



University of South Australia

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**The impact of culture on incentives for contribution to
wiki textbook projects:
An analytical study based on Hofstede's theory**

PhD Research Proposal

Presented by

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1 A statement of research topic

A wiki¹ textbook is produced by collaborative authoring (Adler, Nash & Noël 2005; Pfeil, Zaphiris & Siang Ang 2006). Researching in this area takes a place in information science. Information science is an interdisciplinary science that is concerned with collecting, sorting, manipulating, saving, retrieving and distributing information, and also the interaction between people and their organizations with information systems (Wikipedia 2007b). The foundation of information science has many disciplines such as engineering, education, sociology, research methodology and computer science (Zins 2007). A wiki is a technology that aims to make the collaboration authoring easier and quicker (Goodnoe & InternetWeek 2005; Fichter 2006). There are many applications of wiki such as wiki encyclopedia, wiki blog, wiki syllabus, and wiki textbook (Parker & Chao 2007).

A wiki textbook, my research focus, is a web based book that is produced by many virtual authors who collaboratively contribute to wiki textbook projects (Valenza 2006). These contributions can be by adding new knowledge or editing the current knowledge (Cragun 2007). These wiki textbooks can be accessed, and edited, through websites that can be called wiki-based libraries (Muljadi, Takeda & Ando 2005).

Therefore, researching in wiki textbook is broad and covers many aspects such as technical aspects and social aspects. The technical aspects may be wiki software (Fichter 2006; Wikipedia 2007c), the design and the content of wiki textbook (Bold 2006; Parker & Chao 2007), and the wiki tools (Parker & Chao 2007; Wikipedia 2007c), while the social aspects could be reasons for contributions, roles of contributors and coordination (Schweik, Evans & Grove 2005; Forte & Bruckman 2006; Hylén 2006; Nov 2007).

I choose to study one of the social aspects that is related to incentives which motivate people to contribute to wiki textbook projects (*Wiki Textbooks* 2007; *Open Planner* 2007; *Wiki Books* 2007). Without contributions, these projects could not be sustained ('Open source content contributors response to free riding: The impacts of personality and context' 2007; Nov 2007), and thus could not achieve their aims which are providing people who seek information for free and with good quality (Valenza 2006; 'Modularity, development contributions, and quality in open source software' 2007).

¹ Wiki is an Hawaiian word which means quick (Fichter 2006, p. 30)

2 Introduction to the research problem

Many wiki textbook projects aim to produce textbooks for free to students who seek more knowledge (*Wiki Books* 2007; *Meta Collab* 2007; *Open Planner* 2007; *Wiki Textbooks* 2007) . The founders of these projects aim to develop quality textbooks that cover specific topics under their textbook main titles. To achieve that aim, more voluntary contributors are needed not only to contribute with adding new content but also to verify the content and update this content (Hylén 2006; 'Open source content contributors response to free riding: The impacts of personality and context' 2007).

There are different incentives that may motivate people to contribute to these wiki textbook projects. These incentives are different according to their personal values (Clary et al. 1998; Shapira, Kantor & Melamed 2001; Forte & Bruckman 2006; Wagner & Prasarnphanich 2007). For example, some people contribute to wiki textbooks because they want to receive peer recognition while others seek for fun.

Because the contributors to wiki textbook projects are from all over the world, which means that they are from different cultural backgrounds, therefore, these cultural backgrounds affect their attitudes of contribution (Pfeil, Zaphiris & Siang Ang 2006).

Culture affects not only the individual's behaviors but also the educational systems. These different cultures are manifest in the different educational systems of their countries (Hofstede 1986; Attieh 1992; Mitter 1992). The textbook is an important component of the educational system, and is affected by the culture and its educational system (Valenza 2006; Cragun 2007). For example, culture affects the language of textbook and also the educational objectives, the structure and the content of textbook (Attieh 1992; Vitas & Krstev 1999; Johnstone 2005; Valenza 2006; Parker & Chao 2007).

2.1 Research problem

Since wiki textbooks need to be produced in different languages and according the educational system of different cultures, therefore, contributors from different languages and cultures (Callahan 2005; Johnstone 2005; Valenza 2006) need to be motivated by different incentives (Hars & Ou 2001; Shapira, Kantor & Melamed 2001; Schweik, Evans & Grove 2005; Forte & Bruckman 2006; Nov 2007), to contribute to wiki textbook projects. These incentives for contributions may affected by, not only the values of individuals (Hars & Ou 2001; Forte & Bruckman 2006; Nov 2007; Wagner & Prasarnphanich 2007) but also, the values of their cultures. Finding culture-based incentives is important to produce suitable wiki textbooks for students from different educational systems. In other words, I will try to argue that contributors may often react to incentives based on their cultures.

