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EFL TEACHERS' PERCEPTIONS OF INDONESIAN BLENDED LEARNING COURSE ACROSS GENDER AND TEACHING LEVELS

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Abstract

Studies examining teachers' perceptions of the application of blended learning abound in literature, however, few have explored if the teachers' perception differed in reference to their gender and teaching level. In the current study, English as a foreign language (EFL) teachers' perceptions of Indonesian blended learning practices from the perspective of their gender and teaching levels were examined. A total of 247 EFL teachers across teaching levels, i.e. lower secondary school, upper secondary school, university, informal education and other levels were surveyed. Statistical analyses using Rasch Model and ANOVA were performed to analyse the quantitative data. The findings showed that teachers' perceptions about blended learning were positive but were not statistically significantly different between male and female teachers. Regarding teaching levels, teachers' perceptions about skill and experience and their motivation to exercise blended learning were significantly different ($F_{\text{skill and experience}} = 5.373, p < .05$; $F_{\text{motivation}} = 2.555, p < .05$), whereas the interaction and communication as well as the effectiveness and flexibility domains were not. More specifically, university teachers' perceptions regarding skill and experience statistically differed from those teaching in upper secondary school ($M = 2.48, p < .05$) and informal education ($M = 2.48, p < .05$). Insufficient training and supports on blended learning were the primary challenges that constrained teachers from designing and managing the blended learning activities, consequently preventing them from addressing technical issues that emerged during blended learning practices.

Keywords: blended learning; gender; teaching levels; Rasch analysis

1. Introduction

Over the past few years, blended learning has become an increasingly popular teaching and learning approach, widely adopted by various educational institutions around the world

(Krasnova & Vanushin, 2016; Lim & Morris, 2009; Lin & Wang, 2012). Blended learning is viewed as an alternative teaching and learning method that helps teachers to address the critical issue in online learning: the ignorance of traditional face-to-face interaction among teachers and students (Kuo et al., 2015; Woo & Reeves, 2007). Blended learning, also termed as hybrid learning or mixed-mode learning (Solihati & Mulyono, 2017), is an instructional approach that merges traditional face-to-face learning and online learning (Adams et al., 2018; Solihati & Mulyono, 2017). Ocak (2011) views blended learning as an alternative method that allows teachers to balance the proportion of in-class learning and computer-internet-based learning with the use of online communication tools, web-based material, and learning management system. Such a balance benefits the students as they are given a chance to access reliable learning resources and learn at their pace, connect with instructors, and accumulate data regarding their learning progress (Aldosemani et al., 2018).

Some of the potential benefits of the blended learning approach are that it minimises the boundary of only attending face-to-face and online classroom (Kuo et al., 2015), offers greater teaching and learning flexibility for both teachers and students (Alastuey & Perez, 2013; López-Pérez et al., 2011) and blended learning application may reduce course spending in comparison to traditional settings (López-Pérez et al., 2011). Zibin and Altakhaineh (2018) also argue that blended learning improves students' communication skills as it enables student-teacher interactions and expedites student-teacher engagement in both the online and offline environment. After classroom interaction, students could communicate with their teachers and any other peers, which allowed teachers and students flexibility to organise their learning, track the learning progress whenever and wherever they are, as well as self-reflect on their own learning (Alastuey & Perez, 2013).

Specifically in foreign language learning settings, several studies have confirmed the positive contribution of the blended learning approach to classroom teaching and learning practices. Zibin (2018) conducted an experimental study to examine the effect of blended learning towards written discourse involving sixty Jordanians students majoring in English as a foreign language (EFL), revealing that blended learning promoted an easy and enjoyable learning environment. Students who learned English in the blended learning environment achieved better than those who studied in the conventional way, particularly regarding verb morphology and clause combining acquisition. Yang (2012) examined the effect of blended learning for university students with English reading difficulties. One-hundred and eighty-three EFL students in Taiwan participated in the study, divided into an experimental and control groups. The study showed that students benefited from the online and offline learning in a

blended learning environment. Particularly, online learning allowed students to learn without time and place constraints, enabling them to engage in metacognition. Students were also allowed to socially interact with different groups to discuss and obtain feedback.

