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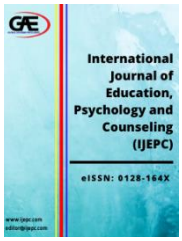

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THE PRACTICE OF PEDAGOGICAL DIGITAL COMPETENCE AMONG ESL LECTURERS

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Abstract:

With the goal of having students graduate with 21 century skills, there is a gap on who are the ambassador of the integration of digital skills. This is where language lecturers can be seen as role models of digital skills. Yet, there is a deficiency in studies looking at ESL lecturers' use of technology in terms of pedagogical use. Taking in the lens of Krumsvik's Teachers' Digital Competence Model, the purpose of the qualitative study is to explore the practice of Pedagogical Digital Competence (PDC) among English as Second Language (ESL) lecturers through 14 in-depth interviews analyzed by Nvivo 12 software to define the themes and codes that emerged. The results revealed the lecturers' use of ICT in the mastery of digital tools utilized for support their teaching, technological challenges faced during the implementation of said skills, as well as the cognizance of ethics in navigating the online world. It is interesting to note that the ESL lecturers highlighted policies restricting usage of technology in terms of formal assessments. The findings are highly relevant to bridging the gap in the growing literature of Malaysian ESL Lecturer's PDC.

Keywords:

Pedagogical Digital Competence, ESL Lecturers, Higher Education

Introduction – The Role of Language Lecturers as Digital Role Models

The lecturers' capacity to efficiently use digital learning instruments and tools to achieve changes in learning outcomes that affect the degree of the effects is still a big question that needs to be addressed. The more effective use of digital education to improve the accomplishment can only happen if lecturers can recognize digital tools, services with a decent level of technology awareness to produce better learning outcomes (Race, 2019). Furthermore, digital equipment, tools and resources can raise the speed and depth of learning for students,

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when effectively used (Papadakis, 2021). Digital technologies seem ideal for improving basic literacy and digital skills, particularly in university settings (Van Laar et al., 2017). The effect degree is usually similar to other pedagogical improvements that improve the effectiveness of interactive learning, although other advantages are gained. In addition, teachers' capacity to efficiently use digital learning instruments and tools to achieve changes in learning outcomes that affect the degree of the effects. The more effective use of digital education to improve the accomplishment happens as teachers can recognize digital tools, services and technology awareness to produce better learning outcomes (McKnight et al., 2016).

The students today are all "native speakers" of the digital language of computers, video games and the Internet, hence Prensky's (2005) defining them as "Digital Natives". This is heightened due to the fact that today's students represent the first generations to grow up, surrounded by and using tools of the digital age (e.g. computers, videogames, cell phones etc.) (Shariman et al., 2014). It is now clear that as a result of this ubiquitous environment and the sheer volume of their interaction with it, today's students think and process information fundamentally differently from their predecessors. These differences go far further and deeper than most educators suspect or realize.

Furthermore, Zheng et al. (2016), and Johler (2022) asserted that the empirical evidences of a transformed education system through digital technologies remain scarce with inconclusive findings on whether the education outcomes are enhanced by incorporating these digital technologies. Moreover, studies on the capacity of digital technologies to transform the education system have not been extensively performed despite the substantial funding provision for digital technologies in schools (Wastiau et al., 2013; Sjølie et al. 2021; Johler, 2022).

Of enhancing or transforming the current teaching practice, the utilization of digital technologies often drives towards the former (Wastiau et al., 2013; Blundell et al., 2016; Letzel et al., 2020). Most educators are not adequately competent to optimize the pedagogical-based digital technologies in the classrooms (OECD 2021) because these educators are typically accustomed to the conventional use of Internet and incompetent of manipulating online tools for the purpose of teaching (Wastiau et al., 2013; Guillén-Gámez et al., 2019). According to Krumsvik et al. (2014), most of educators have digital skills in using fundamental tools, however not many are able to utilize technology in a didactic manner, and less still even reach the "Innovation" stage of his Teacher's Digital Competence Model, where the teachers are expected to be able to build the building blocks of a digital culture.

Therefore, the need of adapting teaching profession in the face of rapidly changing demands as well as the significance of developing digital competence among the educators are pivotal, given that digital devices and applications are widely used (Krumsvik, 2014; Serbec, 2017; Øen & Krumsvik, 2021; Katsaris, 2021).

In general, this study will evaluate the different factors that affect the pedagogical digital competence (PDC) among the ESL lecturers. Hence, this study proposed to explore the practice of adoption, adaptation, appropriation, and innovation in PDC among ESL lecturers in the classroom with the research question - How is the practice of adoption, adaptation, appropriation, and innovation in PDC among ESL lecturers in the classroom?

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Literature Review – Digital Competence of ESL Lecturers

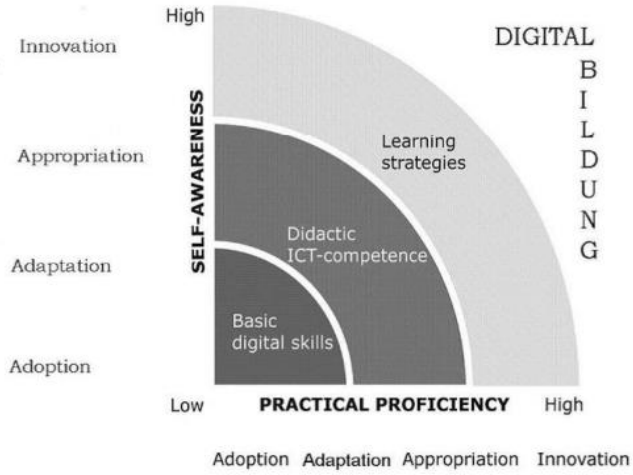

Figure 1. Krumsvik's Teachers' Digital Competence Model. (Source: Krumsvik (2014)

Based on the Figure 1, the horizontal and vertical axes portray distinctive phases of the lecturers' practical competency and self-consciousness. In relation to ICT via four dimensions which include: adoptation, adaptation, appropriation, and innovation. These magnitudes are based on Wegner's plans of mastery of cultural tools. Based on Wegner's hypothesis adoption and adaptation (i.e., mastery) refer to the knowledge of using a cultural tool, whereas the appropriation and the inventive point is the 'process of taking something that belongs to others and make it one's own'. In the mastery stage, the lecturers are reasonably incapable, uncertain, and oblivious to the probabilities and shortcomings of ICT in teaching, i.e., professed affordances. However, as they develop and step into the appropriation phase, they are skillful, confident and conscious of the potential ICT has to provide in the field of education, i.e., real affordances.

The digital competence model focuses on components that are significantly considered in the context of education, specifically for educators (Krumsvik et al., 2014). As shown in Figure 1, the component of 'self-awareness' (vertical axis) demonstrates that educators would experience a passage of 'digital competence' initially by being relatively unaware of the integration of ICT and education, which is represented by 'adoption'. Subsequently, throughout a certain course of time, educators would subsequently experience higher self-awareness in stages, from 'adaptation' to 'appropriation' before approaching the ultimate stage, which is 'innovation'.

