

TEMPLATE OF FINAL REPORT PROFILE BOOK INTERNAL GRANT & SHORT TERM GRANT

DEVELOPING A TECHNOLOGY-MEDIATED READING COMPREHENSION TASKS TO SCAFFOLD LEARNERS IN THE BUILDING OF NEGOTATION SKILLS

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ABSTRACT

This study reports the development of an online platform to classify and store students' reading comprehension achievements data that are aligned with the Common European Framework of Reference (CEFR) in order to ensure that the learning process can meet the international standard while conscientiously tailored to the specific learners' needs. The theoretical foundation of the study is the integration between instructional design (ID) and CALL frameworks. Kemp's ID Model (cited in Morrison et al., 2010) is the basis for the software development supported by the Chun's (2016) recent framework on Ecological CALL that is in line with CEFR practices. The basis for classification of the achievements includes selection of reading texts and development of the questions that are vetted aligning to the CEFR levels. The online platform comprises a database which integrates the information on the CEFR reading illustrative tasks and the scoring grids that would automatically sort the scores of reading comprehension tasks to the CEFR levels accordingly. The system may be able to contribute to the language teaching and learning, with a specific focus on the development of reading skills. Additionally, with the recent emphasis on CEFR, the system may be able to assist teachers to provide appropriate reading comprehension tasks to meet students' level, and for students to map their language competency to the CEFR levels.

Keywords: Reading comprehension, CEFR, online platform, database



1. INTRODUCTION

The current technological ability and the advancement in data mining have made it possible to store multiple level and types of data such as assessment items, framework guidelines and its standards, and learners' level of proficiency. These varied data can be mapped for teachers to provide appropriate and diverse learning materials for different types of learners, and for students to select appropriate materials according to their learning needs and learning styles. Researches in second language acquisition placed within the frameworks of computer assisted language learning (CALL) have progressed from examining the effectiveness of utilizing technology as a tool for learning languages to its pragmatic use such as in tracking learner differences, exposure to intercultural awareness and providing real-time online learning experiences for language learning development (Chun, 2016). This development provides the context and significance for the current study. The development of a database to store reading texts, assessment items and performance data; to classify learners' learning needs based on an international standard, i.e. the utilization of the Common European Framework of Reference (CEFR), and that can be used as an online platform for the purposes of individual learning, in-class activities or examination is therefore in line with the current educational needs and technological development.

Reading is a critical language skill that requires cognitive processes and various complex knowledge such as the semantic-linguistic complexities of words and texts (McNamara, 2007, Sajid & Kassim, 2019). Understanding the process and providing learning experiences that can scaffold learner needs can therefore be essential to ensure effective reading comprehension for learners. Technology can be used to streamline the level of reading texts (which include level of vocabulary, topic selection and information representation of the texts) and the tasks, and has been proven to scaffold learning (Taj et al., 2017; ter Beek, et al., 2018). One way to streamline the texts and activities is by utilizing a standardized framework and guideline namely the Common European Framework of Reference (CEFR). CEFR is a theoretical and practical guide that can be used to develop the curriculum, learning materials and assessments (Arikan, 2015). In this context, CEFR is the guiding principle to select the texts, its difficulty level and topics of the texts, develop the task items, and map the texts and task items according to level of proficiency of learners. With the use of technology, this process is eased especially for a better learning experience. This paper therefore aims to report an initiative of the development of a database for storing reading comprehension inputs and tasks for learner utilization through an online platform. Both the input and tasks were referenced with the CEFR aiming to scaffold learning and develop students' reading comprehension skills.

2. RESEARCH METHODOLOGY

The section describes the development phase of the online platform, in which grounded on the first seven elements of Kemp's model. The evaluation phase involve the participations of instructors teaching English language proficiency course, of which selfaccess activity is part of the assessment. This assessment requires students to answer reading comprehension questions on Socrative. Data gathered from these students are used on the platform to match with the CEFR grid and categorized according to their achievements.