Despite the positive effect exerted by the application of blended learning method, there is a major concern regarding how the end users, such as teachers and students, perceive the incorporation of blended learning in real classroom settings. Several studies have attempted to address this issue, for instance, Thang, Wong, and Noor (2012) explored undergraduate Malaysian students' perceptions of the blended learning approach in EAP (English for Academic Purposes) via focus groups, finding that most students, from both high proficiency and low proficiency level, had a positive perspective of the course. Students found the course book met their language needs, although those higher proficiency students perceived that the book contents were not challenging. Furthermore, the critical factor of slow and unreliable internet connection limited the students' ability to complete the assignment faster. Hung and Chou (2015) investigated students' perceptions of the roles of blended and online learning instructors, a total of 750 students in a Taiwan private university responded to the Online Instructors Role and Behaviour Scale (OIRBS) survey. The results suggested the importance of the instructors' role as course designer and learning organiser, followed by their role as technology facilitator and discussion facilitator.

In addition to students' perception, many studies have discussed the teachers' perspectives of blended learning, among others are Aldosemani and Shepherd (2018) and Kuo et al. (2015). Aldosemani and Shepherd's (2018) study investigated the instructors' perceptions and challenges of the implementation of blended learning, revealing that academic staff of a public Saudi Arabia University had positive perceptions of blended learning, especially regarding its greater flexibility and that both staff and students can access the material anytime. However, the study also revealed several challenges of blended learning, such as lack of training, experience, and skill, as well as technical difficulties while implementing the blended approach. Kuo et al.'s (2015) study attempted to explore teachers' perceptions and satisfaction towards three interaction types of blended learning: learner-learner interaction, learner-instructor interaction and learner-content interaction. Twenty-two teachers attending a distance education master's programme who participated in this study turned out to be positive about all the interaction types in the blended course, especially the learner-content interaction.

Studies examining teachers' perceptions of the application of blended learning abound in literature, but few have explored if the perceptions differed regarding teachers' gender and teaching levels. This study aims to examine EFL teachers' perceptions of blended learning and

the challenges they encounter during the implementation of blended learning in Indonesian classroom settings. The following research questions will navigate this study:

- 1) What are EFL teachers' perceptions of blended learning?
- 2) What challenges do EFL teachers encounter when incorporating blended learning in real classroom settings?
- 3) Do EFL teachers' perceptions and challenges of blended learning differ in reference to their gender and teaching level?

The findings of the current study will contribute to the current literature on teachers' perspectives of blended learning in reference to their gender and teaching levels. More importantly, the current study may identify potential problems in blended learning practices within Indonesian classroom contexts, thus enabling the related parties to search for solutions to address such issues (Aldosemani et al., 2018).

2. Methodology

2.1. Participants

The current study used a quantitative survey involving a total of 247 EFL teachers from different teaching levels, i.e. lower secondary school (N=53), upper secondary school (N=52), university (N=45), informal education (N=66) and other education level (N=31). These teachers were selected using a convenience sampling technique to gather information from participants in an efficient and an affordable way (Etikan et al., 2016). Details of teacher demography are presented in Table 1 below:

Table 1. Demography of the participants

Demography aspects		N	Percentage
Gender	Female	71	71.3
	Male	176	28.7
Age	20 – 35	195	78.9
	35 – 50	47	19.0
	>50	5	2.0
Educational Background	Bachelor (S1)	186	75.3
	Master (S2)	55	22.3
	Doctor (S3)	6	2.4
Teaching Experience	<5 years	148	59.9
	5 – 15 years	70	28.3
	>15 years	29	11.7
	No Experience	2	0.8
Computer Skill	Beginner	23	9.3
	Intermediate	196	79.4
	Expert	26	10.5

2.2. Data collection

To gather the quantitative data, the current study adapted a five point of Likert scale questionnaire modified from Aldosemani and Shepherd (2018). Briefly, 20 out of the 39 original items relevant to the objective of the current research were selected and classified into four subscales, namely 1) Skill and experience, 2) Motivation, 3) Interaction and communication, 4) Effectiveness and flexibility. Several changes to the items were made, including rewording and reversing negative prepositions. All the items were translated to Bahasa Indonesia to ease of comprehension. The translated questionnaire was then read and reread to ensure readability. The distribution of items in each subscale is presented in Table 2 below.