2.2 Research importance

Wiki textbook projects need contributors from different cultures to produce wiki textbooks which accomplish with their educational systems. These contributors are essential for sustaining of wiki textbook projects and for achieving their aims, which are providing quality information for free to students especially with the increased pressure of economic conditions and with the increase in population and increased rate of unemployment which lead to the increase of poverty especially in developing countries. These developing countries suffer from an unskilled and less-educated population and low income per capita (Johnstone 2005; *Income per capita according to statistics of World Bank 2007*) . The low income hinders these people in buying physical textbooks (Cragun 2007) . Therefore, the solution is providing them with free wiki textbooks that suitable with their educational systems. My motivation to do this research is providing students in Arabic countries, which most of them are developing countries (*Developing countries list according to American Mathematical Society 2007; Wikipedia 2007a*), with quality wiki textbooks in the Arabic language.

3 Research questions

3.1 Research main question

Are the incentives for contributions to wiki textbook projects affected only by the five cultural dimensions, which are indicated in Hofstede's theory, or are there other factors that probably have an effect on the incentives for contributors such as the language and structure of wiki textbooks and the interface design and language of wiki-based libraries?

3.2 Research subsidiary questions

To answer the research main question, the researcher will try to answer the following subsidiary questions:

- Q1 What are the dimensions of Hofstede's theory of culture?
- Q2 What are the incentives for contribution to wiki textbook projects?
- Q3 What are the other factors that could have an effect on the contributors?
- Q4 What is the way(s) to measure the effect of the Hofstede's cultural dimensions and other factors on the incentives for contribution? And what are the indicators that could be used to measure these effects?
- Q5 How the Hofstede's dimensions of different cultures affect the incentives for contribution?
- Q6 How do the other factors reflect on the impact of culture on incentives for contribution?
- Q7 What are the contributors' opinions about the incentives and other factors based on their cultures?

Answering the first four questions will enable me to establish a strong theoretical base for this study, and answering the remaining three questions could prove the validity or deficiency of that theoretical base to achieve the culture-based incentives that the researcher seeks to identify and to provide some recommendations for practice as well as theory.

4 Literature review

To answer the research subsidiary questions that lead to answer the main question, a review of literature is conducted. To make this section organized and easy to follow, the researcher divided this section into four main subsections that cover four domains of knowledge which are related to my research topic. A simple diagram of these domains is as follow:

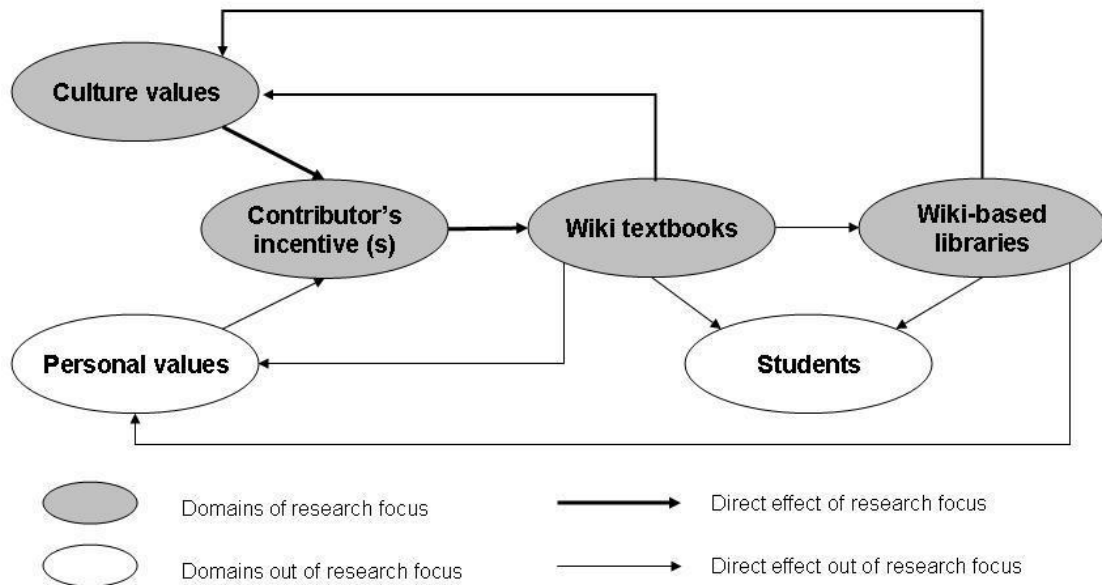


Figure 1: Current research's domains of knowledge

I will discuss the intersection relationships of the domains of this diagram as follows.

