The 3rd International Conference on e-Learning
ICEL 2011, 23-24 November 2011, Bandung, Indonesia

Computer-Aided Self-Access Language Learning: Views of Indonesian, Malaysian & New Zealand Practitioners

Airil Haimi Mohd Adnan\textsuperscript{a,*}&b and Zarlina Mohd Zamari\textsuperscript{b}

\textsuperscript{a}English Language Support and Acquisition Centre (CAD-ELSAC), Kate Edger Information Commons, The University of Auckland, City Campus, New Zealand
\textsuperscript{b}Department of English Language and Linguistics, Academy of Language Studies, Universiti Teknologi MARA Perak, Malaysia

Abstract

Our synthesis of up-to-date research literature and our own professional work in computer-aided language learning (CALL) and self-access language learning (SALL) have led us to propose a 5-point computer-aided self-access language learning (or CASA-LL) framework that combines the best of both worlds as it were, in terms of e-course development and online English language teaching and learning. Based on this framework, we set out to elicit the opinions of e-course developers and online learning managers who focus on English language teaching and learning through virtual environments and platforms. In this study, we report primarily on the asynchronous interview data we collected from senior course developers and online learning managers who are working in the tertiary education sector in Indonesia, Malaysia and New Zealand. Results from open-ended narrative interviews with these experts suggest that our CASA-LL framework is a positive step ahead for both computer-aided language learning (CALL) and self-access language learning (SALL). Nevertheless, our research participants also told us that there are many obstacles that they need to overcome to make certain that English language teaching and learning in virtual environments and platforms fully subscribe to the five key criteria that we have outlined in the CASA-LL framework.

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Selection and peer-review under responsibility of i-Learn Centre, Universiti Teknologi MARA, Malaysia

Keywords: CALL; SALL; ELT; comparative study

* Corresponding author. E-mail address: airil@tceechconsult.com
1. Introduction

In traditional classrooms, teachers have the ability to choose teaching and learning materials, which suit the level of their students, discuss them and ask or answer questions for clarification. The emergence of e-learning or learning via computers brings about innovation in teaching and learning materials specifically marked in the design of an e-courseware.

Suggesting that intelligent e-courseware is able to replace the role of a teacher however, is a moot point. E-courseware is electronic support for learners providing new possibilities in their learning experiences provided the e-courseware has “high quality educational material, created by academics who understand e-learning, using state of the art design process and tools, based on sound pedagogical principles and designed for delivery” (UK eUniversities Worldwide, 2002, online).

Thus, the process of developing an e-courseware is an integrated approach which involves pedagogy, technology and organization. Asmawi and Abdul Razak (2006) and Ipek, Izciler and Baturay (2008) discussed five steps in the instructional design model for integrated learning. These researchers introduced models of instructional design which incorporated all these processes: Analysis, Design, Development, Implementation and Evaluation/Assessment (or ADDIE for short).

The first step for any courseware developer is to determine the goals and objectives, type of technology suitable for that purpose, characteristics of learners and the learning environment. For the next step, Ipek, Izciler and Baturay (2008) stated that types and steps of learning as well as skills and knowledge sub-skills must be determined:

[The] IDT model, basically the taxonomy developed by Gagne and Briggs or integrated IDT models will be used to reach this objective. Instructional analysis provides the entry requirements for different learning conditions, type of learning as verbal, cognitive, case, project-based, audio visual, etc., sequencing instruction, and constructing hierarchies for integrated e-learning modules in technology training with different social-economic groups (p. 252)

The third step is the development of materials. The designer must think about presentation of the course, instructional strategies and the amount of practice and feedback needed. Since an intelligent e-courseware is all about delivery, the fourth step is looks at developing and selecting delivery systems. At this stage, the designer has to choose several types of technologies such as audio-visuals and multimedia designs. Effective use of multimedia authoring tools creates interesting varieties in learning tasks.

The final stage is to prepare for assessment and evaluation. Ipek, Izciler and Baturay (2008) suggested that cognitive and performance tests can be used to gather information on learners’ performance in the course. Evaluation of e-learning, as reported by Asmawi and Abdul Razak (2006) require summative evaluation where instructional materials could be improved after usage. In general, the process of developing e-courseware involves iterative and interrelated stages that begin with a thorough needs analysis and end with an evaluation and assessment for both the end users and the e-learning material.