Table 2. Details of questionnaire subscales and items

Subscale	Item	Code
Skill and Experience (SE)	1. I understand my role in blended learning well.	SE1
	2. I am able to align online course materials with their face-to-face counterparts.	SE2
	11. I incorporate more resources when teaching in a blended learning as compared to traditional learning.	SE3
	13. Adopting a blended teaching approach will result in positive evaluations of my teaching abilities/skill.	SE4
	16. Technical difficulties make the online component of blended teaching frustrating. <i>R</i>	SE5
	19. I did not receive sufficient training to design a blended course. <i>R</i>	SE6
	20. I did not receive sufficient training to manage a blended course. <i>R</i>	SE7
Motivation (M)	5. Having course materials and learning resources ready before the semester starts encourages me to apply blended teaching.	M1
	14. I am more satisfied with teaching in blended environments compared to other delivery methods.	M2
	15. I am looking forward to teaching my next blended course.	M3
Interaction and Communication (IC)	8. My students always pay attention in class although they have already got the course material online. <i>M</i>	IC1
	9. I am able to provide better feedback to my students on their performance in blended learning.	IC2
	10. The rate of my interaction in blended learning is higher than in a traditional face-to-face class.	IC3
	17. Not meeting my students face-to-face in a blended setting prevents me from knowing them. <i>R</i>	IC4
	18. It is more difficult for me to motivate my students in the online environment than in the traditional setting. <i>R</i>	IC5
Effectiveness and Flexibility (EF)	3. Blended learning affects learning becomes more efficient because of its simple planning design. <i>M</i>	EF1
	4. The flexibility provided by blended learning benefits me as the teacher. <i>M</i>	EF2
	6. I can access online course material anytime and anywhere with the implementation of blended learning. <i>M</i>	EF3
	7. I observed that the implementation of blended learning allows my students to access the online course material anytime and anywhere. <i>M</i>	EF4

12. I have a higher workload when teaching a blended course as compared to traditional learning. R	EF5
---	-----

Note: Reverse (**R**) symbol indicates the score of the signed R item is reversed to ease the quantitative data analysis, while **M** refers to modified items

The questionnaire was developed and distributed online through social media (i.e. Twitter, Whatsapp, Facebook and Line) to target a wider range of participants (Ningsih et al., 2018). A paper version of the questionnaire was also distributed to teachers to maximise data collection activity. Person reliability and item reliability were calculated soon after the data collection was completed and the results are presented in Table 3 below.

Table 3. Person and item reliability

	Mean	Separation	Reliability	Cronbach's α
Person	66.6	2.03	.80	.83
Item	822.3	9.88	.99	

As evidenced in Table 3 above, the person reliability index was .80 while the item reliability index was .99, indicating moderate internal consistency of participant responses and the quality of questionnaire items was excellent (Linacre, 2018). In addition to the two reliability indices, the computation of Rasch model resulted in a Cronbach's $\alpha = .83$ suggesting that the questionnaire is highly reliable (Adams et al., 2018; Cohen et al., 2018). The α value also depicts a high interactional level between the person and the questionnaire items. It is crucial to explain here that the reliability level of questionnaire in the current study was lower than that of Aldosemani et al. (2018), which may be due to our decision to exclude nineteen irrelevant items out of a total of thirty-nine items in the original questionnaire.

2.3. Data analysis

The collected quantitative data were analysed using a three-stage data analysis procedure of Mulyono, Liestyana, Warni, and Suryoputro (2019). First, the collected data were coded and tabulated using Microsoft Excel software. Then, two file formats were produced from the tabulation, including .xlsx and .txt file. Specifically, the .txt file was used to help the researcher compute the quantitative data in Rasch software. Second, statistical data analyses were performed using Rasch analysis and ANOVA. The data in .txt file were stored in Winstep 4.3.4 software to allow the calculation of the reliability of the questionnaire, and to examine "distribution and the quality of responses input of the participants" (p. 4). ANOVA was performed to evaluate interactions between the demographic aspects, i.e. gender and teachers' teaching level and the subscales of the questionnaire.

