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An Investigation of Students' Perceptions of Learning Benefits of Weblogs in an East Asian Context: A Rasch Analysis

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ABSTRACT

In the 1980s we witnessed the dawning of the *Information Age*. Today, the use of information technology has become an integral part of our lives. Education is no exception. With the introduction of Web 2.0 tools such as weblogs, students are presented a new platform for interaction and exchanging ideas. A review of the literature however reveals few empirical studies examining the relationship of the use of weblogs and student learning. Furthermore, despite the growing interest in research on blogging, researchers continue to overlook cultural variations when enumerating students' learning benefits through blogging. As such, the purpose of this study is to investigate the factors that are of specific benefits of weblogs in student learning in an East Asian context. To determine this, principal component factor analysis was performed using standardized residuals rather than the non-linear raw scores. The findings revealed four factors, namely, *efficiency*, *deliberation*, *de-personalization*, and *collaboration* that explained students' perceptions of the learning benefits of blogging. (159 words)

Keywords

Rasch analysis, factor analysis, weblogs, blogging and student learning

Introduction

Since the dawn of the *Information Age*, information technology (IT) has presented organizations in many industries in the world with boundless possibilities of applying new technologies to enhance efficiency and effectiveness. This is because as technology advances rapidly through intense communication, standardization and similar decision technology, world markets and cultures are drawn closer together (Levitt, 1983). Today, we continue to live in an era of rapid social change where capital, technology, people, ideas, and information move inexorably across political borders and cultural boundaries (Holton, 2000). One industry which has thrived in the application of IT is education. Although early use of IT in schools was very much restricted to simple software applications to present course materials in an electronic medium, IT is today an integral part of classroom teaching (Yelland, 2001). Gone were the days where the focus was only on exploiting the ability of IT in making lessons more visually engaging or making the materials more entertaining. IT is now seen as an essential tool in bringing about new elements of teaching and learning as well as communication between users.

In view of the increased dependence on the internet, the use of information and communication technology (ICT) has also grown manifold in education. Increasingly, there is a growing perception amongst teachers that ICT is an effective way to connect with and engage their students in learning. It is important to acknowledge the fact that students have become more sophisticated in terms of the IT and internet 'consumption' and as such can process learning differently through constant exchange of information and discussion. Students are growing up immersed in digital media which they use for entertainment, communication, learning, and even shopping. Increasingly, these internet generation learners will demand that schools are technologically relevant and provide technology-rich learning environments. Evidently, technology is a tool that can help teachers exemplify best practices to create enriched and collaborative learning environments by addressing different learning needs, supporting transfer of learning, encouraging higher-order thinking, incorporating real world problems and authentic assessments, and preparing students for lifelong learning (Fullan, 1998). These views are consistent with current learning theories in that they emphasize "interactivity, activation of prior knowledge, connecting the theoretical to the experiential, and using relevance and efficacy to assess information" (Coutinho 2007, p.2028). Learning in today's context is essentially more than assimilating knowledge transmitted by textbooks and teachers. It requires the individual to take personal responsibility to build and communicate the knowledge with others (Harada, 2003).

The Emergence of Web 2.0 Applications in Education

From the preceding discussion, the internet is clearly more than just a massive network of computers linked together to enable people to exchange information. With the introduction of Web 2.0, the internet has now become a global

platform for social interaction (Alexander, 2006). Current popular communication applications on the internet include *Facebook*, *Instant Messaging*, *Wikipedia* and *Weblogs*. These internet communication tools allow users to create their own persona or image on the World Wide Web (Thompson, 2007). Acknowledging these emerging Web 2.0 applications, educators have come to accept the need to explore the effectiveness of such tools in their classroom teaching.

Weblogs (or blogs) are perhaps the most popular of the Web 2.0 applications, mainly because their collaboration-supporting features where users (or bloggers) are allowed to share their opinions, experiences and even media-rich files with others in the virtual world (Kuzu, 2007). Despite the popularity of the use of blogging in education, empirical studies on its effectiveness in students' learning are limited (Borja, 2005; Instone, 2005). Some notable examples include the works of Chan & Ridgway (2005), Coutinho (2007), Kuzu (2007), Stiler & Philleo (2003) and Williams & Jacobs (2004). A further search on the internet and professional publications revealed some 'preliminary studies' on the use of blogging in the classroom (e.g., Glogoff, 2005; Poling, 2005). Elsewhere, others have also contributed general views and suggestions on the use of blogging (e.g., Cochrane, 2007; Ferdig & Trammell, 2004; Nardi et al., 2004). Interestingly, most of these views originated from the West and overlooked cultural variations when enumerating students' learning benefits from blogging. This inability to see beyond one's own culturally prescribed frame of reference ignores fundamental cultural differences, and impedes the successful implementation of blogging in teaching and learning in non-Western cultures.