4.1 Cultures

Culture includes values, symbols, stories and beliefs that affect people in the way they think and behave (Hofstede 2001; Ivancevich, Matteson & Konopaske 2005). Many studies discuss culture with the aim of identifying different cultures, and how these different cultures affect the behaviour of people. Some of these studies focus on the effect of culture on people in the physical world (Wilson 1999; Hofstede 2001; Harris, Moran & Moran 2004; Ivancevich, Matteson & Konopaske 2005) while other studies applied the effect of culture on people in the virtual world (Marcus & Gould 2000; Marcus 2001; Kim & Bonk 2002; Pfeil, Zaphiris & Siang Ang 2006). One of these studies distinguishes different cultures according to four main dimensions which are expressed in a HOME theory of a positive culture for Gross and Shichman (cited in Ivancevich, Matteson & Konopaske 2005). These four dimensions, in order, are: history

(H), oneness (O), membership (M), and exchange (E). Another theory for Edward Hall (cited in Hofstede 2001) distinguish cultures according to their communication ways to high context (HC) culture and low context (LC) culture. A third theory to identify culture is Hofstede's theory (Hofstede 2001). According to Hofstede theory cultures could be distinguished based on five dimensions. These cultural dimensions are: power distance, collectivism/individualism, femininity/masculinity, uncertainty avoidance and long/short term orientation (Hofstede 2001). Power distance indicates to the way in which the society deals with inequality issues; individualism means that individuals focus on their self-interest against the group interest, while collectivism means that the individuals in the society are strongly integrated; masculinity means individuals in the society focus on performance of roles, while femininity means that the individuals focus on the relationship and quality of life; uncertainty avoidance means how the society deals with the uncertainty conditions; long term orientation means that people in the society focus on the future while short term oriented society means that its people focus on the present and past (Hofstede 2001).

Although the Hofstede's theory has been critiqued by some researchers such as McSweeney (2002), his theory was applied, in virtual world, by other researchers to identify some designing considerations in website interfaces (Marcus & Gould 2000; Marcus 2001; Tsikriktsis 2002). Moreover, Hofstede could apply his theory in different educational systems (Hofstede 2001). For example, for some cultures which have a high value of uncertainty avoidance, a short website menu is preferred (Marcus & Gould 2000). Furthermore, in another study, to attract international students from specific countries or cultures, the interface language and colours of universities' websites also are considered (Callahan 2005). The enrolment of these international students to the university programs can be considered as behaviour.

Language has a great effect on the behaviour of students. According to Callahan (2005), universities could attract more international students if these universities develop their websites in the languages of their potential international students. Moreover, Pfiel and his colleague (2006) could prove that culture can affect the contribution patterns, adding and updating, to Wikipedia. For example, contributors to Wikipedia from masculine cultures add more knowledge than people from feminine cultures.

It can be concluded that culture affects the contribution's behaviour in a direct way. In addition, interface language of website affects the behaviour in an indirect way. With the assumption that most contributors to wiki textbook projects are students (Pfeil, Zaphiris & Siang Ang 2006; *Global Text Project* 2007; Cragun 2007; Parker & Chao 2007), this justifies why I will discuss

the language as an affective factor on contribution behaviour to wiki textbooks (as I will mention in section 4.3). Although Pfiel (2006) could prove that different cultures affect the behaviour patterns, he did not relate the contribution's behaviour to a specific incentive (s). The incentives for contributions will be explored in the following subtitle.