3. Findings and discussion

3.1. EFL teachers' perceptions and challenges of blended learning

The Rasch analysis suggested that the separation of questionnaire items was 9.88, allowing the classification of items into ten strata (see Table 5), the logic scores were distributed well and were capable of discriminating the participant responses (Linacre, 2018). The ten-item strata ranged from the most difficult item to be agreed (logit score = 1.65 item SE6) to the easiest item to be agreed (logit score = -1.56 item EF3). Table 4 and 5 present the descriptive statistics of each questionnaire indicator and the item strata:

Table 5. Descriptive statistics of indicator logit

Indicator	Mean	SD
Skill and Experience	22.0	.78
Motivation	10.8	1.52
Interaction and Communication	15.7	.87
Effectiveness and Flexibility	18.1	.95

Table 6. Classification of items based upon their strata

Category	Criteria	Item/LVI
<i>More Difficult to be agreed</i>		
Difficulty Strata I	1.28<LVI	SE6 (LVI = 1.65) SE7 (LVI = 1.60)
Difficulty Strata II	0.93<LVI<1.28	IC5 (LVI = 1.27) SE5 (LVI = 1.01)
Difficulty Strata III	0.44<LVI<0.93	IC3 (LVI = 0.92) EF5 (LVI = 0.81)
Difficulty Strata IV	-0.07<LVI<0.44	IC4 (LVI = 0.43) M2 (LVI = 0.37)
Difficulty Strata V	-0.40<LVI<0.07	SE3 (LVI = -0.08) IC1 (LVI = -0.18)
<i>Easier to be agreed</i>		
Difficulty Strata VI	-0.59<LVI<0.40	EF1 (LVI = -0.41) SE2 (LVI = -0.49)
Difficulty Strata VII	-0.64<LVI<0.59	SE1 (LVI = -0.60) IC2 (LVI = -0.64)
Difficulty Strata VIII	-0.74<LVI<0.64	EF4 (LVI = -0.65) SE4 (LVI = -0.70)
Difficulty Strata IX	-1.07<LVI<0.74	M3 (LVI = -0.75) EF2 (LVI = -0.91)
Difficulty Strata X	-1.07<LVI	M1 (LVI = -1.08) EF3 (LVI = -1.56)

Table 5 provides information regarding person preferences towards twenty items of blended learning perceptions, with items EF3 (logit score = -1.56), M1 (logit score = -1.08), EF2 (logit score = -0.91), and M3 (logit score = 0.75) most selected by respondents. This indicates that teachers benefited from the blended learning method in which they could access online course materials anytime and anywhere (EF3). Teachers felt motivated to apply blended learning (M3) due to the availability of course materials prior to the start of the semester (M1) and the flexibility offered by the blended learning method (EF2). In addition, items SE6 (logit score = 1.65), SE7 (logit score = 1.60), IC5 (logit score = 1.27), and SE5 (logit score = 1.01) were the least item selected by the respondents, indicating that EFL teachers did not receive sufficient training to design the blended learning method (SE6) or to manage a blended learning course (SE7). Teachers also experienced difficulty in motivating students in blended learning course (IC5) and to address technical issues in blended learning practices (SE6).

Teachers' positive perceptions regarding the practice of blended learning is evident in the literature (Aldosemani et al., 2018; Borup et al., 2011; Woods et al., 2004). In particular, the current study's findings correspond to those of Aldosemani et al. (2018) suggesting that teachers benefited from the flexibility of blended learning practices. The application of blended learning had allowed teachers to access the teaching and learning materials without having time and place constraints. However, insufficient technological training and support provided by school/university administrations were identified as the main challenges by Indonesian EFL teachers, like Aldosemani et al.'s (2018) study. Technological training for teachers would address this issue, training teachers about blended modes of teaching models, approaches, tools and frameworks (Aldosemani et al., 2018). Similarly, Villalon (2017) argues that teachers' technological competence and their knowledge of the teaching and learning materials will benefit their further implementation of blended learning courses.