Possible 'Broad' Categories of Benefits of Blogging

From the literature review, albeit general, four categories of benefits of blogging can be identified. Firstly, blogs allow a high degree of customization in their appearance. Some have argued that this makes bloggers (students) feel a sense of ownership towards their own blogs and so they will take the responsibility to write entries that are well-considered (Cameron & Anderson, 2006; Ferdig & Trammell, 2004; Fernheimer & Nelson, 2005). When blogging is voluntary (this usually suggests that the blog is kept for a reason other than the fulfillment of a course requirement), it is likely that the blogger will be enthusiastic and pay much attention to writing their blogs. If the same spirit is exhibited by the student when writing a blog for the purpose of their studies, then blogging becomes a good learning (Brescia & Miller, 2006). Contrary to this assertion, Williams & Jacobs (2004) found that students using blogs as part of the fulfillment of their courses did not necessarily exhibit enthusiasm in personalizing or maintaining their blogs. Providing further support, other researchers (e.g., Instone, 2005; Kuzu, 2007; Salen, 2007) reported that students felt blogging was a waste of time and they will do it solely because it was a requirement for grading.

Secondly, bloggers can post comments and views in a 'safe' virtual environment while choosing to be anonymous (Brescia & Miller, 2006; Instone, 2005; Nardi et al. 2004; Salen, 2007; Schiano et al., 2004; Stiler & Philleo, 2003). According to Qian & Scott (2007), bloggers are generally cautious about what they post on their blogs especially when their views or comments may instigate negative repercussions or response from others. Anonymity may however give rise to other problems such as bloggers expressing their views unreservedly and irresponsibly. Elsewhere, researchers (e.g., Armstrong, Berry & Lamshed, 2004; Viegas, 2005) have reported that students are generally not bothered if their identity is made public as they do not perceive their course-related blogs as private.

Thirdly, blogging allows users to learn through collaboration and the exchange of views. This interactive nature of blogs has led some researchers in education to believe that it can result in collaboration amongst students in their learning. In turn, this may lead to the formation of a learning community (Armstrong et al., 2004; Clyde, 2005; Instone, 2005; Poling, 2005; Williams & Jacobs, 2004). Glogoff (2005) however warned that teachers must provide a lot of guidance and structure for learning using blogs. Furthermore, students must overcome the view that collaboration on blogs is dysfunctional given that they meet each other in class everyday and things are easier done through face-to-face discussions (Salen, 2007), or through instant messaging software such as Skype and Windows Messenger (Weller, Pegler & Mason, 2004).

Lastly, it is generally agreed that blogging encourages students to be more introspective and think deeply about what they write in their blogs or commenting on other peoples' blogs (Armstrong et al., 2004; Chan & Ridgway, 2003; Poling, 2005; Stiler and Philleo, 2003). In addition, it is believed that blogging helps users improve on literacy (Downes, 2004; Edbauer et al., 2005). Elsewhere other researchers (e.g., Duffy & Bruns, 2006; Oravec, 2002) have questioned the degree of reflective thinking taking place in student learning when they blog. Oravec (2002) and

Gumbrecht (2004) argued that it is rare to see deep and private revelations about individuals in course blogs when compared to personal blogs.

Purpose of Study

In the quest to improve student learning in the classroom through the use of IT tools such as blogging, educators often encounter several major obstacles. Firstly, as a result of limited empirical research on the impact of blogging on student learning, they are ignorant of the specific kinds of benefits the students demand in their learning experience; and secondly, they do not have reliable and valid instruments for measuring the learning benefits of weblogs. In fact numerous published works on blogging merely focus on suggested ways of employing blogging in student learning or on the author's views on the benefits of blogging. Furthermore, most of the 'limited' empirical studies to date were conducted in Western countries, thus overlooking cultural variations, preferences and sensitivities of the members, including teachers and students, who possess distinct cultural identities. In view of these shortcomings, the purpose of this study is to investigate students' perceptions of the learning benefits of blogging in an East Asian context.