4.2 Incentives

Individuals are different. They are different according many factors such as their genetic factors, education, and values (Clary et al. 1998; Hofstede & McCrae 2004; Hofstede & Fink 2007). Values arrange individuals' priorities and also control their behaviour (Beer, Eisenstat & Spector 1993; Wilson 1999; Hofstede & McCrae 2004; Hofstede & Fink 2007). Based on this fact, contributors to open source websites, either open source software or open source content, contribute based on their own incentives (Hars & Ou 2001; Roberts, Hann & Slaughter 2006; 'Open source content contributors response to free riding: The impacts of personality and context' 2007; Sagers 2007). In other words, the incentive(s) for contribution may differ from one contributor to another. These incentives could be intrinsic or extrinsic (Hars & Ou 2001; Shapira, Kantor & Melamed 2001; Roberts, Hann & Slaughter 2006; 'Open source content contributors response to free riding: The impacts of personality and context' 2007). The intrinsic incentives could be self-competent, person self-determining, and altruism (Hars & Ou 2001). The extrinsic incentives may be self-marketing, selling other products, peer recognition, and meeting personal needs (Hars & Ou 2001; Shapira, Kantor & Melamed 2001; Roberts, Hann & Slaughter 2006). A financial reward is also considered as an extrinsic incentive (Hars & Ou 2001; 'Open source content contributors response to free riding: The impacts of personality and context' 2007). In another study, Wagner and Prasarnphanich (2007) argue that the most common incentive for contributions to open source software is controlled by selfishness . While the contributors to open source software aim to receive financial rewards or to solve their personal problems, the contributors to open source content are motivated by altruism because they want to be beneficial to others by providing knowledge for free (Wagner & Prasarnphanich 2007). This argument contradicts the results of another study that indicated that most contributors to open source content are students who aim to have fun and receive peer recognition (Shapira, Kantor & Melamed 2001; Nov 2007). This may indicate that the samples of participants of these studies were not broad enough to cover different cultures and that they may be from native-English speaking countries for empirical considerations.

4.3 Wiki textbooks

Many studies cover the area of wiki textbooks from different perspectives. For example, Bold (2006) and Reinhold (Reinhold 2006) suggested that wiki textbooks have to have different scenarios to suit different readers and their interests. This feature may not be planned well, in the current wiki textbook projects (Cragun 2007). Although there are some claims that wiki textbooks can not be reliable sources for information because their contents may not be verified, are incomplete or unorganized (Goodnoe & InternetWeek 2005; Bold 2006), other researchers argue that having many active contributors can verify the information in these wiki textbooks (Hiltz & Turoff 2005; Parker & Chao 2007). From a business perspective, content verification is like quality control (Schweik, Evans & Grove 2005; Bold 2006; Sagers 2007). This is why both of Bold (2006) and Tumlin and his team (2007) ask: what will happen if there are no active contributors, or the contributors do not have the enough experience or knowledge to verify the content? Therefore, incentives are required to have many contributors who can add knowledge and edit the content of a wiki textbook. As Shapira and his colleagues Kantor and Melamed (2001) have argued that there are two types of motivations: intra-group motivations, the “pizza party” motivations (Shapira, Kantor & Melamed 2001, p.885), which work as external motivations and the “pizza itself” (Shapira, Kantor & Melamed 2001, p.885). In my research, the pizza is the wiki textbook itself. Wiki textbooks should have characteristics to make sure that the readers are interested to read or the contributors are interested to contribute to them. For example, these characteristics might include good design characteristics and having multimedia (Shaw, Fu & Sung 1996; Landoni, Wilson & Gibb 2000, 2001). It is hard to find multimedia in the current wiki textbook projects. Another characteristic of wiki textbooks which is important is to have a clear structure of table of contents to make it easy for people to contribute (Bold 2006; Parker & Chao 2007) especially for people with a high rate of uncertainty avoidance (Pfeil, Zaphiris & Siang Ang 2006). This characteristic is similar to simple modules in open source software. Simple modules make it easy for contributors (open source software programmers) to fix software bugs. When the contribution is easy, contribution rate will increase (MacCormack, Rusnak & Baldwin 2004; 'Modularity, development contributions, and quality in open source software' 2007).

A wiki textbook, is like any book, needs to meet the reader's requirements (Valenza 2006; Parker & Chao 2007). Some of these needs are ease of searching and quick links to other resources. Furthermore, the readers wish to have a book in the language that they prefer (Evans & Del-Pizzo

1998; Vitas & Krstev 1999; Valenza 2006) . This is why wiki textbook projects seek for contributors from many languages (*Global Text Project* 2007; *Wiki Books* 2007). Therefore, there is a need for incentives for contributors from different languages. Among all of characteristics of wiki textbooks, I have chosen language and clear structure of the wiki textbook as factors that can have a reflection on incentives for contribution.

4.4 Wiki-based libraries

A wiki-based library (Muljadi, Takeda & Ando 2005) as any electronic library needs to meet the reader's needs (Lindquist 1998). These needs are varied. For example, as Callahan (2005) mentioned that international students prefer to find the university websites in their languages, therefore the interface languages should be in the language they prefer. These languages could be the native languages of the readers. As I mentioned earlier, to attract international students, universities should develop their websites in the languages of their potential students (Callahan 2005). Therefore, when wiki textbook projects ask for contributions from different languages, their wiki-based libraries need to have different interface languages.

