Modelling marketing professionals' information behaviour in the workplace: towards a holistic understanding

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Abstract

Introduction. The aim of this paper is to examine and model how marketing professionals seek, judge, use, and share information in the workplace.
Method. The study consists of two stages. At the first stage, a questionnaire was conducted with eleven marketing professionals, and seven of them completed an intensive five-day diary study followed by semi-structured interviews at the second stage.
Analysis. The open coding method was applied to the 1,198 diary entries which encompassed 101 real work tasks demanding active information seeking as well as the interview transcripts.
Results. Marketing professionals were found to spend approximately 2-3 hours per day seeking information and they obtained most of the information from internal documents (47%) and external search engines and websites (21%). Overwhelmingly more attention was devoted to quality-related factors than to cost-related factors when they chose information sources, and information judgments criteria of reliability (20%) and accuracy (16%) were perceived important. The obtained information was used in the forms of information processing, knowledge construction, information production, and applying information. Five dimensions of information sharing occurrences were uncovered, including people, purpose, mode, content, and level of proactiveness.
Conclusion. A model of information behaviour incorporating behaviours of information seeking, judgement, use, and sharing in the marketing context was developed.

Keywords. Information seeking behaviour, information judgments, information use, information sharing, marketing professional

Introduction

The area of information behaviour investigates the totality of human behaviour in relation to sources and channels of information, information seeking, and information use (Wilson 2000). The conceptual modelling about information behaviour and empirical verification in the development of such models have characterised contemporary information behaviour research (Ellis 2011; Vakkari 2003). However, few studies have explored how people integrate all the various aspects of information behaviour related to information seeking, judgments of information, and information use and sharing, and even less on how these behaviours are interleaved with everyday work and life.

In information-intensive environments such as marketing department, information is available from a wide variety of different sources (Du & Mohammad 2011; Jorosi 2006; Porter & Millar 1985; Thivant & Bouzidi 2008). Recognised as information workers, marketing professionals are required to access, evaluate, and use large amounts of information at work in order to generate strategic communications, support marketing planning, and maintain everyday routines (Narayanan *et al.* 1999). Businesses are found to be very active in seeking information to increase their competitiveness (Porter & Millar 1985; Tapscott *et al.* 2000). More importantly, there are risks for information seeking and use as marketing professionals face real consequences in applying the information found. Marketing professionals' information practices provide a rich research setting for exploring the relationships among specific information seeking context, judgment of information, and information use and sharing within an organisation.

This study is among the first attempts to research various and related aspects of information behaviour within the daily work of marketing professionals. The findings would enhance our holistic understanding of information behaviour by illustrating the inter-relationships between *information seeking*, *information judgments*, *information use*, and *sharing* in practitioner groups.

Literature Review

Information seeking in the workplace

Information seeking is a subset of information behaviour that includes the purposive seeking of information in relation to a goal (Wilson 2000). Among the important concepts in relation to information seeking actions, tasks have been conceptualised as actions performed to achieve particular goals in information seeking studies (Byström & Järvelin 1995; Vakkari 2003). A work task, referring to "an activity people perform to fulfil their responsibility for their work, such as a work-related task" (Li & Belkin 2010: 1771), is considered as a trigger of other types of tasks such as information seeking tasks (Byström & Hansen 2005; Li & Belkin 2010). Information-seeking tasks refer to the activities that users engage in for gathering information from a variety of information sources such as people, paper-based documents, and information systems (Li 2009).

Work roles and associated tasks are believed to be important factors contributing to shaping how people seek information and determining the information they select and subsequently use for various purposes (Freund *et al.* 2005; Leckie *et al.* 1996; Taylor 1991). For example, Allen (1966) suggested that work roles and the various stages of project life cycles influence the information sources sought by engineers and scientists. Landry (2006)'s research indicated that the type of work role-related tasks significantly affected information source selection of dentists.

