

Alignment between Organisational Critical Activities and Websites in New Zealand Universities

Wei-Hsi Hung
Kai-Ju Chuang

Abstract

Purpose – The present study aims to identify the specific types of organisational activities that are strategically crucial for organisations to achieve success, and the websites provide strategic value to these organisations and contribute to their success. Organisational critical activities (OCAs) are recognized as being essential, have been significantly resourced, and receive regular senior management monitoring to assist the organisation to achieve success. This study focuses specifically on the evaluation of the alignment between OCAs and the websites of all New Zealand universities in 2007 and 2017.

Method – This study chooses the multiple-case design methodology as its research methodology and aims to identify precisely how websites provide support to OCAs through a series of interviews and website evaluations at eight universities in New Zealand. The respondents include senior management, IT, and web teams. In total, 48 participants were interviewed. This study also utilised a list of top-ranked OCAs, and several findings when comparing changes in OCAs of websites over a 10-year time period.

Findings – The case studies revealed that the top-10 OCAs of these universities' websites changed over the past decade, indicating that managements' perspective is constantly evolving. "Strategic information provision", "increase branding awareness", and "maintaining a partnership with other institutions" constituted topics among the top-10 entries in 2017, while they were absent from the top-10 list in 2007.

Limitations – Some sub-sites could not be accessed due to security reasons. For example, the finance areas of most websites were inaccessible to the researchers during the web evaluations due to issues of confidentiality.

Implications – The analysed results demonstrate that websites are an important and influential platform to conduct the entire range of primary value-added activities in the value chain. In addition, after 10 years of observation, evolutionary changes can be derived and OCAs are also indicated, and adapt to environmental trends to promote sustainable operation of the organisation to conduct the entire range of OCAs to achieve success.

Originality – This study is the pioneer that explores the alignment between websites and OCAs over a period of 10 years. It would also be useful to investigate such alignment in other countries and cultural settings.

Keywords: organisational critical activities, case study, website evaluation, interviews.

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Introduction

Organisational critical activities (OCAs) are activities that must be continually conducted by an organisation in order to be successful in its respective industry. They are recognized as being essential to short, medium, and long-term success, been significantly resourced, and receive regular senior management monitoring and direction. Davis and Roberts (1970) noted that the impetus of government objectives and programs has been an OCA of private institutions in the external environment. However, the meaning of the term “critical activity” being employed in other management areas does not match with the OCA discussed in this study. This provides a line of research to explore knowledge related to OCAs. Particularly in the area of web support, although these activities are critical, some empirical studies have demonstrated that they are not well supported by organisations.

Websites are being integrated into all channels of both smaller and larger organisations because they provide global reach, and are far less expensive than other alternatives (Hall, 2001; Patel, Schenecker, Desai, & Levitt, 1998;

Richter, 2000). Specifically, websites support various kinds of internal, external, and inter-organisational activities, such as marketing and sales (Bhatt & Emdad, 2001; Karakaya & Khalil, 2004; McNaughton, 2001; Sheth & Sharma, 2005; Punyatoya, 2019), collaboration between partners (Glavas, Mathews, & Russell-Bennett, 2019; Glavas & Mathews, 2014; Griffiths, Elson, & Amos, 2001; Sharma, Gupta, & Wickramasinghe, 2006; Williams, Dale, Visser, & Van der Wiele, 2001a, 2001b), branding (Patel et al., 1998; Pelsmacker, Janssens, Sterckx, & Mielants, 2005; Rowley, 2004; Abdullah, Nordin, & Aziz, 2013; Vasudevan & Kumar, 2019), decision-making (Paul, Saunders, & Haseman, 2005; Riggins, 1999; Zhang & Reichgelt, 2006; Mathews & Healy, 2007), transactions (Chatterjee & Ravichandran, 2004; Wen, Chen, & Hwang, 2001; Zhang & Reichgelt, 2006; Mathews & Healy, 2006; Bordonaba-Juste, Lucia-Palacios, & Polo-Redondo, 2012), and strategy, policy, public participation, and public service (Lee-Geiller & Lee, 2019).