The interface language is not the only consideration for a wiki-based library. Another consideration for this type of electronic library that it should has a search-ability (Borgman 2000). Furthermore, the appearance characteristics should be comfortable for the users (Borgman 2000; Ling-Feng, Jiung-Bin & Mu-Chen 2004).

I have chosen the appearance of wiki-based libraries and also the interface language as factors that could be related to culture (Marcus 2001; Tsikriktsis 2002; Callahan 2005; Tumlin et al. 2007). In my study, I will examine how these factors can also affect the incentives for contribution to wiki textbook projects and how they are related to cultural dimensions for the contributors.

5 Research methodology

5.1 Research philosophy

As mentioned in the beginning of this proposal, the research area of this study is information science. Researching in information science requires the application of social research methods because it involves the interaction between information technologies and humans (Bryman 2004; Zins 2007).

Three main paradigms exist for research in social science. First: positivism, where the researcher views the social phenomenon in the way that the phenomenon is studied in natural science where the researcher aims to answer what and how questions (Blaxter, Hughes & Tight 2001; Bryman 2004). Second: Interpretivism where the researcher aims to study and understand the social phenomenon in its surrounding conditions (Blaxter, Hughes & Tight 2001; Bryman 2004). Third: critical, where the researcher not only wants to understand the phenomenon but also to apply some changes to the studied phenomenon (Blaxter, Hughes & Tight 2001)

Since the aim of this research project is not only identifying what incentives motivate people to contribute to wiki textbook projects, but also how these incentives can be affected by the cultures of contributors, therefore, the research philosophy that the researcher will adopt the positivism philosophy in most of the research phases.

Researchers in the methodology field try to distinguish between qualitative methods and quantitative methods. However, now there is a common orientation toward using mixed method especially with the difficulty of distinguishing between qualitative methods and quantitative methods and also with the enforcement to use triangulation of these research methods to fill in the gap of findings if the researcher rely on only one research method (Bryman 2004).

Three main designs work as frameworks to collect the data. These designs are experimental design, case study design and cross-sectional (survey) design (Bryman 2004). Since I aim to conduct my research on different contributors, from different cultures, and on different wiki textbook projects where I have no control, therefore it is difficult to adopt either experimental design or case study design.

A number of data collection techniques may be used to collect data from participants (contributors to wiki textbook projects) such as questionnaire either by post, email or web-based (Couper, Traugott & Lamias 2001; Bryman 2004; Yun & Trumbo 2007), interview (Bryman 2004; Robey & Jin 2004), observation (Bryman 2004; Robey & Jin 2004), participant observation (Bryman 2004), and Delphi survey (Linstone & Turoff 1975; Van Dijk 1990; Okoli & Pawlowski 2004). The following section will explore the selected research methods and why they have been chosen.

5.2 Justification of research methods

Since I will collect data from virtual participants, therefore data can be collected using either an online questionnaire or online interview. Collecting data using interviews is expensive and time consuming (Bryman 2004). Because the aim is to collect data that covers many variables, such as different incentives and other factors, therefore, I will start first using a questionnaire which can be sent to many participants in the same time (Bryman 2004). To send the questionnaire to virtual participants, it could be done through either an email which attached a questionnaire that requires the participant to fill it in and sends it back to the researcher, and an email which involves a link to website which is designed specially to conduct this survey (Couper, Traugott & Lamias 2001; Bryman 2004; Yun & Trumbo 2007).

Each of these surveys has its advantages and limitations. A web-based survey has more advantages over an email survey. In web-based surveys, the response to the survey is quicker than an email survey. The rate of responses to a web-based survey is higher than an email survey because the appearance of a web-based survey and also its development are much better than email survey. Furthermore, the collected data is simultaneously stored, checked, and processed (Couper, Traugott & Lamias 2001; Bryman 2004; Yun & Trumbo 2007). Moreover, the web-based survey has an advantage of filtering the questions which allow jumping, this characteristic is hard to apply to an email survey (Bryman 2004; Yun & Trumbo 2007).

After I collect data using the web-based survey, I will conduct an online semi-structured interview to some contributors who participate in web-based survey so that I'm able to receive descriptive data of contributors' opinions regarding incentives and other factors, with the aim of creating better understanding. The semi-structured interviews have some advantages over structured and unstructured interviews (Bryman 2004). It makes it possible to receive more details within a specific topic(s). Furthermore, although it gives the contributors more flexibility

to give their opinions, it avoids the time consumption of unstructured interviews and also it saves more time and money in scripting or taping these interviews (Bryman 2004).