Methodology

The variable investigated in this study is the students' perceptions of the learning benefits of blogging. Rasch analysis is used for the determination of the measures of the strength of the students' perceptions. This is because Rasch analysis does extremely well at "constructing linearity out of ordinality and at aiding the identification of the core construct inside a fog of collinearity" (Schumacker and Linacre 1996, p.470). Rasch analysis essentially converts raw rating scale responses into linear units of measurement called 'Logits' or 'Log-Odds Unit'. According to Wright (1993, p.288), the theory is:

$$\text{Log} \left[\frac{\text{Probability of Success}}{\text{Probability of Failure}} \right] = \text{Ability} - \text{Difficulty}$$

From the equation, all elements can be represented as fixed positions along one straight line. The above expression is called *log-odds* (odds of success), and the units of measurement constructed are called '*logits*'. This puts 'ability' (i.e., the strength of perception) and 'difficulty' (i.e., the difficulty to agree to an item) on a common interval scale, making them comparable [More information on Rasch analysis is provided at <http://www.rasch.org/rmt/contents.htm>].

Sample and procedures. A total of 94 students attending the *Diploma in Chemical and Pharmaceutical Technology* course at a Singapore polytechnic participated in this study. The students were divided into groups of three. They then performed an information search on an assigned topic each week which included controversial issues such as plant safety and prevention against accidents, environmental regulations and use of alternative energy. Students were required to reflect upon the issues each week and post their views on their individual blogs; as well as post comments on their course-mates' blogs. The course was conducted over a 10-week period. Students were given a choice on whether to be anonymous or identified when blogging.

Instrument. The rating scale consists of 40 statements concerning benefits of blogging in terms of student learning. The statements were based on the broad categories of benefits of blogging described earlier.

Rasch Analysis and data cleaning. In order that the items were properly calibrated, students who did not take the questionnaire seriously and were misfitting in their responses (or misbehaving on the rating scale) were removed. For the components analyzed, respondents with large z-standardized mean squares may be misfitting. As a guide to what may be considered large infit and outfit mean squares, it is noted that Wright and Stone (1979) stated that in their practical experience, rejecting persons with a normal deviate (fit statistic) of about 2 is "unnecessarily conservative" (p. 168) which implies that values slightly above 2 may be tolerated. As such, it was decided that all respondents with either or both the z-standardized infit and outfit mean squares of more than 3, were removed. In this stage of data cleaning, 5 students were removed and 89 remaining as valid data for final analysis. After the data set was

cleaned for misfitting persons, a second run of Rasch analysis was performed on the ‘cleaned’ data set and the fit of items was examined. In all, four items were deemed misfitting and subsequently removed from further analysis [i.e., Items 5, 11, 12 and 30]. A final run of Rasch analysis was made using the remaining available persons and items in the data matrix.

Principal Components Factor Analysis of Standardized Residuals. Once the measures were obtained from the final run, a Principal Components Factor Analysis on the standardized residuals of the item calibrations was performed (see Linacre, 1998; Wright, 1994). A residual is defined as “the difference in what is predicted by a model and what is actually observed” (Ludlow, 2002, p.1). The decision on the number of factors extracted from the factor solution depends on the following predetermined criteria:

- i. The latent root criterion (i.e., factors with latent roots or eigenvalues greater than 2 are considered significant). It is noted that this criterion eigenvalue threshold is much larger than the standard Kaiser rule (i.e., eigenvalue greater than 1);
- ii. The percentage of variance criterion (i.e., aims to achieve a specified cumulative percentage of total variance extracted by the successive factors); and
- iii. The Scree test criterion is used to identify an optimum number of factors that can be extracted before the amount of unique variance starts to dominate the common variance structure.