Websites especially support value-added activities in the value chain, and affect how organisations perform these activities in their value chains. Chatterjee and Sambamurthy (1999) found that websites constitute a relatively inexpensive, but powerful, platform to perform the entire range of primary value-added activities in the value chain. Using websites to support value-added activities appropriately can provide a substantial competitive advantage to an organisation (Palmer & Griffith, 1998; Abdullah et al., 2013).

While many studies have shown that websites positively support a number of organisational activities, another group of studies has found a negative result. For example, Del Aguila-Obra and Padilla-Meléndez (2006) reported that a shortage of specific research exists analyzing factors that influence Internet technology-adoption by firms. Kowtha and Choon (2001) found that few e-commerce practices relate an organisation's websites to its strategy. Yet, some extant literature on the evaluation of websites in New Zealand, the U.S., the European Union, Asia, and Canada reported that websites do not fully support organisational strategic objectives (Boudreau & Watson, 2006; Lederer, Mirchandani, & Sims, 2001; Tchokogue & Boisvert, 2001; Yu & Koslow, 1999). Although research has determined that websites' designs should contribute to organisations' strategies or objectives in order to operate at peak effectiveness (Boudreau & Watson, 2006; Chorn, 1991; Dann & Dann, 2001; Lederer, Mirchandani, & Sims, 1997; Lederer et al., 2001; Lee, 2001; McNaughton, 2001; Teubner & Klein, 1998; Yu & Koslow, 1999), the results do not seem to be validated. Based on previous contradictory findings, it is logical to make the following inference. Clearly, websites support many organisations' activities. However, whether the websites provide strategic value to these organisations and contribute to their success remains undetermined.

The present study aims to identify the specific types of organisational activities that are strategically crucial for organisations to achieve success. Then, organisations owning websites need to ensure that their websites are supporting these activities. This study terms these types of activities,

“organisational critical activities” (OCAs). This study also evaluates the alignment between OCAs and websites to supply feedback to participants who agreed to be interviewed concerning their perceptions about OCAs in their organisations, and how those OCAs are supported by their organisations’ websites.

This research focuses specifically on the evaluation of the alignment between OCAs and the websites of all New Zealand universities in 2007 and 2017. The methodology employed is the multiple-case design. An evaluation methodology is also utilised, called the “organisational critical activity web support evaluation methodology” (OCAWSEM) (Hung, 2006). OCAWSEM can be used to elicit OCAs from organisations, evaluate whether an organisation’s OCAs are being supported by its websites, and provide guidance on how the organisation can improve its websites.

Identifying OCAs gives organisations an opportunity to elucidate what kinds of activities their websites should support, and ensures that their respective investments contribute to their success. This study provides useful findings, through which both practitioners and academicians can obtain a deeper understanding of OCAs, better elicit OCAs from management, conduct accurate website evaluations, and explore the support of websites for OCAs.

Literature Review

Understanding the activities

A fundamental question that should be posed prior to understanding OCAs is “What is an activity?” Turney (1994) asserted that an activity is work performed within an organisation. From a production perspective, it is what people do to input, convert, and output materials to become more useful activities of finished products or services (Odiorne, 1975; Raffish, 1994). Overall, activities exist at strategic, tactical, and operational levels in organisations (Howard, Kochhar, & Dilworth, 2002; Leonard & McAdam, 2002; Svensson, 2002; Lucena, 2011; García-Morales, Jiménez-Barrionuevo, & Mihi-Ramírez, 2011; Choi & Thoeni, 2016; Oet & Onga, 2016). Descriptions of these levels and some corresponding activities are presented in Table 1.

Table 1. Levels of activities in organisations.

Levels	Activities at this Level
Strategic	Activities at this level are carried out to oversee the organisation and plan its strategic directions. For example, deploying strategic goals, strategic benchmarking, analysing competitors, setting competitive priorities, and innovation.
Tactical	Activities at this level include functional activities and activities which translate strategic direction into deliverable

activities. For example, translating strategic goals into functional plans, structuring resources, and measurement of efficiency and effectiveness.

