



# Senior Meets Junior Digital Natives: TESLians Integrating Technology in their Teaching Practice

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ARTICLE INFO	ABSTRACT
Article history Received: June 01, 2019 Accepted: October 23, 2019 Published: October 31, 2019 Volume: 7 Issue: 4 Conflicts of interest: None Funding: None	The younger generations of students called Digital Natives learn via technology. The Malaysia Education Blueprint 2013-2025 has taken the initiatives to implement Information and Communication Technology (ICT) in learning in bid to cater to their learning styles. However, the implementation has not been smooth-sailing as most teachers have not been integrating ICT in their lessons seamlessly. Goldberg's (1981) Big Five Model of Personality can explain various usage of ICT based on their respective trait but TESL (Teaching English as Second
	Language) undergraduates in the Malaysian context had not been studied before. The researcher purposively selected 72 TESL undergraduates from the Faculty of Educational Studies in a public university in Malaysia for the study using a questionnaire and semi-structured interview. The findings reported high levels of ICT integration and motivation in integrating it. Next, they scored the highest in Openness to experience towards ICT integration in L2 teaching while low in Neuroticism. There was also a statistically significant, moderate, positive relationship between their level of motivation, Agreeableness, Conscientiousness, Extraversion and Openness traits and their ICT integration in L2 teaching. These findings present vital implications for TESL program and course coordinators to facilitate their pre-service teachers to leverage ICT in their teaching practice.
	Key words: Big Five Personality Theory, ICT, L2 Teaching, Motivation, TESL Undergraduates

# INTRODUCTION

Digital Natives are the younger generations of students who grow up with technology throughout their formative years of learning (Prensky, 2001). Employing ICT to teach language is appealing to Digital Natives (Al-Mahrooqi & Troudi, 2014) as the integrations of interactive graphics, audios and videos match well with their learning schemata (Yang, 2010). The role of teachers and ICT has evolved to meet the context of these current times. Teachers are no longer the primary knowledge providers as their role has now become multi-faceted by facilitating their students to explore and guide their own learning process using ICT (Smeets, 2005; Rosnaini & Mohd Arif, 2010; Cakir, 2013). As a result, the learning environment becomes more student-centred and is able to cater more to the needs of individual differences in order to motivate and increase the student's interaction with the target language (Al-Mahrooqi & Troudi, 2014).

To better understand how ICT is integrated in the L2 classroom, teachers' personality traits and levels of motivation should be investigated from the psychological perspective (Butt & Phillips, 2008; Perkmen, 2014). Personality is a crucial factor which is influencing human behaviours and choices in ICT use (Yoo & Gretzel, 2011; Perkmen, 2014), especially on the Internet (Amichai-Hamburger, 2002). This

can be inferred that different teacher personalities motivate different extent of ICT integration in their lessons.

Despite all the hype about catering to the learning needs of Digital Natives by integrating ICT into the lessons, the level of ICT integration among teachers is still insufficient and not fully optimised (Yunus, 2007; Kim, 2008; Rosnaini & Mohd Arif, 2010; Li & Walsh, 2010; Uluyol & Sahin, 2016). In the Malaysian context, the Preliminary Report of the Malaysia Education Blueprint 2013-2025 pointed out that, in 2010, about 80% of teachers were found to utilise ICT in their teaching for only less than an hour on a weekly basis, despite having pumped in a colossal amount of RM6 billion for ICT in education. Following this, the government's efforts in granting Internet access and virtual learning environment (VLE) to all 10,000 schools in Malaysia may go to waste if Malaysian teachers do not actively put them into good use (Lee, 2013).

There are teachers who are reluctant to adapt and grow with the latest, relevant teaching methods which involve the use of ICT (Nurul Atikah et al., 2006) and the main challenge cited is the intensive curriculum which is holding them back from using ICT to stimulate student-centric learning (Uluyol & Sahin, 2016). Despite encountering this setback when the green light has already been given to maximize

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the integration of ICT, personality plays a major role in influencing human's behaviour and is what sets teachers apart in integrating ICT to a certain degree. This is because every teacher thinks, feels and behaves in a unique, consistent manner in response to stimuli in the real world which makes their personality a fundamental aspect of individual differences (Pervin & John, 2001; Dörnyei, 2005). Therefore, a large degree of variability in ICT integration can be observed based on the issues mentioned by the literatures both locally and abroad. Despite the official implementation of integrating ICT into student's learning by government policies, a substantial portion of teacher population still does not leverage ICT to its full potential. Individual differences among teachers namely their personality and motivation, which are still often overlooked in research but carry crucial bearings on student's learning achievement, should serve as the starting points to explain this variability (Dörnyei, 2005).

