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Critical Success Factors for Knowledge Transfer via Government Websites

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Abstract

The transfer of knowledge pertaining to government is central to the success of e-government websites. The

purpose of this paper is to investigate how Australian government website providers perceive critical success factors (CSFs) for the transfer of knowledge

from government to users (citizens, business entities, employees and other government agencies) via an Australian government education website. CSFs are

defined as “the limited number of areas in which results, if satisfactory, will ensure successful competitive performance for the organization”

(Rockart 1979, p. 5) and knowledge transfer (KT) is defined as a process that includes “any exchange of knowledge between or among individuals, teams,

groups or organizations” (King 2006, p. 538). It is the process by which knowledge is transmitted to, and absorbed by, users. Knowledge in this research

is scoped to include government knowledge resources (information and services) made explicit and available to users via government websites. The

research is exploratory, applying content analysis to analyse qualitative data that were collected using interview and focus group techniques. Szulanski’s

knowledge transfer (KT) four stages model was adapted as a lens to study CSFs. Eleven CSFs are identified, grouped into six themes, and associated

with the four KT stages. The research provides guidance to practitioners, arguing that identifying and understanding the CSFs can support government

website providers in taking decisions related to the internal operation of their website’s content development and delivery activities, thus enhancing

their capacity to deliver requisite knowledge to website users.

Keywords: E-government, Australia, Critical success factors, Knowledge transfer.

Introduction

Electronic Government (E-government) addresses the means by which contemporary governments

around the world provide knowledge resources (information and services) to users, specifically citizens, businesses and other government agencies.

Whilst such provision can proceed by various electronic channels, e-government is scoped for the purpose of this research as the utilisation of the

Internet, particularly via websites, to improve and enhance government operations (Benefit view), to disseminate government information and services

(Service view), to acquire knowledge through the website (Objective view), and to establish relationships between governments and their

stakeholders, particularly citizens, employees, business sectors and government agencies (Relational view) (Azizan et al 2011).

The website has become the preferred channel for users seeking to access government information and services, especially in the case of knowledge-

based websites (Ford & Murphy 2008). Nevertheless, the website provides challenges to government - not merely to mount a website able to

deliver information and services, but to ensure that the website delivers in a form that addresses user needs and facilitates the transfer of requisite

knowledge. A substantial body of e-government research focuses on the importance of information and communication technology (ICT), in

particular the role of the website, in transforming relations between a government and its citizens. There is, however, little focus on knowledge

management (KM) especially on knowledge transfer (KT).

Knowledge as defined and scoped for this research

includes government knowledge resources (information and services) made explicit and available for users via a government website (Azizan et al 2011).

The management of knowledge is increasingly important to government in order to face the challenges of the knowledge economy and vital for effective KT

(Santinha & de Castro 2010). KT is defined for this research as a process that includes “any exchange of knowledge between or among individuals, teams,

groups, or organisations” (King 2006, p. 538).

Kuhn and Abecker (1997) assert that a failure to consider the elements of KT

can result in costs arising from spending excessive time searching for knowledge and costs associated with errors arising from actions built

upon inappropriate knowledge resources. Similarly, Traunmuller and Orthofer (2007) assert that attention to KT can support building better e-

government solutions. It should also be noted that a government website must meet the knowledge resource (information and services) needs of both

internal government users and those external to government (Sagheb-Tehrani 2010).

In light of the above, this paper addresses the following question:

What are the critical success factors (CSFs) for knowledge transfer (KT) via an Australian government education website, as perceived by the website?

In this study CSFs are defined as “the limited number of areas in which results, if they are satisfactory, will ensure successful competitive

performance for the organisation” (Rockart 1979, p. 5). It has been recognised that there are generally a small number of such attributes that if

performed well will create opportunity for success (King 2001).

In undertaking this study, a conscious decision has

been taken to focus on the insights of the website provider. Government website providers have substantial established processes and

infrastructure in place to assess user responses to the websites that they provide. That said, future studies could seek additional validation of the

CSFs by seeking direct recourse to external website users.