Operational Activities at this level are conducted through the utilisation of operational tools and techniques. For example, production activities and system-controlling activities.

Odiorne (1975) found that when top management loses sight of its overarching purposes, they begin to focus more on controlling subordinate activity, which tends to become increasingly unrelated to useful goals. Moreover, a number of studies described a process as a hierarchical set of interrelated activities that are embedded in a set of rules and resources which can both constrain and enable social action; and a task as one which includes both activities that are directly functional for achieving the aims of the process, and the resources that are either used or modified by the tasks (e.g., Biazzo, 2000; Clark & Baxter, 1992; Convey, 1994; Lee & Dale, 1998; Odiorne, 1975; Tallon & Kraemer, 1998; Zairi, 1997; Lucena, 2011; Huggins, Johnston, & Thompson, 2012; Oh & Han, 2018).

Organisational Critical Activities (OCAs)

Organisational critical activities (OCAs) constitutes a broad term that can be applied directly or slightly renamed to any organisation in various industries. Two key words in the definition of OCAs are crucial when reviewing the extant literature: “constantly” and “successful”. Some generic OCAs identified through a review of pertinent literature have been developed (Azzone & Masella, 1991; Burton & Pennotti, 2003; Byrd & Turner, 2001; Feeny, 2001; Porter, 1985; Shortell & Zajac, 1990; Tallon, Kraemer, & Gurbaxani, 2000; Lucena, 2011; García-Morales et al., 2011; Larsen & Pedersen, 2014; Oet & Onga, 2016), as shown in Table 2.

Table 2. Some generic OCAs identified from the literature.

Category	Generic OCAs
Marketing-related	Advertising; promoting products; conducting marketing; conducting marketing research; imaging and branding; recruiting; expanding on sale points.
Internal	Conducting general research; innovating and developing products; developing new services; managing information; managing knowledge; assuring product quality; enhancing operational efficiency; measuring cost performance; communicating internally; developing strategic plans; training staff; developing new technology; creating organisational culture.

External and inter-organisational	Maintaining supplier relationships; retaining staff; acquiring material; communicating externally; aligning with external environment; maintaining partnerships.
Service-related	Providing after-sale service; maintaining customer relationships; providing timely customer financial and transaction information; distributing products.

In terms of the interrelationship between OCAs and the environment, numerous scholars have argued that organisations need to adopt certain strategies to fit with the environment (e.g., Chan, Huff, Barclay, & Copeland, 1997; Venkatraman & Camillus, 1984; Venkatraman, Henderson, & Oldach, 1993; Easterby-Smith, Lyles, & Peteraf, 2009; Ambrosini, Bowman, & Collier, 2009; García-Morales et al., 2011; Salmimaa, Hekkala, & Pekkola, 2018). In addition, Miles, Snow, Meyer and Coleman (1978) found that organisations require a general model of adaptation which specifies the major decisions necessary for the organisation to manage internal interdependencies in order to maintain effective alignment with their environment.

This study focuses on eliciting OCAs from the organisation’s perspective. Thus, it is essential to identify the OCAs that are specified by the respondents from the organisation’s perspective. In order to take advantage of environmental changes in a timely manner, organisations may make a change to their OCAs in order to respond to the environment immediately after the environment is altered. This study defines organisational critical activities (OCAs) as follows: “Organisational critical activities” (OCAs) are activities which must be conducted by the organisation constantly in order to be successful in its respective industry. They are recognised as being essential to short, medium, and long-term success in that industry, have been significantly resourced, and receive regular senior management monitoring and direction.

Evaluation of websites

The purpose of the website evaluation in this study is to evaluate how well the websites support the OCAs. In order to achieve this, the most appropriate methodology for website evaluation must be chosen. In line with extant research, four website evaluation perspectives are identified: organisation provider; customer provider; organisation user perspective; and customer user perspective (Widmer & Shepherd, 1999; Chalmers et al., 1998; Huizingh, 2000; Cunliffe, 2000; Konradt, Wandke, Balazs, & Christophersen, 2003).

