Differentiating for multilingual students' needs in a psychology classroom with English as a medium instruction

Agnieszka KAŁDONEK-CRNJAKOVIĆ
University of Warsaw, Poland
E-mail: a.kaldonek2@uw.edu.pl, (iD)

Katarzyna PŁACHTA
TASIS, American School in England, United Kingdom
E-mail: katarzyna.m.plachta@gmail.com

Abstract: Differentiation is a well-known concept that aims at responding to the learning needs of all students in the classroom. However, its realisation can be challenging, especially in highly heterogeneous classes, where students' needs are diverse. Consequently, examples of the practical application of the concept are still scarce in the literature. This case study, therefore, presents how differentiated instruction can be employed in a classroom of students with various linguistic backgrounds and a multi-level proficiency of the language of instruction. Four multilingual students of one British curriculum-based school in Warsaw, Poland, for whom English was not the first language, participated in the study. The students took a psychology course in the International Baccalaureate (IB) programme where English was a medium instruction. The study aimed at investigating the effect of differentiated instruction in summary writing. The findings drawn from quantitative and qualitative data, which included the participants' written expressions and interviews, indicated a beneficial effect of the instruction. However, the effect varied due to specific individual characteristics of the participants. Pedagogical implications are discussed.

Keywords: multilingual students; differentiation; English as a medium instruction; psychology classroom

Introduction

The concept of inclusion has been well present in English language teaching discourse for a while under different terms, including individualisation, scaffolding, or differentiation (Stadler-Heer 2019), as a result of the UNESCO's Guidelines for Inclusion (UNESCO, 2005). According to the guidelines, teachers are expected to address and respond 'to the diversity of needs of all learners' by means of 'changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children (…)' (UNESCO 2005:13).

The guideline implies that one-size-fits-all approaches should no longer be employed in the classroom. Dealing with learner variability and accommodating students with different strengths and weaknesses in the same class have been research and practice priorities (Canagarajah 2016).

Undoubtedly, meeting all students' needs in a classroom may be challenging because of their individual differences, including cognitive profiles, interests, learning styles, cultural and linguistic background (Subban 2006; Tomlinson 2001). Apart from learners'

characteristics, the content of the curriculum and its restrictions may impact Differentiated instruction (DI) realisation (Ribé 2003). As a result, it is very diverse (Hall et al. 2012; Suprayogi et al. 2017), which means 'there is no "right way" to create an effective differentiated classroom' (Tomlinson 2014: 5). Though putting differentiation in practice needs accurate clarification at the policy level to support teachers in their work (Mills et al. 2014).

International schools are often heterogeneous multicultural and multilingual settings (Hayden/Thompson 2008). Students' needs are very diverse, including their cognitive profile, home language characteristics, proficiency of the language of instruction, and cultural and linguistic background. Therefore, differentiating for these students may take different ways. Apart from students' characteristics, DI will also depend on the specificities of a given school subject.

In this paper, we wanted to present how DI could be realised in a psychology classroom where English is a medium instruction. Also, considering that research aiming at investigating the effect of differentiation are still scarce, resulting in many questions around its practical implication in the classroom setting (Capp 2017; Mills et al. 2014; Smale-Jacobse et al. 2019), we wanted to investigate DI's effect on summary writing, one of the vital skills in an International Baccalaureate psychology course. Having in mind the findings of the recent study by Ashton (2019) that showed that one of the most frequent approaches in a multi-level language classroom with students whose English was not their first language was to teach a common topic with differentiated materials, we focused on the effect of differentiated resources to support participants' writing processes and understanding the content demands of the International Baccalaureate (IB) psychology exam papers. Besides, this study, along with the recommendations for future studies on differentiation in a multi-level language classroom (Ashton 2019), included the student perspective.