In this paper, we present findings from an

interpretive case study of a government agency in Australia (“AUSED” a pseudonym). This research has explored CSFs for the transfer of knowledge from

Government to users (citizens, business entities, other government agencies and employees) via an Australian government education website, from the

perspective of the Government website provider. A Ministry/Department of Education was selected, as education constitutes one

of the most vital and widely used of the e- government services (United Nations 2008), and as such was deemed to provide a good initial candidate for the

study of CSFs for KT via e-government websites.

The structure of this paper is as follows: the following sections briefly review the

relevant literature, including the generation of a list of some potential CSFs for KT via a government website; the subsequent section discusses the

research methods used; the penultimate sections report and discuss the key findings; followed by a short conclusion that

explores the significance of the results.

Background – E-Government in Australia

The Australian Government launched its e-government

agenda in March 2006 entitled the ‘2006 e-Government Strategy, Responsive Government: A New Service Agenda’, seeking to provide better

government services delivery (Australian Government 2006). This agenda is a development of an initial e-government strategy launched in 2002,

‘Better Services, Better Government’, which involved plans for the integrated and comprehensive use of new technologies for

government information, service delivery and administration (Australian Government 2006). The 2006 service agenda concentrates on four

primary areas: meeting users' needs, establishing connected service delivery, achieving value for money, and enhancing public sector capability (The

Australian Government Information Management Office (AGIMO) 2008). As a partial endorsement of the strategies advocated, as revealed in the report

‘Interacting with Government: Australians’ use and satisfaction with e-government services’, in 2009 Australians used the internet to interact with

government more than any other method (see AGIMO 2008).

To operationalise strategies, the Australian

Federal Government supports each state implementing its own e-government agenda. In Victoria, where this research has been

conducted, the agenda has evolved in stages according to the government's perceived needs of citizens. For example, the government has sought to

improve its Web Content Accessibility Guidelines in order to provide better services to those with disabilities (AGIMO 2008). The government has also

concentrated on employing or training staff with appropriate skills, especially ICT skills, to implement its e-government strategies

(AGIMO 2008). With the emergence of Web 2.0, the Victorian Government is establishing a Government 2.0 Taskforce to investigate how it might best utilise

Web 2.0 technologies to enhance the effectiveness and efficiency of service delivery, public administration and

community engagement (AGIMO 2008).

Knowledge - Definition

The emerging challenges of the knowledge economy

have promoted increasing government commitment to KM, with KM now a priority on the policy agenda of many nations (Santinha & de Castro

2010). Organisations that manage their knowledge effectively can improve their functioning in many dimensions.

Definitions of knowledge proliferate. For example, Polanyi (1962) and Nonaka (1991) classify knowledge as tacit (personal and hard to formalise) and explicit

(formal and systematic) and argue the need to manage knowledge of both forms. Sternmark (2002), on the other hand, argues that all knowledge is tacit

and that what can be made tangible is information. Knowledge has been conceptualised within a hierarchical structure, from data, seen as facts,

becoming meaningful information as a result of the provision of context, then becoming knowledge when interpreted, and

applied in context (Sternmark 2002).

Drawing upon the above, for the purposes of this research, knowledge is

defined and scoped to include government knowledge resources (information and services), made explicit and available for users via a government

website, which becomes meaningful to website users when they interpret and apply it in context.

Szulanski's KT Model

This research seeks to view CSFs through the lens of KT. An adapted form of Szulanski's (2000) intra-

organisational KT model has been employed to facilitate identification of CSFs for KT via a government website (Cooper and Lichtenstein

2010). This model has been chosen because it is widely recognised and supported through application over many studies. It should be appreciated, however, that

Szulanski's original KT model is designed to describe internal KT (i.e. within an organisation). Cooper et al (2006), however, have adapted the

model to studies of CSFs for external KT in Business-to-Business (B2B) contexts. This research has extended application of Szulanski's KT model to identify CSFs

for internal and external KT in an e-government context.

Szulanski's (2000) intra-organisational KT model

consists of four stages, namely initiation, implementation, ramp-up and integration. The initiation stage begins when the website user has

recognised a need for knowledge and starts a search for knowledge to fulfil that need. Once the need for that knowledge is identified, the feasibility of

transferring that knowledge is explored. The implementation stage begins when knowledge resources flow between the source and the recipient.

