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Gauge of readiness for Internet-based language learning: An 800 pound GORILLa

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This paper is based on the premise that little attention has been paid to learner preparedness for online language learning. We synthesized research on the broader topic of learner readiness for online learning, and attempt to apply those insights to the language learning context. Based on previous work, the demographic variables gender, student level, age, nationality, and area of study and the non-demographic variables learner autonomy, computer self-efficacy, attitude towards online learning, motivation, and English language self-efficacy are proposed as possible indicators of preparedness. A self-assessment survey tool was prepared, piloted, and then applied to a sample of 92 students.

1. Introduction

As the Internet grows in complexity and capability, online language learning is attracting increasing interest. Free and self-access resources abound on the Internet, online courses requiring fees are becoming more prevalent, and educators are taking steps towards blended or fully online teaching. Online resources have several benefits, they: are available any time, can be accessed from any Internet-ready computer, can be made flexible to suit different learners, can give instant feedback specific to a learner, help develop Internet literacy, and are seen as a cost effective online environment capable of reaching many students. Investments are being made, and yet the ability of individual institutions, instructors, and learners to effectively take advantage of Internet-based learning remains in question (Mercado & Domantay, 2010).

This paper focuses on learner readiness

Forum

(LR) for online language learning. LR is an issue which has been addressed in online learning generally (e.g. Harrell, 2008; Santo, 2006; Vonderwell & Savery, 2004; Yee et al., 2009), but has been largely ignored in the field of computer-assisted language learning (CALL). This paper then, by necessity, relies heavily on the literature of online learning outside of the CALL context.

Watkins, discussing online learning generally, points out that while it has grown as an industry, learners may not be ready for success in e-learning (2004). Other scholars have stated the need for considering learners as a vital pedagogical component of online learning (Pillay, Irving, & Tones, 2007; MacPherson et al., 2005; Yee et al., 2009). In reviewing CALL in Japan, Gromik (2005) states that too often learner abilities and their expected output are incompatible; that little is known about student abilities; and that it is necessary to understand the background of the students in order to provide effective materials. In the title of their 2008 CALL study Winke and Goertler ask the question "Did we forget someone?", and in their conclusion point out that with one exception, "researchers and pedagogues have not directly asked students about their preparedness for CALL before implementation" (p. 497). This highlights the need for awareness about LR among CALL practitioners. Stakeholders such as the learner, the instructor, the institution, and the courseware developer can thus waste resources on the preparation of materials which have little concrete benefit for the learner.

One solution to the issue of learner preparedness, or lack thereof, is that learners receive training before they begin online study (Appana, 2008; Harrell, 2008). Even if this is done, however, it does not negate the need to measure students' capabilities in advance of courseware design for two reasons. First, pre-analysis can suggest what kinds of training would be effective; from basic computing skills, to courseware specific skills, to necessary language skills, to independent study skills. More importantly, early measurements can be a guide for designing materials which are suitable for the learners' existing abilities and hence require little or no training at all. Indeed, analysis of learners is a key initial stage in both language curriculum (Richards, 2001; White, 2003) and instructional technology design (Savenye, Olina, & Niemczyk, 2001).

There are a variety of existing survey-based tools for self-assessment of LR in the literature (e.g., Barrette, 2001; Chen & Jang, 2010; Hung et al., 2010; Pillay, Irving, & Tones, 2007; Shih & Gamon, 2001; Smith, 2005; Smith, Murphy, & Mahoney, 2003; Watkins, Leigh & Triner, 2004; Winke & Goertler, 2008). Furthermore, institutions of higher education which offer online courses sometimes provide a self-assessment which potential learners can use before they decide to begin online study (e.g., Massey University, n.d.; Sierra College, n.d.; the University of Miami, n.d.; the University of Oklahoma, 2011; West Hills College, 2007). However, while such tools exist for online learning generally, there seems to be no comprehensive tool focusing on online language learning, or English as a Foreign Language (EFL) specifically.

The purpose of this study was to investigate indicators of LR for online learning and create a comprehensive self-assessment survey to measure the readiness of university-level students for learning English online. Online learning can take many forms, from self-access materials to computer mediated communication (Smith, 2005); this paper will define online language learning as 'any deliberate attempt to improve one's ability in a foreign language through the use of self-access materials on a computer network', usually the Internet or an intranet. A set of indicators to estimate LR was provided by a review of the literature, followed by a pilot of the resulting gauge of readiness for Internet-based language learning

(GORILLa). Finally, the revised GORILLa (see Appendix A) is used to gather data from students who engage in a hybrid learning experience, which is used to perform preliminary validation of the proposed tool.

2. Literature review

2.1 Demographic variables

Based on demographic information included in the literature, we propose that gender, student level, age, nationality, and area of study may influence LR for online language learning.

