ENGLISH STUDENT-TEACHER AWARENESS OF DIFFERENTIATED INSTRUCTION (DI) IMPLEMENTATION IN CLASSROOM

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ABSTRACT

This study aimed to examine the understanding of English Education Department student-teachers on the use of differentiated instruction (DI) in the classroom. There were 80 student-teachers, 20 (25%) male and 60 (75%) female. The data were collected primarily through a 31-item questionnaire with four scales ranging from "not important" to "very important." The questionnaire responses were analyzed to determine the amount of DI awareness and importance. The data underwent descriptive analysis (statistical analysis) by comparing the mean score (M) and standard deviation (SD) of each item for the level of awareness and by calculating percentages for the level of importance. The results indicated that the student-teachers awareness of DI implementation ranges from "high" with the lowest score of 2.06 (2.06>2.01-3.00) to "very high" with the highest score of 3.71 (3.71>3.01-4.00). Consequently, the level of importance concurred with or supported the awareness result that the participants regarded DI to be important, ranging from "somewhat important" (49.40%) to "very important" (88.39%). These findings suggest good implications for the pedagogical element of student-teacher knowledge of DI implementation in the classroom.

Key Words: differentiated instruction; English student-teacher

ABSTRAK

Penelitian ini bertujuan untuk menginvestigasi kesadaran mahasiswa PLP Pendidikan Bahasa Inggris tentang penerapan pembelajaran berdifferensiasi (DI) di kelas. Ada 80 mahasiswa PLP, 20 (25%) laki-laki dan 60 (75%) perempuan. Data dikumpulkan melalui kuesioner dengan empat skala mulai dari "not implotant" hingga "strongly important" yang berjumlah 31 item. Data dianalisis secara deskriptif analisis (analisis statistik) dengan membandingkan nilai rata-rata (M) dan standar deviasi (SD) masing-masing item untuk tingkat kesadaran dan dengan menghitung persentase untuk tingkat kepentingan. Hasil penelitian menunjukkan bahwa kesadaran mahasiswa PLP terhadap penerapan DI berkisar antara "tinggi" dengan skor terendah 2,06 (2,06>2,01-3,00) hingga "sangat tinggi" dengan skor tertinggi 3,71 (3,71>3,01-4,00). Hasil tersebut sejalan dengan hasil tingkat kepentingan bahwa peserta menganggap DI penting, mulai dari "agak penting" (49,40%) hingga "sangat penting" (88,39%). Temuan ini menunjukkan implikasi yang baik untuk elemen pedagogis pengetahuan mahasiswa PLP implementasi DI di kelas.

Kata Kunci: *mahasiswa PLP Bahasa Inggris; pembelajaran berdiferensiasi*

INTRODUCTION

Students are unique in that they are different in many aspects, such as intelligence, self-efficacy, needs, ability, interests, styles of learning, and even motivation to be engaged in learning activities (Barnes, 2019; Imbeau & Tomlinson, 2013; Janu Setiyowati et al., 2019; Mohd Ikhwan & Azlina, 2019; Yavuz, 2020). These differences make the classroom diverse, complex, and challenging for teachers; they must consider these as their prior knowledge before setting up teaching matters. Knowledge of 'students' uniqueness is a precondition for the realization of the adaptive teaching process (Bernard et al., 2019). It also helps the teachers 'find the best practices to meet the learners' needs and respond to diverse situations (Rahman, Scaife, Yahya, & Jalil, 2015). A solution for this phenomenon is implementing differentiated instruction, an approach based on the reality that students of the same age differ in their readiness to learn, interests, learning styles, and backgrounds (Darra & Kanellopoulou, 2019).

Differentiated instruction (DI) is a pedagogical approach aimed at addressing the variation of learners in the classroom through modifying instructions and curriculum to match the S' 'Student's needs (Reis & Renzulli, 2018). Much clearly, Imbeau and Tomlinson (2013) defined *differentiation* as an approach to teaching in which teachers adjust curricula, instructional techniques, resources, learning activities, and student products to meet the unique requirements of individual students and small groups to optimize each Student's learning opportunity through addressing their readiness levels, interests, and learning styles.