Working on the Kemp's model (2010), the identification of the instructional problems illustrated the needs for CEFR aligned platform that can store, organize and share the data among instructors. The specific goal is to ensure a standard outcome is achieved in developing and organizing reading comprehension practices. Learners who are the central point of the whole development process had been shown to have diverse proficiency level thus, the content and task components need to be varied and customized so that the instructional objectives for the learners can be met. The instructional strategies, in this sense were manifested in the reading comprehension tasks and carried out elsewhere using open courseware where records of learners' achievements are stored individually. The next stage was where the individualized data are shared, where an online platform takes centre stage accumulating data and organized according to specific criteria generated within the framework of CEFR. Thus, the design of the study can be divided into two distinct phases, which are the development phase and the evaluation phase.

2.1 The Development Phase

This stage comprises selecting texts and their classifications according to CEFR level. Exploiting the text, questions were set and vetted for content as well as in determining their CEFR level. Questions that have been vetted are then set on Socrative for use by students enrolled in English language proficiency course, answering these questions as part of the assessment contributing 10% of the overall assessment marks. This data set is used for evaluating the Record Module of the platform.

2.2 The Evaluation Phase

Reading passages and questions that were used as graded self-access activity are systematically organized on the platform in the Text Module and the Question Module. The efficacy of these modules available in the platform were evaluated and feedback was used for further improvement.

2.3 Sampling

For the development phase, instructors teaching English language proficiency course were involved in the text selection, question setting and vetting. These instructors teach the English language proficiency course, English for Academic Communication, which is the second level of English students have to take to fulfill their academic requirements. 120 students enrolled in the course participated as users of the questions set. These students were engineering majors taking English as an academic requirement for graduation. Aged between 20 to 22, these students has had formal English language lesson for an average of 12 years.

2.4 Data Set

Three data sets were used to address the research questions of the current study. In order to develop the content of the software, texts, questions and CEFR specifications were organized and managed on the platform. Secondly, results of reading comprehension tasks done on Socrative were gathered and uploaded to the platform for further analysis and classified according to the CEFR level. The third data came from the instructors' evaluation of the software use. These data are analysed from the digital tool evaluation from and technology acceptance model questionnaire.

2.5 Data Analysis

Statistical analysis was carried on the data gathered from the questionnaire to address the second research question. SPSS 18.0 was used to run measurement for descriptive analysis of the constructs evaluating the extent of the online platform facilitative effects of CEFR aligned constructions of reading comprehension practices.

3. LITERATURE REVIEW

For decades, there have been a plethora of studies relating factors affecting reading comprehension, which, among others include affective aspects like motivation and interest (e.g. Cartwright, Marshall & Wray, 2016; Tarchi, 2017), cognitive features such as schemata, interlanguage processes and developmental sequence (e.g. Brimo, Apel & Fountain, 2017; Davey, 2014) as well as strategies and learning styles like fluency, vocabulary competence and critical thinking (e.g. Edward & Taub, 2016; Nergis, 2013). With the advent of technology, studies that attempt to address these factors highlight the integration of digital tools in the teaching and learning process to enhance reading comprehension (e.g. Brevik, 2017; Maynard, 2016). However, the focus on the facilitative effects of these technological tools in the viewpoint of practicality and in the

attempt to address the affecting factors holistically is still scarce in the reading teaching and learning literature. The paucity of studies on these accounts relating to reading comprehension development have led to carrying out the current study which is translated into two main practical issues.

First, with regards to the access and utilisation of the digital tools to assist reading activities and assessments, there are limitations of the current learning settings that the study is attempting to address. The multimedia language laboratories are equipped with language learning software and there are also numerous online reading practices readily available for teachers and students to access easily. But the struggling issue is the utilization of these tools in the learning process. The applications that are available in the labs are not dynamic. They are only accessible in the labs and the contents - texts and practices - may not be specifically customized to the needs of the learners. Other than that, the students can have unlimited access to the software available online, but then again, most are not suited to the learners' needs. In an attempt to take these influencing factors mentioned earlier into considerations, the current study will develop a software that can tackle these issues from the practical point of view.