Gender statistics have been collected in several studies of online learning (Muilenburg & Berge, 2005; Hung et al., 2010; Mehlenbacher et al., 2000; Pillay, Irving & Tones, 2007; Shih & Gamon, 2001; Smith, Murphy & Mahoney, 2003; Song et al., 2004; Winke & Goertler, 2008; Yee et al., 2009), but the effect it has on learning outcomes is not consistent.

The learner's level of study has previously been identified as: freshman or sophomore (Hung et al., 2010); number of years at university, from 1 to 5, or more (Pillay, Irving, & Tones, 2007); high school or university (Shih & Gamon, 2001); or limited to only undergraduate students as a controlled variable (Smith, Murphy, & Mahoney, 2003). This study aims to provide a tool which can be used with any university students, including bachelors, masters, and doctoral levels. Therefore, our survey will ask how many years of post-secondary study learners have completed in order to determine their level.

Age is a common demographic variable in the social sciences, and has been used in previous studies on online LR (e.g., Muilenburg & Berge, 2005; Pillay, Irving, & Tones, 2007; Smith, 2005; Smith, Murphy, & Mahoney, 2003; Song et al., 2004). This is an interesting variable to include, as the "net generation" may be more prepared for online study than older learners.

The fourth demographic variable this study will examine is nationality. Based on their literature review, Muilenburg and Berge (2005) include ethnicity in their study of barriers of learner success. Nationality (Smith, 2005) and culture (Smith, Murphy, & Mahoney, 2003) have been used as controlled variables, although in only one study each and with each study sharing one author. One of the stated reasons for their use is that it allowed the researchers to ensure that English was the native language of their participants. The present research, which focuses on EFL students, will include this variable to investigate the possibility that culture has an impact on LR for online language learning.

The final demographic variable which this research will investigate is area of study. Other LR studies (Shih & Gamon, 2001; Smith, 2005; Smith, Murphy, & Mahoney. 2003; and Song et al., 2004), have included this variable in contexts where field of study will determine the content of online materials; that is to say, LR of students majoring in physics for studying physics online. For our purposes, however, university EFL students often major in a subject other than English; for example, a student majoring in business or computer science may take required English language courses. Including an item about area of study may help to establish if students of some fields of study, such as computers or education, are more suited to online language learning.

2.2 Non-demographic indicators

Sifting through the literature, it is difficult to discretely identify well established indicators of LR for online learning. The lack of standard terminology or agreed definitions for indicators complicates analysis. Furthermore, there are often interrelationships between indicators, such as the contribution of motivation to learner autonomy, or the influence of attitude towards online learning upon motivation to learn online. Where possible, synthesis allows for categorization for the purposes of this study. Indicators which were not frequently mentioned in the literature are not discussed in this paper, including general academic skills or access to the Internet. The five non-demographic indicators of LR for online language learning which we propose are: learner autonomy, computer self-efficacy, attitude towards online learning, motivation, and English language self-efficacy. We exclude learning style as an indicator, which deserves explanation due to its inclusion in other relevant work.

2.2.1 Learner autonomy. Autonomous learning is consistently considered an important requirement for success in online environments (Smith, 2005), and is broadly defined as "learners taking responsibility for their own learning" (Andradea & Bunker, 2009, p. 48). However, in the distance language learning context it is "both a central and a problematic concept" (White, 2003, p. 149) because while the importance of the complex concept of autonomy is well established in SLA literature, no one theory has found dominance, and a solid grasp on autonomy's influence on language learning remains "elusive" (Hurd, 2005). That sentiment is echoed by Benson (2010), who further states that it appears possible to 'test' or measure autonomy in SLA, but that no tool presently exists to effectively do so. The literature within the broader discipline of education is perhaps more hopeful. For example, Zimmerman (2002), who has published extensively in the field of self-regulated learning, contends that, in addition to self-awareness and the ability to utilize self-directed strategies effectively, the following "component skills" form the building blocks of learner autonomy:

a. setting specific proximal goals for oneself,
b. adopting powerful strategies for attaining the goals,
c. monitoring one's performance selectively for signs of progress,
d. restructuring one's physical and social context to make it compatible with one's goals,
e. managing one's time use efficiently,
f. self-evaluating one's methods,
g. attributing causation to results, and
h. adapting future methods.