Information seeking in the workplace has been studied in a wide range of occupations, such as engineers, scientists, entrepreneurs, journalists, lawyers, and scholars (Case 2007; Ellis & Haugan 1997; Hertzum & Pejtersen 2000). Hertzum and Pejtersen (2000) found engineers searched for documents to find people, searched for people to get documents, and interacted socially to get information without engaging in explicit searches. More recently, Allard et al. (2009) suggested that engineers believed the internal sources more trustworthy, but they preferred the ease of access provided by Google. The Internet was chosen as the first stop and primary source along the path of engineers' information seeking. Overall, the accessibility and trustworthiness of different information sources influence professionals' information seeking in the workplace. It is interesting to note that they

sometimes interact with people in social networks for information acquisition, without explicitly engaging with information searches.

Information behaviour of marketing professionals

As briefly reviewed in the above section, professionals such as engineers and scientists are some of the most studied groups in information behaviour research. The investigation of the information seeking behaviour of business and marketing professionals, however, has been relatively sparse. Ashill and Jobber (2001) undertook a qualitative study of senior marketing executives' information needs. Their findings indicated that marketing information needs can be defined using six information characteristics, including aggregated marketing information, broad scope marketing information, current marketing information, timely marketing information, personal information sources, and impersonal information sources. Jorosi (2006) examined the information needs and information seeking behaviours of small and medium-sized enterprises managers in a manufacturing industry. Their key findings include: (1) the managers employed both personal and impersonal sources; (2) information source selection was largely determined by accessibility and ease of use; and (3) managers used information for both decision making and routine activities.

Bennett (2007) investigated various formally and informally published sources of knowledge mainly used by marketing managers for specific purposes in the computer service industry. The findings show that only 2% of the sample read academic marketing journals, and just 3% looked at marketing textbooks. However, 89% of the sample accessed (mainly internet-based) grey marketing literature and 62% read marketing magazines. Based on an extensive literature review, Alwis et al. (2006) identified the influencing factors of managers' choice of source preferences were accessibility, quality, and richness of the information, as well as individual and institutional characteristics.

Much of the existing literature on business and marketing practitioners has focused on the types of information needs and preferences of information sources. Prior research offers very limited insights on this group's other important information behaviour, such as information judgments and subsequent use of information.

Information judgments during information seeking and use

Research shows that criteria or constructs for information judgments include information quality (Taylor 1986), credibility (Metzger 2007), and cognitive authority (Wilson 1983). Each criterion or construct embraces several facets. For example, information quality as a user criterion concerning excellence or truthfulness of information encompasses attributes of usefulness, goodness, currency, and accuracy (Hughes *et al.* 2010; Rieh 2002). Cognitive authority refers to users' relevance judgments, including facets of trustworthiness, credibility, reliability, scholarliness, officialness and authority (Hughes *et al.* 2010; Rieh 2002).

In addition, studies also show that people applied varied criteria for different tasks and for different problem stages during the task performance (Vakkari & Hakala 2000). For instance, Vakkari and Hakala (2000) identified a connection between an individual's changing understanding of his or her task and the criteria for relevance judgment. Rieh (2002) believed that the judgement criteria of information quality depended on the task. In her study, users mentioned usefulness for the tasks of travel and medicine to a greater extent than for those of computer and research, while goodness of information was mentioned less frequently when users interacted with the medical task than other tasks. This aspect of task dependence, however, has not been widely explored in the literature.

User-defined relevance criteria deal with the ultimate usefulness of the piece of information to the user who looked for certain information (Schamber 1994). Prior work on information judgments sheds more light on the information seeking phase (e.g. Knight & Burn 2005; Rieh 2002). Few studies have examined the impact of the perceived value of information on subsequent use. Research suggests that the value of information largely determines the quality of decisions made, and ultimately it affects the quality of activity and action outcomes in organisations (Stvilia *et al.* 2007). Therefore, it is important to understand information judgments within the context of its intended use (Katerattanakul & Siau 1999). Despite the awareness of impact of information in corporate business, there is little empirical research on the specifics of the information judgments during information seeking and use in the marketing context.