When adopting the organisation provider perspective, the evaluation of websites is performed by the provider to determine precisely how the websites can add value to the organisation. The value sought is provided to the web

team by management (Widmer & Shepherd, 1999). The most popular approach from this perspective constitutes measuring the performance of websites (Jones & Kayworth, 2002).

When adopting the customer provider perspective, the evaluation of websites is conducted by the provider to identify exactly how the websites can add value to the customer. Since the provider is not the customer, how the websites can add value to the customer is based on what value the provider believes that the websites provide to its customers. The evaluation made from this perspective comprises assessing the content (Chalmers et al., 1998; Huizingh, 2000), quality (e.g., Cox & Dale, 2002; Day, 1997; Dran, Zhang, & Small, 1999; Loiacono, 1999; Mich, Franch, & Gaio, 2003; Olsina, Godoy, Lafuente, & Rossi, 1999; Rettig & LaGuardia, 1999), design (e.g., Gehrke & Turban, 1999; Shneiderman, 1997; Thelwall, 2003; Wan & Chung, 1998) of the websites, and certain evaluation guidelines (Gehrke & Turban, 1999; Rettig & LaGuardia, 1999).

When adopting the organisation user perspective, the evaluation of websites is performed by the user to discover precisely how the websites can add value to the organisation. The user mentioned here can be internal (e.g., the organisation's staff) or external (e.g., the buyers) to the organisation. However, external users cannot realise value to the organisation because they are external to it. Thus, there is little intention to employ external users to evaluate the websites to determine how the websites can add value to the organisation.

When adopting the customer user perspective, the evaluation of websites is conducted by the user to determine how the websites can add value to the customer. During the evaluation, the central focus of the external user is customer satisfaction, which refers to how the websites can meet the needs and satisfy the preferences of customers (Cunliffe, 2000).

The organisation provider perspective is appropriate for the website evaluation in this study, since the primary purpose of this study is to determine how well the websites support OCAs. When the websites support OCAs, they are adding value to the organisation. Furthermore, another purpose of this study is to identify a method that can be employed by website providers to measure and improve their websites. Since the provider should be the evaluator, the evaluation perspective of this study is the organisation provider perspective.

Research Design

This study adopts a qualitative approach to elicit organisation's OCAs, and evaluate whether the OCAs are being supported by its websites (Hung, 2006). This research aims to identify how the websites actually provide support to OCAs through a series of interviews and website evaluations at all eight

universities in New Zealand. The respondents belonged to senior management teams, IT teams, or website teams. The total number of respondents was 48 in 2007. The eight case studies generated the top-15 ranked OCAs of the eight universities in New Zealand, and changes in websites' supportiveness of OCAs over 10 years were reported.

Through a series of interviews at eight universities in New Zealand in 2007, OCAs at the management level were identified. Then, the website's OCAs were evaluated by the amount of information on the websites in both 2007 and 2017. Finally, the alignment practices of the website's support in these years for the OCAs of the eight university were discussed.

An interview guide, a website evaluation framework, and tools of overall support and evaluation process were utilised. The interview guide provides a definition of OCAs and a set of interview questions that can be used to elicit OCAs from management during the interviews. The OCAs interview questions are presented in Table 3.

Table 3. Questions, sequence, and definition.

Order	Questions and Definition
1	Please describe your role, your job, and how long you have been in this job.
2	Definition of OCAs: An activity which must be constantly conducted by the organisation in order to be successful in its respective industry.
3	Please describe what are this organisation's OCAs.
4	What is their priority?
5	How do you support and enable these OCAs?
6	Would you suggest other people who know about the OCAs in this organisation to be interviewed?

The set of interview questions comprises two groups. The first group is the main questions. The self-typing approach and the interview method without supplying generic OCAs during the interview are appropriate to elicit OCAs from management for the purpose of this study. The second group is the background questions. The first background question is: Please describe your role, your job, and how long you have been in this job. The second background question is: Would you suggest other people who know about the OCAs in this organisation to be interviewed? The latter question can be utilised to generate future interviewees from the current one. Since the notion of OCAs is novel, a list of well written OCAs is not yet available to management in organisations. Thus, it is less likely that interviewees will reveal the same OCAs.