There exist empirically validated characteristics of autonomous learners which correspond to entries on Zimmerman's list, which also correlate with success in online learning. For example, managing one's time use efficiently is frequently cited as an important predictor of LR for online learning (e.g. Hung et al., 2010; Pillay, Irving & Tones, 2007; Smith, 2005; Smith, Murphy, & Mahoney, 2003; Song et al., 2004). Moreover, goal setting is another facet of autonomy which has been identified as an indicator of LR for online learning (e.g. Hung et al., 2010; Smith, 2005; Smith, Murphy, & Mahoney, 2003). Further to these, Hung et al. include items about creating a plan for learning, and seeking assistance (2010). The

present investigation will draw on these themes in formulating survey items for estimating learner autonomy.

2.2.2 Computer self-efficacy. Computer skills have an obvious connection with ability to engage in online learning. At one end of the spectrum, simply being able to 'boot-up' and 'log-in' are basic skills for simply accessing the Internet. Mid-level skills, such as word processing, are likely to be required for completing assignments in online courses. Nearly any instance of online learning is dependent on ability to navigate the Internet. It is thus no surprise that scholars consider ability to use a computer as important for achieving success in online learning (e.g. Harrell, 2007; Machado, 2007; Mehlenbacher et al., 2000; Mercado & Domantay, 2010; Muilenburg & Berge, 2005; Smith, 2005; Smith, Murphey, & Mahoney, 2003; Sun et al., 2008; Watkins, Leigh & Triner, 2004). One method of measuring technical ability is through self-assessment. The term computer self-efficacy (**CSE**) is often used to describe this, and is defined as "an individual judgment of one's capability to use a computer" (Compeau & Higgens, 1995; cited in Downey, 2006).

Within online learning generally, several studies have mentioned technical skills, or related aspects, as a requisite for success. For example, Hung et al. found computer and Internet self-efficacy to be a valid predictor of **LR** for online learning (2010). Yee et al. include ease of use of the system as a primary determinant of online learning (2009), which is a function of both the system being used and the user's technical skill. Similarly, Song et al. report that students felt comfort with using Internet technologies influenced success in online learning (2004). In their paper on **LR** for online learning, Pillay, Irving and Tones include technical skills and computer self-efficacy as two distinct items (2007); however, their tool for measuring readiness seems to include no skills-based assessment of technical skills. In their survey, all items are based on learner opinion, and therefore can be said to measure only self-efficacy. The technology acceptance model (**TAM**; Davis, Bagozzi, & Warshaw, 1989), and variants, has been extensively studied and found to be generally reliable (see Yousafzai, Foxall, & Pallister, 2007a; Yousafzai, Foxall, & Pallister, 2007b); the original **TAM** includes perceived ease of use as well.

Barrette points out the importance, but infrequent practice, of evaluating the computer literacy of learners ahead of assigning **CALL** activities (2001). In a follow-up study, language students at Michigan State University were found to lack the required computer access and literacy for any **CALL** tools which differed from those applications they used in daily life (Winke & Goertler, 2008). Winke and Goertler report the near total absence of studies on students' preparedness, stating that "with the exception of Barrette (2001), **CALL** researchers and pedagogues have not directly asked students about their preparedness for **CALL** before implementation" (2008, p. 483). In an unpublished **MA** thesis, another **CALL**-related survey of student opinion in Japan found that 46% agreed or strongly agreed that computers were too difficult to use (Silva, 2000). A clear conclusion can be drawn: students cannot be assumed to possess the technical computer skills for engaging in online language learning.

This study will measure technical computer skills through **CSE**. The survey items are similar to those used in the aforementioned studies, and aim to encompass the types of computer skills which may be needed for online learning.

2.2.3 Attitude towards online learning. The feelings a learner has about using computers, and the perceived usefulness of online learning, plays a role in their success in online learning (Liaw, Huang, & Chen, 2007; Mehlenbacher et al., 2000; Sun et al., 2008; Yee et al., 2009).

Muilenburg and Berge, though they don't use the term attitude, nonetheless do measure it by querying learner opinion about online learning in terms of: effectiveness, enjoyment, personal successes, and future expectations (2005). Other studies have identified the similar comfort with e-learning as a valid predictor of learner success, using survey items which can be said to measure attitude, such as, "I feel that online learning is of at least equal quality to traditional classroom learning" (Smith, Murphy, & Mahoney, 2003, p. 62; Smith, 2005). Some variants of **TAM** have also included attitude towards the technology as important in acceptance (Yousafzai, Foxall, & Pallister, 2007a; Yousafzai, Foxall, & Pallister, 2007b).

Pillay, Irving, and Tones include attitude towards computers as an indicator of **LR** for online learning, using items focusing on general usage, such as "I like using computers for research," or, "I spend a lot of time on the Internet" (2007, p. 226). Although their paper seems to initially discuss learning styles (see section 2.2.6 of this paper) under the heading learner preferences, the items for their survey are, "I would rather listen to a lecture than read the material from a computer screen," "I would rather find out information using a computer than from a teacher or lecturer," and "I can't learn using only computers, I need the teacher-student contact" (p. 226). It could be said that such items are indeed investigating learner attitude towards online learning.

