wiki tool in the blackboard platform. This study examined whether the use of Wiki as a teaching tool will enhance and improve students' professional and personal skills, and assist students to understand the unit materials by using various tools for their presentation, such as PowerPoint slides, concept maps, or a debate. 150 students from the ITS65 unit confirmed the study aims and research questions, showing that the Wiki tool enables students to understand the course content and improve their skills, especially in writing, discussion, and research. These skills are necessary for the current study as well as for the real life in the future. In conclusion, this study meets the study aims and objectives; however, since it was limited to one postgraduate unit at an Australian university, in the future the researchers will include more units from different disciplines to strengthen the research goals and purposes.

## References

- Adcock, P. (2013). Building collaborative networks using Wikis in education courses. In R. McBride & M. Searson (Eds.), *Proceedings from Society for Information Technology & Teacher Education International Conference 2013* (pp. 136–137). New Orleans, Louisiana: AACE.
- Ammarell, G. (2000). Network groups as teaching tools in social sciences. *Teaching Sociology*, 28, 153–159.
- Bayliss, G. (2013). Exploring the cautionary attitude toward Wikipedia in higher education: Implications for higher education institutions. *New Review of Academic Librarianship*, 19(1), 36–57.
- Ben-Zvi, D. (2007). Using Wiki to promote collaborative learning in statistics education. *Technology Innovations in Statistics Education*, 1(1), 1–18.
- Biasutti, M., & EL-Deghaidy, H. (2015). Interdisciplinary project-based learning: An online Wiki experience in teacher education. *Technology, Pedagogy and Education*, 24(3), 339–355.
- Brooks, M. J. (1997). Beyond teaching and learning paradigms: Trekking into a virtual university. *Teaching Sociology*, 25, 1–14.
- Bruns, A., & Humphreys, S. (2005). Wikis in teaching and assessment: The M/Cyclopedia project. *WikiSym '05* (pp. 25–32). San Diego, CA.
- Chao, J. (2007). Student project collaboration using Wikis. *Proceedings from 20th Conference on Software Engineering Education and Training (CSEET '07)* (pp. 1–7). Dublin.
- Chu, S. K. W., Reynolds, R. B., Tavares, N. J., Notari, M., & Lee, C. W. Y. (2017). Twenty-first century skills education in Switzerland: An example of project-based learning using Wiki in science education. In *21st century skills development through inquiry-based learning: From theory to practice* (pp. 61–78). Singapore: Springer.

- Cole, M. (2009). Using Wiki technology to support student engagement: Lessons from the trenches. *Computers and Education*, 52, 141–146.
- Cowan, B. R., & Jack, M. A. (2011). Exploring the wiki user experience: The effects of training spaces on novice user usability and anxiety towards wiki editing. *Interacting with Computers*, 23(2), 117–128.
- Cubic, M. (2007). Wiki-Based Process Framework for Blended Learning. *WikiSym '07* (pp. 11–22). Montreal.
- De Arriba, R. (2016). Participation and collaborative learning in large class sizes: Wiki, can you help me? *Innovations in Education and Teaching International*, April 27, 1–10.
- De Smet, C., Valcke, M., Schellens, T., De Wever, B., & Vanderlinde, R. (2016). A qualitative study on learning and teaching with learning paths in a learning management system. *JSSSE-Journal of Social Science Education*, 15(1), 27–37.
- Diggins, M. (2004). Teaching and learning communication skills in social work education. Social Care Institute for Excellence. Accessed 22 February 2017. Retrieved from <http://www.scie.org.uk/publications/guides/guide05/>.
- Edwards, M. E., Cordray, S., & Dorbolo, J. (2000). Unintended Benefits of Distance Education Technology for Traditional Classroom Teaching. *Teaching Sociology*, 28, 386–391.
- Gibbons, S. (2010). Collaborating like never before: Reading and writing through a Wiki. *English Journal*, 99(5), 35–39.
- Godwin-Jones, B. (2003). Blogs and Wikis: Environments for on-line collaboration. *Language, Learning and Technology*, 7, 12–16.
- Guzdial, M. (1999). Teacher and student authoring on the web for shifting agency. Accessed 1 June 2013. Retrieved from <http://guzdial.cc.gatech.edu/papers/acera99/default.html>.
- Heng, L. T., & Marimuthu, R. (2012). Let's Wiki in class. *Procedia – Social and Behavioral Sciences*, 67(0), 269–274.
- Höller, H., & Reisinger, P. (2008). Wiki based teaching and learning scenarios at the University of Vienna. In J. Luca & E. R. Weippl (Eds.), *Proceedings from World Conference on Educational Multimedia, Hypermedia and Telecommunications 2008* (pp. 2592–2596). Vienna: AACE.
- Ireland, A. J., Attack, N. E., & Sandy, J. R. (2013). Experiences of Wiki topic teaching in postgraduate orthodontics: What do the learners think? *European Journal of Dental Education*, 17(1), 109–113.
- Isaias, P., & Issa, T. (2014). Promoting communication skills for information systems students in Australian and Portuguese higher education: Action research study. *Education and Information Technologies*, 19(4), 841–861.
- Issa, T. (2014). Learning, communication and interaction via Wiki: An Australian perspective. In H. Kaur & X. Tao (Eds.), *ICTs and the millennium development goals: A United Nations perspective* (pp. 1–17). New York: Springer.
- Karasavvidis, I. (2010). Wiki uses in higher education: Exploring barriers to successful implementation. *Interactive Learning Environments*, 18(3), 219–231.
- Laughton, P. (2011). The use of Wikis as alternative to learning content management systems. *The Electronic Library*, 29(2), 225–235.
- Lund, A., & Smordal, O. (2006). Is there a space for the teacher in Wiki? *WikiSym '06* (pp. 37–46). Odense.
- Matheson, J. (2009). Benefits of using a Wiki. Accessed 15 September 2012. Retrieved from <http://wiki.customware.net/repository/display/www/Benefits+of+using+a+wiki>.
- McDonald, R. (2007). Using the secure Wiki for teaching scientific collaborative. In T. Bastiaens & S. Carliner (Eds.), *Proceedings from World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2007* (pp. 1098–1101). Quebec City: AACE.
- Muscarà, M., & Beercock, S. (2010). The Wiki – a virtual home base for constructivist blended learning courses. *Procedia – Social and Behavioral Sciences*, 2(2), 2885–2889.