Besides, the population in most of the literature on the Big Five and Internet usage focuses on non-education major undergraduates namely in Norsiah, Mohd Sobhi and Siti's (2015) study. Focusing on such population does not yield relevant insights on how to best guide TESL undergraduates on ICT integration before they graduate and deal with Digital Native students in school. Therefore, investigating the TESL undergraduates for the present study would be of significant value in understanding the challenges that the education system may encounter in bid to integrate ICT successfully in language teaching (Rahimi & Yadollahi, 2011).

A number of studies have been conducted to examine personality traits and motivations in relation to ICT use, but their target population has always been focusing on participants who are not from the education major or the teaching profession (Norsiah et al., 2015; Mark & Ganzach, 2014; Wehrli, 2008). Besides, the current literature to date has not covered the Malaysian context (Norsiah et al., 2015), especially involving the ESL teachers. Students are said to be able to greatly benefit from their learning process if their teacher is able to integrate ICT seamlessly into their lessons (Gülbahar, 2007). However, Angeli & Valanides (2008) reported pre-service teachers lack the confidence and willingness to give ICT a chance in their teaching. Hence, this study presents the opportunity to understand teacher's personality and motivation towards ICT, as different personalities will bring in different ICT experience to enhance student's learning process.

## **Objective and Research Questions**

The present study is interested to answer the following research questions:

- 1. What are the TESL undergraduates' level of ICT integration in their L2 teaching?
- 2. What are the TESL undergraduates' level of motivation in integrating ICT in their L2 teaching?
- 3. What are the personality traits of TESL undergraduates towards ICT integration in L2 teaching?
- 4. What is the relationship between their personality traits and ICT integration in L2 teaching?
- 5. What is the relationship between their level of motivation and ICT integration in L2 teaching?

# **Theoretical Framework**

As a unified theory to explain personality, Goldberg's (1981) Big Five Model of Personality served as the theoretical framework for the present study. Known as the Big Five theory, it has received many empirical supports and been recognized as the standard personality trait measure (Costa & Mc-Crae, 1992; Guadagno, Okdie & Eno, 2008; Wehrli, 2008; Ryan & Xenos, 2011; Moore & McElroy, 2012; Ozguven & Mucan, 2013; Norsiah et al., 2015). Its nickname comes from the acronym OCEAN which consists of Openness to experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism that make up the model.

In the context of education, the Openness to experiences trait describes teachers who are the first to adopt new technology-enhanced, pedagogical innovations in their classroom, whereas conscientious teachers may only selectively integrate ICT to achieve their lesson objectives. Meanwhile, extraverted teachers would seize this opportunity to engage their students' attention and participation during their lesson. On one hand, agreeable teachers are compassionate, so they would integrate ICT to cater to their Digital Native students' learning styles more effectively. On the other hand, neurotic teachers may not integrate ICT to avoid adding unnecessary stress into their work due to the nature of their insecurity towards ICT. This shows that different personality traits impact ICT integration in the classroom differently. However, Dörnyei (2005) noted that very little work is done in this area in the education field.

### LITERATURE REVIEW

In conjunction with the breakthroughs of digital technologies in the 21st century, the role of computers in language teaching is becoming increasingly relevant (Kern & Warschauer, 2000). The ultimate goal of Computer-Assisted Language Learning (CALL) is to become part and parcel of human's daily life, by becoming "normalised" to a point where it is "hardly even recognized as a technology, taken for granted in everyday life" (Bax, 2003). Much has changed in CALL in the recent years due to the breakthroughs of unlimited access to the Internet, Web 2.0 and mobile technologies, which have expanded the roles of teacher in language teaching and learning (Beatty, 2010; Dudeney & Hockly, 2012). These inventions have also assimilated into many aspects of daily life (Beatty, 2010), thus bringing CALL closer to normalisation. Efforts have been made to achieve this normalised state in education and the Malaysia Education Blueprint (2013-2025) is one excellent example.