Another practical issue that is related to the theoretical foundation of reading comprehension efficacy is the instructional design of the digital learning aids used in the learning process. This relates to the issue of contexts of the written discourse (Maynard, 2016), level of texts (Davey, 2014) and the types of practices and activities (Arifani & Rosyid, 2016) that are available in the software. The existing software cannot cater for these differences in all aspects mentioned. The test generators available online like Socratives, Edmodo and Testmoz are limited in one way or another. There are certain features that can be available in one software but not in another and they cannot be customized according to what are needed by our instructors and learners. They are simply generators that instructors can use to create quizzes and practices but other elements of the learning process, such as learners' proficiency level, schemata, context and strategies are mostly ignored. Thus, the current study attempts to construct a digital tool that considers the whole process thoroughly, right from pre-development of the tasks to the post-task stage, like feedback and follow-ups.

3.1 The Conceptual framework

The theoretical foundation of the study is the integration between ID and CALL frameworks. Kemp's ID Model (cited in Morrison et al., 2010) is the basis for the software development supported by the Chun's (2016) recent framework on Ecological CALL that is in line with CEF practices.



Figure 1. The Conceptual Framework.

The design of this study will adopt Kemp's Instructional Design Model. As cited by McGriff (2006), Kemp's ID model is specifically facilitative for constructing learning programmes that blend technology, pedagogy and content to deliver effective, inclusive and efficient learning. The model is nonlinear with a continuous development process which requires constant planning, design, development and assessments to ensure effective instructions. The nine key elements outlined in this model are translated into the research design of the present study. The components are:

- Identify instructional problems, and specify goals for designing an instructional program.
- Examine learner characteristics that should receive attention during planning.
- Identify subject content, and analyze task components related to stated goals and purposes.
- State instructional objectives for the learner.
- Sequence content within each instructional unit for logical learning.
- Design instructional strategies so that each learner can master the objectives.
- Plan the instructional message and delivery.
- Develop evaluation instruments to assess objectives.
- Select resources to support instruction and learning activities.

(Kemp, Morrison and Ross, 1994, p. 14).

The study attempts to answer questions in relation to the development of the online platform and the efficacy of the software to facilitate instructors for data storage and management. Thus, the aim of the research is to address the following questions:

- What are the features of a reading platform that can facilitate teachers to determine, develop and construct practices that are aligned to CEFR levels catering to the students' needs?
- 2) To what extent does the online platform facilitate the efficacy of CEFR aligned constructions of reading comprehension practices?

4. **FINDINGS**

The section explains the developed online platforms and the features that are deemed facilitative in accordance to Kemp's model (2010) and Chun's (2016) CALL framework. These characteristics are manifested in the development and the end product that embodies the meaning of technology-enhanced language teaching and learning.

4.1 A CEFR-aligned System for Reading Comprehension Achievement Data

The development of the software commenced with the drafts of the system, which were constructed into three modules. The homepage housed these modules that were categorised as Text, Questions and Records.



Figure 2. The Three Modules on Homepage

The texts are organized in accordance to the CEFR level that has been determined through a vetting session and through the open courseware "Text Analyzer" by Roadtogrammar (<u>http://www.roadtogrammar.com/textanalysis/</u>).

/ Text				
Te	ext			+ 🛓
Num	. Uploaded File Name	CEFR Level	Action	
1	Text 1.docx Upload success.	A2 •	Upload .docx file	Browse
2	Reading Questions for B1 Text Set 1.docx Upload success.	B1 •	Upload .docx file	Browse
3	Reading Questions for B2 Text Set 1.docx Uplood success.	B2 •	Upload .docx file	Browse
		Previous 1 Next		
		Online Research © ump.edu.my		

Figure 3. The Text Module

Texts can be uploaded in PDF or Words format to the Text page for storage, for all registered users to share and use. The Question Module stores all questions, where they can retrieved according to the text uploaded in the Text Module. The record displays the CEFR level for each text uploaded to this page. Under this page, each question is classified according to the CEFR level and descriptions of each question are attached.