5.3 Research phases

This research project is divided into two main phases:

5.3.1 Theoretical framework

This theoretical framework will be established based on a literature review that covers the domain topics: cultural values, incentives for contribution, and characteristics of wiki textbooks and wiki-based libraries that affect the behavior of people to contribute to wiki textbook projects from a collective perspective. I will use Hofstede's theory of culture with a focus on Arabic and Anglo cultural values. In addition, I will disclose the incentives for contribution to wiki textbooks whether intrinsic or extrinsic. I will examine the characteristics of wiki textbooks (wiki textbook language and wiki textbook structure) and the characteristics of wiki-based libraries (wiki-based library interface design and wiki-based library interface language).

This phase aims to answer the first three subsidiary questions (Q1, Q2, and Q3).

By the end of this theoretical analysis, the researcher will be able to build up a strong theoretical framework, which helps the researcher to answer Q4.

5.3.2 The empirical study

5.3.2.1 Study sample

Because of the difficulty of covering the effects of all cultures on incentives for contributors, therefore I will conduct my research with contributors from western culture (Anglo) such as England, USA, and Australia, as well as Arabic culture which include all Arab countries. Another empirical consideration is to conduct the research in both Arabic and English languages because I am familiar with both Arabic and western cultures and also I choose these two languages because I can use them to conduct the web-based surveys and use them in online semi-structured interviews. Furthermore, I choose Arabic culture with the aim of receiving more contributions from their people as well as Anglo culture.

But due to the difficulty of researching the required participants before applying data collection techniques, I will send invitations to contributors' emails through the email lists of some wiki

textbook projects² to participate in web-based surveys (which involves the following criteria) and I will filter the responses according to these criteria:

- The native language of contributors, either Arabic or English
- The contributors are from Arabic countries, England, Australia, and USA.
- The contributors should be of 18 years of age or older to exclude children
- The language of the produced textbook is the same native language as that of the contributor, as I previously mentioned that one of the outcomes of this research is producing textbook in different languages.

Some examples of questions in questionnaire

The following questions will be answered using yes/no or Likert scale responses:

- I would like to contribute to enriching wiki textbook project by providing many definitions for one terminology [Ideology (incentive) & Uncertainty avoidance (cultural dimension)].
- I have fun when I contribute with my friends to produce a quality wiki textbook. [Social (incentive) & Collectivism (cultural dimension)].
- Although I have many other duties, I find that my contribution increases my skills [Enhancement (incentive) & Muscularity (cultural dimension)]
- I feel sad if another contributor deletes what I contributed to if this deletion affects a positive point in my resume [Career (incentive) & Power distance (cultural dimension)]
- I will continue contributing since my efforts could be beneficial for other readers [Altruism (incentive) & Long-term orientation (cultural dimension)]

5.3.2.2 Data collection techniques

Before conducting data collection, an ethics approval is required to be sure of some ethical considerations³.

In this phase, the researcher will collect the primary data using the two following techniques:

² I already sent many emails to the administrators of wiki textbook projects introducing my research topic, and asking them for their cooperation to conduct this research. Recently, I received an acceptance for cooperation from Richard Watson who administrates Global Text Project.

³ Because research aims to collect information from individuals, by law which controls researching institutions in Australia, an ethics proposal should be lodged to obtain an approval which will be required before conducting this research. There is a list of topics that the web-based survey and online interviews will cover. These topics are the incentives for contributors, and the name, age, job, nationality, and their native language of the participants, and also their opinions regarding the wiki-based library language and interface and wiki textbook language and structure and how these factors affect their behaviour and contributions.

5.3.2.2.1 Web-based surveys

This analysis of the collected data will provide the researcher with a complete picture of the different incentives and factors that are affected by culture and have an effect on the contribution. This survey could provide the initial and basic answers for Q5 & Q6

5.3.2.2.2 Semi-structured Online interviews

This analysis of the collected data will give the researcher more explanations, in more detail, and fill-in the gaps of the findings obtaining from the previous method. The interviews will answer Q7.

Other research methods may be applied if I have time and resources, and I find that the findings of the previous research techniques are still not clear enough.