Interviews. In the final step of the research program, 39 students were interviewed separately and each interview session lasted about 50 minutes. Students were selected through convenience sampling. The interviews served to help the investigators consolidate what was perceived and experienced in a macro context (Fetterman 1989). It was through the understanding of these verbal commodities for their cultural connotations, as well as denotative meaning (Ericsson & Simon, 1980), that the investigators were able to uncover the cultural underpinnings of students’ perceptions of the learning benefits of blogging. Semi-structured and retrospective interviewing techniques were used and students were asked to recall and explain particularly beneficial and non-beneficial learning experiences using course blogs. The composition of respondents for the rating scales and interviews is shown in Table 1.

Table 1: Composition of respondents

Demographic Categories	Sub-Categories	Responded to Rating Scales	Interviewed
		No. (%)	No. (%)
Gender	Male	41 (44%)	23 (59%)
	Female	53 (56%)	16 (41%)
	Total	94 (100%)	39 (100%)
Cultural Group	Malay	12 (13 %)	06 (15%)
	Chinese	73 (78%)	31 (80%)
	Indian	06 (6%)	02 (5%)
	Others	03 (3%)	00 (0%)
	Total	94 (100%)	39 (100%)
Blogging Experience	3 to 6 months	36 (38%)	12 (31%)
	7 to 12 months	15 (16%)	08 (21%)
	More than 12 months	43 (46%)	19 (48%)
	Total	94 (100%)	39 (100%)

Results

(i) *Person and Item Separation Reliability*

Table 2 shows that the person separation reliability is .79 for students’ perceptions of the learning benefits of blogging. The relatively large value indicates a good spread in their measures on this variable which would mean that the perceptions differ widely and that the instrument can reliably tell the persons apart. At the same time, the instrument’s separation reliability is .92. This means that the items are well targeted and provide a good spread of the different aspects of perceptions of the four components in order to sufficiently and hence reliably measure the respondents on this variable.

Table 2: Person and Item Separation Reliabilities

SUMMARY OF 89 MEASURED PERSONS

	RAW		MEASURE	MODEL ERROR	INFIT		OUTFIT	
	SCORE	COUNT			MNSQ	ZSTD	MNSQ	ZSTD
MEAN	116.8	36.0	.23	.19	1.00	.2	1.00	.2
S.D.	12.5	.0	.44	.01	.43	2.0	.43	2.0
MAX.	147.0	36.0	1.40	.22	2.04	3.7	2.06	3.8
MIN.	88.0	36.0	.75	.18	.28	4.5	.28	4.5
REAL RMSE	.21	ADJ.SD	.39	SEPARATION	1.91	PERSON	RELIABILITY	.79
MODEL RMSE	.19	ADJ.SD	.40	SEPARATION	2.12	PERSON	RELIABILITY	.82
S.E. OF PERSON MEAN = .05								
PERSON RAW SCORE TO MEASURE CORRELATION = 1.00								
CRONBACH ALPHA (KR20) PERSON RAW SCORE RELIABILITY = .81								

SUMMARY OF 36 MEASURED ITEMS

	RAW		MEASURE	MODEL ERROR	INFIT		OUTFIT	
	SCORE	COUNT			MNSQ	ZSTD	MNSQ	ZSTD
MEAN	288.8	89.0	.00	.12	1.00	.1	1.00	.1
S.D.	32.9	.0	.46	.00	.26	1.8	.26	1.8
MAX.	337.0	89.0	1.06	.13	1.46	2.9	1.49	3.0
MIN.	211.0	89.0	.71	.12	.61	3.1	.62	3.0
REAL RMSE	.13	ADJ.SD	.44	SEPARATION	3.48	ITEM	RELIABILITY	.92
MODEL RMSE	.12	ADJ.SD	.44	SEPARATION	3.69	ITEM	RELIABILITY	.93
S.E. OF ITEM MEAN = .08								
DELETED: 4 ITEMS								
UMEAN=.000 USCALE=1.000								
ITEM RAW SCORE TO MEASURE CORRELATION = 1.00								

(ii) Factor Analysis of Standardized Residuals

A principal component factor analysis was run on the standardized residuals of the 36 items, with factors rotated to an orthogonal structure (i.e., varimax procedures). Factors with eigenvalue greater than 2 were considered significant and retained for further analyses. A *Scree* test (shown in Figure 1) indicated the presence of four factors and accounted for 8.4%, 8.1%, 6.5% and 5.3% of the matrix variance respectively (shown in Table 3).