The existing body of literature on personality traits and level of motivation in relation to ICT integration lacks focus on the education field and teacher population, as research in this area is relatively new. Guadagno et al. (2008), Moore and McElroy (2012) and Norsiah et al. (2015) found that individuals high in Openness like to explore new things, are the first to adopt new technology, always keep up with latest features of social media and try out new social media as alternate means of communication. Landers and Lounsbury (2006), McElroy et al. (2007) and Wehrli (2008) reported that Conscientiousness is related to ICT usage especially computer for academic purposes such as making notes and written assignments, and conscientious individuals would not invest time and energy in social media which are considered as distractions; they would rather invest in engaging with academic activities online. Hamburger and Vinitzky (2010) and Moore and McElroy (2012) discovered that agreeable individuals would post more online contents about themselves by uploading pictures and sharing contact information. Many studies reported significant, positive relationship between ICT usage and several constructs of the Big Five (Mark & Ganzach, 2014; Norsiah et al., 2015; Ryan & Xenos, 2011; Shen et al., 2014).

In Nurul Atikah et al.'s (2006) study, the teachers were very motivated to use ICT to capture and maintain their students' interest towards learning, as well as to better fulfil their various learning style needs. Hassanzadeh's (2012) study on 89 TESL postgraduates in a Malaysian university revealed that the teachers were moderately neurotic but high in the other four traits and motivation towards ICT usage. The study also reported that ICT integration was not significantly correlated with Big Five, but was moderately, positively correlated with motivation. However, majority of her samples were postgraduates in their late 20s at the time of her study. Therefore, there is a generation gap between the samples in her study and this present study which might have resulted in the aforementioned outcomes. Moreover, in eliciting personality data from her interviewees, they were prompted to state and elaborate what they believed their respective personality trait was. This might have methodologically produced lesser accurate data, as it is more reliable to identify their Big Five via key words in their elaborations on given, situation-based prompts.

Uluyol and Sahin's (2016) teachers commented that ICT had helped making their job easier in preparing and delivering the content. Their finding also reported that student participation increased when ICT was utilised compared to using blackboard, and Pinner's (2012) study explained that CALL is more meaningful and real to the Digital Natives. Several studies found significant, positive relationship between ICT usage and level of motivation among teachers (Perkmen & Cevik, 2010; Sang et al., 2011).

The literature on ICT integration among teachers showed that presentation technology is the most popular tool in class with teachers as the users and their students as their audience (Kim, 2008; Li & Walsh, 2010; Uluyol & Sahin, 2016). Kim's (2008) teachers cited that limiting ICT to being an instruction tool helped preventing their students from getting distracted to browse the Internet without having any actual purpose in mind.

#### METHODOLOGY

The present study employed a quantitative study comprising descriptive and correlational designs. The participants of this study were TESL undergraduates doing their degree program in UPM. There were 87 of them in total across the three batches (Semesters 2, 4 and 6) currently present in the Faculty of Educational Studies. Through purposive sampling, 15 participants took part in the pilot study, while the remaining 72 participated in the final study to find out about their personality traits and level of motivation in integrating ICT in L2 teaching.

Two instruments were employed in the study. Firstly, the Personality and Motivation to Integrate ICT Questionnaire was adapted from Isleem (2003), Li (2008) and Hassanzadeh (2012), and it consisted of four sections. Section I was related to demographics, whereas Sections II to IV utilised the Likert scale to elicit data from the participants. This scale is useful in showing the strength of each participant's view in relation to an issue (Kumar, 2011). Section II had 13 items to determine their level of ICT integration in their L2 teaching; Section III had 13 items to examine their level of motivation towards ICT integration in L2 teaching; Section IV had 40 items to identify their personality traits towards ICT integration in L2 teaching where each personality trait had 8 items to be completed. The participants completed the 71-item, self-report questionnaire within 10 minutes.

Prior to its administration in the final study, its validity was established by a panel of experts and its reliability confirmed by pilot study's result via Cronbach's alpha which yielded a highly acceptable value of 0.88. The other instrument was semi-structured interview which served to triangulate the findings from the questionnaire. It had 4 questions regarding their ICT integration, level of motivation and personality traits and followed-up questions were asked based on their responses. Each session which lasted about 8 minutes was audio recorded with their permission.

The data collection was done within one week with all the three batches of TESL undergraduates, along with semi-structured interview involving one representative from each batch. RQs 1, 2 and 3 were to be answered using descriptive statistics, whereas RQs 4 and 5 were to be answered using Pearson Correlation with the alpha level set at.05. Before analysing the data, negative statements such as the items found in Neuroticism in Section IV were reverse coded to prevent "response bias" (Pallant, 2013).