The power of differentiated instruction relies on its notion, which aligns with the concept of constructivism theory, as is well-known that constructivism has brought a significant influence on education development, especially in the way of altering the paradigm from teacher to student-centred, designing classroom activities, and promoting objectives and learning experiences at the same time (Fernando & Marikar, 2017; Golder & Bengal, 2018; Gunduz & Hursen, 2015; V & A, 2016). Constructivism assumes each person's knowledge is unique and varies, concurring with the fundamental concept of differentiated instruction (Meyer, 2009). Accordingly, Robinson, Maldonado, and Whaley (2014), in their paper, pointed out that Dewey and Piaget, the two phenomenal constructivists, promoted differentiated instruction with a shared claim that individuals cannot instantly absorb and use given knowledge but must develop their knowledge based on previous

experiences and innate inherent in them.

Ontario Educational Institution (2010) has listed seven essential concepts of differentiated instruction for teachers before or while deliberating the DI. Firstly, knowledge of " readiness to work with concepts, interests, and learning preferencesis seen as equally valid. Secondly, teachers use a repertoire of instructional and assessment strategies to meet the needs of different learners. Thirdly, all differentiated instruction activities are equally engaging and respectful and take approximately the same time. The next is that unless students have an IEP, all differentiated instruction is based on the same curriculum expectations, and all students have opportunities to achieve the same high performance standards. The fifth relates to assessment, in which students are assessed before, during, and after learning. Assessments inform the next steps for both teacher and Student. The sixth is that even if students have choices in demonstrating their learning, teachers can use a common assessment tool, such as rubrics, so that all student work is judged against the same criteria. Last but not least, a defining characteristic of a differentiated classroom is flexibility. Student work in short-term, flexible learning groups and educators are flexible in creating and altering instruction in response to learners.

Differentiated instruction has five basic elements, as introduced by Tomlinson and Strickland (2005), which can be modified by adjusting to the needs and situations involving content, process, projects, and learning environment. *The content* deals with what the Student needs to learn and which resources will help. *The process* is the activities that help students understand what they learn. *The project* allows students to show what they have understood or known. *The learning environment* is related to the classroom atmosphere and how the class works together.

Numerous researchers have conducted studies related to DI implemented in English classes for the past five years (i.e. Loberg, Nilsson, Kaatari, & Thomas, 2020; Magableh & Abdullah, 2020; Naka, 2017, 2018; Saleh, 2021; Suwastini, Rinawati, Jayantini, & Dantes, 2021; Tanjung & Ashadi, 2019; Whipple, 2012, etc.). These studies reported that the DI implementation has successfully helped English teachers accommodate diverse classes despite the impediments faced by teachers while implementing it. Teachers' careful selection of tailored education elements leads to success, and students who receive differentiated

instruction are calmer and more confident studying English based on their needs and preferences (Suwastini et al., 2021). Furthermore, teachers believed DI helped them cater to their Student's needs and interests (Bidari, 2021; Wan, 2020). Teachers' perceptions about developing language learning skills and the effectiveness of DI in a classroom played roles in overall teaching and learning performance (Bidari, 2021). From these studies, it can be understood that implementing DI in EFL diverse classes is crucial since 'English ability, needs, and preferences are varied, and can be easily accommodated through enclosing DI.

Despite 'the numerous studies mentioned above, unfortunately, there are limited studies conducted to seek the EFL pre-service teachers or student-teachers teachers' awareness of DI. In fact, as future teachers, obtaining information regarding their awareness of the DI strategy is crucial. Lack of pedagogical teaching frameworks might make the student-teachers less professional in many aspects (Baier et al., 2021; Zhao, 2012). Applying unfacilitated teaching approaches, for instance, might result in a passive and unmotivated learning environment due to a lack of awareness on the side of teachers about the differences among students (Agustrianita et al., 2019;

Imbeau & Tomlinson, 2013; Tomlinson & Strickland, 2005).

Nevertheless, the researcher found one similar study by Nepal (2021). The study reveals that most pre-service teachers understand differentiation as a tool for modifying instruction specifically to accommodate challenging students. In addition, the findings suggest that diversity is commonly perceived as referring to "others," and inclusion is viewed as a technique for integrating "different" individuals into the mainstream. This study, however, was not done in the context of ELT or EFL instruction but rather on differentiation in inclusive education. This is the gap that the researchers wish to fill. The significance of this study is crystal clear, as the findings will be especially useful for EFL student-teachers and lecturers in determining the extent to which student-teachers are prepared to become teachers with a pedagogical understanding of DI. In addition, this study serves as a resource for EFL or ELT researchers, particularly in pre-service teachers' understanding of differentiated instruction.