2. Literature Review

2.1. Critical issues and problem areas in using e-courseware for ELL and ELT

E-learning has established itself in the field of language teaching and learning. The fact that it is readily embraced does not mean that there are no glitches where implementation is concerned. In the
midst of enthusiasm and rave reviews of e-courseware’s effectiveness and positive learners’ responses, there are some gnawing issues that must be dealt with.

The most basic issue is concerned with the availability of ICT facilities. Failure in preparing the required computer systems and other paraphernalia will create a barrier in implementing e-learning. Among other critical issues reported are financial barriers, unavailability of hardware and software, lack of technical and theoretical knowledge and reluctance to accept new technologies (Calvo, 1997).

A decade later, the same predicaments concerning knowledge barriers in technology and pedagogy, barriers in facilities, outdated personal beliefs in language teaching and the existing methods of assessment were highlighted by Ismail (2008) whose study was based on the implementation of e-learning in Malaysia. In general, researchers seem to agree that teachers’ attitude towards their own self-efficacy in computer technology influence the success in implementing e-learning. Thus, there exists the urgency in preparing language teachers to face ‘techno-pedagogy’.

Lee (2000), Hong (2009) and Topkaya (2010) found that pre-service English teachers have moderate levels of self-efficacy in computer technology. It is suggested that English teachers must be equipped with up-to-date knowledge of IT and types of instructional designs. Having them involved in the process of developing an e-courseware will also add to its effectiveness as a learning tool.

Another issue to deal with is the content of an e-courseware. Abu Bakar (2007) and Ismail (2008) found that there were some restrictions in the content of e-courseware that they studied. Authentic materials were not readily available and learners were not given the chance to experience a range of learning activities. To make matters worse, learners were less interested in their own learning process as they participated in e-learning activities. Waning interests among them, according to Ismail (2008) was caused by examination-based subjects. Learners were more concerned with scoring high marks in their examination than the actual experience of learning via the computer.

Suffice to say, all these issues could be ironed out if thorough planning and preparation are made prior to implementing e-learning in any educational institution. Since e-courseware offers the luxury of language learning via audio-visuals, teleconferencing and language games, an educational institution has to be able to provide sufficient infrastructure such as language labs and self-access language learning centers.

Equally important would be the teachers and learners whose roles have been re-established in an e-learning environment. While there are findings (see Burrus, 2006; Ghandoura, 2006 and Son, 2008) which indicate that learners responded positively to e-learning, results on teachers’ perceptions seemed to be at the opposite end (see Lee, 2000; Hong, 2009 and Topkaya, 2010). Teachers have no choice but to be knowledgeable in instructional design models and be able to contribute academically to the development of an e-courseware. By getting teachers to be involved in e-courseware design, the mismatch between learning tasks and learners’ level of proficiency should be reduced.

2.2. Making sure e-courseware meets the needs of real English learners

A central query for researchers who studied the effectiveness of e-courseware in language learning would be: “What does good language learning courseware look like?” Researchers who explore the essential process of developing e-courseware have highlighted several important issues to be taken into consideration.

Firstly, almost all of them agree that the most significant element to the design is the end-users or the language learners. Abdullah, Hartharan and Ibrahim (1997) and Nguyen (2008) believed that content specialists and software developers’ collaborative efforts must be based on sound knowledge of the actual characteristics of potential users. Nguyen (2008) for example, detailed these characteristics as learners’
Careful considerations of learners’ needs, especially the knowledge of the target group (Tamburini, 1999; Nguyen, 2008) is crucial in the early stages of the design. Another important aspect of language learners’ characteristics is undoubtedly, their learning styles. As stated in Chapelle and Jamieson (1986) and Chapelle (2005), teachers and courseware developers must quickly determine language learners’ cognitive styles such as field dependent and field independent learners. One of the ways to achieve this, according to them, is to provide an early assessment that required learners to respond to questions about their style pertaining to CALL. In short, knowledge of the learners and their needs are the fundamentals of processes involved in developing an e-courseware.