Not all research has found a correlation between attitude towards online learning and learner success. Interestingly, Sun et al. report that their data does not support the connection between attitude and learner satisfaction with online learning, yet they also state that perceived usefulness and perceived ease of use are two of "the critical factors affecting learners' perceived satisfaction" (2008, p. 1183). Machado included attitude as a dimension of **LR**, as a result of a focus group study, but does not elaborate further (2007). It is also, important to note that Shih and Gamon (2001) investigated the impact of attitude on success in e-learning and found that there was no connection.

In order to investigate the usefulness of establishing **LR** for online learning by measuring learner attitude towards online learning, this study will include survey items similar to those used in other studies investigating readiness for online learning.

2.2.4 Motivation. There are several studies investigating various models of motivation for predicting learner success in online learning. Davis, Bagozzi and Warshaw's original (1989) **TAM** included "behavioral intention to use". Shih and Gamon (2001) used the Motivation Strategies for Learning Questionnaire and found motivation played a significant role in learner success in online learning. Similarly, Hung et al. (2010) incorporated items from self-determination theory (**SDT**; see Ryan & Deci, 2000) with their own items, conducted the survey, and concluded that motivation likely has an effect on success in online learning. Other studies, as a result of surveying learner perceptions, also claim that learner motivation is a potential barrier to online learning (Muilenburg & Berge, 2005; Song et al., 2004). It should be mentioned that, although many studies support the connection between learner motivation and success, researchers are not always able to demonstrate a clear and direct relationship. Chen and Jang attempted to use **SDT**, and measured motivation using an adjusted version of the Academic Motivation Scale (see Vallerand et al., 1992), but found that "motivation/self-determination failed to predict learning outcomes" (2010, p. 741). Moreover, Watkins, Leigh and Triner (2004) report inclusion of motivation within their self-assessment survey, but, due to technical problems, could not provide empirical evidence of its usefulness as an indicator of **LR** for online learning. In general, though, the evidence suggests that motivation is a good indicator of success in online learning.

The relationship between language learning and motivation is among the best documented areas of second language acquisition (**SLA**; Dornyei, 2003a). Academics and researchers generally recognize motivation as one of the strongest influences on the success, and speed, of second language learning (Dornyei, 1998). In particular, the socio-educational theory developed by Gardner and colleagues has been extensively studied (Dornyei, 2003a; Oxford, 1996), and is investigated using the Attitude/Motivation Test Battery (**AMTB**). The **AMTB** has the advantage of investigating not only motivation, but also related factors such as attitude and anxiety. A meta-analysis of studies into Gardner's theory provides detailed descriptions of, and strong support for, both the theory and the **AMTB** (Masgoret & Gardner, 2003). However, the large size of the **AMTB** can be time-consuming and inconvenient for both students and scholars; an international version of the **AMTB** for **EFL** contains 116 items (Gardner, 2004). For this reason, a miniature version of the **AMTB** has been created and tested, with results indicating that the mini-**AMTB** and the full **AMTB** are equally reliable (Tennant & Gardner, 2004). This study will pilot with items identical to those published in Tennant and Gardner's **CALL**-specific study (2004), with slight contextual changes (i.e. from English speakers learning French, to non-English speakers learning English).

2.2.5 English language self-efficacy. An online course typically requires learners to have strong reading and writing skills, as most of the work is done through the use of text. Self-access online materials which have no teacher and are not part of an online course, will likely require that learners read, but are unlikely to involve writing due to the limitations of computers when analyzing learner submissions. From the papers reviewed for this study, it appears that the language element of **LR** for online learning, even in language-specific settings, has either been overlooked or in some cases purposefully ignored. For example, Machado (2007) used a focus group to establish an e-learning readiness model, and while the issue of students' language skills was raised by participants, it was inexplicably not included in the final model. Machado even mentions that lack of a common language was a dilemma faced during the focus group interviews, but does not discuss the relationship between language and communication in a learning environment.

Most studies do not appear to consider the issue of language at all, though in some cases it is possible that the language of instruction was either the native language of the students, or they had a very strong proficiency in it. The importance of common language is acknowledged by Smith, Murphy and Mahoney (2003) and Smith (2005) in the selection of the participants for their studies on readiness for online learning, with only native speakers of English included. Even after such screening, it is worth noting that they use McVay's Readiness for Online Learning questionnaire (Smith, Murphy, & Mahoney, 2003; Smith, 2005) which asks learners if they are comfortable with written communication.