These stages can take up to years for a novice educator to attain, especially when they are not specifically trained to attain digital competence. Nonetheless, it is not necessary for certain educators, who are already digitally competent, to set off from the first level in order. These digitally competent educators are allowed to professionally make use of their competence without any technical complications in the classrooms, i.e. 'form over content'. Moreover, these educators would certainly recognize the significant need of self-learning with their realization of the potential of integrating ICT and education in the classrooms which eventually affects their teaching approach.

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Both practical knowledge and self-reflection go hand-in-hand in this passage of 'digital competence'. The first two stages (adoption and adaptation) mostly focus on the digital technologies and the engagement of educators in basic ICT skills. As educators develop higher self-awareness (appropriation and innovation), the ICT and teaching practice are 'seamlessly integrated'. Eventually, educators have the competence to make use of ICT in developing pedagogical and didactic innovations as well as digital tools for the classrooms.

Methodology

Based on the research objective presented, qualitative research design is considered appropriate for this study. This study collected the data based on semi-structured interviews. A through literature review was conducted, from which the interview questions were extracted. The interview questions were then validated by 4 senior lecturers from UKM, UPM and UNITEN as well as piloted with ESL teachers in secondary schools. Changes were made to better clarify the questions and better guide the responses of the participants.

Sample

The study aimed to look at independent privately-owned university and university colleges to gain insight at how these institutions implement and support technology use in their own environment. According to Patton (1990), a sample size depends on what is wanted, the purpose of the survey, what's at stake, what's beneficial, what's credible, and what can be done within the allocated time and resources. Based on similar resources and limitation of time, the researcher chooses to survey either a particular set of experiences for a larger quantity of person (seeking breadth) or a more open variety of experiences for a smaller quantity of person (seeking depth). Hence, this study samples small number of ESL lecturers, which can be precious, particularly if the cases are brimful with information. For qualitative sampling designs proposed by Patton (1990), the selection of minimal samples is due to the anticipated rationale of the process and the study and stakeholder interests.

For the main qualitative component process (face-to-face interview), 14 ESL lecturers shared their willingness to engage in the survey. Volunteers positions range from senior lecturers to junior lecturers to best represent the technical capabilities of various ESL lecturers. The interviewees are from different institutions; their age, gender and demographic profile is as describe in the table below (Table 1).

Table 1. Profile of ESL Lecturers Involved In The Face-To-Face Interview (n=14)

No.	Gender/ Age	Qualification	Academic Position	Years of Experience	Gadget	Hour of tech Use	ICT Education	Current ICT Education
1.	F/ 31 – 40	PhD	Lecturer	3	3	2-4	15	No
2.	F/ 51 – 60	Masters	Lecturer	10	2	8-10	No	No
3.	F/ 41- 50	Masters	Senior L.	22	2	8-10	15	No
4.	M/ 41- 50	PhD	Senior L.	25	4	10-12	15	No
5.	F/ 31 - 40	Masters	Lecturer	7	3	8-10	15	No
6.	M/ 21 - 30	Degree	Junior L.	4	2	> 12	15	Yes
7.	F/ 21 - 30	Masters	Lecturer	5	2	6-8	No	No
8.	F/ 21 - 30	Masters	Lecturer	5	4	10-12	30	No

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9.	F/ 31 – 40	Degree	Junior L.	4	3	2-4	15	No
10.	F/ 21 - 30	Masters	Lecturer	8	3	2-4	No	No
11.	F/ 21 - 30	Degree	Junior L.	6	2	8-10	No	No
12.	F/ 41- 50	PhD	Senior L.	18	3	2-4	15	Yes
13.	F/31-40	Masters	Lecturer	7	3	6-8	15	No
14.	F/31-40	Masters	Lecturer	10	4	6-8	31-60	No

Interview

Interviews in this study will be guided by Krumsvik's Digital Competence Model. The interview construct is essentially guided by the Digital Competence Model (Krumsvik 2014), specifically adoption, adaptation, appropriation, and innovation. These interview sessions will provide improved understanding of how these lecturers approach the incorporation of digital technologies in their teaching practice and their existing digital competence. Besides that, the participation of academic administrators in this study will provide essential insights on their viewpoints on how, what, and why ICT is adopted in ESL course and related educational programmes. The interview guide for this study will consider the following four primary themes, which are the implementation of (1) adoption, (2) adaptation, (3) appropriation, and (4) innovation among ESL lecturers in using technology in their teaching.

Meanwhile, this study considers the approach of semi-structured interview because this approach provides flexibility to present any supplementary questions to the participants during the interview session in relation to the topic discussed. Moreover, this approach does not limit participants' responses to a certain depth (Dornyei, 2007). For this study, the order and wording may not be exactly similar to the established procedure despite nearly similar number of questions are posed to the participants during the interview. There may be more probing questions for the participants in order to acquire in-depth insights on the issues discussed.

Apart from that, reflexivity reduces bias in these interview sessions (Hammersley & Atkinson 2007; Alvesson & Sköldberg 2009), where the participants recognize their role in the process and are potentially affected by the interviewer as well as the interview process (Maxwell 2013). From a reflexive standpoint, the researcher approached the role as an interviewer and the interview situation according to guidelines proposed by Alvesson and Sandberg (2011) as "neopositive", who puts forward effective questions, establishes neutral viewpoint, produces quality data, and attempts to generate valid interpretations and conclusions.

Data Collection

The interviewees were deliberately chosen from a variety of positions among the ESL lecturers (from junior lecturers to senior lecturers) to best represent the technical capabilities of the broader ESL lecturer population. The researcher conducted a total of 20 interview sessions, each of which was interviewed at least once per participant. The first session consists in getting answers to all questions. The length varies between 15 and 20 minutes. The minimum time is 15 minutes, and the maximum time is 20 minutes. The second session is to get confirmation of the response given from the first session as well as any additional response that the interviewee would like to add if needed.

The interviews start with a warm-up discussion in which the interviewer introduced himself and the questioner to be interviewed, and whether the interviewee wants to continue with an interview, and whether the time and place is suitable. The interviews were conducted at a

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variety of locations, such as where lecturers favoured such as the staff lounge and the offices of the teachers themselves. This is to ensure that the reaction of the lecturers to the interview is positive, and that they are indeed willing to be interviewed.

The first phase is where the respondents were required to read the letter of consent before engaging in this study which provides clear information about the research and their role in the interview. While the researcher conducting the interview, she explains the procedure to each respondent and how important it is to be involved in this study and informs them that their response will be treated confidentially and anonymously. But interviewees should feel free to share a genuine feeling and thinking (Cohen 1998). Every interview session lasted about 15 to 20 minutes and was recorded; the interviews were conducted with the consent of the respondents. In fact, the interviews were conducted in English, where the conversations are transcribed later.