Instructors can choose the question types, the CEFR level and the communicative activities, which is the learning outcome of each question. These descriptions of communicative activities are adapted from several CEFR alignment reports (Council of Europe, 2009; Elderson, Fuijeras, Kuijper, Nold, Takala, Tardieu, 2006; Helenic American University, 2009).

Home / Qu	estion / Re	ading Questions for B1 Text Set 1.do	JN		ر +
	Num.	File Name	Text Preview		CEFR Level
	Reading Questions for B1 Text Set 1.docx		Read the text and answer the questions.A Face on MoneyThe faces of kings and queens are everywhere – on TV, in newspapers and even on money. For example, Queen Elizabeth II's face is on money all over the world. There are coins and notes with her face in over thirty countries. In 1936, Princess Elizabeth was ten years old and her parents were king and queen. Her face was on this Canadian twenty-dollar note. In her mid-twenties, her face was on notes in Bermuda and Cyprus. In 1953, she was the		B1
	1	MCQ *	A2	Can read texts of various kinds for both inform	ation and general inten 🔹
	2	MCQ	B1	Can distinguish main from subsidiary points an	d the gist of a text from 🔹
			Online F	Research © ump.edu.my	

Figure 4. The Question Module

The last section, which is the Record Module stores the students' results of the reading comprehension tasks that have been executed via Socrative. Results were downloaded in excel and instructors upload to this platform to determine the level of each student's achievement according to the CEFR level.

Home / Record	ł					
	Rec Num.	Ord Group Name	Text File	Group Name + O		
	1	UHL241215G	Text 1.docx	SAA 20G 7MAR19.xlsx Upload success.	Upload .xlsx file	Browse 🕜 🧻
	2	UHL241201G	Reading Questic *	SAA 29G 7MAR19.xlsx Upload success.	Upload .xlsx file	Browse 🕜 💼
	3	SAA READING COMPREHENSION	Choose text file Choose text file Text 1.docx Reading Questions for Reading Questions for	No file uploaded yet. Note Concention star file type. B1 Text Set 1.docx B2 Text Set 1.docx	Upload .xlsx file	Browse 😰
			On	line Research © ump.edu.my		

Figure 5. The Record Module

In this platform, only Excel format, the .xlsx file type is accepted by the system. The results show the number of questions, students' scores and the questions that are either correctly or wrongly answered, indicated by green color for the correct answer and light red for wrong answer. The CEFR grid programmed into this platform is calculated based on ten questions for each CEFR categorization. Figure 6 chows the CEFR grid by ten questions.



Figure 6. CEFR Grid by 10 Questions

The different number of correct answers are measured by the different text level. Lower level texts should have a higher number of correct answers for the lower CEFR level and for the higher level text, students results should show a gradual increase of correct

answers in sequence to the CEFR level. These figures are organized in Excel file and can be downloaded for instructors' reference. Thus, for the complete record, instructors can download the excel file and data that they get with regards to the students' performance may be able to give them some insights on which areas that each student needs improvement.

4.2 Features of the CEFR-Aligned Online Platform

Working on the integrated theoretical foundation that employs instructional design (ID) and CALL frameworks, the answer to the current study's research question can be described in accordance to this model. Features that are deemed as facilitative revolve around the needs addressed by CALL framework that incorporate the use of mobile learning, web-based, and many other digital tools that enhance language learning.