There are two research questions posed in this study: (1) Are the English Education Department's student-teacher aware of DI's importance to be implemented in the classroom? And (2)

How important is DI to be implemented in the classroom from the student-teacher perspective of the English Education Department? In line with these questions, the research purposes are (1) to investigate to what extent the student-teacher of the English Education Department is aware of DI implementation and (2) to find out how important DI is to be implemented in the classroom according to the student-teacher of English Education Department.

METHOD

Research design

The researchers employed descriptive – a quantitative design. In this type of research, data may be obtained qualitatively, but it is frequently examined quantitatively using frequencies, percentages, or other statistical techniques to discover relationships (Nassaji, 2015). As for this research, the researcher investigated the 'students' awareness ,which is qualitative but quantitative in the way the data were analyzed and presented.

The research started by observing the latest phenomenon in Indonesia where DI is being encouraged to be applied to all levels of education listed in the concept of the Merdeka Curriculum, the newest curriculum (Mariati et al., 2021). Then, it continued

to reviewing continued to review literatureon DI, and realized that DI was also crucial to be understood by student-teacher of the English Education Department (the research participants). After that, the researchers formulated the problems and research questions. The researchers then distributed the questionnaire to the participants to collect the data without intervening with the data and the participants (natural setting) (Creswell, 2014; Miles et al., 2014). Finally, the researchers analyzed the data statistically and presented them in tables and charts, as seen in the Findings and Discussion section.

Research site and participants

The research was conducted online by distributing Google Forms. The participants are sixth-semester students of the English Education Department of Teacher Training and Education Faculty of Universitas Tanjungpura who have passed Micro Teaching and TEFL subjects and are now taking their teaching practice or internship at appointed schools. The total participants are 80 students consisting of 20 (25%) male students and 60 (75%) female students.

Data collection and analysis

The researcher used a closed-ended questionnaire as the primary data. The

questionnaire was modified from Whipple (2012) about the 'participants' understanding of differentiated instructions. It consisted of 31 items covering six elements of differentiated instruction involving 'students' interests, assessment, lesson plan, content, process, and product. The questionnaire was in the form of a Likert Scale with four options from ""not important" to""strongly important".

Then, the questionnaire responses were tabulated, analyzed, and presented in tables and charts. The researchers referred to the level of importance with an interval of 25 points derived from the four-scale tabulation. The level of importance is presented in Table 1 below.

Table 1. Level of importance

Index	Category
0-25	Not Important
26-50	Fairly Important
51-75	Important
76-100	Strongly Important

The level of importance is in the form of percentages of each responded item of the questionnaire. These data would also be converted and displayed into charts to see the responses' differences.

After getting the importance level of each DI element, the researchers then interpret the level of awareness obtained by calculating the interval of four scales of 1.00 on each category. The level of awareness is presented in Table 2 below.

Table 2. Level of awareness

Index	Category
0-1.00	Low
1.01-2.00	Moderate
2.01-3.00	High
3.01-4.00	Very High

Finally, all the data were gathered, concluded, and communicated respectively to answer the research questions posed in the study.

FINDINGS AND DISCUSSION

Findings

The findings in this paper are presented in two parts based on the number of research questions posed, as below:

RQ1: Are the English Education Department's student-teacher aware of DI's importance in being implemented in the classroom?

The results indicated that students of the English Education Department were aware of DI's importance in being implemented in the classroom. The participants responded precisely positively to the questionnaire items from the six posed elements. The awareness level was benchmarked by

each item's mean score (M) and standard deviation (SD).

The 'students' awareness level of the importance of DI in the classroom is high. In detail, the awareness level varies from high to very high category. Out of 31 items, there are ten items categorized as very high with a percentage of 32,25%, and 21 items categorized as high with a percentage of 67,74%. The results are presented in Table 3 to Table 8 below.

Table 3. 'Students' Interest

Item	N	NI	FI	I	SI	M	SD
1	80	0	7	35	38	3.39	2.92
2	80	7	10	43	20	2.95	2.54
3	80	15	23	32	10	2.46	2.12
4	80	0	27	28	25	2.98	2.55

Referring to the level of awareness index, mean scores in the first element asked about 'students' interests indicate that the participants are aware of the importance of DI in finding and integrating students'' interests in teaching-learning. This first element consists of four statements responded by 80 participants (N=80). The values range from high with a mean score of 2.46 (2.46>2.01-3.00) and SD=2.12 on the third statement to very high with mean score 3.39 (3.39>3.01-4.00) and SD=2.92 on the first statement. The level of awareness in this element is dominated by high category (three out of four items being posed).