Table 3: Total Variance Explained from Principal Components Factor Analysis of Standardized Residuals

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	4.644	12.900	12.900	4.644	12.900	12.900	3.010	8.362
2	3.007	8.353	21.254	3.007	8.353	21.254	2.903	8.063	16.424
3	2.740	7.610	28.864	2.740	7.610	28.864	2.343	6.510	22.934
4	2.230	6.195	35.059	2.230	6.195	35.059	1.904	5.288	28.222
5	2.008	5.578	40.638	2.008	5.578	40.638	1.773	4.925	33.146
6	1.846	5.127	45.764	1.846	5.127	45.764	1.767	4.909	38.055
...									
...									

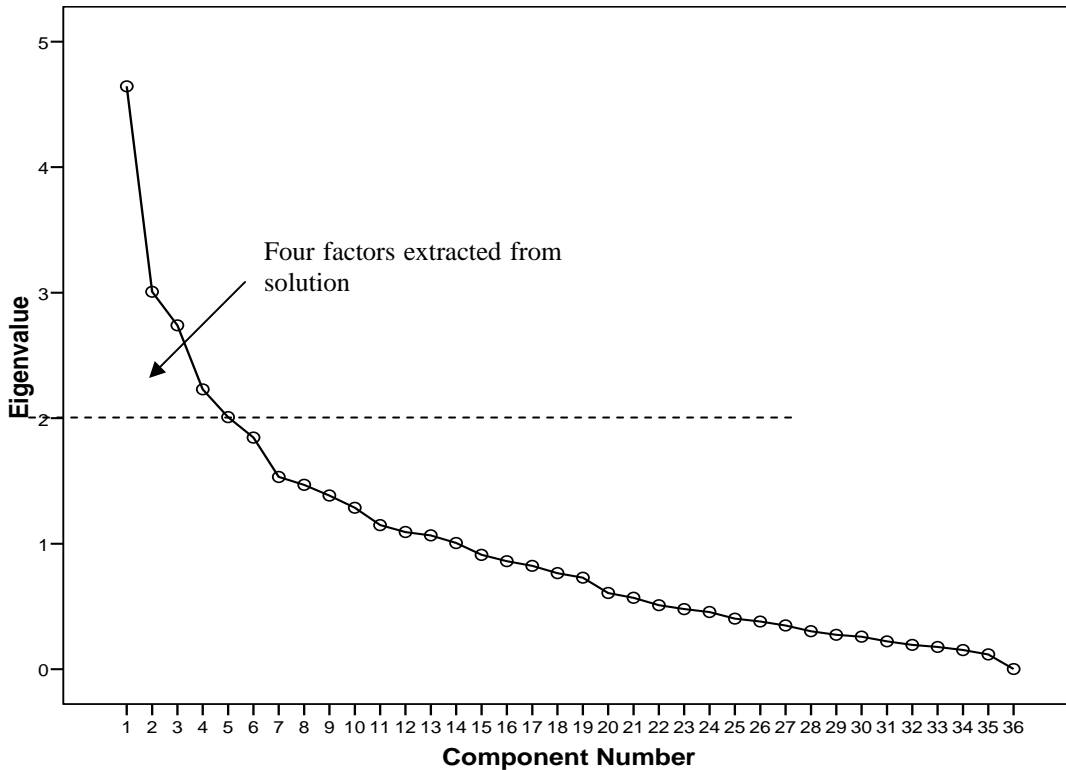


Figure 1: Scree Plot for residuals of Rasch analysis

The total variance explained was 28.2%. Items loading $>.30$ are listed under their tentative factor labels in Table 4. The four factors from the standardized residuals solution were:

- **Factor I.** There were 5 items in this factor. The positive loadings reflected a broad emphasis on the efficiency of working with blogs. The items include ease of communication, saving time, more convenient than meeting face-to-face with group members. Two items ‘anonymity when commenting on the blogs of others’, and ‘cutting and pasting answers’ were negatively loaded on this factor. This factor was labeled ‘*Efficiency*’.
- **Factor II.** There were 5 items that loaded positively on this factor. All the items reflected the need for careful reflection when blogging, such as thinking carefully before writing blogs and posting comments or replies on blogs of others, and thinking through the flow and logical sequence of contents in blogs. This factor is labeled ‘*Deliberation*’.
- **Factor III.** There were 5 items that loaded on this factor. The items ‘afraid to express view openly’ and ‘not afraid to offend others’ were positively loaded on this factor, while items such as ‘keeping up with current trend’, ‘adding new features’ and ‘changing blogs to suit one’s needs’ were negatively loaded. Clearly this factor highlights students’ reluctance towards customization or personalization of blogs. This factor is labeled ‘*De-personalization*’.
- **Factor IV.** There were 4 items and they were generally related to the need for collaboration. The items included ‘generating discussion’, ‘sharing information’, and ‘enhancing learning through interaction’. One item ‘unique design of blog’ was negatively loaded on this factor. This factor is labeled ‘*Collaboration*’.