- Ng, E. M. (2016). Fostering pre-service teachers' self-regulated learning through self-and peer assessment of wiki projects. *Computers & Education*, 98, 180–191.
- Parker, K., & Chao, J. (2007). Wiki as teaching tool. *Interdisciplinary Journal of Knowledge and Learning Objects*, 3, 57–72.
- Rainey, D. (2006). *Sustainable business development*. Cambridge: Cambridge University Press
- Schroeder, B. (2009). Within the Wiki: Best practices for educators. *AACE Journal*, 17(3), 181–197.
- Su, F., & Beaumont, C. (2010). Evaluating the use of a Wiki for collaborative learning. *Innovations in Education and Training International*, 47(4), 417–431.
- Teece, D. J. (2009). *Dynamic capabilities and strategic management – Organizing for innovation and growth*. Oxford: Oxford University Press.
- Tharp, T. L. (2010). “Wiki, Wiki, Wiki-what?” Assessing online collaborative writing. *English Journal*, 99(5), 40–46.
- Trentin, G. (2008). Using a Wiki to evaluate individual contribution to a collaborative learning project. *Journal of Computer Assisted Learning*, 25, 43–55.
- Tsinakos, A. (2006). Collaborative student modelling – A new perspective using Wiki. *WSEAS Transaction on Advance in Engeineering Education*, 6(3), 475–481.
- Wang, L. (2016). Employing Wikibook project in a linguistics course to promote peer teaching and learning. *Education and Information Technologies*, 21(2), 453–470.
- Witney, D., & Smallbone, T. (2011). Wiki work: Can using Wikis enhance student collaboration for group assignment tasks. *Innovations in Education and Training International*, 48(1), 101–110.
- Worley, P. (2008). Writing skills essential in tech ed today. *Tech Directions*, 68(2), 17–19.
- Zein, R. (2014). Explorative study on the ways of using blogs and Wikis as teaching and learning tools in mathematics. In M. Searson & M. N. Ochoa (Eds.), *Proceedings from Society for Information Technology & Teacher Education International Conference 2014* (pp. 66–72). Jacksonville, Florida: AACE.

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## Narzędzie Wiki w szkolnictwie wyższym: Perspektywa australijska