Table 4. Assessment

Item	N	NI	FI	I	SI	M	SD
1	80	0	12	56	12	3.00	2.51
2	80	0	8	36	36	3.35	2.88
3	80	0	13	28	39	3.33	2.88
4	80	0	3	17	60	3.71	3.22
5	80	12	8	27	33	3.01	2.68

Table 4 displays the results of the second element asked about the importance of DI in constructing the assessment. There are five statements responded to by 80 participants (N=80), with the mean score ranging from 3.00 to 3.71. Referring to the level of awareness index, the participants are aware of the awareness category reaching high (3.00>2.01-3.00) and SD=2.51 on the first statement to very high (3.71>3.01-4.00) and SD=3.22 on the fourth statement. From the table, it can be learned that four out of five statements are categorized as very high.

Table 5. Lesson Planning

Item	N	NI	FI	I	SI	M	SD
1	80	3	22	31	24	2.84	2.57
2	80	0	37	12	31	2.82	2.57
3	80	22	13	29	16	2.40	2.23
4	80	8	11	34	27	2.89	2.64
5	80	28	14	19	19	2.28	2.17
6	80	5	12	23	40	3.11	2.85

Table 5 presents the results of the third element asked about the importance of DI in designing the plans. There are six statements in the questionnaire responded to by 80 participants (N=80), with the mean score ranging from 2.28 to 3.11.

Referring to the level of awareness index, the participants are aware of the awareness category reaching high (2.28>2.01-3.00) and SD=2.17 on the third statement to very high (3.11>3.01-4.00) and SD=2.85 on the sixth statement. The dominant category in this element is high; five out of six statements are indexed as high, and one is very high.

Table 6. Content

Item	N	NI	FI	I	SI	M	SD
1	80	0	9	47	24	3.19	2.62
2	80	13	19	30	18	2.66	2.24
3	80	17	11	30	22	2.71	2.33
4	80	37	7	29	7	2.08	1.77
5	80	0	17	52	11	2.93	2.36

Table 6 presents the descriptive analysis of the fourth element asked about the importance of DI in designing content for classroom activities. It consists of five statements responded to by 80 respondents (N=80). The awareness level is gauged by the mean scores referring to the index of awareness level in which the results range from high (2.08>2.01-3.00) on the fourth statement with SD=1.77 to very high (3.19>3.01-4.00) on the first statement with SD=2.62. Four out of five statements are indexed as high, and one is very high. These results indicate that the participants are aware of DI's importance in being integrated into designing the content of the classroom activity.

Table 7. Process

Item	N	NI	FI	I	SI	M	SD
1	80	6	21	37	16	2.79	2.39
2	80	0	13	55	12	2.99	2.50
3	80	29	18	32	1	2.06	1.73
4	80	10	21	27	22	2.76	2.42
5	80	0	16	26	38	3.28	2.84

Table 7 displays the descriptive analysis of the fifth element asked about the importance of DI in designing the process of classroom activities. There are five items responded by 80 respondents (N=80). The results indicate that the 'participants' awareness reaches the category of high to very high with the mean score 2.06 (2.06>2.01-3.00) and SD=1.73, and 3.28 (3.28>3.01-4.00) and SD=2.84 respectively. It can be seen from the table that four out of five items are indexed by high.

Table 8. Product

Item	N	NI	FI	I	SI	M	SD
1	80	7	13	39	21	2.93	2.53
2	80	13	18	22	27	2.79	2.48
3	80	9	27	15	29	2.80	2.48
4	80	24	16	20	20	2.45	2.21
5	80	0	7	24	49	3.53	3.05
6	80	3	7	27	43	3.38	2.94

Referring to the results displayed in Table 8 above, it is indicated that students' level of awareness reaches from high to very high category. The mean score varies from 2.06 (2.06>2.01-3.00) and SD=1.73 and 3.53 (3.53>3.01-4.00) and SD=3.05, respectively. There are six items posed in the sixth DI

element about product responded to by 80 participants (N=80). From the results, it can be concluded that the participants are highly aware of ' 'DI's importance in planning and designing the product to be instructed to the students, that four out of six items are indexed as high.

RQ2: How important is DI to be implemented in the classroom from the perspective of the student-teacher of the English Education Department?