Information use and information sharing

The use of information has been conceptualised in different ways in the literature (Kari 2010). At the individual level, the outcome of information use is a change of the user's state of knowledge, such as increase, awareness, understanding of a situation, or a capacity to act, including solve a problem, make a decision, or negotiate a position (Choo *et al.* 2000). Previous studies of information usage in the workplace focused on the use of information source or media to access information (Allard *et al.* 2009; Bennett 2007). For example, Allard et al. (2009) reported design engineers used sorts of software including word processors, web browsers, spreadsheets, CAD and databases to create and edit documents, access the Internet, run simulations, or conduct testing. Limited studies have examined the actual use of information found.

Taylor (1991) described information use in professional settings as motivated by the goal of solving work-related tasks and as more critical and conscious than general information use. This is partly because teamwork has been common in the workplace, which introduces complex social and contextual factors into the process of use of information. As such, the use of information within an organisational setting provides a rich environment for understanding how goal-oriented information use is motivated by work tasks and collaborative work.

The issues of information sharing and collaborative work in information-intensive tasks have been studied extensively by communities such as Computer-Supported Cooperative Work, and have received increasing attention in recent years from information behaviour communities (e.g., Foster 2006; Shah & Marchionini 2010; Wilson 2010). Pilerot and Limberg (2011) investigated the information sharing activities of design research scholars, in which the information sharing activities were found to be intrinsically intertwined with other information behaviours such as information seeking and use. According to Wilson's (2010) review, information sharing is a relatively unexplored part of information behaviour. Information sharing is a complex phenomenon with many dimensions and it is context sensitive. Our study aims to explore how marketing professionals utilise and share information in the workplace.

The Study

Research questions

The goal of this study is to examine and model how marketing practitioners seek information, judge information, use, and share information in the workplace. Specifically, we address the following research questions:

1. What is taxonomy of work tasks driving information seeking?
2. How do marketing professionals choose information sources?
3. What criteria for information judgments do marketing professionals apply during information seeking and use?
4. How do marketing professionals use and share information found?

Research design

Study participants

A total of eleven marketing professionals (seven females and four males) at a university (hereinafter "the University") in Australia participated in the study. They were recruited by sending emails of invitation letters to a list of marketing professionals whose contacts were identified and collected from the University directory. A follow-up email was made if no any feedback was received within one week after the initial contact. The study participants' ages averaged in their 20s (27%), 30s (27%), 40s (27%) and 50s (18%). They had diverse educational backgrounds: Masters (N=5), Graduate Diploma (N=2), Bachelor (N=1), Diploma (N=1), High School (N=1), and PhD (N=1). Only two participants had been ever formally educated in marketing and business administration while the rest were in a variety of disciplines including history, teaching, migration law, and biology. Nearly half of them (five out of eleven) held the job title of line managers; four were front-line coordinators, one deputy director who was at the level of senior marketing executive, and one business support administrator. The participants had varied working experiences in marketing with a mean career age of 12.5 years, ranging from two to twenty-five years.

Data collection and analysis

This study follows a qualitative approach which comprises questionnaire, diary, and post-diary interview methods. The research data were collected between January and May 2011. At first, a questionnaire was scheduled and conducted with each participant. Besides the basic information of age, sex, education, position, and working years, the questionnaire also captured the participants' frequently used information sources for work tasks. At the end of each questionnaire, the participants were asked to keep a structured diary for five working days. Finally, seven individuals (four females and three males) completed the diary as required and thus represented thirty-five days of recorded information activities, amounting to 1,198 diary entries. The participants were prompted to record their daily work tasks and the corresponding information seeking and use activities in the diary, including the information objects searched for, information sources and tactics employed, evaluation of quality of information obtained, and the use and sharing of information.

For these diary-keepers, a semi-structured post-diary interview was conducted to clarify their diary entries, thereby offering a complementary perspective on the same data. Each interview ranged from thirty to sixty minutes in length. The interview recordings were transcribed for further analysis.