In terms of a website evaluation framework, OCAWSEM is used to identify a list of OCAs, and reveals which OCAs the websites support well and which they do not. This framework comprises four website evaluation forms.

These forms are based on the criteria of informativeness and interactivity. Overall, the four forms are used to evaluate how well the websites support OCAs from the provider's perspective in order to add value to the business that provides the websites.

In terms of evaluating tools, the OCAWSEM includes a set of tools which can be utilised to determine the overall support given to OCAs from websites based on the results produced from interviews and website evaluations. These tools are as follows: the organisational critical activity repository (OCA repository); a prioritising principle of interview results; two prioritising principles of website evaluation results; and a diagram used to display the overall support given to OCAs by websites.

The OCA repository serves these dimensions by providing a list of generic OCAs. These generic OCAs are presented in Table 2. These dimensions are utilised both to elicit OCAs from management and to extract OCAs from websites. By referring to the OCA repository, evaluators can efficiently assess the websites. In addition, the prioritising principle for interview results is termed the "interview prioritising principle" in this study. The interview prioritising principle is "the activity as nominated by more interviewees is more critical". The prioritising principle for website evaluation results is termed the "web prioritising principle". The two web prioritising principles are "the OCA at a higher level has a higher priority than the one at a lower level" and "the activity which is supported by more sub-sites has a higher priority".

The OCAWSEM includes a list of evaluation process instructions which can be used to guide the utilisation of the components included in the OCAWSEM. Specifically, it comprises nine stages, which can be categorised into three parts, as shown in Figure 1.

The First Part	Stage 1: Identify Management Views Stage 2: Analyse Interview Data Stage 3: Prioritise Organisational Critical Activities
The Second Part	Stage 4: Investigate Web Background Stage 5: Confirm and Generate Organisational Critical Activities Stage 6: Analyse Effectiveness and Efficiency Stage 7: Grouping Stage 8: Prioritising
The Third Part	Stage 9: Overall Support Discussion

Figure 1. Evaluation process instructions of OCAWSEM.

The first part instruction of OCAWSEM includes three stages: Identify Management Views, Analyse Interview Data, and Prioritise OCAs, and are, respectively, Stages 1, 2, and 3 in the evaluation process instructions. The purpose of this part is to elicit a list of prioritised OCAs from management. The second part includes five stages: Investigate Web Background, Confirm and Generate OCAs, Analyse Effectiveness and Efficiency, Grouping, and Prioritising, which are Stages 4, 5, 6, 7, and 8 in the evaluation process instructions, respectively. The purpose of this part is to generate a list of prioritised OCAs from the website evaluation, according to how efficiently and effectively these activities are being supported by the websites. The third part includes Stage 9, which is the Overall Support Discussion. This stage addresses not only the overall support made to OCAs from websites, but also how to improve the web designs if any poor support does exist. Specifically, it asks the evaluator to compare the two lists of OCAs generated from interviews and the website evaluation, and then discuss how well these two lists are matched. The discussion is based on both the content and priority matched between the two lists of OCAs. In other words, if the website is fully supportive of OCAs, the OCA nominated by the management as a top priority should be supported by the websites and be at the top of the supporting list. Stage 9 also requires the evaluator to assign those OCAs that were both nominated by the interviewees and listed in the website evaluation.

This study chooses the case study methodology as its research methodology. Benbasat, Goldstein and Mead (1987) described the case study methodology as a methodology that examines a phenomenon in its natural setting, employing multiple methods of data collection to gather information from one or several entities (i.e., people, groups, or organisations).

This study used all eight universities in New Zealand as field cases, and performed a cross comparison of their websites between 2007 and 2017. The OCAWSEM constitutes a valid and reliable methodology for evaluating the support given to OCAs by the websites.