Results & Discussion

In-depth interview data for the fourteen participants were analyzed thematically to identify emerging patterns and themes. The themes were added systematically to the codes ' data means and rearranged as per thematic structure. Once the major topics were illustrated, a structure of categories for each transcript was developed. Data collection adopted a system in which transcripts were obtained from all, and then grouped into groups. A category, as defined in this study, is a group or collection of related findings with specific themes identifying and impacting the study's research issues. Consequently, each category was formed from several topics and each topic was formed from several lists of coded subjects. Apart from the coding of themes, word cloud visualization analysis, digital competence such as teaching, classroom, ICT and English featured prominently from the interviews. A strong theme across all interviews was that, there is a heightened need to practice the adoption, adaptation, appropriation, and innovation in PDC among ESL lecturers in the classroom. Interviewees shared similar feedback where essential insights on the significant factors affecting digital competence of lecturers based on the obtained data from English as Second Language (ESL) lecturers.

In order to provide a sense of structure in the presentation of the data, participants' responses are presented following the order of in-depth interview responses to each question under the thematic categories that emerged during the analysis. In addition, this study had utilized the qualitative procedures suggested by Morrow (2007) to analyse the transcripts of the discussion including code, analyse and present the data according to themes. This is due to the fact that within and across interview session, responses elicited by the questions and comments was grouped under four major themes. The emerged four major themes are divided according to (a) adoptation which has five sub-themes, (b) adaptation which has three sub-themes, (c) appropriation which has two sub-themes, and (d) innovation with two sub-themes. Furthermore, in describing the results, data are presented with direct quotations to demonstrate trends and variability of opinions to strengthen the interpretations of the discussion.

Adoptation

In adoptation, the analysis examines on how the participants learn to use technology, use of ICT in teaching English language, and the availability of digital tools for teaching and technical problem solved in classroom with example of technological challenge. **Error! Reference source not found.** presents a list of themes and coded subjects for adoptation category.

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Analysis of the in-depth interview revealed five sub-themes concerning the factors that influence the adoptation of ICT in teaching English language namely 'use of ICT', 'ICT knowledge', 'applied digital tool', 'technical problem' and 'technology challenges'.

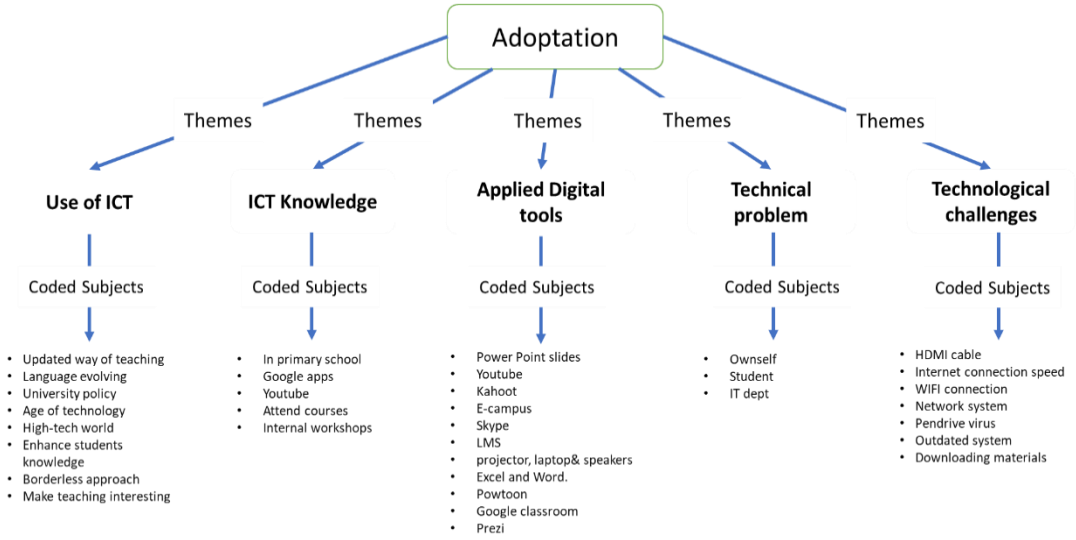

Figure 2: Coding Subject And Themes For Adaptation

Use of ICT

In the early session of the interviews, the participants were asked to provide their reason to use ICT in teaching English language. The participants have mixed response in answering this question and claimed that they used to updated ways of teaching English language. Two of the participants claimed that:

Preferably why I choose to use ICT in English teaching because it is much more interactive and it provides that kind of atmosphere and excitement for my students. And they seem to enjoy it more as I'm using ICT compared to the chalk and talk system [L06]
I use ICT in teaching English language because it makes students feel more comfortable learning in class where they would like to see at least slides in class rather than just from the books. So that is why I use ICT in English class [L08]

While most of the participant expressed their personal reason to use ICT in teaching English language, participant L03 revealed that:

> *Partly it's because of the university policy. We have a policy where in every subject taught, there should be 30% of blended learning be implemented in the subject, in the lessons. So that's partly because of the university policy plus I feel that students who are digital natives today, they are very familiar with ICT. So, for us to not incorporate ICT, that would be a loss of opportunity to me [L03]*

In summary, the answers provided by the participants seem to reflect that English is one of the most important languages which have played important role in the process of knowledge explosion. It is necessary to use modern approaches and tools of ICT to develop better

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understanding and acquisition of essential skills i.e. listening, speaking, reading and writing of among the students. In fact, ICT has a lot of things to offer to both lecturers and students for the enhancement of their vocabulary and improvement of English language skills as nowadays ICT tools and approaches are being used widely due to their convenience, omnipresence, effectiveness and being economic. Therefore, ICT is playing the most important and pivotal role in teaching learning process.

ICT Knowledge

As regards to the participants knowledge on the use of ICT in teaching, the fast-paced advances in the development of technology can be used well if the lecturers able to cultivated on how to take advantages from the resources that are furnished to them. Lecturers need proper training, as well as ongoing support pertaining to ICT knowledge. Based on the question, three participants illustrated similar response:

All this while, in order to use ICT gadget and what not, I have to learn from my friends because I believe they are more well verse with it. Sometimes I learn from my own students. So, I take the advantage of learning from whomever who'd like to teach me using those things [L02]
Actually, most of the time I learn from my peers, my friends, my colleagues, and also our LMS manager [L09]

Yeah, I attended some workshops and we have LMS. So, we attended that so that we can use it. Other than that, I think I just learn it informally with friends and colleagues [L10]

On the other hand, one of the participants (L03) learned ICT through their university's learning platform. As stated by L03:

The university has a division called ADEPT that overlooks the implementation of blended learning at university level. So, they are the ones who actually organises various type of ICT related trainings to equip lecturers with the skills, giving them exposure to the different types of apps so that they feel comfortable in incorporating ICT in their teaching
In spite of this, participant L06 added:

It is a mix of the ICT knowledge that I gained since I was studying back in IPT and then I did my own initiative. I watched videos on YouTube on how to implement technology in class and my campus also provide some in house workshop to help us vary our method in teaching

These findings clearly correspond to the participants' knowledge on the use of ICT in teach**ing.** Technology in the classroom **now** plays a very big role in the effectiveness of education as universities have invested in a delivery system for multimedia courses such as the **'**Learning Management System' (LMS)**.** It is important to acknowledge that students are already interested and engaged in using technology and this creates many amazing opportunities for universities and lecturers to benefit from integrating some forms of technology in the classroom and to make teaching and learning more effective. In summary, lecturers determined what students should do and how lecturers and ICT knowledge can support students, as many of the routine tasks done by lecturers can be reassigned to technology, elevating the role of lecturers.