1. Theoretical framework

The concept of DI is not new (Blaz 2016; Perk 2017). It came to light as a result of research on individual differences (Thomas 1992) and quickly became part of teachers' professional obligation and competence (Perk 2017), enshrined in the educational legal framework in many countries (Kałdonek-Crnjaković 2020).

However, differentiation is not easy as many terms are used interchangeably (Fox/Hoffman 2011), and it is associated with many other concepts such as individualisation (e.g. Hattie 2009; Janicka 2018) and personalisation (e.g. Griffiths et al. 2000; Waxman et al. 2013). Although individualisation, differentiation, and personalisation are connected, they are believed to be distinct concepts (Bray/ McClaskey 2017; Courcier 2007; Author, 2020). On the other hand, all of them have common features that allow developing a DI working definition, as summarised by Suprayogi and Valcke:

> Differentiated instruction is an instructional approach that accommodates the diversity of students by (1) copying with student diversity; (2) adopting specific teaching strategies; (3) invoking a variety in learning activities; (4) monitoring individual student needs, and (5) pursuing optimal learning outcomes." (Suprayogi/ Valcke 2016 cited in Suprayogi et al. 2017: 292).

It is also paramount to stress that DI considers needs of all students in the class, recognising each learner's unique profile (Blaz 2016; Hall et al. 2012; Tomlinson 2001, 2014). Thus, learning and teaching have to be adaptive, flexible, dynamic, and multidimensional (Lamb 2003; Benjamin 2003; Loughland/ Alonzo 2019; Tomlinson 2001). It goes beyond the needs of individual learners, and, drawing on the new conceptualisation of language learner autonomy proposed by Little, Dam and Legenhausen (2017), is a learning-centred approach that aims at creating an autonomy classroom (Kałdonek-Crnjaković 2020).

In such a classroom, the teacher responds to the diversity among students and meets their needs convergently and divergently, as proposed by Ribé (2003). When adopting the convergent position, the teacher attempts to integrate individual differences with the common learning objective, which is pre-established by the curriculum of the syllabus. In this position, DI is realised by providing students with different teaching material, which are "a constellation of tasks" (Candlin/ Murphy 1987:2 cited in Ribé 2003:126). In contrast, the divergent way considers differences among learners to a broader extent, and thus, itis the most favourable approach to differentiation; however, it is difficult to achieve in a pre-established curriculum (Ribé 2003). In this position, the focus is on the learning process that is defined by starting learning points of individual learners and on learning outcomes, which are highly "learner-dependent and unpredictable" (Ribé 2003:128).

Although differentiation is featured by highly complex and flexible, some authors attempted to categorise it. For example, the framework of the Universal Design for Learning (UDL), developed by Meyer and Rose in the 1990s, assumes instructional goals, assessments, methods, and materials that can be adjusted to meet individual needs of students by differentiating students' engagement to boost their motivation for learning, the ways that students can express what they know, and by presenting information and content in different ways (Hall et al. 2012).

In the same vein, Tomlinson (2014) suggests that teachers, guided by general principles of differentiation, that is encouraging and supporting learning environment, quality curriculum, assessments that inform teaching and learning, instruction that responds to student variance, and leading students can differentiate through content, process, product, as well as affect and environment. This needs to be done according to students' readiness, interest, and learning profile, which mark each learner's starting point for learning specific material.

Similarly, but specifically for a language classroom, Convery and Coyle (1993) proposed differentiation by ability, interest, outcome, support, task, and text. However, the authors stress that such a strict categorisation should be avoided because there are frequent overlaps between categories. For example, potentially, the differentiation by task will overlap with the text and the ability one.

To avoid overlapping in taxonomy, Corno and Snow (1986 cited in Raya/ Lamb 2003:19) suggested two-level differentiation to adapt to students' individual differences. These are macroadaptation, that is adaptation that is needed before teaching starts, and microadaptation, which is required while teaching and is a result of classroom interaction. As suggested by Raya and Lamb (2003:19), macroadaptation is about 'a willingness to incorporate a range of approaches', whereas microadaptation, following the suggestion made by Convery and Coyle (1993:2), may require distinguishing between core work that

is done by the whole class and branching activities that allow practising the same language material in different ways, or extending learning to develop new skills.