3.2. Differences in EFL teachers' perceptions in reference to their gender and teaching level

The third research question aimed to determine if there were any differences in EFL teachers' perceptions about blended learning in reference to their gender and teaching levels. The Person-Differential Item functioning (DIF) of the person logit value in reference to participant gender was analysed and the results are presented in Figure 1 below:

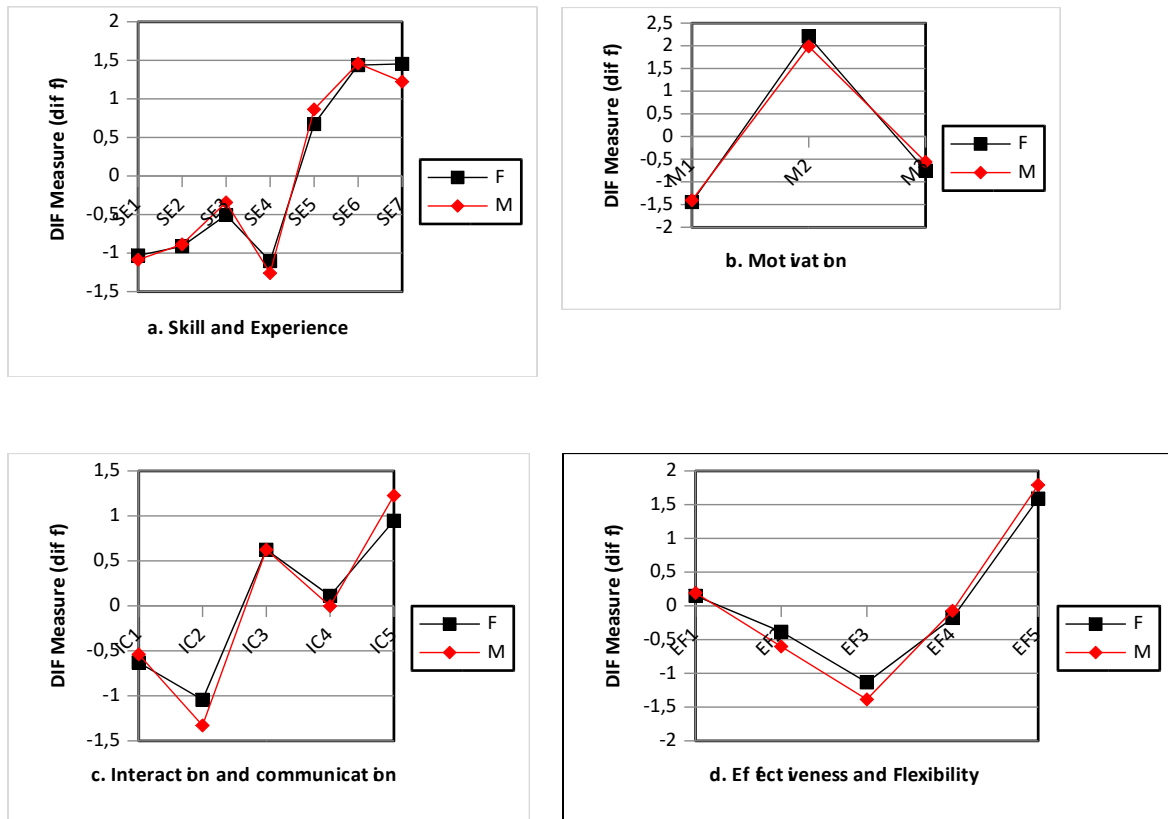


Figure 1. DIF measurement on gender

Figure 1 shows the DIF gender measurement on teachers' responses towards 20 items included in the questionnaire divided into four indicators (e.g., skill and experience, motivation, interaction and communication, and effectiveness and flexibility). Figure 1 (a) shows that males and females had a similar perception of having knowledge of blended learning well (SE1, $\text{diff } M = -1.0868$, $\text{diff } F = -1.032$) and having the ability to adjust online materials with traditional learning materials (SE2, $\text{diff } M = -0.8874$, $\text{diff } F = -0.9125$). Female teachers were more comfortable incorporating many learning material sources in the blended learning classroom rather than traditional learning classroom compared to their male counterparts (SE3, $\text{diff} = -0.5057$), whereas male teachers had a more positive outlook than females on the impact of applying blended learning on improving their teaching abilities (SE4, $\text{diff} = -1.2601$).