Another important factor to be incorporated into e-courseware design would be the principles of instructional design as cited in Abdullah, Hartharan and Ibrahim (1997). Courseware developers need to have sufficient technological know-how so that they could maximize the use of multimedia authoring tools:

*Instructional knowledge on issues relating to the amount and suitability of information, layout design, graphics, background music, user interface, etc. is essential.*

(Abdullah, Hartharan and Ibrahim, 1997, online)

Another concern regarding instructional design of e-courseware is interactivity. Meskill (1987) believed that courseware interactivity enhances the learning environment, which will invite exploration, experimentation and risk taking. More specific models for interface design was proposed by Plass (1998) who listed three stages – select instructional activity that supports cognitive success of competence to be developed, attributes and design of the feature. Meskill (1987) and Plass (1998) greatly stressed that the ultimate goal of instructional designs in a courseware is to ensure that language acquisition takes place.

A decade later in the wake of advanced multimedia designs, more studies have been done to identify the needs for courseware that really works. For instance, Nguyen (2008) introduced the Multimedia Courseware Design framework, which stressed that developers must consider the intended users, content and screen design. Indeed, the main challenge for developers is to create effective instruction sets and meaningful tasks with rich and varied learning experiences. ‘Too much’ interface will only create unnecessary clutter in the design and hampering the language learning process.

2.3. Other considerations in using e-courseware to deliver English Language lessons to learners

One significant issue, which must not be overlooked, is the cross-cultural consideration in the content of e-courseware as highlighted by Meskill (1987). She emphasised that as second language learners learn the target language, they also learn the system of the target culture. Granted, L2 learners do need the exposure on how language is used in the native speaker setting. English language learners around the world however, come from diverse cultural background and they will only communicate in English in their own learning environment. We believe that a good language learning e-courseware must incorporate learning in the local context while not compromising the linguistics of the target language. Cultural needs and differences need to be taken into account at every stage of the design and delivery of online materials.

Another consideration in using e-courseware to teach language is whether or not it sustains learners’ autonomous growth. The degree of autonomy in the chosen e-courseware must be high enough to generate interest amongst learners to find out about the target language outside of the classroom. One of the ways to support autonomous learning is to establish self-access language learning and support centers. Gardner and Miller (1999) view self-access as a way to encourage learners to move from teacher
dependence towards autonomy. Similarly, highlighting the issue of self-access materials as an approach to learning and not teaching, Reinders (2000) defined self-access as:

*Learning that takes place in a self-access center [through] a number of resources (in the form of materials, activities and help), usually in one place that accommodate learners of different levels, styles and with different goals and interests. (p. 222)*

Last but not least, when using e-courseware to support language learning, it must be able to go through an iterative development process (Kennedy and Levy, 2009). An outdated e-courseware will not benefit language learners in the long run. In fact, learners will get bored with the same challenges and tasks will be predictable enough to hamper new learning experiences and language acquisition. Sustainability of an e-courseware can actually be an indication of its successful implementation.

In general, we believe the process of designing an integrated e-courseware has to address five key points to ensure its usability and delivery (Zamari and Adnan, 2010). In order to assure that language learners acquire actual language skills, e-courseware developers have to work closely with language teachers and linguists to produce effective and varied e-learning experience, not to mention the need to acknowledge language learners’ cultural differences. The implementation of e-learning also requires training and adequate equipment, particularly well-designed language support centers. Lastly, English language e-courseware must have in-built sustainability so that it can continue to deliver over time.

### 2.4. A framework for developing and evaluating computer-aided, self-access language learning

Due to the fact that there are many standards that can be used to assist course developers in developing computer-aided self-access language learning materials and evaluating their materials after deployment we decided to come up with an integrated common framework that can be easily used by both course developers and language practitioners.

This common framework should allow course developers and those in charge of online English language learning (or e-learning managers) in educational institutions to be more sensitive to the needs of learners in these institutions. The framework can also become a starting point for language practitioners and classroom teachers to think about how they can integrate computer-aided self-access language learning materials in their day-to-day teaching of the English language.
As a preliminary step to ensure the usefulness of the common framework that we have named, CASA-LL’, we began by using the framework to critically evaluate an English language learning virtual community on a popular social networking platform (refer to Zamari and Adnan, 2010). Results from this exploratory study are positive in that we are able to use the CASA-LL 5-point framework to learn about both the opportunities and limitations that that language learning community affords its members. Diagram 1 shows the 5 points covered by the CASA-LL framework. From that juncture, we now move on to the next stage to critically evaluate the usefulness of the 5-point CASA-LL framework by getting feedback from senior course developers and online learning managers who are working in the tertiary education sector in three countries. To achieve all our aims, this particular research effort was guided by two questions as outlined below:

- First: Do the senior course developers and online learning managers subscribe partly or fully to the 5-point CASA-LL framework, as they develop and deploy English language e-learning materials?
- Second: Based on their professional experience, how useful is the 5-point CASA-LL framework according to the senior course developers and online learning managers in all the research sites?