Microadaptation, therefore, encompasses differentiation by text, task, and interest as suggested by Convery and Coyle (1993). According to Jaworska (2013), the simplest way of this type of differentiation is presenting the learning material of various difficulty. It is also necessary to consider the text length and its language features, including the vocabulary unknown to the learner, complexity of syntax, as well as the learners' knowledge of the topic presented in the text. Such type of differentiation can be either 'quantitative', that is the number and range of tasks, or 'qualitative', that is the level of difficulty (Jaworska 2013:45). However, according to Tomlinson (2001: 4), differentiated instruction 'is more qualitative than quantitative'. It means that giving to one student more work and to another less does not make differentiation effective. What matters is the quality of the assignment with the goal of moving the student's learning forward.

2. The effect of DI

The effect of the DI has been researched in the last three decades; however, empirical evidence of its effect is still scarce (Capp, 2017; Smale-Jacobse et al., 2019). This may be due to the complexity of differentiation, which further challenges measuring its effect; few instruments to gauge its effectiveness have been developed (Van Geel et al. 2019).

Earlier review studies promoted DI through theory and empirical evidence, reporting its positive effect on students' engagement and achievement, and (see Subban 2006 and Tomlinson et al. 2003). Also, based on the findings of the literature review, Tomlinson et al. (2003) concluded with indications of effective differentiation. These are a proactive, knowledge- and learner-centred approach, flexible use of small teaching-learning groups in the classroom, and learning materials and pacing variation.

In contrast, more recent reviews evidenced mixed results on the effect of DI. For example, the meta-analysis by Capp (2017) concerning the impact of 18 intervention studies concluded that UDL was an effective teaching approach that helped all learners in the classroom improve their learning processes. However, the reviewed studies did not examine the effect of UDL on students' educational achievements. Also, it needs to be noted that the studies examined the effect of various UDL components and principles; therefore, the overall effect of the framework cannot be established.

Smale-Jacobse et al. (2019) reviewed 14 papers and 12 empirical studies and concluded that an approach to DI in secondary education was very diverse. These included generic approaches to DI, individualised DI, mastery learning, DI using homogeneous clustering, and DI in flipped classrooms. In the literature review, the authors refer to Hattie's review of instructional approaches (2009), which found that mastery learning was relatively more effective than within-class ability grouping and individualised instruction, which evidenced a small effect size. Similarly, the results of a meta-analysis conducted by the Education Endowment Foundation (n.d. in Smale-Jacobse et al. 2019: 5) found an insignificant effect of individualisation.

The authors also stated that their statistical analysis was inclusive and thus did not allow to conclude the overall effectiveness of DI. More specifically, the authors explain that the largest studies in their sample evidenced a small positive effect. In contrast, the other studies claimed a moderate or large effect of DI. Based on these results, Smale-Jacobse et al. (2019) recommended that future studies on DI should investigate both its

quantitative and qualitative effect to show practical pedagogical implications of the development and evaluation of differentiated instruction interventions.

To conclude, drawing on recent findings of Brühwiler and Vogt (2020) on the effect of the adaptive teaching competency, the effect of DI may vary and may have a limited direct effect on students' learning outcomes but its indirect effect is achieved through ongoing high-quality classroom processes.

3. The study

3.1. Aim and research questions

This present study aimed at examining the effect of DI on summary writing in the International Baccalaureate Diploma Programme (IBDP) psychology classroom. The form of DI was individualised adaptations, which addressed specific students' learning needs within the same learning goals through task, support, and learning rate variations, as suggested in the literature (Brühwiler/ Vogt 2020; Little et al. 2014). Following the recommendations of Smale-Jacobse et al. (2019), we investigated the quantitative and qualitative effects of DI. The following questions guided our study:

1.   What individualised adaptations will be used?
2.   Will DI improve the quality of the summary writing?
3.   Will the participants find DI beneficial?