#### **RESULTS AND DISCUSSIONS**

The participants were mostly in their early 20s, and the majority was female (75%). Among the sample, those from Malay ethnic group made up 83.33% of the sample, followed by Chinese (8.33%) and Indians (5.56%). The distribution of participants across the three batches was nearly proportional with the  $2^{nd}$  semester having the most number of participants (36.11%).

#### Level of ICT Integration among TESL Undergraduates

Based on the Likert scale responses, score 1 represented 'never' and 5 represented 'very often'. According to Pallant's (2011) interpretation of mean scores, data analysis for RQ1 shows that the TESL undergraduates had high levels of ICT integration in their L2 teaching as six items scored above average mean values: Internet (M = 4.99, SD = .12), word processing such as Microsoft Word (M = 4.90, SD = .38), multimedia application such as YouTube (M = 4.82, SD = .45), e-mail

(M = 4.80, SD = .47), presentation software such as Microsoft PowerPoint (M = 4.78, SD = .48), and subject-related programs such as Edmodo and Quia (M = 4.63, SD = .62), while the remaining items scored within the range of moderate mean values which is below 4. The three interviewees cited the advantages of integrating ICT in their teaching, namely to engage students better, acquire information and teaching materials easier, manage work more efficiently and reduce time taken to present input in class. Meanwhile, they were also concerned with its setbacks such as glitches, distractions and its unavailability in different schools. These findings are consistent with those of Kim (2008), Li and Walsh (2010) and Uluyol and Sahin (2016).

As Table 1 shows, integrating Internet scored the highest (M = 4.99, SD = .12) and this was supported by one of the interviewees who shared that browsing Google Search can help teachers acquire the needed information easily without having to go through the trouble of scanning books after books

**Table 1.** Participants' level of ICT integration in L2 teaching

Item	Mean	SD
Internet	4.99	0.12
Word processing	4.90	0.38
Multimedia application	4.82	0.45
E-mail	4.80	0.47
Presentation	4.78	0.48
Subject-related program	4.63	0.62
Database program	3.78	1.05
Online interactive content	3.65	0.84
Drill and practice	2.83	0.95
Game-based learning	2.76	1.12
Graphics	2.54	1.15
Authoring	2.38	1.26
Spreadsheets	2.18	0.79

Keys: 1 – 1.99 (never); 2 – 2.99 (rarely); 3 – 3.99 (sometimes); 4 – 4.49 (often); 4.50 – 5 (very often) which is very time-consuming. Presentation technology namely PowerPoint (M = 4.78, SD = .48) dominated the top six as another interviewee commented it was useful for saving time in lesson delivery and avoiding student distractions.

# Level of Motivation among TESL Undergraduates

In this section, score 1 represented 'strongly disagree' and 5 represented 'strongly agree'. Results for RQ2 in Table 2 reveal that they had high levels of motivation in integrating ICT in their L2 teaching as all of the 13 items regarding ICT motivation scored above average mean values such as to get useful information (M = 4.68, SD = .58), to communicate (M = 4.61, SD = .60). The three interviewees commented being motivated to integrate ICT to capture their students' interest, cater to their various learning styles and prepare teaching materials more efficiently. These findings are consistent with those of Nurul Atikah et al. (2006), Uluyol and Sahin (2016) and Pinner (2012) on teachers' ICT motivation.

Two interviewees respectively mentioned that integrating ICT in L2 teaching has become a necessity nowadays and the need for adaptations in teaching Digital Native students more effectively. Therefore, given the fact that this collective batch of TESL undergraduates is in their early 20s which means they were born in the era during which technology is thriving such as the rise of personal computer and Internet, they have the mentality of Digital Natives and should be able to better understand how L2 lessons should be taught more meaningfully.

## **Personality Traits of TESL Undergraduates**

The TESL undergraduates in this study are dominantly open individuals towards ICT as they scored the highest for the Openness trait with the above average mean value of 4.05 based on the 5-point Likert scale responses ranging from 'strongly disagree' to 'strongly agree'. The values among the Conscientiousness, Agreeableness and Extraversion traits are very close by the decimal points and they belong to the higher end of average means. Besides, the differences