One study was found in the literature which included three items considering language skills. That paper analyzed student barriers to online learning, and identified "Lack language skills for online learning, Lack writing skills for online learning, lack reading skills for online learning, [and] Lack communication skills for online learning" (Muilenburg & Berge, 2005). While these items are included in their survey, the issue of language is not discussed in the text of the publication.

The present study investigates online language learning, and English language learning specifically. When self-access English language learning materials are prepared for an international audience, English is used as the language of instruction; from explanations,

to task instructions, to feedback. So, there is a need to know what level of English language proficiency is needed for success in online language learning.

In the interest of consistency a self-assessment technique is proposed for predicting **LR** with respect to English language ability; seven items gauge learner ability (such as reading or vocabulary) and use of strategies (such as dictionaries or online translation tools). In order to provide further data about learners' English language ability, each survey item will also include the possible answer of I don't understand the question. For learners who consistently select this option, the prediction is that it their level of English may be too low to follow high-level instructions or materials. An added benefit of this is that it may help to identify poorly worded questions, if several respondents report that they do not understand the same item.

2.2.6 Learning style. Comprehensive discussion of learning style (**LS**) is beyond the scope of this paper, but a succinct definition is provided by Dunn, as, "the way in which each person absorbs and retains information and/or skills; regardless of how that process is described, it is dramatically different for each person" (1984, p. 12). Sometimes used interchangeably with 'cognitive style' or 'learning preferences', several **LS** models were included in papers reviewed for this study; some looking at several indicators of **LR** (Harrell, 2008; Mehlenbacher et al., 2000; Mercado & Domantay, 2010; Pillay, Irving, & Tones, 2007; Shih & Gamon, 2001), and in others focusing on **LS** exclusively (Dag & Gecer, 2009; Santo, 2006; Zapalska & Brozik, 2006). Although we do not use this indicator, the frequent mention of **LS** merits some discussion.

Harrell (2008) claims that research suggests **LS** may be a large impediment to online success, but does not elaborate on that statement. Similarly, Mercado and Domantay include **LS** as an indicator of student preparedness for online learning (2010), though with reference to only a single paper by Blackmore (1996), which seems to be neither published nor based on primary sources. Mehlenbacher et al. (2000) used Felder's Inventory of Learning Styles (**ILS**) to determine different **LS** and found a correlation between learning style and success in an online writing course. However, in a 2002 preface added to the initial publication, Felder discusses significant changes he has made to the original model (Felder, 1988). This throws doubt on the value of Mehlenbacher et al.'s findings using the earlier **ILS**. Lastly, in a review paper on the relation between online learning and **LS**, Dag and Gecer (2009) present a wide variety of completed studies, but with only vague conclusions.

Insights into this obscurity are provided by Santo, who investigates **LS** as an indicator of learner success in online learning (2006). She points out that there is no one standard definition of **LS**, and goes on to review several empirical studies which discuss nine different models. She concludes that: the term learning style is unclear, self-assessment tools rely on respondents being both self-aware and honest – an important consideration for any indicator-, the overall trend does not indicate that **LS** is a reliable indicator of online learning readiness, and that the online learning context provides additional complications. While Santo does not dispute the existence of **LS**, she warns against the use of it as an indicator of **LR** given the state of knowledge at the time of her writing. Her findings are consistent with Shih and Gamon's (2001) investigation of the Group Embedded Figures Test, a test of learning styles, which found no noteworthy impact of **LS** on achievement.

Therefore, since no substantial insights have come to light in the intervening years, and in agreement with Zapalska and Brozik (2006), we conclude that variety in learning style could be considered in course/courseware design, but not in predicting learner success.

3. Methodology

3.1 GORILLa pilot

Piloting a questionnaire is an essential step in development (Dornyei, 2003b) and a paper-based pilot of the GORILLa was conducted between July 26 and August 2, 2011, at the Asian Institute of Technology (AIT), using convenience sampling. The survey respondents were users of English as a foreign language, as well as being participants in a preparatory program which focuses on academic English and research skills, in advance of graduate study in an English language medium. All of the 40 students in the program were given blank surveys, and 21 were returned complete. All survey items were measured on a 7-point Likert-type scale to be consistent with the computerized mini-AMTB for measuring motivation (see section 2.2.4). The responses were reviewed for three aspects: (1) correctly completing survey items, (2) instances of I don't understand the question being selected for an item, or no selection for an item, and, (3) comments from the participants. Based on the returned papers the GORILLa survey items were revised for clarity while retaining meaning. The post-pilot GORILLa is in Appendix I.