3.2. Participants

In this case study, the participants were four English as an additional language students in one international school with a British curriculum in Warsaw, Poland. They had different home languages and a varied proficiency level of English. Their mean age was 17 years and four months.

Participants were selected from 24 psychology class students by their teacher, who was the second author of the present paper. The selected students struggled to meet the standard of summary writing as of the requirements of the International Baccalaureate Diploma Programme (IBDP) psychology exam; they were thus likely to either not to meet their predicted grade or fail the exam.

The information about the participants and their learning needs is summarised in Table 1. The participants' English language proficiency level was established by the school's internal placement test using the levels of the Common European Framework of Reference for Languages or CEFR (Council of Europe, 2003). The participants' learning needs were determined based on the analysis of the first summary written by the participants and the information from their psychology teacher.

Partici-pant/gender	Home lan-guage	Level of English	Learning needs
1 Female	Polish	B1/B2	a specific learning difficulty (dyslexia); frequent misspellings, including common words; a limited vocabulary range; written expression often lacks cohesion and coherence; needs model answers, e.g. when writing longer expressions
2 Female	Slovak	B2/C1	difficulty in structuring her thoughts in longer written expressions; written expression sometimes lacks cohesion and coherence; frequently applies incorrect sentence structure
3 Male	Mandarin	B1	difficulty in manipulating information independently; a limited vocabulary range; needs model answers, e.g. when writing longer expressions; frequent misspellings
4 Male	Polish	B2/C1	easily distracted; frequently applies incorrect sentence structure; struggles to organise his thought in a concise and coherent manner

Table 1. Information about the participants.

3.3. IBDP psychology classroom

IBDP psychology is a two-year pre-university course of study designed for students in the 16 to 19 age range. There is no prerequisite to studying IBDP psychology, apart from suggested but not required, sufficient English language level. The level of English proficiency that allows students to read and write various texts at the academic level is B2/C1, according to the CEFR (International Baccalaureate Organization 2018).

By the end of the course, students are required to have developed an understanding of how psychological knowledge is generated and what methodology is used to investigate behaviour. They are also expected to develop higher thinking skills to recognise and evaluate ethical and methodological concerns associated with research and generate novel ideas to provide solutions to existing problems.

One of the essential abilities of IBDP psychology students is to be able to sufficiently summarise original research to support their ideas in the short and long responses, and when writing a report on the simplified experimental study that they conduct independently. Not only do the candidates have to select suitable research, but they also need to summarise it in a way that allows their audience to understand the aim, procedure, results,

and findings of such an investigation. In addition, an adequate summary of the study serves as the basis for the student's further evaluation of the research, which is relevant to show critical thinking skills and score high marks on the assessment.

3.4. Procedure

Participants were first asked to write a summary of an academic journal article. Texts written by the participants were then analysed to identify areas of difficulties in reference to the IB psychology exam. Once the participant composed the summary, they were interviewed to learn about, among others, what they had found challenging when writing a summary of the article.

Based on the analysis of the first summary, the information from the teacher, and the interviews, differentiated resources were prepared for each participant to facilitate writing a summary of the second academic journal article. Each participant was given a sheet that contained sentence starters and model sentences for each part of the summary, keywords and psychological terminology phrases from the text, and synonyms to avoid repetition and copying from the original texts. Additional differentiated resources specific for each participant are listed in Table 2.

Both academic journal articles were of similar length and difficulty as of the vocabulary and psychology terminology used. The psychology teacher selected the texts.