First, the most essential feature is accessibility to the digital tool. In Ecological CALL, Chun (2016) reflects on the views of ecology in SLA (e.g., Kramsch & Whiteside, 2008; van Lier, 2004) in which the acquisition of language takes place not confining to the four walls of the classroom, but occurrence of this acquisition can happen anytime and anywhere made possible by the accessibility features of the learning tools. Chun also mentions the more current devices such mobile and wearables, like watches in illustrating these digital tools. Relating to the practice of the present study, accessibility encompasses the ease of use and the functional apt of the system developed. This primarily contributed by the fact that all language instructors involved in the teaching and learning process have access and the ability to store, modify, classify, and record texts, questions and learners' reading comprehension performance on one single system that can be shared by many. More significant is that all these phases are carried out with the common shared knowledge of the CEFR level beginning from text selection up to the categorization of the learners reading comprehension scores. This CEFR alignment is in line with what Kramsch (2011) posits as "symbolic competence" denoting one's ability to "approximate or appropriate" onself in other's language and also to structure the environment where learning takes place and how this language functions in that setting. In the case of the present study, the language learning and functionality is constructed where CEFR is the core element that fundamentally forms the environment. The competence that is referred to is not the ability to appropriate one self in the language of others, but it applies to the skills and knowledge of a language and the ability to appropriate oneself in that shared framework, considering the context of learning and its use to achieve communicative competence. What Kramsch and Whiteside (2008) ascribe as "semiotic awareness" also applies in the shaping of this context, specifically pertains the use of technology in the process of the system development in the present study, making use of "technologized forms of language" (Chun, 2016, p.106).

In this regard, the second feature that is vital to the efficacy of the system relates to the notion of normalization. Chun (2016) describes normalization as a condition blends in the support of technology as naturally as using other traditional teaching tools in language learning processes. The concept of normalization in CALL has been in context mostly contributed by the work pur forth by Bax (2000; 2003) and Chambers and Bax (2006) noting that the "concept is relevant to any kind of technological innovation and refers to the stage when the technology becomes invisible, embedded in everyday practice and hence 'normalized'" (Bax, 2003, p. 23). The system developed is considered as facilitative if it supports the integration of this digital tool into the teaching ang learning process as not something alien, but a common instructional tool readily available anywhere and anytime. Instructors should be able to make use of this system with ease and do not need any special or extensive training in order to successfully incorporate this tool in their language instructions. This digitalised form of language is part of the system that supplement the learning process fitting in the evolution of language instructions in the 21st century. The integration of technology is ubiquitous that it blends in almost any strategies and approaches of teaching and learning, such as used in speaking, writing (e.g.: Coyle & Reverte Prieto, 2017; Gao & Ma, 2019; Grimshaw & Cardoso, 2018; Ranalli, Feng & Chukharev-Hudilainen, 2019; Yu, Bo & Chee, 2019), reading and vocabulary (e.g.: Arndt & Woore, 2018; Godwin-Jones, 2018; Hadley & Charles, 2017; Kent, 2019; Ramezanali & Faez, 2019) to name a few. The ease of access and the ease of use are key features to ensuring facilitative integration of this digital system in enhancing teaching and learning process, particularly in the development of reading comprehension skills that are aligned to the CEFR level.

Apart from accessibility and normalize integration of the digital system into the process of teaching and learning reading, the ability to support the landscape of multimodality is also significant. Chun (2016) asserts that the normalized context of technology brings varied meaning to learners learning a language of which,

in addition to developing L2 grammar, vocabulary, and understanding pragmatics, they also need to acquire the cultural know-how for dealing with technologized forms of language, either as producers or interpreters of meaning. Digital technologies make possible new kinds of texts, allowing writing to be combined with audio, images, music and video in a single document. Language is now just one mode for making meaning among many others, and L2 learners must be able to make culturally-encoded connections between forms, contexts, and meaning in a variety of mediums (p.106).