3.2 Preliminary investigation of the revised GORILLa

The revised GORILLa was next distributed, at the end of August, 2012, to all students in attendance (n = 92) for the first class of a remedial academic English writing course with two classes a week: one online as self study using the materials at <el19online.ait.asia>, and the other face-to-face. Every student in this class was undertaking masters or doctoral studies in an international university where English is the language of instruction, and have a level of writing equivalent to a 5.5 on the International English Language Testing System (IELTS) scale. In addition to the survey data, records for the course show that there were a total of 118 students registered for the course, of whom 111 took the final test with 77 able to pass by achieving equivalent to an IELTS 6.

Survey data was entered into MS Excel for calculation of totals and percentages. Comprehensive investigation of each demographic indicators is beyond the scope of this paper, but the data are included to give an impression of the participants. Cronbach alpha values were calculated with SPSS Statistics 17 to estimate reliability of the non-demographic indicators as well as the entire GORILLa.

4. Results

4.1 Demographic data

Survey respondents were 42 males and 45 females, with five not indicating gender. The majority of the respondents were masters students, at 72, with 16 doctoral candidates and five writing that they were undergraduate students. Table 1 displays totals for respondent age, nationality (NTY), current year of study (CYoS), and field of study (FoS).

Table 1: Summary of age, nationality, year of study, and field of study data

AGE	#
18–21	1
22–25	43
26–29	23
30–33	10
34–37	7
38–41	4
42–45	0
46–49	0
>50	1
blank	3

NTY	#
Thai	51
Myanmar	10
Vietnamese	6
Malaysian	1
Nepali	4
Indonesian	2
Tanzanian	1
Rwandan	1
Laotian	1
East-Timorese	1
Indian	1
Taiwanese	2
Iranian	1
Cambodian	2
Chinese	2
Afghani	1
blank	5

CYoS	#
1st	39
2nd	44
3rd	5
4th	0
5th	1
>5	1
blank	2

FoS	#
Interdisciplinary	1
Natural Science	3
Social Science	8
Engineering	38
Applied Science	22
Environmental Management	1
Business/Finance	15
ICT	2
Offshore Tech. Management	1
Computer Science	1

4.2. Non-demographic data

Table 2 contains Cronbach's alpha reliability estimates for each of: learner autonomy (LA), computer self-efficacy (CSE), attitude towards online learning (AOL), motivation (MOT), and English language self-efficacy (EL), as well as in total for the entire GORILLa.

Table 2: Cronbach's alpha for non-demographic indicator survey item data

	α	Reliability
LA	0.612	questionable
CSE	0.792	acceptable
AOL	0.687	questionable
MOT	0.473	unacceptable
EL	0.379	unacceptable
GORILLa	0.810	good

5. Discussion

5.1 Post-pilot GORILLa survey: The state of the art

Preliminary investigation of non-demographic indicators suggests that the survey lacks reliability at the indicator level (see Table 2). Conversely, at the survey level the data suggest that the survey items are consistently measuring the same construct, LR for online

language learning, with a Cronbach alpha coefficient of 0.810; this may be an inflated value as a result of the large number of survey items (n=41).

Although further work can enhance the validity of the GORILLa, we can begin to consider where to draw the line between prepared and unprepared. Since 118 students registered for the course and there were 92 completed surveys, then the survey sample is a very representative ~78% of the population. The Likert-scale codification out of seven gave the highest score to responses which were most conducive to online learning, and a zero to those who could not understand the question; therefore, learners with a higher total number for non-demographic indicators should theoretically have a higher likelihood of success in online language learning, up to a maximum possible total of 287. Of the 118 students registered for the course, only 111 took the final test and ~69% of those passed. Assuming that the 69% who passed were prepared for the online component of the course, we can begin to consider that a ballpark figure to indicate LR based on the GORILLa non-demographic indicators would be around 212, which is the lowest score for the top 69% of survey respondents.

The returned survey data raises the issue of possibly unrecognized misunderstanding which taints the survey data and raises questions about the validity of a second language self-assessment approach for second language learners. Even after the pilot there are students reporting that current level of study as bachelors degree, or that they are studying natural sciences. This is impossible as each student is required to be a masters or doctoral student in order to register for the course, and AIT does not offer degrees in the natural sciences. If students don't understand "current year of study" then they might incorrectly answer about number of years at current level, or any of the other items. This strongly suggests that the use of a self-answered survey tool using the English language for second language users is perhaps not appropriate, consistent with warnings from Mackey and Gass (2005).

This study and the tool it proposes are not without limitations. The post-pilot GORILLa figure of 212 to estimate LR is based on learners passing a test for which they had face-to-face instruction for half of the course; the use of a blended teaching approach allows that students who are not successful online learners could be successful face-to-face learners and still have passed their test. Furthermore, the experiment was not carefully controlled, in that not all of the survey respondents necessarily took the final test, at 92 out of 118 enrolled, and not all of the final test takers necessarily completed the survey at 111 out of 118 enrolled. Moreover, Winke and Goertler (2008) point out that students may not provide accurate responses because they are disinterested, or because they report opinions which are acceptable to their teachers, even if untrue. Perhaps the greatest flaw is that the tool is not yet completely calibrated and ready to implement out of the box. On the other hand, while the GORILLa has not been rigorously validated, this limitation opens up several avenues for future research.