Results and Discussion

Through the above research process, this study presents the 15 OCAs of management levels at the eight universities in New Zealand (including North Island and South Island), as shown in Table 4.

Table 4. Top-15 ranked OCAs at the eight universities in New Zealand (in alphabetical order).

Rank	OCAs
1	Communication with businesses and local communities
2	Enhancing internal administrative efficiency
3	Facility management
4	Financial management

5	Increasing branding
6	Maintaining partnerships with other institutions
7	Providing student services
8	Recruiting domestic students
9	Recruiting international students
10	Recruiting staff
11	Retaining staff
12	Research development
13	Strategic information provision
14	Sustaining educational and extra funding
15	Teaching and learning

Table 5 presents the top-10 OCAs which appeared to be most supported by the websites of the eight universities in 2007. A higher ranking means that the critical activity support on the websites had more information and more sophisticated functions.

Table 5. The 2007 top-10 OCAs as supported by the universities' websites.

Rank	OCAs of the Websites
1	Providing student services
2	Recruiting international students
3	Recruiting domestic students
4	Research development
5	Teaching and learning
6	Enhancing internal administrative efficiency
7	Communication with businesses and local communities
8	Recruiting staff
9	Retaining staff
10	Facility management

In order to generally align with the aims of management, most websites should be enhanced to provide more information and sophisticated functions to support the OCAs of research and development, teaching and learning, increasing branding, and sustaining educational and extra funding activities.

Table 6 shows the top-10 website OCAs in 2017. Compared to 2010, there are several common characteristics in the eight university websites in New Zealand: information diversity; meaningful expressions; rich architecture; and content presentation.

Table 6. The 2017 top-10 OCAs as supported by the universities' websites.

Rank	OCAs of the Websites
1	Teaching and learning
2	Providing student services

3	Strategic information provision
4	Research development
5	Recruiting domestic students
6	Recruiting international students
7	Increasing branding
8	Maintaining partnerships with other institutions
9	Communication with businesses and local communities
10	Facility management

Table 7. Comparisons the results of the OCAs analysis from website evaluations from 2007 to 2017.

Rank	OCAs 2007	Rank	Change in Rank	OCAs 2017
1	Providing student services	1	+4	Teaching and learning
2	Recruiting international students	2	-1	Providing student services
3	Recruiting domestic students	3	new	Strategic information provision
4	Research development	4	0	Research development
5	Teaching and learning	5	-2	Recruiting domestic students
6	Enhancing internal administrative efficiency	6	-2	Recruiting international students
7	Communication with businesses and local communities	7	-1	Enhancing internal administrative efficiency
8	Recruiting staff	8	new	Increasing branding
9	Retaining staff	9	new	Maintaining partnerships with other institutions
10	Facility management	10	-3	Communication with businesses and local communities

Table 7 presents comparisons of the results from the analysis of the website evaluations. The following findings are evident from this table.

Firstly, the OCAs of the websites of the eight universities, which have continued to change over the past 10 years, show that the management's view of the OCAs of the website has evolved, which also reflects the evolution of the respective industry and the environment. Secondly, the first three OCAs in

2007 showed that they were mainly based on “providing student services”, “recruiting international students”, and “recruiting domestic students”. Compared to the first three OCAs in 2017, “teaching and learning”, “providing student services”, and “strategic information provision” are fundamental, which demonstrates the universities’ emphasis on teaching and student services. At the same time, presenting the “strategic information provision” from the website has become an important item of the senior management team.

Thirdly, the sequence of increasing branding in 2017 rises to the top-10, demonstrating that the management of the universities has increased its emphasis on brand and reputation. Accordingly, the website is used to operate a variety of OCAs to highlight the university's brand. Fourthly, the term “maintaining partnerships with other institutions” enters the top-10 of 2017. However, ranking of the term “communication with businesses and local communities” goes down, but these two terms show the depth of connections and participation of universities in international relations and local relationships. This means that it indirectly promotes university student activities and services, employment performance and business cooperation, and resource networks. Overall, this part should promote organisational competitiveness.