This combination of different modes and discourse makes multimodality a centre piece to the system developed in the present study. Linear and non-linear texts are used extensively in the question constructions making the use of digital visuals to enhance learners' meaning making in reading the texts as well as comprehending the texts via the questions that are attempted. As concluded by Bikowski and Casal (2018), learners' engagement in the learning process can be retained thoughout due to the multimodal features of textual representations afforded by the effective integration of technology. Similar deductions have been put forth by a good number of study integrating multimodality in enhancing language learning, for instance in the use of electronic glosses in vocabulary learning (Lee, Warschauer & Lee, 2017), critical media literacy (Huang, 2015) and in L2 writing (Dzekoe, 2017). The affordance multimodality offers to enhancing the learners language learning experience is significant in ensuring the facilitative effects of the system developed in the current study. Fundamentally the three facilitative features of the system may be able to contribute to constructive technologized language learning environment that nurture growth not only for learners but also the instructors in becoming part of the globalized digital citizens.

5. CONCLUSION

The current study developed a framework based on the CEFR for analysing language test items, texts, tasks, and specifications to help instructors relate their examinations to the CEFR. This framework has been turned into a Web-based platform, which is completed by analysts and whose data go into a database that facilitates the analysis of results from the point of view, inter alia, of the amount of agreement among analysts on the content of the test items, tasks, and so forth. This research sought to develop, on the basis of the CEFR by complementing it where necessary, an instrument based on a theoretical framework that would enable instructors to produce test Items or practices that corresponded to the constructs elucidated in the CEFR and that could be calibrated to the CEFR levels. The limited empirical research that we have been able to conduct suggests that, as with other frameworks such as the ACTFL guidelines, the CEFR does not provide sufficient guidance to enable item writers to develop tests at specific levels of the CEFR.

However, this tentative conclusion clearly needs to be replicated in much larger studies, which probably can be undertaken only once a body exists of tests and tasks that have been developed explicitly to correspond to the CEFR and that have been empirically linked to the CEFR. Currently, relatively few such tests exist. The CEFR itself is clearly intended more as a user-oriented set of scales than as a constructor-

oriented set of scales (Alderson, 1991), and we recommend that in future references to the CEFR, this important distinction be emphasised. The CEFR should not be taken to present a set of specifications for test development at the different levels it posits, but rather it can act, and has indeed so acted within the research reported in this article, as a fruitful starting point for the analysis and development of items and tasks intended to measure reading abilities. Indications from our necessarily limited research are that the dimensions of the platform (and thus of the CEFR and its scales) do not alone or maybe even in combination distinguish among the CEFR levels. Indeed, it is proposed that an empirical process whereby content analysis of test texts and items should proceed hand inhand with empirical investigations of difficulty and empirical standardsetting procedures.

In conclusion, the reserach has developed an instrument that provides a promising framework for the characterisation of test items and tasks and thus represents a contribution to the growing literature on the development and use of the CEFR. Hopefully, analysis of the results of further use of the platform will also contribute to a better understanding of what changes as language learners develop in their ability to understand written and spoken texts in a foreign language. Finally, in contemplating the future, along with the need for more longitudinal studies, there is also a need for what Hubbard (2008) termed *native CALL theories*. In his review of 25 years of CALL theory and in a subsequent article (Hubbard, 2012), he pointed to an insufficiency in employing theories that do not take the unique properties of technology into account and called for working towards the creation of new theoretical domains, in particular, for CALL. This is a task still waiting to be accomplished.

ACHIEVEMENT

- i) Name of articles/ manuscripts/ books published
 - a) Article Submission

Asiah Kassim, Hafizoah Kassim & Nur Syafawati Sabuan. An Online Database for Reading Comprehension Achievements Data: A CEFR-Aligned System, *Malaysia Journal of Learning and Instruction.* (Refer to Appendix 1 for acceptance email)

b) Chapter in a book

Hafizoah Kassim & Asiah Kassim. (2019). Embracing the Internet of Things for Language Education: Are We There Yet? In *Industrial Revolution 4.0: A Future Outlook*. Pp. 86-105.