5.2 Suggestions for future work

The primary contribution of this study is the rich framework provided for further investigation into estimating LR for online language learning, as the GORILLa is calibrated, including:

1. The impact of demographic variables upon overall LR needs to be more fully addressed.
2. In order to ascertain if the individual GORILLa items are a valid measure of each indicator, a large enough sample should be obtained to perform statistical validity testing,

such as confirmatory factor analysis. Such analysis could be used to identify weak items for deletion.

3. Validity of GORILLa estimates should be improved through considering weighting of indicators and adjustments could be made about what level(s) can be considered high enough to suggest preparedness.
4. The estimated readiness score of 212 on non-demographic indicators can be further tested and validated.
5. Is self-assessment of English language ability sufficient? Perhaps an assessment tool which tests necessary language for online learning would be more useful, such as instruction language (Choose the best answer, etc.) or Internet language (click, download, etc.).
6. A pre-/post-test analysis of some online learning experience would be required to see if the GORILLa can make an accurate prediction. Such testing would be useful for establishing recommendations to individual learners who have the choice between taking a course online or face-to face. This kind of experiment would require that survey data be identifiable to a student name or number to check against test scores.
7. The GORILLa could be further validated by being tested with different groups of learners and on different kinds of online materials.
8. Given that student success is also dependent on the quality of online materials, it would be useful to have a comprehensive, GORILLa-specific, rating framework which could be used to determine a specific learners' estimated chance of being successful when using online materials with a specific ranking.
9. An online version of the GORILLa which can be accessed by researchers and practitioners around the globe can assist in overcoming the lack of data which frustrated the present research, while at the same time helping to calibrate the tool towards more accurate predictions of LR.

6. Conclusions

The aim of this study was to propose a comprehensive tool for estimating LR for online language learning. Although detailed investigation of each indicator is outside of the scope of a single article, preliminary investigation of the GORILLa's non-demographic indicators suggests that most of the sampled learners rated themselves as prepared for online study, and indeed most of the tested population were successful. Combined with the good fit rendered by Cronbach's alpha coefficient for the entire survey we can cautiously conclude that the GORILLa shows promise in becoming an authoritative and reliable tool for estimating LR for online language learning.

This study began when one of the authors was tasked with preparing online language learning materials and was concerned that many of the target learners may not be successful in a self-access online environment. As a result of the floods in Thailand which devastated the AIT campus in 2011, however, the research was inaccessible and it became necessary to immediately begin work on the online materials at <el19online.ait.asia> in order to support student learning in the post-flood environment. It has been highly satisfying to see that the learners were prepared, even if the tool to measure their readiness was not itself ready.

However, the dilemma of insufficient resources for developing online materials at a time when education is gravitating towards the Internet remains. If LR for online language

learning is to be considered, as we have argued it should, then the GORILLa presented above provides rich data for further investigation by fellow CALL practitioners and researchers. A thoroughly tested and properly tuned gauge of learner preparedness for online language learning will be an indispensible tool for language education in the digital age. Beyond language learning, internationalization of education and the rise of Massive Open Online Courses (MOOCS) with international participants provides further justification for interest in this work.

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Appendix A

The post-pilot GORILLa

A Gauge of Readiness for Internet-based Language Learning

Please take a few minutes to answer the following questions by putting a tick (☑) in the correct box. Write complete answers in the lined space (_____) when appropriate. If you don't know the meaning of a question, tick *I don't understand*.

This survey is confidential, so please try your best to answer honestly.

Age: *<18* ☐ *22-25* ☐ *30-33* ☐ *38-41* ☐ *46-49* ☐
18-21 ☐ *26-29* ☐ *34-37* ☐ *42-45* ☐ *>50* ☐

Current level of study: *bachelors degree* ☐ *masters degree* ☐ *doctoral degree* ☐ *other* _____

Gender: *male* ☐ *female* ☐ *other* ☐

Nationality: _____

Year of study at current level: *1st year* ☐ *2nd year* ☐ *3rd year* ☐ *4th year* ☐ *5th year* ☐ *>5 year* ☐

Area of study: *Engineering* ☐ *Business/Finance* ☐ *Education* ☐ *Mathematics* ☐ *ICT* ☐ *other* _____
Natural science (physics, chemistry, etc.) ☐ *Humanities (philosophy, literature, etc.)* ☐ *Social science (gender, psychology, etc.)* ☐ *Applied science (agriculture, energy, etc.)* ☐ *Languages* ☐

I can direct my own learning.
Very much ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *not at all* ☐ *I don't understand* ☐

I believe it is possible for me to learn without a teacher.
Very possible ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *impossible* ☐ *I don't understand* ☐

I can find enough time to study every week.
Very easily ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand* ☐

I complete work and assignments on time.
Always ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand* ☐

1

I set goals for myself when studying.