### Streszczenie

Niniejsza praca ma na celu zbadanie wyzwań i spostrzeżeń dotyczących propagowania nauki, komunikacji i interakcji studentów za pośrednictwem narzędzia Wiki na platformie tablicy. Narzędzie Wiki ma na celu podtrzymywanie i rozwijanie zawodowych i osobistych kompetencji studentów. Kompetencje zawodowe obejmują takie kompetencje jak: czytanie, pisanie, badanie, informacja, krytyczne myślenie, podejmowanie decyzji, technologia, cyfrowa prezentacja ustna, rysowanie (np. mapy koncepcyjne), praca zespołowa i języki. Kompetencje osobiste obejmują takie kompetencje jak: motywacja, przywództwo, negocjacje, komunikacja, rozwiązywanie problemów, zarządzanie czasem, refleksja, samzarządzanie i samoocena. Włączenie narzędzia Wiki do nauczania i kształcenia poprawi efektywność pracy, produktywność i pewność siebie studentów, jako że te umiejętności są potrzebne do niniejszego badania, a także do przyszłej pracy. Ponadto wykorzystywanie tego narzędzia w nauczaniu i kształceniu, szczególnie w szkolnictwie wyższym, może stawiać pewne wyzwania przed wykładowcą i studentami, zwłaszcza w zakresie prezentacji i oceniania. Niniejsza praca omawia wdrożenie narzędzia Wiki w jednostce podyplomowej na australijskim uniwersytecie. Wyniki badania potwierdziły, że wykorzystywanie narzędzia Wiki w jednostce podyplomowej na australijskim uniwersytecie podnosi umiejętności osobiste i zawodowe studentów oraz przekonuje

o tym, że studenci nauczyli się i przyswoili sobie nowe koncepcje oraz nowatorską wiedzę ITS65, tj. trwałość i zieloną informatykę.

Słowa kluczowe: Wiki, wyzwania, spostrzeżenia, umiejętności, jednostka podyplomowa, Australia

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### **Вики-инструменты в высшем образовании: австралийская перспектива**

#### **А н н о т а ц и я**

Целью данной статьи является рассмотрение проблемы поддержки и содействия обучению, коммуникации и взаимодействию студентов с помощью инструмента вики на платформе «Blackboard». Вики создает возможности для поддержки и развития профессиональных навыков и личностных качеств студентов, прежде всего, таких как чтение, письмо, исследовательские умения, информационные умения, критическое мышление, принятие решений, использование технологий, цифровая и устная презентация, рисование (т.е. концептуальные карты), командная работа, владение иностранными языками. Кроме того, способствует повышению мотивации, развитию лидерства, навыков ведения переговоров, общения, решения проблем, управления временем, самоуправления самооценки. Интеграция вики в преподавание и обучение студентов повышает эффективность и уверенность в себе, так как эти навыки необходимы для обучения, а также на рабочем месте в будущем. Кроме того, использование этого инструмента в области преподавания и обучения, особенно в высшем образовании, может вызывать некоторые проблемы у преподавателя и студентов, особенно в презентации и оценивании. В этой статье будет обсуждаться реализация вики в последипломном образовании в австралийском университете. Результаты исследования подтвердили, что использование вики в последипломном образовании позволяет студентам развивать личные и профессиональные навыки, кроме того, студенты овладевают новыми понятиями и передовыми знаниями (ITS65), а именно устойчивость и экологичные информационные технологии (Green IT).

К л ю ч е в ы е с л о в а: Вики, Вызовы, Восприятие, Последипломное образование, Австралия.

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### **Las herramientas Wiki en la educación superior: una perspectiva australiana**

#### **R e s u m e n**

Este artículo tiene como objetivo examinar los desafíos y percepciones para promover el aprendizaje del estudiante, la comunicación y la interacción a través de las herramientas wiki en la plataforma blackboard. Las herramientas wiki tienen el objetivo de mejorar las habilidades profesionales y personales de los estudiantes, desde la lectura, la escritura, la investigación, la información, el pensamiento crítico, la toma de decisiones, la tecnología, la presentación oral digital, el dibujo por ejemplo los mapas conceptuales), el trabajo en equipo y el lenguaje. También desde la Motivación, Liderazgo, Negociación, Comunicación, Solución de problemas, Gestión del Tiempo, Reflexión,



Autogestión y Autoevaluación. Además, la integración de las herramientas wiki en la enseñanza y el aprendizaje mejorará el desempeño laboral de los estudiantes, la productividad y la confianza en sí mismos, ya que estas habilidades son necesarias para el desarrollo de los estudios actuales, así como para el futuro laboral. Además, el uso de estas herramientas en la enseñanza y el aprendizaje, especialmente en la educación superior, puede generar algunos retos para el profesor y los estudiantes, especialmente en las presentaciones y la evaluación. Este artículo discutirá la implementación de las herramientas wiki en un curso de posgrado en una universidad australiana. Los resultados del estudio confirmaron que el uso de las herramientas wiki mejoran las habilidades personales y profesionales de los estudiantes, así como los nuevos conceptos y conocimiento de vanguardia de las unidades ITS65, por ejemplo Sostenibilidad y Green IT.

Palabras clave: Wiki, Retos, Percepciones, Habilidades, Cursos de Posgrado, Australia