Both qualitative and quantitative analyses were employed to interpret data in order to obtain a richer understanding of marketing professionals' information behaviour. The interview transcripts and the diary entries were thoroughly read and coded using the open coding method (Strauss & Corbin 1990). During open coding "the data are broken down into discrete parts, closely examined, compared for similarities and differences, and questions are asked about the phenomena as reflected in the data" (Strauss & Corbin 1990: 62). The coding focused on the identification of themes, involving categories of work tasks, information

objects and sources, criteria for information judgments, use of information found, and dimensions of information sharing. In addition, descriptive statistics of frequency and relative frequency of the categories were calculated where appropriate to examine major trends and to enhance the descriptions.

Results and Discussion

In the following sections we report the results based on the analysis of both diary entries and post-diary interview transcripts, relating them to each research question in turn.

Taxonomy of work tasks

The results of the diaries revealed 101 work tasks demanding active information seeking. Hence, marketing professionals were seeking work-related information an average of two or three tasks a day. The mean duration per work task was one hour, ranging from five minutes to three hours. Therefore, marketing professionals spent about two to three hours of each day engaging in some type of information event, which was somewhat similar to the time percentage identified in engineers' daily information seeking (Allard *et al.* 2009). An analysis of the descriptions of work tasks led the researcher to develop taxonomy of work tasks shown in Table 1. Frequency of work tasks occurrence is shown in Table 2.

Taxonomy of work task	Description
Administrative tasks	Specific routine tasks related to work responsibilities which are not appropriate to be grouped into the other named categories. For instance, searching for postage costs for sending a parcel interstate, updating codes for project cost centres, tracing financial data in the system, following up on an international application, checking on progress of current students, setting an agenda for a upcoming meeting, and preparing for briefing with senior management.
Competitor behaviour and performance analysis	Finding out statistics for competitor institutions, information on competitor's products, partnerships and agreements, news and marketing tools, and university ranking statistics.
Events information obtaining	Obtaining information regarding upcoming events, exhibitions, collating events sponsors' feedback, checking the progress of events.
Internal information sharing	Forwarding a media release internally, talking to other units in the University e.g. the Facility unit to find a visitor parking on the campus, sharing information on a prospective project partner or grant applications.
Market potential analysis	Analysing data on student numbers to form strategy and approach for improvement of student recruitment in future, researching new policies, announcements or changes on current market to inform further planning and relevant activities, studying education industry developments and trends in home and overseas markets.
Media public relations	Talking to journalists and other media people, emailing or calling an expert from the University to help with media query or a story, looking for a magazine issue, and

	responding to journalists' queries.
Partnership and client contact maintenance	Establishing and maintaining the details of alumni, tracking a donation, setting up a new vendor or client, phone calls with clients and researchers, discussions with industry partners for projects, and identifying priority agents in home and overseas for recruitment purposes.
Report/document writing and updating	Writing or updating a report about a certain market or a project, writing invitation letters for delegations, updating internal documents, compiling guidelines, writing a media story, compiling or updating study programs for students and marketing materials.
Strategic planning and development	Planning confidential guest list and profiles for senior management, researching how to achieve outreach partnerships' competitive grants, discussing annual research revenue targets, and reviewing internal business case.
Training and professional development	Looking for articles in professional journals/magazines (e.g. international higher education) for own background knowledge, undertaking study for professional development, and providing training for new staff members.
Travel planning	Organising a car from a renting company, completing business travel forms, visa application for travel overseas, and checking on the flight details from different airlines.

Table 1: Taxonomy of work tasks motivating information seeking

Taxonomy of work task	Frequency
Administrative tasks	26
Report/document writing and updating	16
Partnership and client contacts maintaining	11
Events information obtaining	8
Travel planning	8
Competitor behaviour and performance analysis	7
Media public relations	6
Strategic planning and development	6
Market potential analysis	5
Internal information sharing	5
Training and professional development	3
Total	101

Table 2: Taxonomy of work tasks – frequency of occurrence

In contrast to the general categories of tasks reported in previous studies, such as research tasks and travel tasks (Rieh 2002), or intellectual tasks and complex tasks that consider the perceived task complexity (Li 2009), our results identified the task categories at a more concrete level in a specific working setting.