Always ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I create a plan to help me study.

Always ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I ask friends or teachers if I need help.

Always ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I enjoy learning new things.

Always ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I can surf the web and find the information that I want.

Always ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I can communicate online with email or messaging services like MSN.

Very easily ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I can sign-up for new online services, such as an email account or Facebook.

Very easily ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I can share media, such as pictures or video, on Web 2.0 sites, such as facebook or YouTube.

Very easily ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I can install new software, or upgrade software, on my computer.

Very easily ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I can use Windows to manage files and folders (create, copy, delete, etc.).

Very easily ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I can insert audio and video files into documents.

Very easily ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

2

I can learn to use new software by myself.

Very easily ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I believe that I can learn without an instructor.

Very easily ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I believe online learning is useful.

Very often ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I believe that I can learn with a computer.

Very easily ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I enjoy using computers and the Internet to learn.

Always ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

Compared to classroom learning, online learning is:

Better ☐ ☐ ☐ *the same* ☐ ☐ ☐ *worse* ☐ *I don't understand*

I like learning in a classroom environment.

Very much ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

I have successfully used online learning materials in the past.

Many times ☐ ☐ ☐ *a little bit* ☐ ☐ ☐ *never* ☐ *I don't understand*

I look forward to high quality online learning opportunities in the future.

Very much ☐ ☐ ☐ *somewhat* ☐ ☐ ☐ *not at all* ☐ *I don't understand*

I want to learn English to communicate with English speakers:

Very much ☐ ☐ ☐ *somewhat* ☐ ☐ ☐ *not at all* ☐ *I don't understand*

I am interested in learning new languages:

Very much ☐ ☐ ☐ *somewhat* ☐ ☐ ☐ *not at all* ☐ *I don't understand*

My desire to learn English is:

Weak ☐ ☐ ☐ ☐ ☐ ☐ ☐ *strong* ☐ *I don't understand*

I want to learn English:

Very much ☐ ☐ ☐ ☐ ☐ ☐ ☐ *somewhat* ☐ *not at all* ☐ *I don't understand*

I like my English teacher:

Very much ☐ ☐ ☐ ☐ ☐ ☐ ☐ *somewhat* ☐ *not at all* ☐ *I don't understand*

The important reason for me to learn English is because I need it for study, work, or some other practical reason

Very much ☐ ☐ ☐ ☐ ☐ ☐ ☐ *somewhat* ☐ *not at all* ☐ *I don't understand*

When I speak English outside of class I feel:

Very comfortable ☐ ☐ ☐ ☐ ☐ ☐ ☐ *no feeling* ☐ *very nervous* ☐ *I don't understand*

I think that English language is:

Very useful ☐ ☐ ☐ ☐ ☐ ☐ ☐ *not useful* ☐ *I don't understand*

In English class I feel:

Very comfortable ☐ ☐ ☐ ☐ ☐ ☐ ☐ *very nervous* ☐ *I don't understand*

I work hard to learn English:

Very much ☐ ☐ ☐ ☐ ☐ ☐ ☐ *somewhat* ☐ *not at all* ☐ *I don't understand*

I can read and understand instructions written in English.

Very easily ☐ ☐ ☐ ☐ ☐ ☐ ☐ *sometimes* ☐ *never* ☐ *I don't understand*

I need to read or hear instructions in my native language.

Always ☐ ☐ ☐ ☐ ☐ ☐ ☐ *sometimes* ☐ *never* ☐ *I don't understand*

My vocabulary is strong enough for me to communicate with others.

Very easily ☐ ☐ ☐ ☐ ☐ ☐ ☐ *sometimes* ☐ *never* ☐ *I don't understand*

4

I can communicate with other people through writing. *Very easily* ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*
English is a problem for me when I try to study online. *Never* ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *always* ☐ *I don't understand*
I use an English dictionary when I study. *Very easily* ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*
I use a translation tool, such as Google Translate, when I study online. *Very easily* ☐ ☐ ☐ *sometimes* ☐ ☐ ☐ *never* ☐ *I don't understand*

Further Comments:

Disclaimer:

By completing this questionnaire and submitting it, you are agreeing to allow the author to use the data for research and educational purposes only.