In addition, female teachers were more frustrated with technical constraints in applying blended learning methods (SE5, $\text{diff} = 0.6726$), while male teachers found it difficult to manage blended learning course due to lack of training (SE7, $\text{diff} = 1.2223$). The reason for these issues were that both males and females mentioned that they did not obtain sufficient training to design and practice the blended learning method (SE6, $\text{diff } M = 1.4589$, $\text{diff } F = 1.4378$). Male

and female teachers' perceptions regarding the desires and awareness of teachers in using blended learning innovations in the classroom are shown in Figure 1b. Both male and female teachers were very enthusiastic to apply the blended learning method (M1, $\text{diff } M = -1.4072$, $\text{diff } F = -1.4465$) but they had different perceptions about teaching satisfaction. Male teachers preferred the blended learning method to other delivery methods (M2, $\text{diff} = 1.9856$), while female teachers were eager adopt the blended learning method as they always took the opportunity to apply it (M3, $\text{diff} = -0.7521$).

In terms of interaction and communication, both male and female teachers affirmed that their students were able to pay attention in the classroom as well as in the online learning environment (IC1, $\text{diff } M = -0.5393$, $\text{diff } F = -0.6311$). This certainly is a positive aspect for the students as they can understand learning with blended methods. Moreover, teachers played a role in providing positive input to students regarding their performance, with male teachers more likely to be more dominant in this regard than female teachers (IC2, $\text{diff} = -1.3298$). In blended learning applications, both male and female teachers had the ability to allocate more blended interactions than face-to-face learning (IC3, $\text{diff } M = 0.6238$, $\text{diff } F = 0.6238$). However, male teachers perceived that blended learning methods could reduce the interactions between teachers and students to recognize each other well (IC4, $\text{diff} = -0.0029$). Such an issue may be affected by the lack of face-to-face classroom meeting. Another difficulty was also encountered by female teachers, who found it difficult to motivate students when using blended methods rather than traditional learning (IC5, $\text{diff} = 0.9464$).

Blended learning also offers some benefits in terms of effectiveness and flexibility in classroom learning. One of the benefits agreed by both male and female teachers was that the blended learning method could create a more efficient learning process (EF1, $\text{diff } M = 0.1911$, $\text{diff } F = 0.1485$). Moreover, male teachers perceived that blended learning could assist them to be more flexible in teaching (EF2, $\text{diff} = -0.6025$) and had access to the online material (EF3, $\text{diff} = -1.3864$). In addition, male and female teachers believed that their students could also access the material in online databases (EF4, $\text{diff } M = -0.0741$, $\text{diff } F = -0.1801$). The critical issue related to the workload in blended learning environment was that male teachers more than females felt that the blended learning method was a burden (EF5, $\text{diff} = 1.589$).

One-way ANOVA showed that male and female perceptions about blended learning were not statistically different for all indicators, (p value $> .05$). This finding confirmed an earlier study by Villalon (2017), who suggested that there was no statistically significant difference between male and female teachers' attitudes when practising blended learning. More specifically, the inability of male and female teachers to address technical issues while

implementing blended learning found in the current study was primarily due to lack of technological training received by both teachers.

In addition to gender, Rasch analysis and ANOVA were performed to examine teachers' perceptions of blended learning in reference to their teaching levels. To this end, the Person-DIF of the person logit value in reference to participant teaching level i.e. lower secondary school level (LS), upper secondary school (US), university (U), Informal Education (IE), other education level (OE) was examined and the results are presented in Figure 2.