Table 2. Participants' level of motivation in integrating ICT in L2 teaching

Item	Mean	SD
I use ICT to get useful information.	4.68	0.58
I use ICT to communicate with others.	4.63	0.57
ICT makes the lessons more interesting.	4.61	0.60
ICT reduces my workload.	4.49	0.71
Learning becomes very exciting when using ICT.	4.44	0.67
Language learning becomes easier by using ICT.	4.40	0.64
ICT can have a positive impact on the way I teach.	4.35	0.74
I use ICT in English lessons to do extra listening and speaking.	4.29	0.68
ICT provides many real-life materials for language learning	4.29	0.76
ICT usage can help me become an effective teacher.	4.25	0.78
My confidence in using English has improved with the help of ICT.	4.21	0.79
I use ICT to prepare children for the digital age.	4.18	0.83
I use ICT in English lessons to do extra reading and writing.	4.08	0.78

Keys: 1 - 1.99 (strongly disagree); 2 - 2.99 (disagree); 3 - 3.99 (unsure); 4 - 4.49 (agree); 4.50 - 5 (strongly agree)

in value among these four traits are considerably small, so it can be observed that these pre-service teachers were high in Openness, Conscientiousness, Agreeableness and Extraversion. On the other hand, they scored the lowest for the Neuroticism trait with the below average mean value of 2.29. Its value is a stark contrast to the values of other traits and it shows that the TESL undergraduates were relatively low in Neuroticism (Table 3).

During the interview with the selected interviewees, they were given a hypothetical scenario on how they would teach an English lesson in a classroom which has full access to ICT facilities and Internet connection. Based on their responses, the way they would utilise those perks in their teaching would reflect on their dominant Big Five as shown in the key phrases below.

"I will use everything that is provided. we cannot be oldschooled. The children now. their tendency for gadgets is higher, so make use of it."

#### (Interviewee S2)

S2's responses reveal that she was an agreeable individual towards ICT because she displayed the characteristics of being cooperative when she intended to make full use of the ICT facilities, and being compassionate as she put herself in the shoes of her Digital Native students and wished to keep up with their learning styles.

"I don't want my students to be distracted. I want them to focus on the things I'm gonna teach. I want them to gain information and not just having fun looking at my slides."

(Interviewee S4)

S4 was a conscientious individual towards ICT because she was very organised in the way she would deliver her lesson using ICT, and intended to use ICT to help her students achieve their learning objectives and not simply for their own enjoyment.

"... I have not used the smartboard but I have seen it and it's very interesting... I do see myself producing my own teaching materials from one time to another to get the students excited without doing the same thing every single time..."

(Interviewee S6)

**Table 3.** Average mean values of participants' Big Five by ranking

No.	Personality trait	Average mean
1	Openness to experience	4.05
2	Conscientiousness	3.89
3	Agreeableness	3.87
4	Extraversion	3.87
5	Neuroticism	2.29

Keys: 1.00 – 1.99 (very low); 2.00 – 2.99 (low); 3.00 – 3.99 (average); 4.00 – 5.00 (high)

Lastly, S6 was an open individual towards ICT as he displayed his genuine curiosity to try out the smartboard to enhance his lesson and did not follow routine-based teaching to keep his students interested in learning.

Table 4 below summarises the interview data above which are similar with the findings of many past studies (Guadagno et al., 2008; Hamburger & Vinitzky, 2010; Landers & Lounsbury, 2006; McElroy et al., 2007; Moore & McElroy, 2012; Norsiah et al., 2015; Wehrli, 2008).

# Relationship between Personality Traits and ICT Integration in L2 Teaching

The four constructs of the Big Five have a significant, moderate, positive relationship with ICT integration, namely Agreeableness, Conscientiousness, Extraversion and Openness to experience based on Cohen's (1988) interpretation of r value. This means the more open, conscientious, extraverted or agreeable a teacher is, the more ICT is integrated in teaching. These findings are similar to those of several studies (Launders & Lounsbury, 2006; Hamburger & Vinitzky, 2010; Shen et al., 2014; Ryan & Xenos, 2011; Mark & Ganzach, 2014; Norsiah et al., 2015; Perkmen & Cevik, 2010) in terms of significant, positive relationship with ICT usage. Moreover, the interviewees in the present study possessed three of these four traits. However, these findings were different from Hassanzadeh's (2012) results which reported no significant correlation between Big Five and ICT integration. The different contexts from which the TESL undergraduates grew up can be attributed to this difference.