The participants have agreed that implementing Differentiated Instructions (DI) in the classroom is essential. The importance level varies, ranging from fairly important to strongly important. Among 31 items, two are fairly important, nineteen are important, and ten are strongly important. The detail of the result can be seen in the following figures.
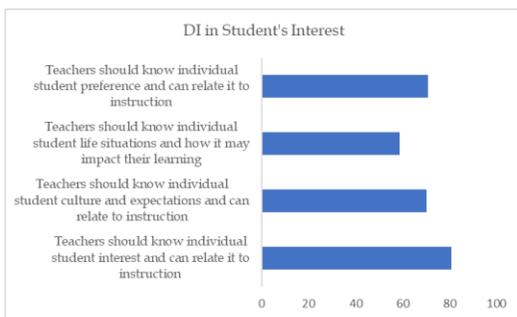

Figure 1**.** ' 'Student's interest

Figure 1 above shows that the highest percentage reaches 80.65% categorized as "strongly important", while the lowest is 58.63% categorized

as "important". Four items are asked in this element; two are categorized as strongly important, and two are as important, with 80.65%, 70.83%, 70.24%, and 58.63%, respectively.
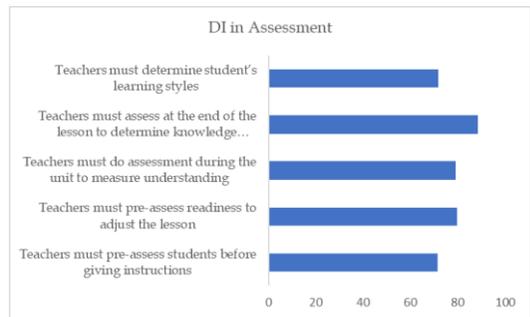

Figure 2. Assessment

Figure 2 above displays the percentage results of DI implementation in assessment. The percentage relies upon 71.43% categorized as important to 88.39% categorized as strongly important. Three out of five items in the second element are categorized as strongly important, and two are important, with 79.17%, 79.76%, 88.39%, 71.43%, and 71.73%, respectively.
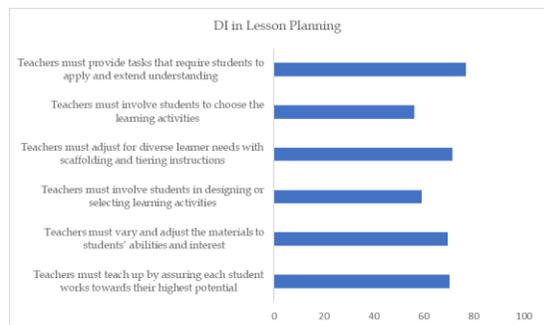

Figure 3. Lesson Planning

Figure 3 above shows that five out of six items are categorized as important, and one is responded by strongly important. The range of the percentages varies from 56.25%, categorized as important, to 75.79% categorized as strongly important. In detail, statements 1 to 5 are responded by important with 70.24%, 69.64%, 59.23%, 71.43%, and 56.25% respectively. Meanwhile, statement 6 responded by strongly agree with the percentage 76.79%.
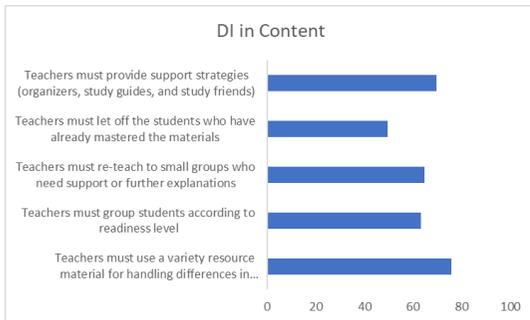

Figure 4. Content

Figure 4 above displays 'participants' responses to the importance of DI in assessment in the form of a percentage. The result indicates that three out of five items are responded by important with the percentage of 63.39%, 64.58%, and 69.64% on statements 2, statement 3, and statement 5, respectively; one is fairly important with a percentage of 49.40% on statement 4, and one is strongly important with the percentage of 75.89% on statement 1.
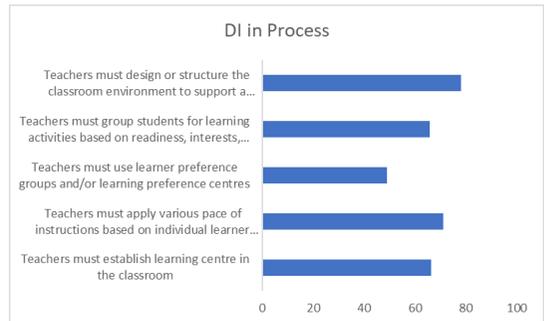