Table 4: Items loading $>.30$ on the principal component factor analysis on standardized residuals

Factor 1 (Efficiency)		Factor 3 (De-Personalization)	
Q27	Efficient way of communicating with friends (0.81)	Q20	Afraid of expressing views openly (0.61)
Q29	Save time when doing group projects (0.80)	Q16	Not afraid of offending people when commenting (.32)
Q22	More convenient than meeting physically (0.66)	Q08	Change blog design to suit my needs (-.44)
Q19	Disclose identity when commenting on people’s blogs (-.41)	Q04	Add new features to blog frequently (-.75)

Q40 I can cut-and-paste answers from other people's blog (-.70)

Q03 Keep my blog in line with current trend. (-.80)

Factor 2 (Deliberation)

Q32 Think through comments before commenting on people's blogs (0.80)

Q31 Think through what I write on my blog (0.74)

Q33 Important to think through replies I write to the comments I receive (0.69)

Q39 Make sure that my blog entries are logical and well-written (0.47)

Q34 Make sure that my blog entries are well-thought out (0.42)

Factor 4 (Collaboration)

Q24 Blogging generates discussion through online interactions (0.79)

Q23 Great way for sending information because of ability to upload multimedia files (0.67)

Q26 Enhanced learning because of interaction with others (0.60)

Q01 I like the unique design of my blog (-.41)

(iii) Interview findings

The verbatim responses were content analyzed. The findings supported the four factor structure yielded from the principal components factor analysis of standardized residuals. Students generally concurred that:

- 1) Blogging is an efficient approach to learning as it saves them time.
- 2) They become more careful about what they wrote on blogs.
- 3) They would approach blogging in a practical way (i.e., there is no need to personalize course blogs).
- 4) They do to an extent learn collaboratively.

Specific findings and verbatim responses are provided in the proceeding discussion.

Discussion

The findings from this study have provided an interesting view of Singapore students' perceptions of the learning benefits of blogging. The findings indicate that Singapore students' perception of blogging may not be necessarily consistent with those discussed in existing literature. The Singapore *Asian values* could provide the explanation to our findings. Singapore has a multiracial society comprising mainly Chinese, Malays and Indians. Despite the rapid increase in living standards and ever-changing social lifestyles, Confucianism still remains a dominant living philosophy among Singaporeans, and these are being transmitted through formal education and indoctrination as well as through folklore and religious practices (Clammer, 1985; Kuo, 1987). The Singapore government achieved this by securing its hegemony through avoidance of liberal democracy and the deployment of a discourse of 'Asian Values' (De Bary, 1998; Hussin, 2004). These notions are arguably Confucian in origins and are constantly being reproduced in societies such as Singapore to render them a degree of stability (Chua, 2003).

"It really saves me time!" – Convenient and efficient

The students appreciated the use of blogs for its convenience and efficiency, in particular when doing group projects. This was because they did not have to meet up physically with their team members to get things done, and they could easily access information from the blogs of others. The following verbatim responses highlight this point:

"My friends can just post it on the blog. There is no need to print out and pass it to each other. I can see it immediately after she has updated the blog. No need to wait for us to meet up to get the information".
(Female, 18, Chinese)

"If I don't understand the topic, then I can go and get more information from other people's opinion without meeting them". (Male, 18, Chinese)

According to some students, blogs were also a convenient way to learn from others as well as gauge their own learning when compared with others.