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Applied Digital Tools

Based on the previous section's discussion, the participant was probed on the type of digital tools used as a teaching tools in classroom teaching. All the participants somehow engaged with one or more digital tools or classroom technologies in teaching. For example, most of the lecturers engaged with Kahoot (game-based learning platform), Youtube, Skype, Powtoon, Google classroom, Edmodo, Power Point slides, Prezi, Microsoft Office and the universities online platform, such as, e-campus, Frog VLE and LMS, with projector, laptop and speakers. For example, two of the participants illustrated their applied ICT tools in classroom teaching:

> *I love using videos especially from YouTube. Since the Internet connection is quite good here, simply connect to the Internet and play YouTube videos. And then when I have the time, I would conduct Kahoot! in the class for like quizzes and trivia. Most of the time I use our online system, e-campus so that the students can download notes and they can discuss in the forum in the e-campus and what not [L02]*
> *I think that one is the most fun that I have use. Although it is quite difficult to be assessed for filing, I have to mix and match. If I just want to teach, I'll use Kahoot! but for assessment I will use LMS [L06]*

Based on the participants' answer, the growing presence of ICT tools in the classroom is directly correlated with students' increased usage of technology outside of the classroom. Due to the students' familiarity with technology, lecturers can utilize different types of technology to create more diverse and inclusive learning environment. The main benefit of using ICT tools in the classroom is interactive lessons that engage students, foster in-depth learning, and encourage collaboration. In addition, ICT tools in the classroom also provides benefits for lecturers, such as saving time by creating lesson plans online. Therefore, in contrast, the use of ICT tools in the classroom has demonstrated that it can also improve student test scores, literacy, and overall outcomes.

Technical Problems

The use of ICT in the classroom is very important in providing opportunities for students to learn in the information age. Technical problems or difficulties faced by lecturers in using ICT in classroom teaching will interrupt the quality of education by decreasing students' motivation and engagement. In view of this issue, participant was asked to elaborate the technical problems faced in classroom teaching. There is a mixed reaction among participants pertaining to this question. The first group of participants addressed that they will inform the IT department or IT technician to rectify the problem. These are the several problems mentioned by the participants:

> *Technical problems in our university, we have IT Division that look into this. So, in every classroom, there are notices where in cases of any technical problems, there are numbers that they can actually contact. So usually you just have to call, and then somebody will be sent to the classroom to assist [L03]*
> *Technology problem, if something wrong with the projector or computer, we have our tech assistants who will come and help [L04]*
> *Most of the time I will find problem with the projector issue, HDMI issue. So usually we contact the IT person to come and solve it but somehow it will take like a lot of time, consume time [L09]*

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Oh, that is my biggest weakness. I don't usually fix everything if anything happens to the ICT. I will call someone for the help. Not directly to the technical support. If the students know, then ya. Or else I will call the technical support [L07]
We have ICT department so I will call person in charge in to solve the problem [L14]

According to the second group of participants, they mentioned that they will rectify the problem by themselves.

Everything is not so hard because I can use the laptop myself. I can work the projector myself. And any technical issue is very- is not- as long as it's not too detail or maybe too internal programming, too detail, I can do it myself [L01].
I'll try to manage it on my own. But if I still have difficulty, I'll call the IT personnel. Or if they're unable to attend, I'll just adapt with various methods [L06]

The third group of participants said that they usually try to rectify the problem by themselves and if they unable to solve it, the will look for students in the classroom who have IT knowledge or IT department support. As participant L12 mentioned:

The projection from my laptop, it does not project. So we needed to check on say for example like P Window button to actually see if we can actually have the options that are- sometimes we actually have extended, then we have duplicate. Plus I also learn that the way I've connected the cable to my physical laptop was incorrect. So there were times that the projector did not project mine because it was turned on and it went on idle mode. So I've to switch it off. After few seconds, turn it on. And then it already project. So these are those things that I've experienced, very minor issues [L12]

Despite significant resources allocated to integrate ICT in the classroom teaching, many lecturers have struggled with disruptions that ICT can bring, had their work negatively impacted or have not used ICT effectively. In fact, there is no single technical solution that applies for every lecturer on every view of teaching. Integrating ICT in the classroom is a complex and varied process for many lecturers. Therefore, meaningful ICT integration depends on more than device use. Moreover, there are important steps to make sure integrating ICT aligns with how the lecturer teach and what they are teaching. In summary, professional development had tried to address lecturers' technical struggles, but much of it has been limited to' one-shot' or 'one solution for all' strategies.

Technological Challenge

Technology is perhaps the strongest factor shaping the educational landscape today. Many universities are showing support for increased levels of ICT in the classroom teaching by providing hardware such as computers, enhancing internet connectivity, and implementing programs designed to improve computer literacy for both lecturers and students. Although lecturers generally appreciate the benefits of educational technologies, they often find smooth and effective integration of new educational technologies challenging. From acquisition of new ICT equipment to adaptation of curricula and teaching techniques to incorporate new educational tools, ICT integration presents significant challenges to lecturers. When posed the question on technological challenge faced in the classroom, participants claimed that:

Normally when there's no Internet connection or suddenly the Internet breaks down. So there goes my video. And perhaps power shortage. I was using whatever tools that is and then suddenly there's no electricity. I had to revert to using traditional classroom methods [L02]

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> *I would say probably Internet access for the students. But this was probably a problem several years ago. Now it's not much of a problem. Because before this on campus we have got WiFi connection. It was quite, not quite slow, depending on the time of your class. If it's during peak time, then access can be pretty slow which can actually affect the time that the students use to do whatever task that we give them- that we ask them to do because of the low WiFi strength [L03]*

However, on the other side of this issue, certain participant take precaution by pre-check their technological device before teaching in the classroom. As participant L08 explains:

> *Basically I prepare myself before I teach. So before the students come, I make sure my laptop is functioning, the slides, the projector is functioning. So I seldom face any technical problem [L08]*

On the extreme side, participant L10 critized on the poor facilities rendered by the university:

> *Okay, a lot actually because I think our facilities here are still very poor. Some classes we don't have projector. And not all classes that we have computers, CPUs, even some parts in the CPU will be broken by some monsters. So you know it's difficult for me like when I come, the projector doesn't work. If it is has there, it doesn't work, you know, things like that. So I think that's very challenging for me*

In summary, it is important for lecturers and university to understand the challenges and cost-effectiveness of different approaches of ICT used in teaching, so that teaching strategies can be appropriately explored to make such changes viable to all. The Internet is not, of course, the answer to every challenge posed by lecturers. Experience shows that the best results are likely to be achieved through cooperation between stakeholders, including government, Internet business solution and technical experts, and sector specialists such as lecturers and educational administrators. Therefore, the university requires a strong policy framework, commitment and realistic implementation strategies to overcome the technological challenges.