Conclusion

Several tentative conclusions can be made based on the results of this study. Firstly, the OCAWSEM approach is used to observe the operations of eight universities in New Zealand, and can effectively promote OCAs of the organisation. This study identifies the OCAs of the universities in 2007 and 2017, which can be utilised as a reference for organisational management. Secondly, derived from the results of this study using the OCAWSEM approach, the organisation's operators can regularly observe and enhance the website's support for OCAs, in order to optimally adapt to environmental changes and be successful in its respective industry. A case from this study revealed that the top-10 OCAs of these universities’ websites have changed over the past decade, indicating that the perspective of management is continually evolving. Moreover, comparison of the first three OCAs of 2007 and 2010 show that that the teaching and learning, providing student services, and strategic information provisions are primary. The 2017 brand promotion sequence also entered the top-10, indicating that the universities’ management augmented its emphasis on brand and reputation, and used the websites accordingly. Thirdly, the analysed results demonstrate that websites are an important and influential platform to conduct the entire range of primary value-added activities in the value chain. In addition, after 10 years of observation, evolutionary changes can be derived and OCAs are also indicated, and adapt to environmental trends to promote sustainable operation of the organisation.

However, this study possesses certain limitations. Firstly, some sub-sites could not be accessed due to security reasons. For example, the finance areas of most websites were inaccessible to the researchers during the web evaluations due to issues of confidentiality. In addition, this study only evaluated university level sub-sites, and excluded departmental sub-sites, which may limit the generalisability of the findings. Several topics are worthy of future research. It is suggested that future research can apply current research processes to evaluate the alignment of other kinds of technologies, such as mobile technologies and governmental information technologies, with OCAs. It would also be useful to investigate the alignment between websites and OCAs in other countries and cultural settings.

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About the Author

Wei-Hsi Hung

*Department of Management Information Systems
National Chengchi University
No. 64, Sec. 2, Zhi-Nan Rd., Wenshan District,
Taipei City 11605, Taiwan (R.O.C)
E-mail: fhung@nccu.edu.tw*

Kai-Ju Chuang*

*Department of Information Management Systems
National Chengchi University
No. 64, Sec. 2, Zhi-Nan Rd., Wenshan District,
Taipei City 11605, Taiwan (R.O.C)
Department of Visual Communication Design
Hsuan Chuang University
No. 48, Hsuan Chuang Rd.
Hsinchu City 300, Taiwan, R.O.C.
E-mail: karen9999k@gmail.com*

*Corresponding author:

Wei-Hsi Hung is Professor of Management Information Systems at National Chengchi University, Taiwan. He received his Ph.D. and Master degree (with 1st Class Hons.) from the Department of Management Systems at the University of Waikato, New Zealand. His research interests are in the areas of e-commerce, IS alignment, knowledge management, and supply chain management. His research papers appeared in journals such as Decision Support Systems, Communications of the Association for Information Systems, Journal of Global Information Management, Journal of Computer Information Systems, Computers in Human Behavior, Industrial Marketing Management, Technology Analysis & Strategic Management, Telematics and Informatics, Internet Research, Pacific Asian Journal of Association for Information Systems, International Journal of Logistics Research and Applications, Journal of Information Management, Asia Pacific Management Review, Communications of the ICISA, International Journal of Web Portals, and Electronic Journal of Information Systems Evaluation.

Kai-Ju Chuang, a professional multimedia designer, teaches in the Department of Visual Communication Design at Hsuan Chuang University, Taiwan. She studies in the PhD program in the Department of Management Information Systems at the National Chengchi University, Taiwan. Chuang earned her master's degree from the Institute of Industrial Engineering at National Taiwan University and the Department of Information Communication at Yuan Ze University, Taiwan. She also attended the Department of Fine Arts at National Taiwan University of Arts. Since 2012, she has been the executive director at the Taiwan Amoeba Design Association (TADA) which is an expert member of the International Council of Design. Also Chuang winning many multimedia design awards include creative design of National Palace Museum of digital museum project. Her research interests include experience designs, user experience strategy design, and business innovations.