“It is only after seeing his work that I knew I didn’t focus on the right things. A bit out of point. So I went to change mine, not copying lah [sic], but at least avoid [sic] my work from getting out of point. So next time I always check their work before I do mine”. (Male, 18, Chinese)

“[On reading friends’ blogs] Yes, to compare and contrast. See whether the content is right or not ... So I go and see what other people write and catch the ideas and expand on the ideas”. (Male, 18, Indian)

While the students found blogs a convenient way of learning, they were discerning and did not plagiarize the blog contents of others.

“That’s convenient but...how can? [sic] They will surely know and punish us for it. (Female, 18, Chinese)

“That’s the same as plagiarism right? Of course it is easier to cut and paste on PC than copying on paper but it is wrong, right?” (Female, 18, Malay)

The above responses clearly reflected the importance placed on saving time. In embracing the basic philosophy of down-to-earth pragmatism, the students strived to use as little time as possible in getting the work done, and readily adopted anything that saved them time and effort. These findings are consistent with Singapore’s emphasis on the value of practicality and pragmatism. To this end, the students approved features found in blogging softwares that offered convenience and speed. While they valued efficiency, pragmatism and practicality, the students were careful not to plagiarize the work of others as they feared being caught.

“Be careful what you write” – The art of deliberating

Although the students planned and deliberated on in their blog contents, it is unclear to what extent blogs helped them in learning the course. The students were more concerned about (1) getting into trouble with the law when blogging, and (2) offending others with ‘insensitive’ or ‘confrontational’ remarks. Essentially, they did not feel safe in expressing their views freely owing to the public nature of blogs. Perhaps this could be due to recent high profile cases where bloggers were dealt with by the law in Singapore as a result of what they wrote on their blogs which were deemed to have incited religious or racial prejudice. The following responses highlight their concerns:

“Yes, because internet what? [sic] everybody can read, so it is not quite safe. For example if people don’t agree with what I say, I can get into trouble. Maybe people will put bad comments or the government can come after me”. (Male, 18, Chinese)

“Because what we write will be read by other people, so we cannot anyhow [sic] write because it can affect, and you can end up in jail”. (Male, 18, Malay)

The students were also careful not to offend others when replying or submitting comments on other students’ blogs. To maintain harmony within the group, some students reported that they would even agree with others even if they did not; while others preferred to be anonymous to minimize misunderstandings.

“Yes, when I write I try not to offend people. So I am sometimes quite careful if I think that the topic can be misinterpreted”. (Male, 18, Chinese)

“Sometimes we might go against each other, we do not want to spoil the bond. So it’s good to be anonymous”. (Male, 18, Chinese)

These legitimate concerns have clearly affected the way students see freedom of expression through blogging. As a result, the students did not really engage in deep reflection about the issues in the course as suggested in the literature. This is not surprising considering the importance Asian societies place on maintaining harmony (Kirkbride, Tang & Westwood, 1991). Evidently, the Singapore students may have focused on the needs of the group

and view themselves as an extension of others in that group (Hsu, 1985). Therefore, they did not assert their individual identities and instead, conformed to the norms of the community. As such, they would alter or control their inner attributes (i.e. behave in a modest, self-effacing, or other-enhancing way) to suit the context and avoid disrupting harmony in the relationship (Yang, 1992). Another possible explanation of the students' behavior could be the importance placed on *Mianzi* (or face). The students may be constrained by the expectations of others so as to maintain their face, as well as reciprocate a due regard for the *Mianzi* of others (Ho, 1972). It is thus not surprising to find that the students did not like being put in situations where they would lose face, or be embarrassed. This would clearly displace internal harmony within the individual.

“Let us be practical here ...” – Pragmatism over personalization

Contrary to the literature where people believe that blogging allows a high degree of customization in terms of utilities, applications and appearance, the Singapore students did not personalize their school blogs. In fact, they prefer to adopt standard blog templates and not waste time personalizing their blogs for the course. This is because students do differentiate between their personal blogs and their school blogs. The students were pragmatic in that they would only do what was necessary to satisfy the requirements of the course, and not go beyond as it may involve a lot of time and effort. After all, no extra marks were given for the blog site designs. Furthermore, the students did not need to express their individuality in the designing of the blogs, or would rarely use all the features available in the blog software. This behavior could be explained by Singapore's emphasis on pragmatism and practicality.