Adaptation

In regards of adaptation, the analysis examines the participants' level of mastery on ICT tools, 'list some of the instructions given to the students related to ICT use in the classroom and subject incorporated the use of technology. Figure 3 presents a list of themes and coded subjects for adaptation category. Analysis of the in-depth interview revealed three sub-themes concerning the factors that influence the adaptation of ICT in teaching English language namely 'mastered in ICT tools', 'ICT instruction', and 'skills incorporated with ICT'. The following sub-section discussed the sub-themes of adaptation.

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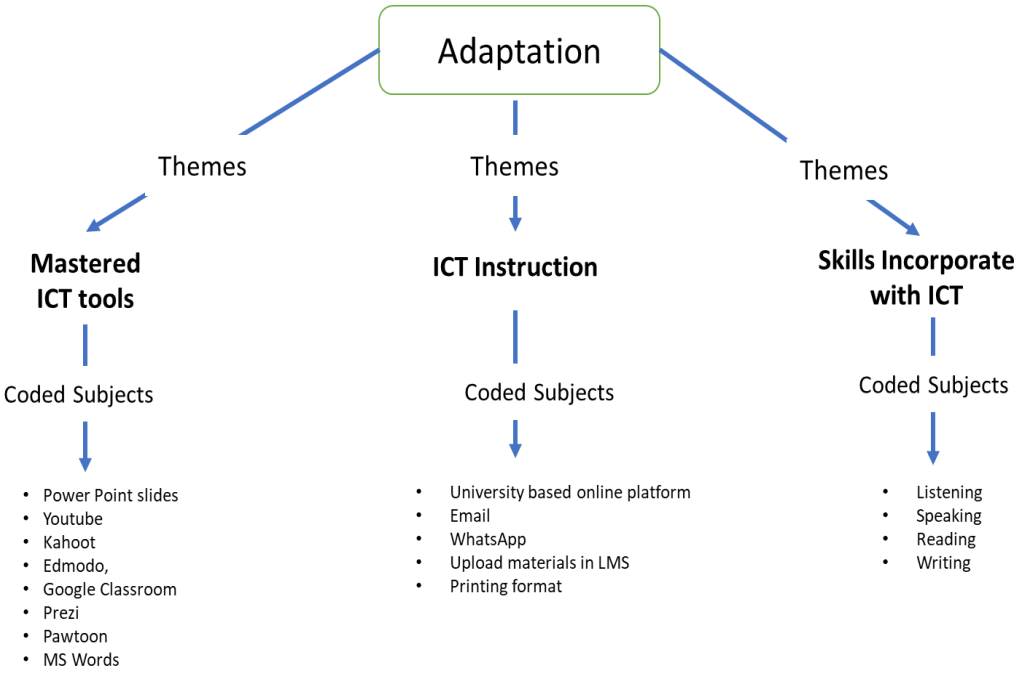

Figure 3. Coding Subject and Theme for Adaptation

Mastered ICT tools

In view of level of mastery in ICT tools, it has become extremely hard for all lecturers to keep abreast with the constantly evolving computer-based technology. This is especially the case with lecturers who are now, required to stay a step ahead to preserve their relevance in their careers and engaged with students. With this in mind, the participants were asked to revealed their expertise in ICT tools, means the computer-based technology tools they have mastered or comfortable in applying during classroom teaching. As expected, all the participants somehow mastered in one or more ICT tools and applied in classroom teaching. Few of the interviewed participants claimed that:

> *So far I think Kahoot and Course Networking. Because Course Networking is I think compulsory for all lecturers to use it [L14]*
> *"I can use PowerPoint like an expert definitely" [L01]*
> *"I have experience with most of the digital tools because I have been teaching for 25 years" [L04]*
> *"Ha, right. YouTube yes, Prezi yes, Blendspace. Kahoot! is I know how use it. I mean it's a game, we do that" [L11]*

Given this point, in order to become a confident user of ICT in the classroom, lecturers need to master or dominant in as many ICT tools as possible. Furthermore, lecturers should understand the benefits of digital literacy and recognized as essential for teaching such skills, and as an enabler of other teaching and learning practices. In the long run, the ICT skills that lecturers need have moved on from just being able to use word processing and spreadsheets software as the mastery of ICT tools is seen as important in classroom teaching and student engagement.

List of ICT instructions

While, the aim of ICT instruction is to improve and increase the quality, accessibility and cost-efficiency of the delivery of instruction to students, it also refers to benefits from networking

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the learning communities to face the challenges of current globalization. Process of adaption and instruction of ICT is not a single step, but it is ongoing and continuous steps that fully support teaching and learning and information resources. Henceforth, the list of the instructions given to the students in relation to ICT use in the classroom, most of the participants seems addressing this question based on their personal experience rather than a 'standard of procedure' answers. Participant L01 illustrates that:

> *we have our own software and other software that we use for online teaching as well as on campus teaching. So those software, we will teach the students on how to use from the beginning, from A to Z on what are the- what is the website, where to click, how to log in, how to start and how to answer your, how to upload your assignment, your quizzes. And then how to answer your final exam, everything is online for us*

On the other hand, participant L05 stated that:

> *We have the MMLS and we tell them in class. They usually know and I'll tell them in class and also post it in MMLS and tell them when they're supposed to do it. Give them the time frame when they're supposed to submit it and how to submit it. The instructions are either given verbally and then enhanced through our LMS*

Subsequently, participant L14 and L11 claimed that:

> *Ok, when you talk about instructions for example in Course Networking, right, I post my course structure, course specification and assignments for them to refer to, right. And then they need to log in, they need to download the specification, what are the things that they need to follow for the assignment, alright. So that's a kind of instruction. Downloading, uploading assignments, log in for quiz [L14]*

Based on the participants' feedback, ICT instruction in teaching generally means technology-based teaching and learning process that closely relates to the utilization of learning technologies in class room teaching. Due to the fact that students are familiar with technology and they will learn better within technology-based environment, the issue of ICT instruction in universities, specifically in the classroom is vital. This is due to the use of technology in education contributes a lot in the pedagogical aspects in which the application of ICT will lead to effective learning with the help and supports from ICT elements.