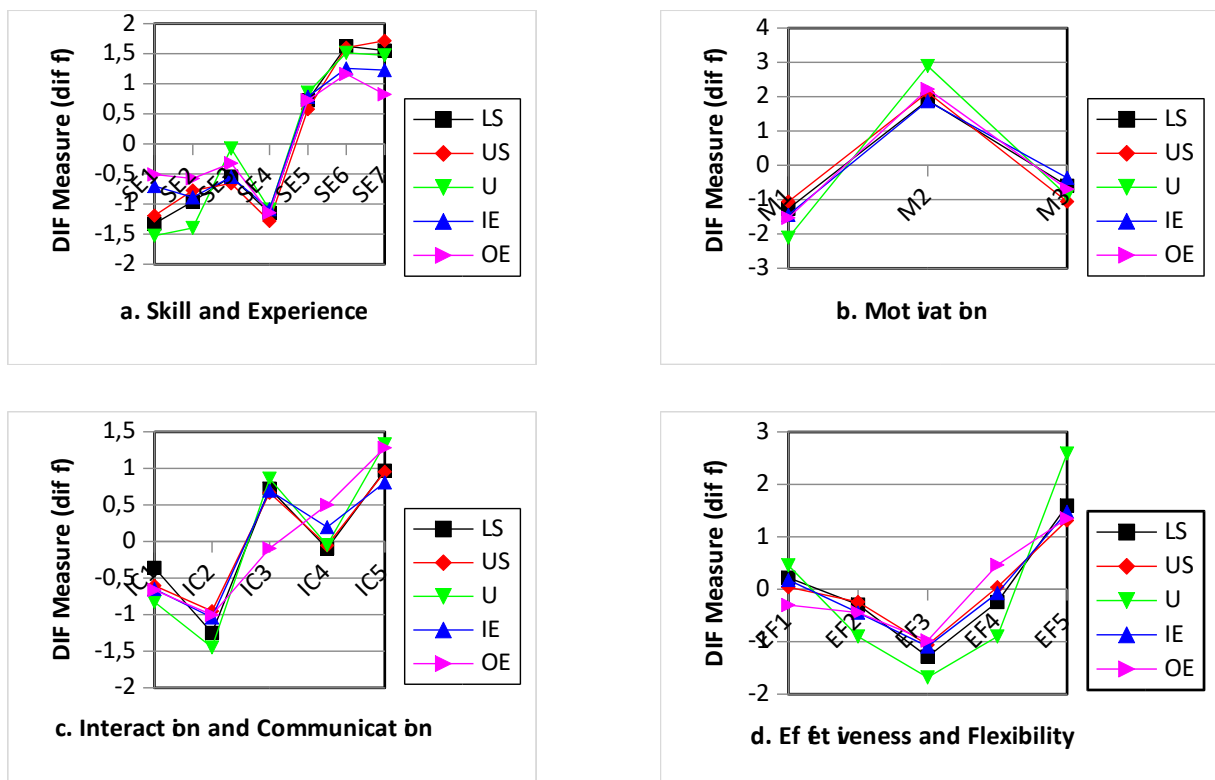


Figure 2. DIF measurement on teaching level

As shown in Figure 2(a), university teachers had a better understanding of the context of blended learning (SE1, $diff = -1.5279$) and were more competent in adjusting material for blended learning (SE2, $diff = -1.3979$) compared to those teaching at other levels. Teachers from lower secondary school, upper secondary school and informal education combined more teaching material in blended learning (SE3, $diff LS = -0.5431$, $diff US = -0.6575$, $diff IE = -0.5495$). It is interesting, but not surprising, that all teachers from all levels had a similar view about the positive impact of using the blended learning method (SE, $diff LS = -1.1456$, $diff US = -1.2825$, $diff U = -1.092$, $diff IE = -1.0866$, $diff OE = -1.1456$). However, technical obstacles often made upper secondary school teachers feel unsure and even frustrated, as indicated by

item SE5 ($diff = 0.577$), while some teachers teaching in informal education and other educational level encountered difficulties due to lack of training regarding the design and use of blended learning methods (SE6 ($diff\ IE = 1.2552$, $diff\ OE = 1.1624$)). More importantly, teachers from other educational levels had more difficulty in managing blended learning as they did not receive sufficient blended learning training (SE7, $diff = 0.8228$).