(Refer to Appendix 2 for first few pages of the book and the chapter)

ii) Title of Paper presentations (international/ local)

Asiah Kassim, Hafizoah Kassim & Nur Syafawati Sabuan. (2019). An Online Platform for Reading Comprehension Achievements Data: A Cefr-Aligned System. A Paper presented at the International Language and Education Conference, USIM, Malaysia.

(Refer to Appendix 3 for Presentation Slides)

iii) Human Capital Development

Undergraduate Students:

- a) Muhammad Amirul bin Amran (TE16069)
- b) Siti Afiqah Nazirah binti Jaafar (TE16023)
- c) Nuralia binti Azman (TC16011)
- d) Adam Aiman bin Zulkornain (CB18189)

PhD Student: Rosmawati binti Abd Majid (PBL19001)

- iv) Awards/ Others Silver Medal, Citrex 2020, UMP (Refer Appendix 4 for Citrex Poster)
- v) Others

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APPENDIX 1

Acceptance Email for Publication with MJLI (Scopus Indexed)

2/27/2020

Universiti Malaysia Pahang Mail - MJLI-iLEC 2019 Publication Opportunity: Decision on Manuscript ID MJLI-07



ASIAH BINTI KASSIM . <asiah@ump.edu.my>



The 2019 International Language and Education Conference (ILEC 2019) was concluded on October 10, 2019. After a thorough evaluation, we are pleased to confirm that the following manuscript:

Paper Title: "

AN ONLINE PLATFORM FOR READING COMPREHENSION ACHIEVEMENTS DATA: A CEFR-ALIGNED SYSTEM

has been shortlisted for publication in MJLI (

http://www.mjli.uum.edu.my/) Malaysian Journal of Learning and Instruction.

(Malaysian Journal of Learning and Instruction (MJLI) is abstracted and indexed in:

Emerging Sources Citation Index (ESCI, WoS), SCOPUS, EBSCOhost, Malaysian Citation Index (MyCite), Ulrich's Periodical Directory, Cabell's Directories in Educational & Curriculum Methods, Education Resources Information Center (ERIC), Islamic World Science Citation Centre and UDLedge Social Science & Humanities Citation Index (SS&HCI) and Focus (Journals and Conference Proceedings)

This publication requires an article processing fee (APC) of RM 1000 per manuscript, subject to the review by the journal and iLEC 2019 publication committee. <u>APC</u> is only (and only) charged once amendments/corrections as required by assigned reviewers have been addressed satisfactorily.

 Having said that, please indicate whether author(s) wish to publish with the help of iLEC 2019 publication committee. Author(s) need to respond to this email by stating the journal with which they wish to publish. If author(s) decide not to publish with MJLI with the help of iLEC 2019 publication committee, please notify us seven (7) days after receipt of this email.

2. If author(s) decide on proceeding with publishing with the assistance of iLEC2019 publication committee, please do the following;

a. Amend the existing abstract to follow the convention or format for MJLI. Please refer to the

attached documents,

In order to meet the deadlines set forth by the journal, author(s) need to email the ABSTRACT (only) to this email ilec2019editors@gmail.com by 13-12-2019 (Friday), Abstracts received after this date will not be considered for publication. Once the abstract is approved by MJLI, we will proceed to the next step.

Looking forward to hearing from you. Thanks for submitting a paper at iLEC2019.

Wassalam,

2 attachments FORMATTING YOUR ABSTRACT.docx 14K Sample abstract.docx 15K

APPENDIX 2

First Pages of Chapter in a Book (UMP Publication-Research Book)



Book Cover

Embracing the Internet of Thing: for Language Education: Are We There

ustrial Revolution 4.0 A Future Outlook



Introduction

The fourth industrial revolution (4IR) has just begun, and alwady its impact on every part of our lives is massive. The fundamental change of this revolution is clearly defined by the burgeoning transformation of the so-called 'technology' and all things related including the humankind (Schwab, 2016). The term is coined by Klaus Schwab, the Founder and Executive Chairman of the World Economic Forum (WEF) in 2017, proclaiming that it is building on the third industrial revolution. Historically, this impactful revolution, from its first stage in the late 1800s, is founded on technology. This transformation begun when people realized what technology is capable of, and ultimately in order to mass produce systematically and efficiently to falfill the needs of the ever increasing human population (Effodu), 2016; Peophrase, 2018).