3. Methodology

To increase the validity and reliability of this research effort, we decided to work with research participants in three countries to produce a cross-national comparison of the CASA-LL framework. The countries involved are Indonesia, Malaysia and New Zealand – three countries with different levels of deployment in terms of computer-aided self-access English language learning materials.

3.1. Research participants

Due to budgetary and time constraints, we only contacted senior course developers and online learning managers who are working in the tertiary education sector that we knew personally, or those who are professionally connected to our own work spheres. This purposive sampling was deemed acceptable on two grounds.

Firstly, this group of professionals makes up only a small and select group due to the fact that computer-aided self-access English language learning materials development and deployment are not widespread in the three countries that we chose to study. Secondly, realistically we simply did not have the resources necessary to initiate contact with as many tertiary institutions as possible and to get in touch with senior course developers and online learning managers working on those institutions.

That said, we managed to get a good mix of senior course developers and online learning managers in all three countries from various research sites and with various level of engagement (and personal expertise) in developing and/or deploying e-learning materials. Furthermore, as several of our research participants actually hold a different formal job title but are still given the task to develop and/or manage computer-aided self-access English language learning materials in their respective institutions, we decided to not differentiate between course development and learning management roles. This is also due to the fact that we found out in many institutions both roles were rolled into one. The breakdown of our research participants is as below:

3.1.1. Indonesia

Three private colleges (coded as InaPriCol1, InaPriCol2, InaPriCol3), one private university (coded as InaPriUni1), one branch campus of public university (coded as InaPubUni1). Five research participants in total, one in each research site.
3.1.2. Malaysia

Three private colleges (coded as MasPriCol1, MasPriCol2, MasPriCol3), and two branch campuses of public universities (coded as MasPubUni1, MasPubUni2). Seven research participants in total, one in each private college, two each in both campuses of the public universities.

3.1.3. New Zealand

Two private colleges (coded as NzlPriCol1, NzlPriCol2), and a publicly funded university (coded as NzlPubUni1). Four research participants in total, one in each private college and two in the campus of the public university.

3.2. Data collection and data analysis

We began by sending emails or telephoning the research participants personally to explain about the research that we are doing. Those who responded are then sent an executive summary of the CASA-LL framework for them to go through. About a week later, we sent out a semi-structured ‘interview’ schedule by email to all the participants for them to complete and email back to us within a given period of time. Although in Malaysia specifically we had the opportunity for face-to-face meetings with the participants, we decided not to do this as to control the study and to ensure the reliability of data collected. All sixteen participants returned the forms via email with their personal responses.

The data collected was then fed into a CAQDAS programme for better management of the responses we gathered. The coding and thematic analysis was then primarily done by one of us (Airil) after which we rechecked the codes and themes individually and as a pair before the writing up process. As we did not ask too many open questions and we mainly wanted to know how the 5-point CASA-LL framework could be used by our research participants, from the outset the responses we got are directly related to the questions and also because the participants had a period of time to go through the questions one by one.

3.2.1. Asynchronous email ‘interview’ as a data collection tool

Our data collection method although limiting in some ways is actually useful in our own situation because we wanted direct and critical responses about a given topic without having to spend too much time and resources (that we did not have) on fieldwork. Insofar as our research was concerned, we were able to gain valuable insights from professionals and experts who play key roles as senior course developers and online learning managers in their own institutions of higher learning. The data we collected is presented in the next section.

On the contrary, even though online data harvesting is common in a few academic disciplines for example health and medical sciences (see Fyfe, Leonard, Gelmi, Tassell and Strack, 2001; Granello and Wheaton, 2004; Lancaster, Dodd and Williamson, 2004), it is not yet a common scene in the social sciences and within applied linguistics. Indeed within applied linguistics research not only is it uncommon to find researchers that collect data through the Internet, it is also not easy to find applied linguistics studies that use modern online avenues to collect data about language use in the real world.

That said, our email ‘interview’ collected interesting and enlightening responses from the research participants as seen in the next section. We believe that this is because we invited our participants to share their points of view rather than just examining and evaluating the CASA-LL framework using a closed questionnaire. The fact that the participants had a longer response time also indicates the usefulness of this data collection method, and although it might not be useful in all research designs – within the limits of our own study it has proven to be useful.
In the following five sub-sections, we go through the responses from the participants and we highlight the responses that we think best exemplifies the general ‘train of thought’ of our sixteen research participants. Where actual quotes are used, the names used are pseudonyms chosen by our actual participants.