Participant	Differentiation
1	A sheet containing the following: • a reminder about how to proofread for spelling and grammar use • key words with underlined parts that are likely to be misspelt by the student, e.g. *results, quantitative, positive* Key information highlighted in the text of the article
2	A sheet containing the following: • a reminder about writing in full sentences and using the correct punctuation • how to write shorter and well-structured sentences • how to use a wider range of connectives
3	A sheet containing the following: • how to use a wider range of connectives
4	Key information highlighted in the text of the article

Table 2. Additional differentiation for each participant.

Once the participants composed the second summary, they were asked what they found challenging when writing the second summary and whether they found differentiated resources useful.

4.5. Analysis

Following the methodology of written text analysis in applied linguistics (Rose et al. 2020; Schiffrin et al. 2001), the texts written by the participants were analysed comparatively both for linguistic properties and content referring to the IBDP requirements. Each text was graded by both authors of this paper separately using categorical items that are described in Table 3 and left comments justifying their grading. The mean of both gradings was calculated for each category and the aggregated number of points out of the maximum of 25.

The paired *t*-test and the effect size (Cohen 1988) were calculated to determine the significance of the difference between the quality of both texts and the effect of the differentiation. The interpretation of the effect size follows the guidelines for paired samples *t*-test proposed by Plonsky and Oswald (2014). All data met the assumption of normality.

Categorical items	Points system
A focus on the question	2: explained the problem/issue raised in the question throughout 1: identified the problem/issue raised in the question 0: did not reach the standard described by the descriptors above
Knowledge and understanding:	5-6: demonstrated relevant, detailed knowledge and understanding by using suitable psychological terminology in the appropriate context; all the terminology explained 3-4: demonstrated relevant knowledge and understanding, but lacked detail (i.e. suitable term but no explanation of it); psychological terminology was used but with errors that did not hamper understanding 1-2: demonstrated limited relevant knowledge and understanding; psychological terminology was used, but with errors that hampered understanding 0: did not reach the standard described by the descriptors above
Clarity and organisation:	2: the answer demonstrated organisation and clarity throughout the response; the theoretical framework was recognised; the aim was identified and stated; a step by step procedure with all the relevant for further evaluation elements/ steps was explained; results were stated; findings were stated; the text was logical and semantically consistent due to the fact cohesive devices (linking words and expressions to other words and expressions) were implemented; the text was very clear and organised into paragraphs; the text is sufficiently detailed and allowed a possible replication of the study 1: the answer demonstrated some organisation and clarity, but this was not sustained throughout the response; some relevant elements (theoretical framework; aim; procedure; results; findings) were missing and/or were not organised in

	a coherent manner that allowed a possible replication of the study; little logical and semantical consistency; the text may appear unclear; only a few or none cohesive devices were used; unclear paragraphing 0: did not reach the standard described by the descriptors above; the text was not logical and semantically consistent; most of the text was completely unclear
Vocabulary usage	3: used appropriate advanced academic vocabulary; avoided repetition (did not copy words, phrases, sentences from the original text) 2: used some advanced vocabulary but also some copying from the original text occurred 1: used basic, rather spoken expressions; copied many phrases and sentences from the original text
Grammar usage	3: used advanced grammatical forms and/or no serious grammatical mistakes occurred 2: used some advanced grammatical forms and/or made some grammatical mistakes 1: used basic grammatical structures and/or made many grammatical mistakes
Punctuation	3: used punctuation correctly in most of the text 2: used punctuation but with a few mistakes 1: punctuation present only to some extent and mostly incorrectly used 0: no punctuation present
Sentence structure	3: all the sentences with correct sentence structure 2: most of the sentences with the correct sentence structure 1: very few sentences with the correct sentence structure 0: most of the sentences in the text with incorrect sentence structure or word order
Spelling	3: no spelling mistakes 2: a few spelling mistakes 1: many spelling mistakes
The length of the text	word count

Table 3. Categorical items for comparative texts analysis.

4. Findings

4.1. Participant 1 (P1)

For her first summary text, P1 received 10.5, whereas for the second one 14.5 points. This difference was significant ($t(14) = 3.05$, $p = .02$) but the effect was small ($d = 0.2$). The second summary was slightly longer (by four words or three per cent).