With regards to the motivation to practice blended learning, university teachers were more enthusiastic than other teachers (M1, $diff = -2.1118$), but they were not too satisfied with the blended learning method compared to using other methods (M2, $diff = 2.8914$). Moreover, all teachers had a similar view of looking forward to every opportunity to use the blended learning method in teaching (M3, $diff\ LS = -0.5969$, $diff\ US = -1.0588$, $diff\ U = -0.8877$, $diff\ IE = -0.3685$, $diff\ OE = -0.6947$).

Furthermore, in terms of interaction and communication, university teachers felt more comfortable with students who still paid attention to learning when using blended learning or not (IC1, $diff = -0.8273$). University and upper secondary school teachers motivated their students better in the blended learning environment (IC2, $diff\ N = -1.2493$, $diff\ O = -1.4489$). Teachers from other educational levels interacted with their students more when using blended learning than when using face-to-face methods (IC3, $diff = -0.0952$). It is interesting that lower secondary school, upper secondary school and university teachers felt that blended learning prevented them from getting to know students well, as indicated in item IC4 ($diff\ LS = -0.0956$, $diff\ US = -0.0544$, $diff\ U = -0.0486$), while lower secondary school, upper secondary school and informal education teachers experienced difficulty in motivating their students when exercising the blended learning method (IC5, $diff\ LS = 0.9697$, $diff\ US = 0.9532$, $diff\ IE = 0.8072$). In addition, item EF1 ('Blended learning affects learning becomes more efficient because of its simple planning design') was experienced more by other educational level teachers ($diff = -0.3014$), although the flexibility of blended learning was addressed more by university teachers (EF2, $diff = -0.902$). University teachers felt it was more convenient to access material online wherever and whenever they needed (EF4, $diff = -0.9018$). Such benefits may be why university teachers have a lesser workload than other teachers (informal education, primary, lower, and upper secondary school), as informed by item EF5 ($diff = 2.5866$). It is important to mention here that university students are likely to have better computer skills than those secondary school students, allowing them to use computer technology in learning at their ease (Adams et al., 2018; Islam, 2011). In other words, students at a higher level of education may possess a higher level of blended learning readiness, accordingly, their university teachers

are more likely to apply blended learning in their teaching practices compared to teachers from other teaching levels.

To identify the significant differences of teachers' perception across the teaching level, one-way ANOVA test was performed, showing that teachers' perceptions about blended learning were statistically different, particularly regarding their skill and experience ($F = 5.373$, $p < .05$) and motivation to exercise blended learning ($F = 2.555$, $p < .05$). Teachers' perceptions of the interaction and communication in the blended learning environment and the effectiveness and flexibility offered by blended learning was not influenced by their teaching levels ($p > .05$). A Tukey posteriori test was conducted to explore the exact factor that indicated the significant differences across teachers' teaching levels. The post-hoc calculation showed that university teachers had a significantly different perception from upper secondary school teachers ($M = 2.48$, $p < .05$) and informal education teachers ($M = 2.48$, $p < .05$) in the skill and experience domain.

4. Conclusion

The current study aimed to explore EFL teachers' perceptions and challenges regarding blended learning and the extent to which teachers' perceptions differed in relation to their gender and teaching level. The Rasch analysis and ANOVA calculation showed that EFL teachers' perceptions about blended learning were different regarding their gender, although the difference was not statistically significant. Regarding teaching levels, teachers' perceptions about skill and experience and motivation to exercise blended learning was statistically different ($F_{\text{skill and experience}} = 5.373$, $p < .05$; $F_{\text{motivation}} = 2.555$, $p < .05$) but not significant for the interaction and communication and the effectiveness and flexibility domain. More specifically, the current study found that university teachers had a significantly different perception from upper secondary school teachers ($M = 2.48$, $p < .05$) and informal education teachers ($M = 2.48$, $p < .05$) in the skill and experience domain. The findings also highlighted the issue of teachers' insufficient training regarding the design and use of blended learning activities, as well as lack of training and support for their inability to address any technical issues encountered during the blended learning practices.

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