4. Results and Discussions

4.1. CASA-LL framework’s point 1 - Needs

With reference to meeting the needs of English language learners, all of the participants agree that this should be the primary objective of all computer-aided self-access English language materials or learning platform. Most of the participants also mentioned the importance of doing a needs analysis of learners before developing any e-learning materials. As ‘Gemma’ from NzlPubUni1 puts it:

All [e-learning] materials are for our learners, right? So, if we do not think about their needs we might as well not produce such materials [...] I really believe that it will be such a waste if what we do, does not really match their personal needs.

On the other, meeting the actual needs of all language learners is easier said than done. As ‘Siva’ from MasPubUni2 describes:

Of course we want to meet the needs of learners [but] they come in all shapes and sizes. Like for this campus, we normally build a general user profile and work from there [...] At best this profile corresponds to about 40%-60% of the actual users. Meeting the needs of the upper and lower ends [of learners] is a real challenge though and these groups are normally those with lesser engagement levels when it comes to using e-learning [tools].

4.2. CASA-LL framework’s point 2 – Design

In terms of design, many of the participants believe that it is a technical issue that needs to be taken care of by real experts, for example those with computer programming background. This point was made by Winnie’ in InaPriUni1:

I am the manager of this unit [online English support] but I have no real computer background. My work is mainly business computing. Here [on campus] we contract design work [for the e- language learning platform] to a professional firm.

Nevertheless, not all educational institutions are as lucky (and financially well-endowed) as Winnie’s private university. Many institutions have no choice but to use their own human resources to design and to deploy their computer-aided self-access English language learning platforms. The upside to this is that linguists and English professionals in those institutions are able to provide immediate feedback to the design team. But there is also a downside, as, Rebecca’ from NzlPriCol2 observed:

Having an in-house [design] team is good. But they do have other things to do and work is almost always behind schedule. Perhaps it is better to have a specific design unit in large institutions like ours.
4.3. CASA-LL framework’s point 3 – Learner autonomy

The third point in our framework however seems to be the least important of all, according to many of our research participants. A few participants also seem to think that achieving learner autonomy is something that is not realistic depending on the context and situation. ‘Zack’ in MasPriCol3 made this comment:

In our situation we do not think about this too much. Plus you have to think about the levels of our own students. Like here in Malaysia, even making them [tertiary students] learn English is difficult. In our college, we actually have to force them to use this [their English language e-learning platform] to help with their pronunciation, grammar and other skills. They use this [the platform] but mostly just on campus and because the lecturers make them.

Perhaps both of us were too idealistic in stressing the promotion of learner autonomy through computer-aided self-access English language materials. A few participants conceded to the fact that autonomous learning is a really difficult objective to achieve and thus it is rarely mentioned during the development and deployment of English language e-learning materials and learning platforms.

Many of the participants even report that without a degree of coercion (albeit positively) or some sort of concrete incentive (for example through the giving of extra-credit or ‘bonus’ marks), most learners will not even use computer-aided self-access materials even though their institutions have invested a lot of time and money in setting these up.

4.4. CASA-LL framework’s point 4 – Assessment/Evaluation

Other than the importance of meeting the needs of learners, all of the research participants are in agreement with us that English language computer-aided self-access learning materials and platforms must have an in-built assessment or evaluation component. Or if this is not possible, they stress the fact that there should be a method in which to test or profile the progress of learners, a point made clear by ‘Krisda’ in InaPriCol2:

In our college, we use this [e-learning] programme to help teach English. But it cannot do any testing so our lecturers prepared some pen and paper tests for students.

An assessment or evaluation component is without a doubt, one of the most basic things to be taken care of in the development and/or deployment of e-learning materials and platforms. Nevertheless, sometimes this issue is not taken seriously by English language teachers and instructors as ‘Khairil’ from MasPubUni1 wrote:

Our university trains primary and secondary teachers on the use of CALL materials [developed by the Malaysian government]. But I find that in most classes, the teachers report that they just ask students to go the [computer] labs and work on the courseware for the sake of using computers. When I ask them do they test their students after that, they all say [sic] “What for?” This is a real embarrassment for us. I think the government need to look seriously into this matter [...] millions have been used to develop all the courseware.