Figure 5. Process

Figure 5 displays the 'participants' responses to the importance of DI in designing content. The result indicates that three out of five items are responded by important with the percentage of 66.37%, 71.13%, and 65.77% on statements 1, statement 2, and statement 4, respectively; one is fairly important with a percentage of 49.11% on statement 3, and one is strongly important with the percentage of 77.98% on statement 5.
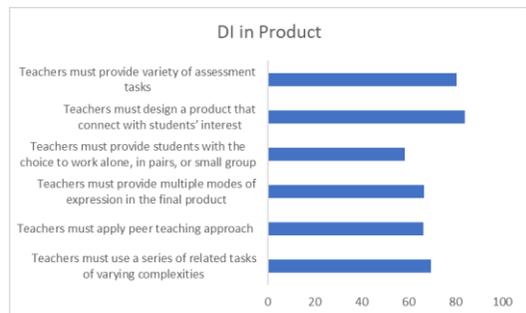

Figure 6. Product

Figure 6 presents the response of DI importance in designing a product as a percentage. From the figure, it can be seen that the Student's responses range from 58.33% to 83.93%.

In detail, the students responded to four out of six statements by "important" with a percentage of 69.64%, 66.37%, 66.67%, and 58.33% on statements 1, statement 2, statement 3, and statement 4, respectively. The other two statements are responded by strongly important with a percentage of 83.93% and 80.36%.

Discussion

This study is significant in the way it examines the perceptions of the student-teacher of the English Education Department towards the importance of differentiated instructions implemented in six core elements of teaching-learning. The results of this study have confirmed that the student-teachers are aware that differentiated instruction is important to be applied in all aspects of teaching. The results that have been presented in tables and figures in the Findings section are evidence of it.

Differentiated instruction framework is not a new issue in education and is believed to effectively cater to 'students' diversity (Bidari, 2021; Wan, 2016, 2020). It has been popular amongst educators, practitioners, and researchers across nations since 1990s, and it gained more popularity in 2017 as the DI articles were published and cited by authors in accredited journals (Smale-Jacobse et al., 2019). The result of the study indicated that the tendency to use differentiated classroom instruction by practitioners (teachers or lecturers) increases within years.

In the Indonesian context, DI has now taken into account that the Ministry of Education, Culture, Research, and Technology suggested that DI be implemented in the classroom. DI is seen as the solution for the Indonesian classes that are diverse in the background (Mariati et al., 2021). By implementing DI in class, teachers are expected to build a learning environment using effective strategies or scenarios to accommodate the 'students' needs (Gentry et al., 2013; Ireh & Ibeneme, 2010).

As DI is essential in many ways, teachers should recognize its existence and apply it to design relevant and effective class scenarios. It goes similar to the student-teachers who would become teachers in the future. Hence, getting information about their awareness towards DI approach is essential. A lack of understanding on the part of teachers regarding the 'students' differences unfacilitated teaching approaches, such as the employment of more traditional methods such as lecturing (Agustrianita et al., 2019), resulting passive and unmotivated learning environment

(Tomlinson, 2001; Tomlinson & Strickland, 2005).

Since the results of this study indicate positive perceptions obtained from the questionnaire responses, the researchers believed that English student-teachers from the English Education department are ready to be caring and attentive teachers in the future. Nevertheless, they still need to further deepen the notion of DI, particularly on the point of (1) relating grouping students related to readiness level in the element of content and (2) using a 'students' preference group in the element of the process. These two points obtained almost 50% responses of the total participants categorized as somewhat important while readiness and preferences are crucial to be involved (Koehler, 2010; Tomlinson et al., 2003; Whipple, 2012).

Furthermore, the results of this study complete the previous studies about DI implementation and 'teachers' perceptions towards DI conducted by several researchers (see background)(Al-Shaboul et al., 2021; Ginja & Chen, 2020; Magableh & Abdullah, 2020; Saleh, 2021; Whipple, 2012). For the last five years, no studies have been published on EFL student-teachers awareness of DI. Meanwhile, as future teachers, understanding or awareness of teaching-learning know-

how is an issue as a basis of knowledge development or enrichment for becoming professional teachers (Zhao, 2012). Henceforth, this study has contributed to filling in this gap.

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