Skilled Incorporated with ICT

It is right to say that almost all ranges of subjects can be learned more effectively through incorporating technology-based tools and equipment such as writing, reading, listening & speaking. In addition, these skills provided the help and complementary supports for both lecturers and students where it involves effective learning with the help of the ICT to serve the purpose of learning aids. The participants noticeably claimed that they employed all four essential skills in their teaching:

> *I use most of it on more for reading, writing and grammar, but for listening not so much. Because a lot of- they can do a lot of research and then complete the exercises we give them to do it. And then they can submit their essays through the system [L05]*

Apart of this, participant L04, L08 and L11 incorporated ICT tools such as YouTube for writing, reading and listening effectively in teaching. The participants explained:

> *Extensively I use it in listening because we have a variety of anecdotes, stories, YouTube. A lot of things that can bring agility and activeness to the class. And reading*

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> *I use it but a little bit, not that much. In writing, I prefer to use a pen. So, ask the students to do this but sometimes I have very limited time that I ask the students to do an exercise on the Internet. [L04]*
> *For writing, yes. I have use technology for example I will play a movie. They will have to watch and then they will have to write a summary. So, it is more to writing. As for reading, I prefer to go with the book. So, this one, I'm not using- I will not use technology. Listening, yes where we have to play CDs and let the students listen and fill in the blanks. Yes, I use for listening. Speaking, no. I prefer one to one so that, you know, the use of technology sometimes will disrupt the students' attention when they're speaking. So, I prefer to have one to one without technology [L08]*
> *Basically, for writing because I teach academic reading and writing. And of course, also for speaking because speaking we use YouTube videos for them to listen up to the pronunciation and all that. It's much better. Why because, there's a question why. Why because instead of me telling them, it's always better- it's very catchy for them if I put up something and, especially the YouTube video, and something a different level where it gets them connected easier. It's the big screen and all this stuff, yeah [L11]*

Interestingly, participant L02 moved beyond the classroom teaching to real life learning experiences incorporating ICT tools. The participant stated:

> *Last semester I was teaching listening and speaking. I had the opportunity to ask my students to conduct a video of them communicating with the person over the counter at McD. Because I believe that is how you use the language in real life situation. So that is the subject that I manage to have some sort of rare assignment in comparison to other subjects. Because the other subjects are quite content based. So, they have to do a lot of writing. But this semester I'm not getting any of those subjects anymore. I'm getting new subjects. So, I have yet to determine how to use ICT in my class [L02]*

In summary, the ability and expertise of lecturers to use ICT play an essential role in using ICT in classroom teaching. Lecturers need ample ICT expertise to incorporate the technology and high confidence to use it in a classroom setting. In addition, lecturers also need insight into the pedagogical role of ICT to use it meaningfully in their educational cycle. Lecturers who have incorporated ICT with essential skills such as writing, reading, listening & speaking are more successful in teaching as opposed to those who have no background or lack of initiative in such instruction.

Appropriation

In view of appropriation, the analysis examines the types of digital tools used to conduct assessments and the participants' authority in using digital competence without any technical obstructions. Figure 4 presents a list of themes and coded subjects for the appropriation category. Analysis of the in-depth interview revealed two sub-themes concerning the factors that influence the appropriation of ICT in teaching English language namely 'assessment', and 'digital competency'.

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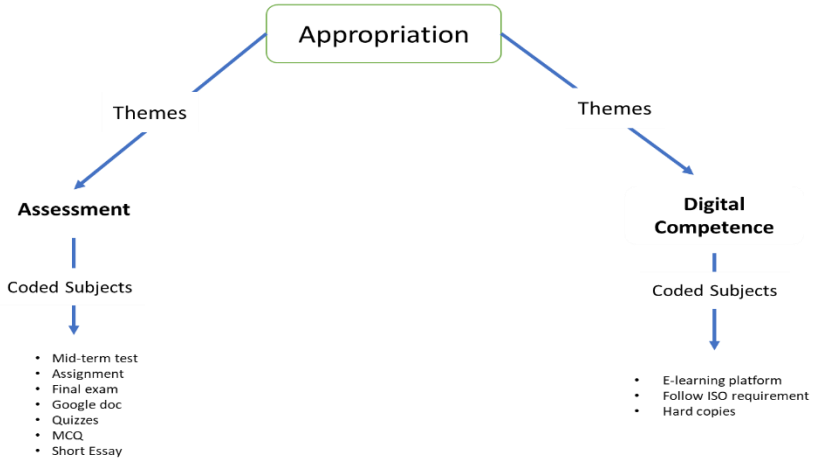

Figure 4. Coding Subject and Theme for Appropriation

Assessment

Assessments are vital for determining what learning has occurred, what areas need to be reinforced, and what lecturers' next steps likely. This kind of information helps to guide lecturers' instruction and provide additional opportunities for the students. With the variety of digital tools available, many of these concerns have disappeared and make a tremendous difference in the efficiency of classrooms and teaching procedures, and the types of assessments that lecturers can create for students to meet the diverse learning styles. Based on the question on the types of digital tools used to conduct assessments in the English language classroom, the participants commented:

> *To conduct assessment, I think most of the time I use LMS because it's easier and but that is only for like, you know, questions like MCQ. For structured, usually I will do it in class. It's kind of difficult for the system. I'm not sure about other systems, but our LMS system here even for structured questions, sometimes it doesn't detect even though the answer is very close to the one which is in the answer scheme. So, it's not fair to the students. So, we do it manually [L10]*

On the other hand, participant also found to be using their universities platform to assess students. Participant L12 illustrated their university's online portal to conduct assessment:

> *Assessment, digital tools, we have Google Classroom as well and our online portal called UNIEC Virtual. What we do is we upload; we also use flipped classroom where we upload videos or links to certain things. They have to read it. They've to come to class and answer questions. But the question that they answer is either in the form of forum or debate or they actually write essay about it. So those tools that I'm very comfortable with is the UNIEC Virtual number 1. Number 2 is Google Classroom [L12]*

Despite of this, one of the participants (L08) highlight that there are so many possibilities, and even better is how quickly results are obtained, can be evaluated and feedback provided to the students by using external website for assessment. Participant L08 expressed:

> *As I said, yes. I have that website from book Oxford. So, we have assessments, placement tests, and so on. So, the students will register in that particular website as a student. So, and they will register under a class via a teacher. So, they will send in their assessment there and I will mark them and give feedback accordingly*

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In summary, integrating tools for assessment such as these, enables lecturers to have the results within a few minutes and use this valuable feedback to help guide the classroom teaching and make changes as needed based on 'real time data'. The results can then provide valuable feedback to the students, one on one, and help them to work on their personal growth and reflection. Furthermore, lecturers can refer back to the results to track student growth, to note patterns in certain classes or students, and to work with students on determining strengths and weaknesses.