The implementation related activities conclude after the recipient begins using the transferred knowledge. The ramp-up stage begins when the recipient starts using

the received knowledge. During this stage, the recipient will be concerned with identifying and resolving unexpected problems that arise while

using the new knowledge. Finally, the integration stage begins after the recipient achieves satisfactory results with the transferred knowledge. The

use of the transferred knowledge becomes routinised. Integration is complete when old knowledge is replaced by

new knowledge or practices.

Potential CSFs for KT via Government Websites

A conceptual framework underpinning this research has been derived from a

substantial literature review, to seed the identification of CSFs from the rich data set collected in this study (Azizan 2011). A focus of the literature

review has been on CSFs and concepts raised in a number of relevant associated literatures, including: KM; customer service (CS) and Web-based

Self Service (WSS). The conceptual framework is presented in Table 1, cast in terms of 6 groupings, and some associated concepts, with reference to the

relevant literatures. This conceptual framework has been used to:

(1) Seed the analysis of the interviews and focus groups data; and

(2) As a basis for comparing and aligning

the final set of validated CSFs with the extant literature.

Table 1: Some Potential CSFs for KT via a Government Website (KM: Knowledge Management; CS:

Customer Service; WSS: Web-based Self-Service)

Please see Table 1 in full PDF version

Research Methodology

The research has employed an interpretive case study approach, applying qualitative data capture

and analysis methods. The case study research method enables examination and scrutiny of the rich organisational situation and supports the use of

multiple data capture and analysis techniques so facilitating the triangulation of analysis outcomes (Cooper and Lichtenstein 2010).

The case study was conducted at one government agency in Australia “AUSED”. AUSED is an education-based organisation, chosen

because this sector provides a rich environment in which to investigate CSFs for KT via government websites. United Nations (2008)

argues that the education sector provides fertile ground for the provision of government services.

In this research, an adapted form of Rockart's CSF method was adopted for data collection, including an introductory workshop, interviews and a focus

group. In the introductory workshop the contact official was briefed on the purpose of the study and the research process. Following the workshop,

semi-structured interviews with nine respondents were conducted. The respondents were selected from the staff involved in the development and

management of the Australian government website, including top, middle and operational management level appointments across the

organisation. The respondents were requested to identify the CSFs for KT via the government website, at each stage of the KT

process (Initiation, Implementation, Ramp-up and Integration). The interview transcripts were then analysed, using inductive qualitative

content analysis techniques (Creswell 2009). The potential CSFs (see Table 1) were available to seed this analysis, supplemented with the outcomes of the

qualitative analysis which allowed the researchers to code category names that emerged from the data (Hsieh & Shannon 2005). Subsequently, a focus group

was conducted, involving the same respondents as in the interviews. The purpose of the focus group was to validate the CSFs resulting from the

interviews. In this session, the list of the CSFs from the interviews was tabled. Respondents then shared each others' experiences

and a confirmed list of CSFs was generated.

Results – Critical Success Factors (CSFs)

Drawing upon analysis of the interviews, respondents identified 11 CSFs for KT

via the Australian government education website (see Table 2). Subsequent reflection on these, suggested themes that could be mapped

against four of the six groupings identified in the conceptual framework (Table 1) (i.e. management role, user focus, content focus, and technology

focus). The absence of CSFs related to the themes employee focus and organisational culture was explored in the focus group setting, and was identified

as a consequence of a drive to implement e-government initiatives widely, across the broad sweep of Australian government agencies with

each state preparing guidelines for government agencies to follow. Victorian government guidelines (Victoria State Government 2010) focus

heavily on service delivery to citizens, reflected in these results in the number of identified CSFs related to user, content and technology focus (in fact

ten of the 11 CSFs reported in Table 2 are classified in these theme areas). As such, employee focus imperatives and organisational culture

imperatives were not seen as critical. This is not to say that such matters were not seen as necessary to the achievement of KT by the respondents – instead they

were seen as established practice that underpinned all public service undertakings but not specifically critical to the achievement of KT in this

context. As an aside, this distinction was not observed in a CSF study of an education agency in Malaysia, as recently reported (Azizan et al

2011), where factors related to both these themes were classified as critical in this context. The CSFs identified are listed and defined in Table 2.