Among the taxonomy, administrative tasks (N=26) were the most frequent task type in the marketing professionals' daily work. The second most frequent task type was report/document writing and updating (N=16), followed by partnership and client contact maintenance (N=11). Analysing competitors' performance, strategic planning, and analysing

market potential for student recruitment and collaboration were important work tasks but did not occur frequently in the work during our study period. The taxonomy reflects that marketing professionals engaged in seeking information mainly for performing their routine activities, generating marketing planning and report, and maintaining partnerships.

Information sources utilised for current work tasks

For solving 101 work tasks, the marketing participants employed 189 information sources (including repetitions, approximately two information sources per work task) that were further grouped into seven categories of major sources (Table 3).

Categories of information sources	Description and examples	Frequency	%
Internal databases/documents	The University reports, statistics, standards, documents, internal databases, and personal files.	89	47
External general search engines and websites	Wikipedia, think tank (in Chinese), search engines (e.g. Google, Baidu in Chinese)	39	21
External educational (institutional) websites	Australian Government Education Department website, World University newsletter, other Australian universities websites, overseas universities websites, overseas Government Education Department website, and overseas education agencies websites.	25	13
Internal people	People within the University, e.g. colleagues.	20	11
Internal emails	The University emails (from personal archive).	10	5
External people	People out of the University, e.g. external member of fundraising committee.	4	2
External research sources	Academic journals, e.g. Journal of International Higher Education.	2	1
Total		189	100

Table 3: Categories of information sources for current work tasks

Unlike prior work on engineers' daily information seeking who make extensive use of communications through interpersonal means as well as through information found in documents such as handbooks and internal reports (Hertzum & Pejtersen 2000), our results demonstrate that marketing personnel obtained most information from internal databases/documents (47%) and external general search engines and websites (21%), followed by external educational websites (13%), internal people (11%), internal emails (5%), and external people (2%). External research sources were used only twice. Overall, the marketing professionals sought more internal information sources (63%) than external sources (37%). The selection of information sources may relate to the nature of the work tasks—nearly half of them were administrative tasks and report writing tasks which required internal information.

It is worth noting that the marketing professionals tended to adopt multiple information sources to solve a single work task. Around 30% of the work tasks relied on two and more categories of information sources. It might be due to the complexity of work tasks

or the information content needs to be cross-checked from multiple sources. For example, when working on the task "Trying to find out why numbers of Malaysian students in the states of Victoria and New South Wales were much higher than other states in certain study areas", Study Participant 1 searched for information from the University credit assessor, other Australian universities' websites, Malaysian universities' websites, and Wikipedia.

Factors affecting the choice of information sources

Table 4 indicates the factors that affected participants' choice of information sources.

Factors	Frequency of consideration	%	Proportion of participants (out of seven)	%
Quality-related factors	**149**	**97**		
Sole source (uniqueness of internal source)	32	22	5	71
Appropriate external body	31	21	7	100
Self-generated collections	31	21	6	86
Familiar source (used previously)	22	15	6	86
Appropriate organisational unit	11	7	4	57
Known source recommended by colleagues or newsletter	9	6	4	57
Authority of source/official source	7	5	3	43
Up-to-dateness	1	0.7	1	14
Cost-related factors	**5**	**3**		
Accessibility (Quickness of accessing)	5	3	3	43

Table 4: Factors affecting the choice of information sources

The results show marketing professionals devoted overwhelmingly more attention to quality-related factors (97%) than to cost-related factors (3%) when selecting information sources. Specifically, the uniqueness of an internal source (22%), appropriate external body (21%), and self-generated collections (21%) were the three major quality-related factors viewed by the majority of participants (five of seven, seven of seven, and six of seven, respectively) in determining information sources selection. These were followed by familiar source (15%), appropriate organisational unit (7%), known source recommended by colleagues or newsletter (6%), and the authority of the source (5%). Accessibility (3%) and up-to-dateness (0.7%) were seldom considered when marketing practitioners selecting information sources for their work tasks.

