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Knowledge Archetype: Facilitating Cross Cultural Knowledge Sharing

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Abstract

Studies have indicated that national culture may impact the choice of who shares knowledge with whom. This paper considers the problem of tacit knowledge sharing in multi-cultural environments and the issues that relate to trust, language, and culture that could impact on tacit knowledge sharing choices.

A study was conducted in an international and multi-cultural Business School to discover if the theoretical research relating to a potential tacit and implicit knowledge sharing archetype had validity. The study which was conducted with 70 students from 28 nations speaking 24 languages, discovered that the variables that impacted who students chose to ask for indicated that the longer that students spent in the Business School; the longer they were in London and the UK; and the older they were, the less they were concerned about the nationality, ethnicity, and language of the person they asked. Additionally, testing the knowledge archetype module it was found that there were no moderating factors. This indicates that a knowledge archetype that is common to all nationalities can be developed.

Keywords

Knowledge Management, Avatar, Cross Cultural Studies, Knowledge Sharing, Knowledge Dynamics, Knowledge Archetype, Tacit and Implicit Knowledge.

1. Introduction

The importance of managing knowledge assets in a business enterprise has been established by researchers many arguing that it is the most critical function in an organization to maintain a competitive edge, and claiming that knowledge management provides the innovation to deliver this competitive advantage (Coakes, Bradburn, & Sugden, 2004; Coakes and Clark, 2010; Ghosh and Wu, 2007; Prusak, 2001). When looking for information and knowledge in a new environment, especially in a new country, it could be expected for a person to look for someone of similar age, ethnicity, culture, or language to assist them in their search. This assumption is one that can cause issues when you cannot find that 'similar' person because your environment does not provide them. Who then will you choose to ask? Indeed, as we enter an age where businesses operate in a complex multi-national environment is this assumption still valid? In order to look at this assumption, and any moderating factors on the choice of assistance in the search, a study was carried out in Westminster Business School (WBS) amongst Postgraduate students from 28 nationalities. Specifically this research considered the following questions:

- Can a descriptive model be developed to understand the dynamics working behind cross cultural knowledge sharing?

- Can an archetype be developed to promote knowledge sharing in cross-cultural environment?

The concept of knowledge in the business / management literature is still evolving with a lack of consensus. Table (1) gives a summary of some of the views on knowledge expressed by researchers who consider personal knowledge as being an individual's world view and that these individual views combine to form a society's or community's world view.

Author/s	Knowledge
Wiig (1993)	Truths and beliefs, perspectives and concepts, judgments and expectations, methodologies and know-how
Nonaka and Takeuchi (1995)	Commitments and beliefs created from these messages
Spek and Spijkervet (1997)	The ability to assign meaning
Davenport (1997)	Valuable information from the human mind
Davenport and Prusak (1998)	Experiences, values, insights, and contextual information
Choo et al. (2000)	Justified, true beliefs

Table 1: Views on Knowledge

This paper discusses the ideas of knowledge sharing and the concept of a knowledge archetype demonstrating the theoretical base that underpins the model suggested. The paper considers the research undertaken at WBS to validate the Knowledge Archetype including the methodology; data collected; data analysis; and discussion and verification of the archetype. The paper concludes with a discussion of research limitations and future research to develop a technical avatar.

2. Exploring the Knowledge Sharing Landscape

Since the popularity of knowledge management (KM) discussions began in the business domain, a number of models have been presented for understanding knowledge sharing in organizations. The earlier KM models were often focused on the hard structure such as the use of IT, while later models have shifted the focus to a soft structure approach (Blankenship and Ruona, 2009; Jeon et al., 2011; Lakshman, 2011). One emerging idea is to analyse the organizational culture for the promotion of knowledge sharing. The employees are to be facilitated and motivated by management to share knowledge voluntarily within the organization, and therefore increase the innovative capacity of the organizations. The idea of encouraging a specific culture for the promotion of knowledge sharing has been adopted from research in cultural anthropology, especially the studies on cultural characteristics (Hall, 1959; Hall, 1966; Hofstede, 1980) of employees, and ways in which culture can hinder knowledge sharing - Duan et al. (2010) for instance studied factors affecting transnational knowledge transfer across cultures and organizations. Their research developed from the individual level arguing that without the individuals' involvement, knowledge cannot be transferred, and then moved on to consider knowledge transfer at the intra and transnational organisational levels. Duan's research (ibid) identified 24 major factors and 10 key factors including trust, motivation, leadership, and the use of ICT that affect the transfer of knowledge across national boundaries.