5.3.2.3 Data analysis techniques

It is useful to consider which data analysis techniques will be used. Therefore, as I will use mixed research methods to collect data, mixed analysis may required. There are some possible strategies that can be used to analyze collected data such as univariate analysis using frequency tables and diagrams; bivariate analysis using contingency tables; and also multivariate analysis (Bryman 2004). For example, the frequency tables may be used to show which incentive(s) are more common in different cultures, and bivariate analysis could be used to discover the correlations between each type of incentives and different values of cultures. In addition, there are code analysis and narrative analysis (Bryman 2004). The analysis will be done based on the theoretical framework, admitted logic and the reality. For example, with the responses from the interviews, responses could be coded into main expressions to make it easy to do the analysis.

By the end of the analysis, based on both theoretical phase and empirical phase, the researcher can conclude to some results. Based on these results the researcher could identify the culture-based incentives that may be useful for wiki textbook projects if their founders adopt the research recommendations. In addition, some other recommendations will be made that may guide the future research in this area.

Lastly, the researcher hopes to achieve more contributions to the current knowledge of information theory.

Before the researcher finishes this proposal, she will discuss the expected outcomes, limitations and future research as follow:

6 Contribution and expected outcomes

Although the current knowledge covers the incentives for contribution to open source websites, these incentives are identified from an individualistic perspective and away from the cultural values that provide a collective perspective and affect the behavior of contributions. Furthermore, although the current knowledge has explored the cultural considerations in designing websites and their interface language, the current knowledge is still poor in the area of how these cultural considerations of wiki-based library and wiki textbook can have an affect on the incentives for contribution.

Therefore, by the end of this study, the researcher expects to achieve the following aims which lead to the development of information theory.

6.1 Contribution to information theory

- Identify incentives for wiki-book projects that are concerning the cultural values of the contributors.
- Understand how the design and language of wiki-based library affect the behavior of contribution
- Discover how the structure and language of wiki textbook affect the contributors
- Rate the incentives according to the different cultures.

6.2 Contribution to practice

Due to the fact that the researcher has no control over wiki textbook projects, therefore contribution to practice is limited to that of the wiki textbook founders adopt how of the cultural considerations of incentives in wiki textbook projects.

7 Limitations

This research will focus on wiki textbook projects only. Therefore, the results of this research may not be generalised on all wiki projects. Furthermore, this study will focus two cultures, Arabic culture and Anglo culture, and their effect on incentives. As it is not possible to study each culture, therefore there are some cultures which will not be covered by this study.

8 Future research

The effect of specific culture on the incentives for contributions to wiki textbook projects can be conducted. Moreover, instead of using the Hofstede's theory for national culture, another theory of culture such as a HOME theory for Gross and Schichman, can be used to address the culture effect on incentives for contributions. Further research could be conducted if the recommendations are adopted by wiki textbook founders, to test the cultural considerations on incentives for contributions.

9 Research resources

- University scholarship that covers the research fund
- University equipment and facilities
- I will apply to Jacob foundation to support my research.

10 Project plan

Research activity	Year 1		Year 2		Year 3				
	01-06 month(s)	07-12 months	01-06 month(s)	07-12 months	01-06 month(s)	07-12 months			
In-depth reviewing of literature	■	■	■	■	■	■			
Adjusting the methodology, designing questionnaire, applying for ethics proposal, and building wiki textbook project.	■	■							
Gathering data using web-based surveys		■	■						
Analysing data that collected by web-based surveys			■	■					
Finalizing web-based surveys and plan for semi-structured interviews				■					
Gathering data using semi-structured online interviews				■	■				
Analysing data that collected by semi-structured online interviews					■	■			
Finalizing semi-structured interviews						■			
Collecting the sprinkled research ideas and building up a logical structure						■			
Writing up the PhD dissertation	■	■	■	■	■	■			
Attending conferences and writing research papers		◆		◆		◆	◆	◆	◆

- The period of study for a certain activity
- Reserved time to complete a certain activity
- ◆ Short-term activity

Figure 2: Time plan for PhD project

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- Future research

12 References list of current proposal

The following references are that the researcher used to prepare this proposal; however, to do PhD, it requires to refer to more references. A proposed reference list for the PhD project will be mentioned in the appendix of the current proposal

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13 Appendices

Researcher Biography

Amal Hanna is a PhD student in School of Computer and Information Science in University of South Australia. Her supervisors are Associate Professor Carole Alcock and Professor Paula Swatman.

Amal Hanna obtained two master degrees: the first one is Master of Public Administration (by thesis) from Cairo University, and the second one is Master of e-Commerce Website Designing (by course work), from CIW-USA.

In addition to three postgraduate diplomas in Web Site Designing from IBM-Egypt , Web Site Developing from IBM-Egypt, and Educational Software Programming (Visual Basic) from Cairo University.