An interesting note is that marketing professionals employed their own generated collections to support daily work. This encompassed archived emails, old magazine issues, personal notes, and documents and files stored in SharePoint or in physical boxes. Attfield and Dowell (2003) claimed that information gathered from sources was stored as user-generated collections to facilitate low-cost referencing and accessibility. However, the participants in our study tended to use self-generated collections not because of the ease of access but the consideration of quality-related factors. For example, Study Participant 8 believed "It's because myself and my team have created those paper files so we have confidence in their content", and "The existing files are always maintained and updated".

The results also demonstrate that the choice of information sources depends on the task. For instance, internal documents were used by the participants for administrative tasks to a greater extent than for those of strategic planning. Also, a notable finding is that external search engines and educational websites were employed more frequently when the participants interacted with the competitors-related task than with other tasks.

Criteria for information judgments

As discussed in the previous section, marketing professionals considered more quality-related factors as determining the selection of information sources. Quality information is critical to the success of marketing (Bennett 2007). Table 5 summarises the criteria applied for judging the obtained information.

Criteria	Keywords (direct quote)	Frequency (no. of negative judgments)	%
Reliability	Reliable, discrepancy, not reliable	55 (5)	20
Accuracy	Accurate, correct, spelling and grammar errors	44 (3)	16
Usefulness	Useful, helpful, usable, applicable	37	13
Relevance	Relevant, not immediately relevant	29 (3)	10
Currency	Current, up-to-date, updated, out of date, no sense of recent news	26 (3)	9
Comprehensiveness	Coverage, not comprehensive, not covered, lack of information, not very informative, incomplete, missing	21 (14)	7.5
Credibility	Credible	11	4
Authority	Authoritative	8	3
Effectiveness	Effective, hard to work out	7 (1)	2.5
Official	Official	7	2.5
Objectivity	Objective	6	2.1
Goodness	Good, well-developed	5	1.8
Trustworthiness	Trustworthy, trust	5	1.8
Importance	Important	4	1.4
Specificity	Not specific enough, hard to find exactly what I am looking for	4 (4)	1.4
Scholarliness	Scholarly, academic	4	1.4
Briefness/shortness/ Simplicity	Simple, short, quick	3	1.1
Security	Secure	3	1.1
Format	Not in a good format	1 (1)	0.4
Total		280	100

Table 5: Criteria for the judgements of information found

The marketing professionals were found to apply diverse criteria to judge the value of information obtained. Nineteen criteria for information judgments emerged from the data. Reliability (20%) was the major criterion of cognitive authority mentioned most frequently. This reflects that marketing professionals were concerned about the cognitive authority

construct of information substantially as they want to be sure what they are reporting or writing or relying on to make decisions is based on something deemed reliable.

In addtion, the participants believed if the source of information is reliable then the information would be reliable and credible. For example, Study Participant 8 stated "If it's a government site then it will have a high level of reliability. I never use social media and online news items because I don't see those as reliable; Study Participant 9 also stated "If I seek advice from a colleague I would choose that colleague on the basis of the reliability of what they'll tell me. Will they be in a position to give me accurate information?".

Again, it is notable that in many instances where marketing professionals valued the information because it was "born" within their environment – they were self-generated collections during work. For example, participants stated "I would have created it and placed the previous document on SharePoint. So I have confidence in its reliability" (Study Participant 8); and "I say reliable and relevant because I'm using our own files, our own material, I'm not relying on any others" (Study Participant 9). The quality of internal documents was regarded to be well controlled.

The second key criterion was accuracy (16%), followed by usefulness (13%), relevance (10%), currency (9%) and comprehensiveness (7.5%). This reflects that information quality construct was also vital to marketing professionals. The results are similar to Hughes et al.'s (2010) findings about clinical doctors' information judgments on online medical information, in which information quality and cognitive authority appear to be important factors in doctors' information judgments. Yet, additional six criteria were revealed in marketing information judgments, including relevance, effectiveness, specificity, briefness, security, and format.

It is interesting to note that marketing professionals applied negative information judgments as well as positive judgments, supporting Savolainen's (2011) view that both positive and negative criteria were used by people judging the quality and credibility of information. Our findings show that the participants made negative judgements on eight of the nineteen criteria, such as reliability, accuracy, relevance, currency, comprehensiveness, specificity, effectiveness, and format. Due to the space limit, the details of negative information judgments will not be reported here.