Additionally, socio-technologists would argue that the character of technology is shaped by the sociocultural conditions that it is embedded in (Pinch and Bijker. 1987; Woolgar, 1991). Diverse sociocultural conditions will determine the usefulness of the technology and the use to which it is put. Pinch and Bjiker (1987) refer to this as technology being socially constructed. Producers and users of technology shape the definition or redefinition of these technologies giving it new meanings in specific contexts (Mackay et al, 2000; Suchman,

2002) and this is particularly important as we discuss the uses of an avatar for knowledge sharing, later in this paper.

2.1 Knowledge Archetypes

The use of archetypes by civilizations to transfer or strengthen cultural values has been established by Jung (Hampden-Turner, 1982), however the use of an archetype in the KM research literature is infrequent and often approached from psychological perspectives. Lemon and Sahota (2004) present knowledge as a bundle of knowledge repositories with storing and information processing capabilities. Similarly Kang et al. (2007) use relational archetypes in relation to organizational learning and value creation with the ultimate function of extending human resource architecture. Researchers have used the knowledge archetype concept to study organizations eg including Desouza and Evaristo (2006), when investigating the project management office in IT companies described four archetypes based on KM functions and the organizational capabilities. Makela et al. (2009) in contrast used the archetype concept to build human and social capital within an organization.

3. Developing a Knowledge Sharing Archetype

This study builds the concept of a Knowledge Sharing Archetype using Polanyi's (1958) view of knowledge - utilising Jung's concept of Archetype and collective consciousness. The Archetype is contained by a Culture Based Knowledge Sharing Model for organizations as described by Lodhi (2005), and Lodhi and Ahmad (2010). The knowledge sharing process between two individuals at an abstract level, is presented in Figure-1 below, where an actor "A" has a certain world view based on his/her experiences and information about an object or an issue. When that actor intends to pass his/her understanding of reality to another actor "B", he/she codes his point of view into a verbal and nonverbal message and transmits it the actor "B". The actor "B" then de-codes the message with the help of his/her previous knowledge, experience and the information contained in the message received from actor "A". The actor "B" after decoding of the complete message is able to create his/her own view of reality. When we compare the reality view of actor "A" with the reality view created by actor "B", even assuming that there has been no distortion in the message due to noise or miscoding on the part of actor "A", the world view of actor "B" could never be the same as actor "A".

The knowledge sharing process in Figure -1 is based on Polanyi's theory of Knowledge, which has roots in constructivism (Svieby, 1994). Considering that knowledge is not private but social in nature, therefore socially conveyed knowledge blends with the experience of reality of an individual. New experiences are always assimilated through the concepts that the individual constructs and which the individual has inherited from other users of the language. Polanyi regards the process of knowing as fragmentary clues that are integrated under categories - arguing that these patterns of categories contain theories, methods, feelings, values, and skills that can be used in a fashion that the tradition judges are valid.

The way humans perceive the world or create a reality-view depends on the complex working of the human brain, Hampden-Turner (1982) gives a comprehensive review of the work of theorists on human psyche. Using the metaphor of a map, he has organised the work into different levels, from the mechanistic and physiological, to the paradigmatic and mythological. Hampden-Turner (ibid) states that Freud's contribution begins from understanding that humans "know" more than that they are consciously aware, Freud provided clues to answer basic questions like, why do we forget selective things while remember some seemingly unimportant events for the whole length of our life? Why do people suffer phobic dreads and anxieties or recover buried memories under hypnosis? These

cannot be explained without the concepts of the conscious and unconscious mind, with the “Id” embodying the instincts and being controlled by a partially conscious “Ego”.