4.5. CASA-LL framework’s point 5 – Sustainability

Finally, we placed ‘sustainability’ as the fifth and final point to be addressed in the development and deployment of computer-aided self-access e-learning materials and platforms. Although some of the
research participants agree that it is an important issue, most of them however have mixed feelings about it – they agree that it is important to address however, they find it difficult to practically tackle this issue due to the different resources needed in the development and deployment of e-learning materials and platforms. As ‘Gemma’ from NzIPubUni1 puts it:

*I seriously have doubts when it comes to this [sustainability issue]. Not that it is not important, but for example, in our own university we had to use the same [e-learning] platform for more than eight years. Only late last year [2010] did we move to a new and more up-to-date platform [...] all things considered, I guess money is always an issue plus technology now moves so fast that it is just impossible to keep up-to-date.*

The point made by Gemma reverberates in this quote from ‘Khairil’ from MasPubUni1. As a senior English language lecturer cum professional e-learning course developer who also has years of computer programming background, he argues:

*Three years give or take if you ask me. That is the limit of ‘sustainability’ when it comes to CALL and e-learning technology nowadays. You also have to consider that it takes time, money, human power to develop these materials. Then you have to take more time for testing and later on with deployment. Then you need even more time to teach the language instructors and our students. By that time, the technology you are using [...] is yesterday’s [technology].*

5. Conclusions

Our research generally managed to justify the usefulness of the CASA-LL framework based on the professional experience of online course developers and online learning managers in all three countries. Even though our research participants work in different learning environments and in different nation states with different levels of ICT preparedness – nearly all of them suggest that the CASA-LL framework has the potential to become a good frame of reference particularly for English language teachers in the classroom who want to incorporate computer-aided self-access e-learning materials in their classroom teaching.

Nevertheless, they also pointed out that both of us might need to rethink ‘learner autonomy’ and also ‘sustainability’ as important areas because both are quite thorny issues and it is difficult for course developers and e-learning managers to share a common ground when it comes to these two areas. We both feel that we should address this issue as we refine and fine tune the CASA-LL framework in the future. That said, we found it exciting when some of the research participants mentioned that the CASA-LL framework fits nicely with what they are already doing (and thinking) as e-course developers and e-learning managers.

The only practical issue for us now is to share the framework as widely as possible with other course developers, learning managers and of course, classroom teachers – to ensure that the framework can be put to good use as a common shared platform that should be adhered to in the development and deployment of computer-aided self-access English language e-learning materials.

References

of the Independent Learning Association Japan Conference, Kanda University of International Studies, Chiba, Japan.


APPENDIX A – Excerpt of second email to participants

Thank you for your kind response to my email and for agreeing to provide your feedback regarding this framework that I am developing with my co-researcher. As mentioned in my earlier email, here is the executive summary of the ‘CASA-LL’ framework that we have been working on. Please accept my apologies for setting such a short deadline for the completion of this online ‘review/interview’. We are pressed for time at the moment as we are planning to present working papers regarding this framework in the coming months. Last but not least, thank you for your kind help and please be as thorough (and as ‘brutal’ as possible) with your responses. Whatever feedback we receive from you will go a long way in helping us to validate and refine our raw framework.

* I have included the participant information sheet and research ethics document in the last email. Please do take the time to contact me if you need more clarification about how data you provide will be used (I have clearly marked several confidentiality clauses for your kind perusal).

APPENDIX B – Data collection tool (asynchronous email ‘interview’/narrative essay)

Instructions: You are kindly requested to review our raw framework and to provide feedback based on the guiding questions below. These guiding questions are merely starting points and of course, you are free to provide as much (or as little input) as possible based on your professional capacity and experience as e-learning managers and e-course developers in your institutions.

- On a scale of 1 to 10 – 1 being not useful and 10 being very useful – how would you rate our raw framework and why?
- Do you feel that this working framework will have at least some uses in your own institution? In what ways?
- What suggestions would you forward to revise and improve our raw framework, based on your professional capacity and working experience?
- In your professional capacity and working experience, have you ever considered at least one of the five points within our raw framework? Please kindly elaborate your answers based on the ‘wh- questions’ construct.
- If it is at all possible, could you share some practical issues and perhaps some challenges that you have faced as senior course developers and online learning managers that are directly related to our raw framework?