Use of obtained information

The marketing professionals expressed in the diary how they used or would use the information found. The rate of use of information reached 97%—either immediate use (89%, the obtained information was utilised immediately to solve the work task at hand) or delayed use (8%, for future use) (Table 6).

Overview	Number of instances (out of 101)	%
Immediate use	90	89
Delayed use	8	8
No use	3	3
Total	101	100

Table 6: Overview of information utilisation

There were three instances in which participants made no use of the information found because the information was not new compared to what they had already got, or was too little information to achieve the task goal. The participants made use of information mostly for writing a document, direct forwarding, updating an existing document, and

collating information in text format, which accounted for 60% of the total usage. Details of specific use of information found and their instances follow in Table 7.

Use of information found	Description	Examples	Number of instances (out of 98)	%
Writing	Writing a new document, an analysis, or a report.	"Using the data to write a short analysis paper", "Completed a report in Microsoft word".	17	17
Forwarding	Forwarding information directly to someone else, normally via emails.	"Used the email address given to forward on the information to the School".	15	15
Updating	Keeping the existing document up-to-date, maintenance.	"It was written into the updated version of my report", "Updated PowerPoint presentation for use at Corporate Induction sessions".	15	15
Collating	Assembling of written information, creating a collage to illustrate potential directions.	"Will be added to scanning list of institutions in Malaysia", "Used to prepare confidential guest profiles".	13	13
Recording	Making a record of information.	"Recorded the information into the system for Project Proposal data".	8	8
Advising	Providing advice for others, giving guidance, and making arrangements.	"Advised the staff how to change item code so that levy is not applied in the future".	7	7
Taking notes	Making notes for own recollections, annotation.	"Made some notes on reflections that I gained from the articles for my own purposes".	7	7
Reporting	Reporting to an upper level.	"Reported the briefing to the senior management".	6	6
Editing	Making revisions or adaptations.	"Changed the spelling to the correct one".	4	4
Calling	Phoning somebody.	"Used the number to call the students".	3	3
Decision-making	Making a decision.	"Determined that Diploma studies were my best option based on my level or education and work experience".	2	2
Marking	Marking up, labelling.	"Marked the event in calendar".	1	1
Total			98	100

Table 7: Use of the obtained information

Our findings reveal the subsequent use of obtained information. According to Kari's (2010) seven major conceptions which were assumed to cover the whole domain of information use—information use as information practices, as information search, as information processing, as knowledge construction, as information production, as applying information, and as effects of information—the use of information in our study identifies the examination to certain categories of information use in the marketing context, which can be categorised into:

- *information processing*: including editing, updating, and taking notes, in which information is interpreted, analysed, understood, and incorporated.
- *knowledge construction:* including writing, and decision-making, in which humans create new and adapted knowledge structures by interpreting and coding environmental stimuli.
- *informaiton production:* including advising, forwarding, reporting, and collating, in which information is shared, forwarded, and combined.
- *applying information:* including calling, recording, and marking, in which information is seen as a tool.

Dimensions of information sharing

Information sharing is an important component of information behaviour (Sonnenwald 2006; Wilson 2010). During the 101 work task instances, there were sixty-nine information sharing occurrences (68% of the total instances), while the rest of the work tasks required no sharing occurrence. As reviewed, Wilson (2010) uncovered dimensions of information sharing, including the number of people (or organisations) sharing and the setting of the sharing. Based on an intensive and micro-level analysis of the descriptions of information sharing data, we proposed a faceted classification of information sharing, comprising facets and values which were deemed important in the marketing context (Table 8).