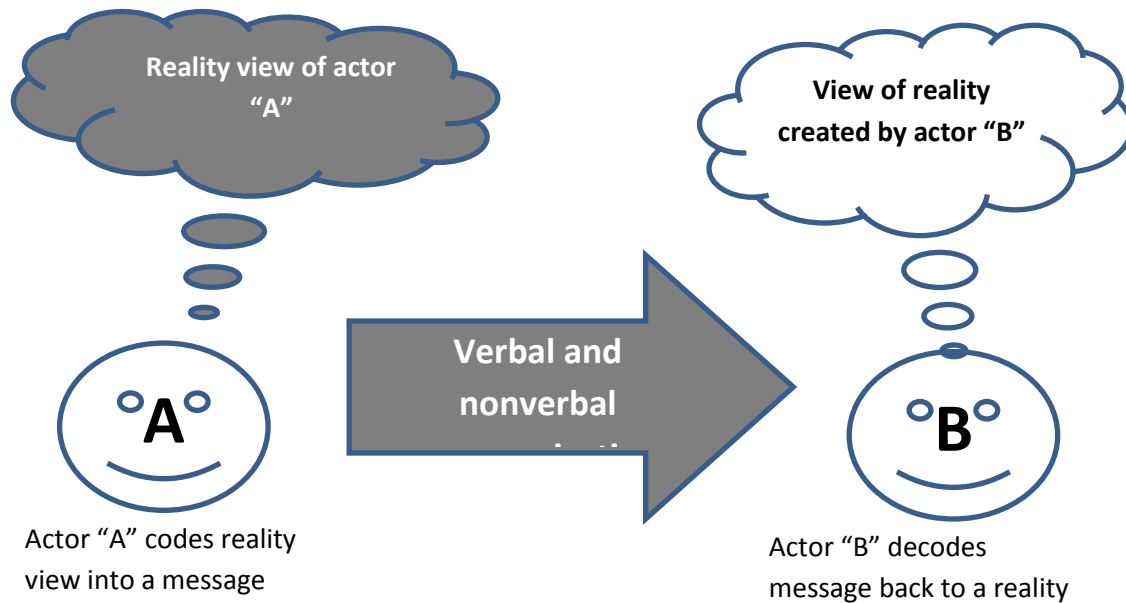


Figure 1: Showing the knowledge sharing process as a transfer of reality-view from actor “A” to another actor “B”

The Id consists of instinctual energies and drives which are without rational thought - on the other hand the Ego usually functions intelligently and works to serve the Id. Jung later borrowed the concepts of the conscious and unconscious from Freud, but Jung’s concept of the unconscious and conscious was much more elaborate than Freud’s, He considered that there was a personal unconscious consisting of dimmed memories and a collective unconscious at a still deeper level. By the collective unconscious Jung denoted a possibility of inherited psychical functioning. In Jung’s psychology an archetype is an inherited pattern of thought or symbolic imagery that is transferred from culture, and its past collective experience, to an individual unconscious, and then this archetype guides the individual to follow a certain behavioural pattern.

In developing the concept of a knowledge archetype, the model for voluntary knowledge sharing in organizations (Lodhi and Ahmad, 2010) is regarded here as a reference model. It is assumed that an archetype will be unable to function if it is not synchronised, or embedded, in the environment which contains it. Here the reference model by Lodhi and Ahmed is developed further using a constructivist approach and utilising Polanyi’s theory of knowledge, see Figure 2.

According to this model (Figure 2), the true source of knowledge creation in an organization are individuals, these individuals work in groups and develop their ideas by social interaction. In order to work in groups these individuals need to communicate with one another, and they may use all channels of communications to get their message across to the other team members. These channels of communication in the social aspect include meetings, seminars, group discussions etc. while technically the communication medium used would include books, telephone, and computer networks of different systems and software. The outermost shell of the model is the organizational environment that provides a strategic direction and motivation to the whole system.

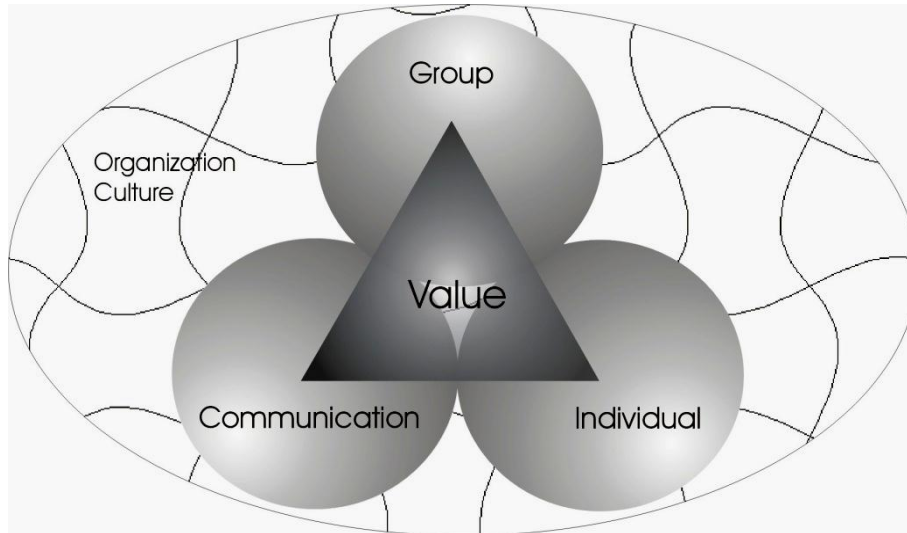


Figure 2: Voluntary Knowledge Sharing Model
Source: (Lodhi & Ahmad, 2010)