Table 2: CSFs for KT via the Australian Government Education Website

Please see Table 2 in full PDF version

The Association of CSFs with KT Stages

In this section we unpack the 11 CSFs reported, highlighting, in particular,

instances where a CSF was the first-mentioned by a respondent when considering each KT stage. It should be noted that when discussing each KT

stage, respondents tended to mention many factors. The subset of first-mentioned CSFs at each stage provides some insight into which CSFs were at the

front of each respondent's mind. The use of the first-mentioned response in this way has been previously used by researchers to capture what is seen as

most important to study respondents (e.g. Krause & Jay 1994).

Some observations, drawn from these results, include:

1) CSFs have been identified almost uniformly across the four stages: eight CSFs during the Initiation stage, seven in the

Implementation and Integration stages, and five during the Ramp-up stage. This indicates that the respondents have no difficulty in appreciating

critical factors across <u>all</u> stages of the KT model.

2) Overall, the most frequently cited CSFs are: CSF 3 – User Focus:

Understanding the needs of the recipient; CSF 2 – Usability: Functionality and navigation; and CSF 5 – Content. AUSED

acknowledges that in order to successfully transfer knowledge to users, the government provider must be

responsive to users' needs.

3) If one focuses at each stage on the first-mentioned CSF, the

most important CSFs for the achievement of each KT stage are:

- **Initiation**: CSF 2 – Usability: Functionality and navigation;

- **Implementation**: CSF 6 – Accessibility;

- **Ramp-up**: CSF 3 – User Focus: Understanding the needs of the recipient; and

- **Integration**: CSF 5 – Content.

The above highlights that at Initiation, which involves the knowledge provider

preparing knowledge content for the website and the potential user recognising a need for knowledge and commencing a search for

that knowledge, the respondents see as most critical that easy-to-use functionality that will support users with clear and unambiguous advice

must be identified (CSF 2 – Usability: Functionality and navigation). At Implementation which begins with the decision of the knowledge recipient to

proceed to acquire the knowledge, focus shifts to the ICT infrastructure which must support a website that is available, whenever it is needed, and

must provide alternative ways for users to access knowledge that is fast and easy for users to download (CSF 6 – Accessibility). At Ramp-up, which begins

when the knowledge recipient starts applying the received knowledge, the respondents see as critical that the website should provide relevant

knowledge to users in such a way that the content is easy to understand, and is written in simple and meaningful language chosen with the recipient in

mind (CSF 3 – User Focus: Understand needs of recipient). Finally, at Integration, when the knowledge recipient has received the transferred

knowledge and moves to integrate its use with their needs, the respondents see that it is critical that the website should contain content that is accurate,

relevant, regularly updated and which meets user requirements (CSF 5 – Content). At this stage the content itself is seen as critical – a lack of accuracy,

relevance, currency and a failure to meet user requirements, will be exposed as the user seeks to integrate the acquired

knowledge with their ongoing needs.

Conclusion

In this paper results have been reported for an

analysis of CSFs for KT from government sources to internal and external stakeholders, via a government education website operated by the

Australian government. The analysis has drawn upon interviews with key Australian government respondents.

It is recognised that this study, built upon a single case study of an educational agency of the Australian government, may not necessarily be

applicable to other contexts (i.e. educational agencies of other national governments and/or other forms of government agency). Ongoing studies of

educational agencies of other national governments are in progress, to gain insight into the extent to which the CSFs reported are shared in different

national government contexts. The paper argues that this study has produced a fully researched set of CSFs for KT via a government education

website, from a government provider perspective, that may be considered and possibly tailored to other areas of government activity.

Furthermore, identifying and understanding the CSFs has the capacity to provide practical guidance to practitioners, allowing them to identify and

understand the CSFs and their impact on the various stages of KT, so facilitating government website providers in taking decisions related to the

internal operation of their website’s content development and delivery activities, and thus to enhance their capacity to deliver requisite knowledge

to website users. It must be understood, however, that the CSFs proposed are considered by the study respondents to be necessary for success, but

that they should not necessarily be considered sufficient for success.

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