Information sharing	
Facets/Dimensions	Values
People	team colleagues
	line manager
	senior management
	people from other units within organisation
	external people
Level of proactiveness	proactive
	upon request
Purpose	distributing to others
	obtaining from others
	discussing and consulting with others
Mode	e-mails
	telephone calls
	face-to-face
	social media
Content	topical areas
	ideas
	resources
	sources
	documents

Table 8: A faceted classification of information sharing

The behaviour of information sharing was identified to include five facets or dimensions: people, level of proactiveness, purpose, mode, and content. *People* focuses on who to share information with, having values of colleagues, line manager, senior management, people from other units, or external contacts; *level of proactiveness* refers to the

degree of active information sharing, with values of proactive or upon request; *purposes* emphasize the goals of sharing information, with values of distributing information to others, obtaining information from others, or discussing and consulting with others; *mode* refers to media of sharing information, which could include e-mails, phone calls, face-to-face conversations and meetings, or social media; *content* focuses on what is to be shared, with values of topics, ideas, resources, sources, or documents. The applicability of the faceted classification needs to be tested in other contexts and refined by empirical studies.

Conclusions and Further Research

Marketing professionals' information practices provide a rich research setting to better understand information behaviour taking place in the work environment. The research to this point has laid a foundation to model the relationship between information seeking, judgements of information, information use, and information sharing in the marketing context (Figure 1).

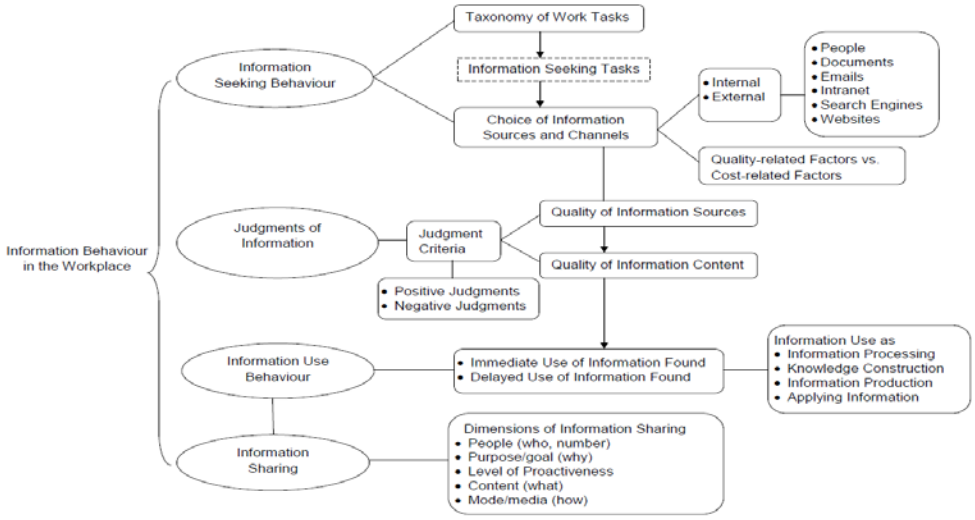

Figure 1: Information behaviour model in the workplace incorporating information seeking, judgment, use, and sharing

The model illustrates that marketing professionals' information seeking behaviour and judgment criteria on the value of information are contingent upon the different work tasks in which they are involved. A work task prompts a specific information need (an information seeking task), triggering purposive information seeking behaviour in the workplace. The work task plays a critical role in shaping marketing professionals' information-seeking pathways, including the choice of information sources and channels. Marketing professionals employ various criteria to make both positive and negative judgments on the obtained information related to work tasks.

Due to high confidence with the quality of information found, marketing professionals make immediate use or delayed use of the acquired information. Information sharing is another notable behaviour of marketing professionals and its occurrences are found to be embedded within the dimensions of people, purpose, level of proactiveness, content, and sharing mode. The findings have provided the holistic understanding of information behaviour by illustrating information seeking, information judgments, information use, and sharing contained in professional settings and how they are related.

Further research directions include investigating the implications for understanding and modelling marketing professionals' information behaviour. For example, the information sharing dimensions proposed would have implications for the introduction of information technology and information systems to support the behaviour of information sharing. Exploring information sharing behaviour is relatively new direction for information behaviour research. Further research is also required to examine the patterns of the occurrence of information sharing.

Acknowledgements

This research project was supported by the Division of ITEE Research Development Grant (10/ECNA-01) at the University of South Australia. We thank all of the study participants who contributed their valuable time to this project. We also thank the anonymous reviewers for their comments and suggestions.

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