“No, it's such a hassle. Actually many of us will do it for the sake of it if you ask. If you didn't ask, we won't do it”. (*Male, 18, Chinese*)

“I don't even care, just leave it. Because it is very troublesome and after this semester I won't use it anymore. No need to waste too much time”. (*Female, 18, Chinese*)

“Learning from others?” – But is it collaborative in nature?

It was generally agreed amongst the students that they found blogging useful for interaction with and learning from other bloggers. The blog postings helped the students gauge their own learning. However, it is interesting to note that not many students were willing to post personal views for discussion for fear of being perceived to be incompetent or embarrassed. Clearly, the findings in this study do not fully support the claims in the literature that students engage in collaborative learning through blogging. The following responses highlight this point:

“Can get more insights and opinions of others. Can learn more from others. But I don't know if I have anything to share so I don't comment, but I read what other people comment”. (*Male, 18, Chinese*)

“I like comments. But too many comments means there is a lot of judgment on what I write. And If I make a mistake, I feel stupid”. (*Male, 19, Chinese*)

The values placed on collectivism, harmony and face could provide an explanation to these students' behaviors. As noted earlier, the students behaved in a way that was in relation to significant others, and would avoid expressing their emotions or views outwardly. By so doing, they avoided imposing their feelings on others and thereby maintained harmony. This search for interpersonal harmony often produces deference, compliance and cooperativeness within in-groups (Bond & Hwang, 1986). This also implies that the students were more likely to exercise moderation, moral self-control and self-regulation in public. It is not surprising to note that the students were reluctant to post comments on their course-mates' blogs, especially when views were sensitive or in opposition to those of their course-mates.

Conclusions and Implications for Future Research

This study has provided evidence on Singapore students' perceptions of the learning benefits of blogging in their course at a local polytechnic. Contrary to the benefits reported in mainly Western literature, the findings in this study

has provided interesting insights into the strategies adopted by the Singapore students. Four dimensions of students' perceptions of learning benefits of blogging have emerged, and they are *efficiency*, *deliberation*, *de-personalization* and *collaboration*. Singapore's *Asian values* certainly provided plausible explanations to these findings. As noted earlier, despite Singapore's rapid economic growth and ever-changing social lifestyles, Confucianism still remains at the heart of basic moral standards amongst Singaporeans. It is thus not surprising to note that, in order to maintain harmony and protect one's face, the students deliberated before posting blogs entries or comments. These values foster preferences to be more conservative, reserved, restrained, shy, cautious, and introverted. As such Singaporean students may refrain from expressing their thoughts and views in such a way that leads to arrogance, and may even sidestep making honest comments on the blogs of other students. Another 'cultural' explanation could be a result of Singapore's emphasis on pragmatism which has been infused in the Singapore educational system (Sanderson, 2002). Perhaps this is why the students preferred not to personalize their blogs and valued efficiency and pragmatism instead.

While 'classrooms environment' (including virtual) have been recognized in both policy and research as places for learning, it is also important to note that they are subjected to the influences of a range of external and internal imperatives (e.g., cultural values and self-concepts). While the features of blogs provide educators with new ways of teaching and create learning communities (which may go beyond classrooms), educators in Singapore may have to recognize some possible limitations and adapt their pedagogies to ensure that students are able to maximize their learning in a multi-faceted, technologically-advanced and dynamic world. One of the major challenges for educators using blogging as a pedagogical tool for teaching is to get students to express their views and opinions more freely. Evidently, students' blogging behaviors are in part influenced by their cultural disposition. It is indeed ironic that while the students in this study enjoy reading views expressed by other bloggers, they exhibit a lack of a sense of belonging to a community of learners by not contributing their own views freely. Clearly, this may have implications on individual reflective learning and collaboration with others. These student behaviors in the virtual realm are worthy of further investigation, after all blogs may bring new learning or 'unlearning' habits, as well as varying degrees of satisfaction from the learning experience. A few areas for future research can be considered. First, future studies in this area should expand on this study to include a comparison with student perceptions in other diverse cultures (i.e., Western, Eastern and Middle Eastern). After all, empirical studies on the learning benefits of blogging are few, especially from a cross-cultural perspective. Second, studies could also look at the motivation of bloggers to extend their communication beyond the courses; thus continuing the 'community of learners'. Lastly, it would be advisable to investigate more methodically how blogging or communication through other Web 2.0 platforms impact students learning outcomes or performance across cultures.

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