The 4IR is characterized by the convergence effects of exponential technologies, which are assimilated, again to fulfill the changing needs of the humankind, and are able to go beyond the simple mass production of the current industries (Penphrase, 2018). The mobile technology for example, will look to integrate modern, tiny, slick, and light design, numerous smart applications, high speed Internet connection, synchronous audiovisual connection, and smart links to homest, offices, devices, and appliances of the user. For such integrated technology to be possible, i.e., for such a small mobile device to be able to connect billions of people and numerous things for an unprecedented function, digital technology, the Internet of Things, nanotechnology, and artificial intelligence, to name a few, need to be converged. This technological convergence although currently imperfect, has occurred, and will define the needs and wants of man. This is the present future, designed and developed to solve future problems, but which has already making significant impacts and continue to make expanding profound influences on the society, industry, economy, environment and ducation (Penphrase, 2018; Schwab, 2016). The concerns of how the 4IR is changing the future jobs is already in talks (World Economic Forum (WEF), 2016). Preparing for the future jobs, not only means making significant changes to the science and technology curiculum, which indicates immediate reevaluation of the current Science, Technology, Engineering and Mathematics (STEM) and Technical and Vocational Education and Training (TVET) curricula, but also providing digital and global learning argerisaces apt with what is characterized by the 4IR exponential technologies. Education 4.0, the educational sector needs to optimize blended instruction, flipped and online courses, provides asynchronous educational resources, increases flexibility and modularity of learning, and ensures global interconnectedness (Guerra & de Gomer, 2019; Ossiannilsson, 2016). Peophrase, 2018). Above all, beyond all these capabilities the exponential technologies of the 4IR can provide, the appropriate skills, attitude, sptitude, understanding and knowledge, which are entued from the 4IR, should be fostered and inculcated (Ossiannilsson, 2016).

Language education is not isolated from the impacts of the 4IR. Though it may seem absent, impacts of the 4IR on language education is definite, and it is not only on how language should be taught and learned in this exponentially digital context, but on how a language evolves alongside the revolution of the technological industry. This is the context of this paper. However, our aims are to explore how far language education have come within the practical context of the 4IR technologies, and the challenges that students, teachers, administrators, content developers, and all the stakeholders may face in preparing to embrace the future language teaching and learning. Our discussion is further confined within the paradigm of the internet of Things (IoT).

The Internet of Things: Definition, Context, Technologies and Its Application in Education

Defining the Internet of Things (IoT) and Its Technologies

Since 1969, when the first message was sent over what was then the predecessor of today's internet, the ARPANET, the evolution of this connectivity concept has been on an epic proportion. In the early 1990s, with the introduction of "ubiquitous computing" and "embodied virtuality" by the Xerox PARC's Mark Weiser, the application of the internet has taken yet a greater less and eventually giving birth to what its now known as the Internet of Things (IGT) (Foote, 2016; Lueth, 2014; Tozzi, 2016). First coined by Kevin Ashton in 1999 in his presentation to promote Radio Frequency Identification (RFD) - an entity viri to IOT - the term is later defined as "an intelliguent infrastructure linking objects, information and people through the computer networks", and where the RFID technology found the basis for its realization" (Brock, 2001, p.5). However, the term reached the mass couly in this decide. From them on, IOT has taken off to be

APPENDIX 3



APPENDIX 4 CITREX 2020 Poster



CONCLUSION

In conclusion, the reserach has developed an instrument that provides a promising framework for the characterisation of test items and tasks and thus represents a contribution to the growing literature on the development and use of the CEFR.