Digital Competence

With regard to the lecturers' authority in using digital competence in students' assessment, most of the lecturers feel that there are procedural obstructions that need to be solved. Even though there are so many options for creating assessments by using any of the ICT tools available today, the universities standard of procedures such as directive from MOHE and ISO requirement need to be adhered by the lecturer. According to participant L09:

> *Uhuh, okay. And what do you think of your authority in using digital competence without any technical obstructions? So, in here it says that you want to use Kahoot! as a midterm quiz but unable to do so because of the ISO filing as it requires a hard copy version of assessment in a more formal setting [L09]*

In supporting, participant L08 and L10 stated:

> *So, we shouldn't do it. I mean we don't have the access yet. So, we prefer to have papers, hard copies because we have to keep record. So, for classroom assessment like, you know, just to test their knowledge, yes, I use digital tools. But like formal exam, midterm exam, yes, we need to have hard copies [L08]*
>
> *Ya, that is one of the factors as well, ISO request. And most of the time is that because students will get confused when you gave some that you say it's normal assignment and some is made assignments. So, it's easier when you just to stick to one [L10]*

On the other hand, participant L14 commented:

> *Alright, in this case, if we talk about quality management system or ISO of course we need hardcopy to be submitted as in filing right. But for exercise wise I think erm… I can use Kahoot but I don't feel I face any difficulty in the Kahoot because it is for the exercise only. But in terms of the assignments, yea, we need to have something which is in hard copy so I would prefer to use CN (Course Networking) because the students can upload it, we can download it and print in hard copy [L14]*

In regards to the above comments, lecturers find that providing assessments and giving feedback through digital competence to the students in a timely manner which can be challenging and need a way to make this process easier. However, sometimes due to the procedures that need to be adhered, lecturers have to perform formal and informal assessment exercise by integrating digital competency into classroom teaching assessments. Lecturers tend to find that the most challenging tasks relate to autonomy in being able to conduct formal assessments online. Especially when adhering to ISO requirements which requires all files to be filed in the hardcopy form. Thus, with the variety of digital tools available, many of these concerns can be solved and make a tremendous difference in the efficiency of classrooms and teaching procedures, and the types of assessments that lecturers can create for students to meet the diverse learning styles.

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Innovation

In innovation, the analysis examines on how the participants teach ICT etiquette, moral awareness, paraphrase and cite sources in English classes. Figure 5 presents a list of themes and coded subjects for innovation category. Analysis of the in-depth interview revealed two sub-themes concerning the factors that influence the innovation of ICT in teaching English language namely 'ICT ethics', and 'referencing guide'.

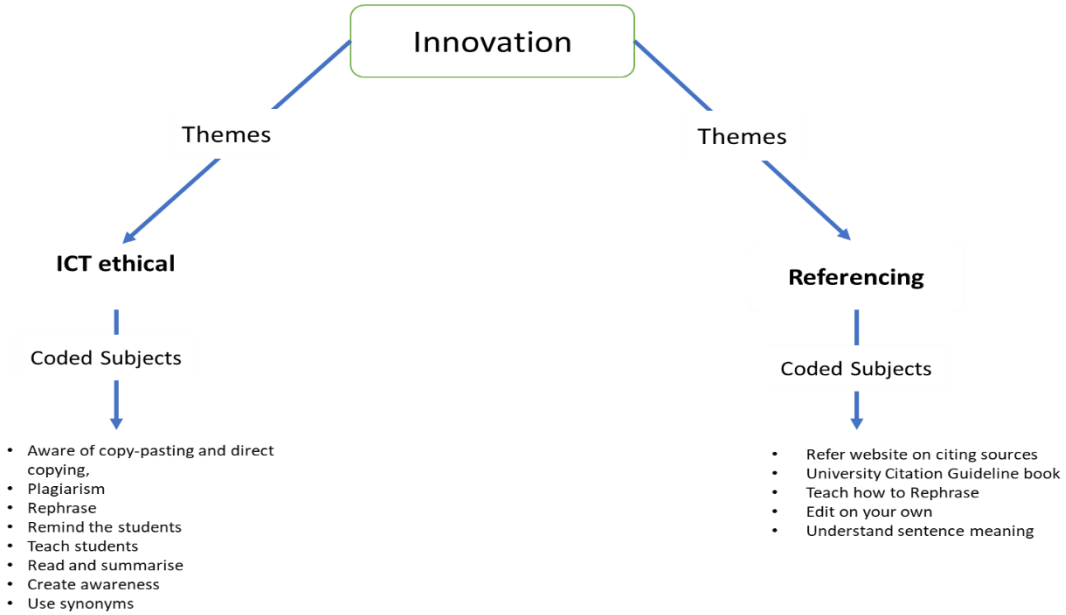

Figure 5. Coding Subject and Theme for Innovation

ICT Ethics

ICT Ethics has always been at the core of creating a thriving learning environment. Lecturers are well accustomed to teaching students' ethics through principled examples, such as 'these are the rules' and 'here are reasons for the rules'. Pertaining to the question on how lecturers teach ICT ethical and moral awareness in the English language classroom, most of the participants employed their best professional judgment when dealing with technology-related ethics. They find it helpful to recognize the types of situations and to discuss them with students to develop awareness of ethical issues. Two participants have similar answer for this question:

> *I teach my students even though you're doing your assignments, your quizzes and all that, please be aware of copy-pasting and direct copying, plagiarism and always to rephrase. I teach them how to rephrase. They can refer to others but they do not use exactly what the others write. They have to rephrase and all that [L01]*
>
> *This is always a problem because whenever an assignment is given, you know, students tend to copy-paste the whole thing, you know, without even citing the author. So, what do we do before we hand over any assignment task, we inform the students that you should not copy-paste. Even if you feel like, you know, copying that phrase, you will have to paraphrase it into your own words. So we inform the students, actually [L08]*

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On the other hand, participant L13 emphasized the use of plagiarism software to solve the problem by stating:

> *Erm, always check on the students' work and always remind them its not immoral for you to just copy and claim that it is yours. So, I would be very strict on that assessment, as it is a part of the writing, how I taught my student in writing is that for each the point they have to find an article to support that is what I teach them about plagiarism, where I teach that they have to actually erm, you know, cite the sources. Ok, but when it comes to check the plagiarism, the similarity, percentage of similarity in Turnitin, so they, it is found that it is actually yes, for the point that they actually quoted, yes, they cite but for the other points, the other explanation, they did copy from somewhere else. So that is why we need software like Turnitin*

Even though the students seem be prone to completing tasks by 'copying and pasting', participant L04 used religious basis to create awareness and seriousness of ICT ethics. Participant L04 commented:

> *Usually I tell my students on the religious basis, Islamically speaking. I tell them that when you copy and paste without referring to the person whom you copied it from, it's a kind of stealing and this will be punished by Allah SWT. So, I tell them this from scratch in the beginning. And then I tell them that if I am a person who doesn't like to just pass thing easily, so I will check either your answer is copy-paste or your own. So, if I discover that you copy and paste 100% then I'll give you zero in your assessment. I allow you, because you are still bachelor students, I allow you to read and summarise. Give me the source. I'll give you full mark if it is yours. So, I'm, you know- I'm not that, you know- a strict person. I just tell them do something but don't copy and paste. Copy and paste mean no effort. Summarise, decent effort. And what I need from you at this level is to understand. If you understand what you wrote by means of summarisation, then its justifiable' [L04]*

As lecturers increase the use of ICT in the classroom teaching, they must also be conscious of ethical issues that arise from that ICT tools use. Understanding the biggest ethical issues affecting the classroom teaching will help the lecturer better understand how to address the issue. In addition to identify the ethic related situations, it is important for lecturers to outline both ICT rules and the reason for the rules. Lecturers also should focus on how ICT tools can enhance or expand the student's learning and help them see how technology can connect and build upon their real-life activities and learning.

Referencing Guide

Students often struggle to integrate sources into their writing and the difficult process of finding evidence to support their assignments. They face the new challenge of deciding whether to quote, paraphrase, or summarize sources. Not understanding how to properly summarize, quote and paraphrase make students unsure of how to incorporate sources in their assignment, which lead to poorly written assignments with a tendency to plagiarize. In such scenario, the lecturers were asked to explain how they teach students to paraphrase and cite sources in your English class. Basically, all the participants highlighted that they will provide certain guidelines to follow in paraphrasing and citing sources for their assignments. Example, participant L01 commented:

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Yeah, like as I added before, we have to teach them how to rephrase from the beginning, as early as they study or else if they are used to be copy-pasting, until the end of their study life, they will keep copy-pasting which is not good [L01]

Apart of this, participant L10 highlighted:

So, this is one of the ways to avoid plagiarism by paraphrasing. And then they can also do a summary and also rephrase the sentences. So, I teach them how to use synonyms, and then how to change sentence structure. So, for example if you find the sentence in the source that you find, so if it's in active sentence, so how do you change it to passive or the other way round. You know, yeah, synonyms can help you a lot in avoiding plagiarism. And also cite sources like how you cite your source. Are you using APA style? Are you using Vancouver? Are you using Harvard? Yeah [L10]

In echoing participant L01 and L10 information, participant L04 and L14 commented:

Usually I don't need to do that. But paraphrasing you can say yeah I just told you before, you know, when they do assignment or something, they can paraphrase. They can replace the words with their own word and they can transfer this information to me. But hey have to tell me where they are from. And they have to be exact. Because you know paraphrasing and summarizing is dangerous. If you summaries with the wrong perception, wrong understanding, your summary will be wrong. So the information you are giving to me is wrong [L04]

Alright, basically for paraphrase and citation, they need to attend one workshop which is conducted by our resource center or library. So normally in my class I don't teach students to you know… based on this kind of skills but I do teach the students on how to come out with a different sentence. That is actually paraphrase. So, based only not into a deep one because they have certain course you know they will actually learn more about citation and reference it [L14]

In conclusion, ethical writing practices is the key to academic and professional success in the digital age. Lecturers have free and premium tools at their disposal that include writing models, current events articles, live polling, and plagiarism checkers for crafting instruction around these essential practices. Instilling ethical writing habits in students is one of the tasks that lecturers should emphasized in classroom teaching today. Although it can be tough, one of the most impactful things lecturers can do to fit this critical subject into their curriculum by taking a step back and evaluate the efficiency of their approach.

Conclusion

The third research question explored the practice of adoption, adaptation, appropriation, and innovation in PDC among ESL lecturers in the classroom. The analysis of this objective focused on how the participants learn to use technology, use of ICT in teaching English language, the available of digital tools for teaching and technical problem solved in classroom with example of technological challenge. It is notable that all the ESL lecturers in their interview indicate that they are fully aware of practice of adoption, adaptation, appropriation, and innovation in PDC in the classroom accordingly.

According to the findings of the first theme, adoptation, interestingly, it was found that not all lecturers regarded their teacher educators as role models for the use of ICT in educating themselves. This is a sad fact as teacher educators should be the ones who build and teach

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lecturers to integrate these skills from the degree level itself. Furthermore, the interview details revealed that a number of lecturers appeared to follow teacher-centred ESL teaching styles of ICT close to those used by their own lecturers and tutor lecturers, including the use of ICT for teaching and content delivery. Often, this entailed reliance on basic digital skills including using word processors, Kahoot, PowerPoint, and YouTube which were also commonly featured in ESL didactics. Additionally, a large number of them seemed to agree that lecturers needed to develop digital skills. This clearly indicates that the present study highlights the need for a higher quality of teaching training programs (Ipek, 2023), the digital tools that available and mastered by the ESL lecturers to enhance English language teaching in the classroom.

According to the findings from the second theme, adaptation, the ESL lecturers seemed to develop their digital competence through the workshops (as mirrored in Krumsvik's (2012, 2014), self-initiatives, and the available classroom technologies. As required to stay a step ahead to preserve their relevance in their careers and engaged with students, the ESL lecturers revealed their expertise in ICT tools, means the computer-based technology tools they have mastered or comfortable in applying during classroom teaching. These developments were prompted through the implementation of several approaches with ICT through active engagement and collaboration with students in classroom teaching. In this regard, the findings show how comfortable the ESL lecturers when using technologies to teach the four core components of English (reading, writing, listening and speaking) in the classroom.

The findings of third theme, appropriation, also revealed the types of digital tools used to conduct assessments and the participants' authority in using digital competence without any technical obstructions. The ESL lecturers find that providing assessments and giving feedback through digital competence to the students in a timely manner which can be challenging and need a way to make this process easier. However, sometimes due to the procedures that need to be adhered, lecturers have to perform formal assessment physically in hardcopy. Hence, the lecturers are only integrating digital competency into classroom teaching informal assessments and exercises. In fact, the study also discovered the ESL lecturer have incorporated the use of technology in to obtain feedback from their students through various different platforms.

Finally, the findings of fourth theme, innovation, focused on how regularly the ESL lecturers talk to the students' regarding their digital judgement. This entails describing the steps that were used to guide the students on the ethical and moral awareness that comes with using ICT. Interestingly, all the ESL lecturer are aware of the ethical issues and digital judgement in navigating the online world. In fact, the findings encouraging ESL lecturers to move from traditional assessment to appropriate innovative ways of evaluating students' performance and attainment with ICT could benefit their digital competence development (Røkenes & Krumsvik, 2016).

Therefore, in drawing a conclusion on above, it was possible to see that the interviewees (ESL lecturers) presented new ways of doing assessment with ICT and used digital tools as integral part in solving, presenting, and assessing tasks and assignments in the classroom.

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