In the above perspectives a Knowledge Archetype would define an ideal personality of an individual that would promote knowledge sharing in an organization (figure -3). The Archetype has to be observed on four functional dimensions; as proposed by the Voluntary Knowledge sharing model, which are communication abilities; interpersonal interactions at the individual level; and at the group level; and then finally the behavioural expectations at the organizational level.

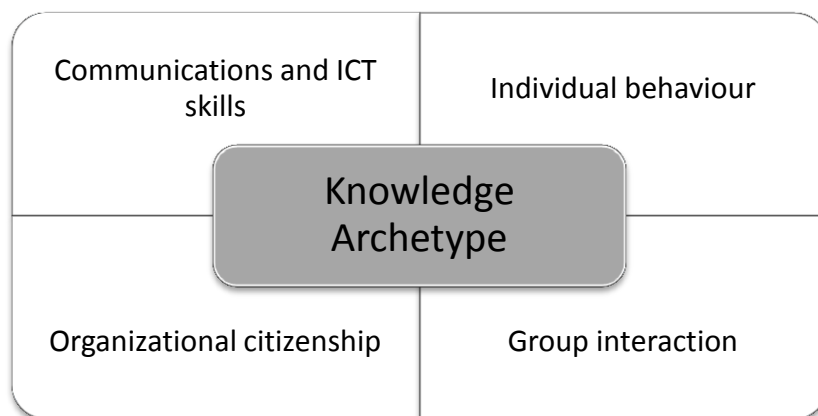


Figure 3: Functional dimensions of a Knowledge Archetype

Propositions outlining the behavioural expectation of the archetype in respect of the four dimensions are given in Table-2. The behavioural expectations are based on the broader principles of epistemological constructivism. The domain of epistemological constructivism has a number of theories which may be interpreted somewhat differently, but a number of general principles may be assumed. These are that:

- a) Knowledge is actively constructed by the individuals.

Constructivists argue that knowledge creation is not a passive activity and that learning requires effort on the part of learner. (Geary 1995; Sexton & Griffin, 1997; von Glaserfeld, 1995; Vygotsky, 1978)

b) Learning is both an individual and a social process.

The Constructivist's view is that individuals' interactions with the environment are critical for these learning processes. All knowledge is organized into universal cognitive structures and all of these structures have a social component. (Mahoney, 1995; Piaget, 1926; Piaget & Inhelder, 1969)

c) Learning is a self-regulated process.

An Actor or an Individual learn at different rates due to a number of reasons, including their inborn characteristics (i.e., intelligence) and the external factors that have an effect on them. These external factors including the attitudes of other people, and their interactions towards the learner. (Bandura, 1986; Ertl & Kraan, 1997)

d) Learning is an organizational process that enables people to make sense of their world.

Experiences or concepts that are encountered by an actor or an individual for the first time undergo evolution over time. (Piaget, 1926; Piaget & Inhelder, 1969; von Glaserfeld & Steffe, 1991)

e) Cognition serves the actor to understand the experiential world.

All actors or individuals lead different lives, having different purposes and visions, this indicates that applying the learning should permit individuals to organize what they have experienced, rather than just having to memorise or "knowing" cold facts about "reality,". (Bandura, 1986; Gruender, 1996; Murphy, 1997; Piaget, 1926; Piaget & Inhelder, 1969; von Glaserfeld, 1995)

f) Language plays an essential role in learning.

Constructivists argue that thinking takes place in communication and consider language as a tool that enables individuals to communicate beyond what has been learned in their own experience in the past, by the formulation of words, sentences, and paragraphs. (Piaget, 1965; Sexton & Griffin, 1997; Vygotsky, 1978)

g) Motivation is a key component in learning.