Her first degree is B.Sc. of Business Administration from Cairo University which is recognized by VETASSESS-Australia as Bachelor of Commerce (Business and Information).

Amal Hanna has more than ten years of work experience as a researcher, computer instructor, purchasing manager, Visual Basic programmer, website designer and website developer. Her last job was IT web project manager.

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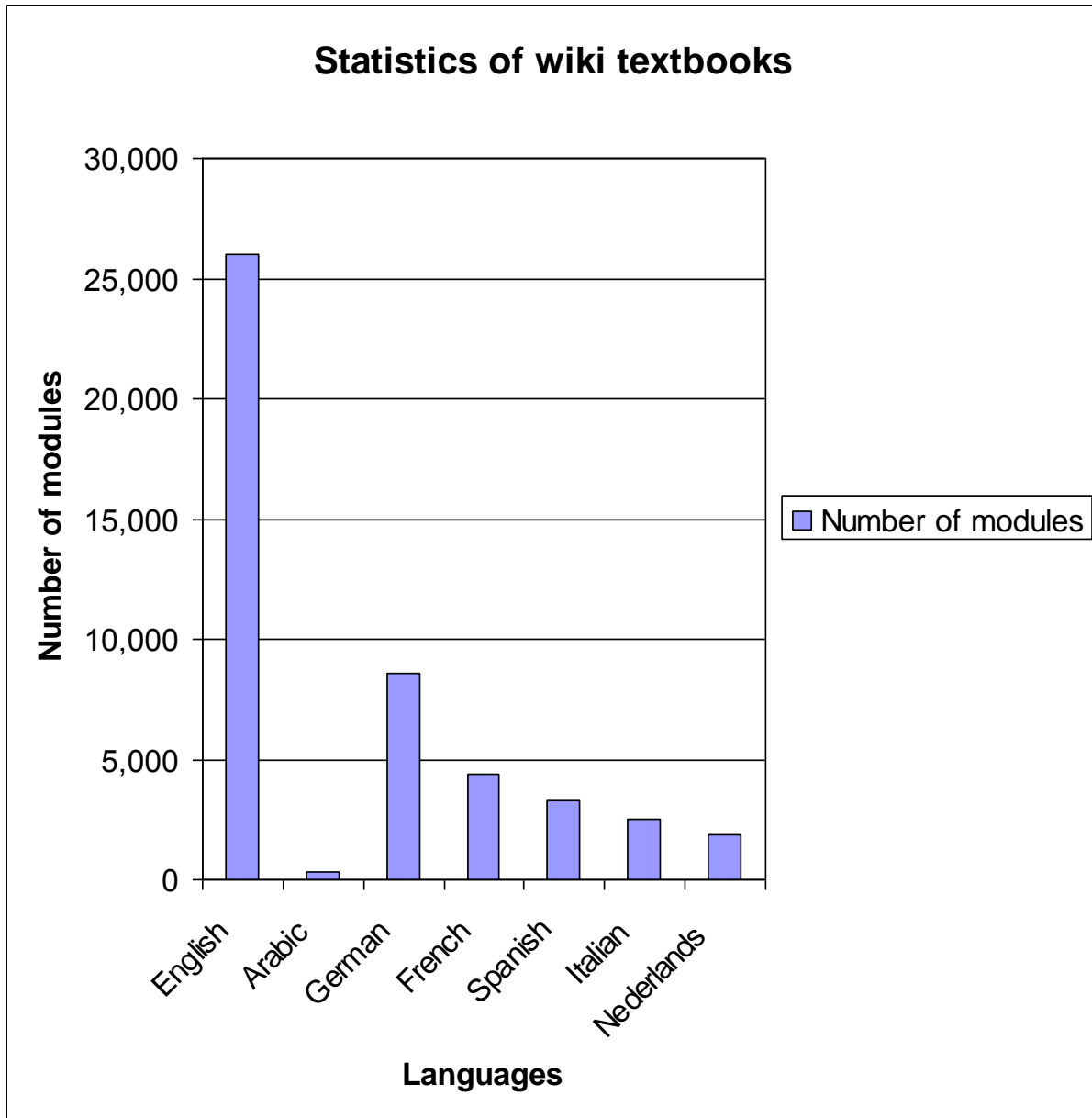
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Appendix II: Statistics of number of wiki textbooks

Statistics for number of modules of wiki textbooks according to language – from www.wikibooks.org



N.B. Module could be either an article or book sub-section