On the other hand, Neuroticism is reported to have very weak, not statistically significant relationship with ICT integration. This finding is contrary to those of Shen et al. (2014) and Mark and Ganzach (2014). However, the context of ICT usage that Shen et al. were focusing on was the social media only and not for academic purposes, which may have produced a different correlation outcome for Neuroticism. Although Mark and Ganzach were focusing on ICT in the academic context, their sample was young adults in general which may not have sufficiently captured the teacher education student population because it is a niche area of focus in leveraging ICT for teaching. Hence, their correlation outcome for Neuroticism accounted for populations different from the teachers (Table 5).

In regards to the strength of the relationship, Agreeableness had the strongest with ICT integration. This could mean the pre-service teachers were displaying their level of cooperativeness in understanding, complying and implementing the Ministry's ICT policy for education. Their Agreeableness

Interviewee	Personality trait	ICT behaviour
S2	Agreeableness	Cooperative (fully utilise ICT facilities), Compassionate (keep up with Digital Native students' learning styles)
S4	Conscientiousness	Organised (no ICT distractions), Goal-oriented (achieve learning objectives with ICT)
S6	Openness to experience	Curious (smartboard for class), Non-routine-based (diversify teaching materials to prevent monotony)

P			
Ν	r	р	
72	0.373**	0.001	
72	0.447**	0.000	
72	0.399**	0.001	
72	0.491**	0.000	
72	-0.085	0.475	
	72 72 72 72 72	72         0.373**           72         0.447**           72         0.399**           72         0.491**	

**Table 5.** Correlation between TESL undergraduates'

 personality traits and ICT integration

\*\*. Correlation is significant at the 0.01 level (2-tailed)

**Table 6.** Correlation between TESL undergraduates' level of motivation and ICT integration

Motivation	Ν	r	р
Level of motivation	72	0.393**	001
** 0 1			

\*\*. Correlation is significant at the 0.01 level (2-tailed)

trait had one of the highest average mean in the top three which was 3.87 and Interviewee S2 was an example of an agreeable individual. She had previously mentioned that, given the opportunity, she would fully utilise all the ICT facilities in order to cater to her students' learning styles more effectively. It can be seen that she was showing her cooperation and compassion in utilizing ICT for her lesson.

# Relationship between TESL Undergraduates' Level of Motivation and ICT Integration

The TESL undergraduates' level of motivation is moderately, significantly related to their integration of ICT in their L2 teaching (Table 6). This means the higher their level of motivation, the more ICT is integrated in their L2 teaching. This finding is similar with Sang et al.'s (2011) and Perkmen and Cevik's (2010) study, including the qualitative ones (Uluyol & Sahin, 2016; Pinner, 2012).

This finding is further strengthened by the interview findings with the three interviewees. The responses from all three of them had been encouragingly positive with capturing students' interest, catering to various learning styles and efficiency in preparing teaching materials being their motivating factors. Especially for this sample of TESL undergraduates in the present study, they were born in the robust digital era, so they should possess certain characteristics of Digital Natives such as mastering the basics of computer skills and being literate around the Internet, thus understanding how knowledge should be best delivered to their junior counterparts.

# CONCLUSION

Today's generations of pre-service ESL teachers are receptive in embracing and to seamlessly integrate technology in their classrooms which is crucial in meeting the needs of the 21<sup>st</sup> century learning. There was a time where books and pens were considered useful tools in learning but in today's digital age, computers and its technologies are now reshaping our educational landscape (Bax, 2003). Therefore, it is imperative that teachers are guided to utilise ICT tools and integrate them in their lessons meaningfully. Nevertheless, this does not mean L2 teachers should give up their teaching role and leave their job to the technology. Face-to-face teaching still has its important place in the classroom, but being able to integrate ICT in a lesson is a crucial plus point (Copriady, 2015).

Besides, findings have shown that the TESL undergraduates were curious and had higher tendencies to integrate technology in their teaching, so all they need is rich exposure to various educational technologies out there in the digital world. Hence, course contents for pedagogical ICT subjects should be structured in such a way that exposure and applications of various ICT tools are included. These will potentially benefit the TESL undergraduates who are entering the teaching profession at the end of their program and making a difference in the lives of their Digital Native students throughout their schooling years.

Finally, findings also reveal that TESL undergraduates' L2 lessons would involve a certain degree of ICT elements in enhancing and enriching their L2 input to their students. Therefore, school and higher learning institution authorities should provide consistent support for ICT facilities for the purposes of teaching and learning. After all, the future teachers are doing their part in fulfilling the Ministry's vision of CALL in the Malaysian education via initiatives namely VLE Frog and blended learning platforms. As Interviewee S4 said, "as we progress, we have to change our style of teaching."

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