The motivations possessed by an Actor or Individuals will greatly affect their abilities and resultantly their capacities to learn. The most basic motivation for learning is an individual's desire to make sense of the world. (Bandura, 1986; Gruender, 1996; Piaget, 1926; Piaget & Inhelder, 1969; Vygotsky, 1978)

The propositions in Table-2 give an Archetype's behavioural expectations based on the constructivists' view of knowledge. The propositions were tested in a real life situation with the help of a survey conducted with participants belonging to different countries. It was assumed that based on their previous experience the participants would be able to identify the true behavioural traits of a Knowledge Archetype, which they thought could promote cross cultural knowledge sharing.

4. Methodology

A wide range of subject areas including Philosophy, Epistemology, Psychology, and Anthropology were reviewed for developing the conceptual basis, followed by literature

support from Cybernetics, Information Technology, and Knowledge Management which was used to refine the concept. The research hypotheses were developed to test the opinion of the population on the Archetype developed. Each hypothesis tested a single facet of the Archetype's personality; within the four broader categories, using Likert's scale.

<p>Proposition 1: The individual should be very good in communication skills and excellent in the use of the latest technological aids to enhance his/her communication abilities</p> <p>Proposition 2: The individual should always be willing to consider new thinking approaches, not confirming to egoistic perspectives</p> <p>Proposition 3: The individual should promote cross cultural collaboration and group work</p> <p>Proposition 4: The individual should advocate a strategic orientation to promote cross cultural collaboration at organizational and higher levels</p>

Table 2: Archetype's functional behavior

The questionnaire was designed with reference to the conceptual model and distributed in class to the selected population. It is important to note that the questionnaire was in English and designed to be as simple as possible. The students given admission to the Business School are supposed to have adequate English language skills (6.5 IELTS and above), but still observers were present to clarify any ambiguity in the understanding of the questionnaire. A cluster sampling technique was used to collect data from four classes in the Business School.

The only requirement to be the part of sample for the survey undertaken was that the respondent should be a registered postgraduate student of the university's business school. A minimum sample size for co-relational research for a one-tailed hypothesis is regarded as being between 64 and 82 for 2 tailed (Onweuegbuzie and Collins 2007); and for causal-comparative research a minimum of 51 participants per group for 1 tailed and 64 for 2 tailed analysis. It is noted that precision increases steadily up to sample sizes of 150-200 (Fowler, 2009) and thus we are looking to increase this sample as mentioned in the Conclusions.

5. Data Analysis

A total of seventy valid questionnaires were received from the School of Business. The data showed that students came from twenty eight countries and spoke twenty five languages including English, and for some English was their fourth language. The mean age of the participant student was 28 years and on average they had visited ten countries, which demonstrates that the students have had good exposure to other cultures. The sample collected included thirty four male and thirty six female participants, giving a very good gender balance. Interpreting the data in Table-3, it is seen that based on their experiences, the participants do think that there is a need for promoting knowledge sharing efforts between students of different cultures at the business school. The students in general do like to share knowledge and discuss ideas with students from their own culture - a possible reason for this could be due to the fact that the survey was done in the beginning of the semester, and the average time that the student had spent at WBS was less than six months.

Correlation coefficients for questions 1 to 8 are calculated against gender, internet usage, age of participant, time spent at the Business School and lastly the total length of stay of the participant at England. It is observed that as the age of respondent, stay in WBS, and stay in

England, is increased they tend to have relatively fewer issues in cross cultural communication. Respondents who have spent more time at WBS tend to have less misunderstanding when undertaking cross culture communicating.

One-Sample Test

		Test Value = 4			
		t	df	Sig (2-tailed)	Mean Difference
Q1	Do you prefer asking for information from somebody who is apparently from your nationality?	-8.274	69	0	-1.2029
Q2	Have you felt that you wanted to convey a message to someone from another nationality, but that your message has not been fully understood?	-5.482	69	0	-0.7391
Q3	Does mis-understanding happen often when talking to people with a different ethnicity?	-5.9	69	0	-0.8551
Q4	Do you take special care in selecting your words and sentence construction, when talking with somebody from another nationality?	-2.166	69	0.034	-0.3043
Q5	In your opinion is mis-understanding related to the language that people speak?	-4.727	69	0	-0.6667
Q6	In your opinion is mis-understanding related to the ethnicity of the people concerned?	-7.013	69	0	-0.971
Q7	Do you think that there is a need of focused efforts by WBS towards increasing cross cultural understanding for the promoting a knowledge- sharing?	-3.777	69	0	-0.4783
Q8	Do you prefer to ask for information from someone who speaks your national/'home' language?	-5.896	69	0	-0.942

Table 3: Showing the results of t-test

Data on the behavioural aspects of the Knowledge Archetype was collected from questions P1 to P16 on the survey. The results were tested against a “t” value of 4 on a 1 to 5 point Likert scale. The data shows that on the communication and ICT skills dimension, the respondents agreed to the P1 and P3 statements while agreement was not found to be sufficient for the P2 and P4 statements. Then on the personal behaviour and ego dimension, the P5, and P6 statements were not supported. On group development statements, P9 and P10 were not supported, while all the other statements regarding an organization’s cultural development were supported by the respondents. The details of the t-test are given in Table 4.

In general it is observed that the respondents have shown agreement to all statements that are related to observable action, while statements focusing on the values on which these actions are actually based are not supported. This could be due to the fact that actions of an individual (archetype) are observable while the values on which the actions were actually taken cannot be observed. Therefore the respondents agreed more with observable actions, when answering the statements.

6. Conclusion

The student population answered the questionnaire based on their everyday experiences at the university and validated the main concept on all of the four proposed dimensions. It is important to bear in mind that the Archetype was not developed from this survey, rather it is

anchored in theory and the purpose of the survey was to test the results in a real life situation. The result of the survey showed that regardless of the country or gender of the student, the general population agreed to all of the dimensions of the Archetype defined.

One-Sample Test

		Test Value = 4				95% Confidence Interval of the Difference	
		t	df	Sig (2-tailed)	Mean Difference		
P1	Exploring communicational aspects	-2.447	69	0.017	-0.2609	-0.474	-0.048
P2		-1.495	69	0.14	-0.1884	-0.44	0.063
P3		3.395	69	0.001	0.2899	0.119	0.46
P4		-1.386	69	0.17	-0.1739	-0.424	0.077
P5	Exploring behavior at individual level	0.402	69	0.689	0.0435	-0.172	0.259
P6		-1.87	69	0.066	-0.2609	-0.539	0.017
P7		-2.481	69	0.016	-0.3043	-0.549	-0.06
P8		4.697	69	0	0.3768	0.217	0.537
P9	Exploring behavior at group level	1.352	69	0.181	0.1594	-0.076	0.395
P10		0.599	69	0.551	0.0725	-0.169	0.314
P11		5.858	69	0	0.5217	0.344	0.699
P12		4.441	69	0	0.3913	0.215	0.567
P13	Exploring behavior at organizational level	2.521	69	0.014	0.2464	0.051	0.441
P14		3.069	69	0.003	0.2754	0.096	0.454
P15		2.111	69	0.038	0.2174	0.012	0.423
P16		5.915	69	0	0.4493	0.298	0.601

Table 4: Showing the results of t-test

We would suggest that the concept of a Knowledge Archetype can be promoted in educational institutions with cross-cultural enrolment, to encourage knowledge sharing between students from different ethnicity. The Archetype can also be used for improving the performance of the faculty of the educational institutions as in a multi-cultural institution such as WBS staff are equally of many nationalities, ethnicities, and cultures and thus subject to many of the same issues as students when joining such an organization.

6.1 Limitations

One of the limitations that could not be avoided was that the survey questionnaire was in English, it would have been ideal, if the questionnaire had been translated into the native language of the participant, but since the participants were speaking 24 languages this could not be done. However, as English is the default language of education on many international degrees, and in many international companies, this was not as much a drawback as might first be imagined.

6.2 Further Research

Future research intends to develop a configurable technical based archetype - or avatar - that can be utilised by students as they enter university for implicit knowledge sharing purposes. It would be interesting to test the archetype in business sector or in a not-for-profit organization with teams comprising of multicultural members. This would help the researchers in identifying and improving the knowledge flows in international businesses especially the larger Non-Governmental Organisations and Consultancies working in geographically distributed areas.

Data shows that participants who are hesitant in cross cultural communicating prefer to use the Internet for obtaining information. This finding is being further tested by increasing the sample size of students with further surveying of Postgraduate students in different classes. This finding also indicates that another research direction could be to develop an AI integrated Avatar based on the Knowledge Archetype in a virtual environment. This Avatar can be used for educational purposes for students at induction into the university to learn their way around and answer early questions; and as it could be then personalised by the student, it could then become their Knowledge Sharing 'buddy' and learn appropriate knowledge to share through using algorithms etc. Similar avatars can also be developed for collecting marketing information on consumer preferences.

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