The first summary written by P1 was incomplete and random in its content and organisation. She identified only a few elements of the procedure and did not explicitly state the aim of the study. The psychology terms were used scarcely but correctly. P1 also used simple vocabulary and made many basic grammatical and spelling mistakes.

The second summary, in contrast, contained an explicit statement of the aim of the study. The summary was also more complete and chronologically organised as it included many key content elements such as the description of the method, participants, and results of the study. P1 also used psychology terminology correctly and more advanced vocabulary. She made some grammatical mistakes but only with more advanced structures and some prepositions. She made only one spelling mistake.

P1 found both articles difficult. However, the first one was more challenging for her to understand and allocate relevant information for the summary; she said, 'There was a lot of information, and it was hard to summarise even part of it to make sense.' Whereas in the second article, vocabulary was most challenging for her; she said, 'Some words, phrases are very official and specialised and hard to understand even in the whole text.'

The differentiated resources helped her write the summary only to some extent. She was not sure whether the sheet and the underlined text in the article helped her to understand the text of the article and improve the quality of summary writing. She still found it difficult to summarise the results of the study as 'they are always very complicated and contain a lot of details.' She added, 'I simply don't know how to summarise it because I think it's all important.'

4.2 Participant 2 (P2)

The mean number of points awarded for the first summary text was 17, whereas for the second one, it was 21. This difference was significant ($t(14) = 3.05$, $p = .02$) but the effect was small ($d = 0.2$). Also, the second text was longer by 60 words or 16 per cent.

The first summary text written by P2 contained the statement of the aim, and it was chronological and sufficiently detailed to allow possible replication. P2 attempted to use advanced vocabulary and complex sentences, but the words and expressions she used were often implemented without much coherence and cohesion.

The text was too descriptive and narrative, lacked the use of specific terminology, and some sentences were copied from the article. Moreover, P2 did not use full sentences but statements in the form of bullet points, which resulted in a lack of correct punctuation. Also, she made some grammatical mistakes, including article omission, incorrect usage of articles, relative clauses, and pronouns.

In contrast, the second summary text was significantly more detailed, demonstrated relevant knowledge and understanding of the topic presented in the articles, and the psychological terminology and more advanced vocabulary were used in the appropriate context. However, the text was not paragraphed, which affected the clarity and organisation of the written expression. P2 also made some grammatical mistakes, including the use of prepositions, relative clauses, past tenses, and articles.

Yet, it needs to be mentioned that in the second summary, she attempted to use more advanced grammatical forms such as a range of past tense and reported speech structures, for example. Also, punctuation was correctly used in most of the text; the errors mostly included the use of commas with relative clauses. Yet, P2 overused the comma to split

longer sentences, which affected the structure of some sentences and thus the readability of the text.

Unlike the first article, P2 found the second one more challenging because of the vocabulary related to the topic of the article. The differentiated sheet helped her understand most of the unknown vocabulary and, as she said, ' … showed what I have to focus on and guided me through the different steps of the summary.'

4.3. Participant 3 (P3)

P3 obtained a similar number of points for both summaries (13 and 15, respectively). No statistically significant difference was found and the effect size was very small ($t(14) =$ 1.08, $p = .31$, $d = 0.07$). Also, the second summary was shorter by 198 or 44 per cent.

In the first summary, P3 applied relevant psychological knowledge only to some extent, which resulted in only a few subject-specific terms being used. On the other hand, most of the key aspects of the summary were included and presented chronologically; however, their content was often random and not detailed enough. P3 used advanced vocabulary, but most of the phrases and even sentences were copied from the article. As a result, the text of the summary did not contain grammatical or spelling mistakes. However, there were numerous punctuation errors and incorrect sentence structure applied, which stemmed from the combination of the participant's own phrases and sentences and the phrases copied from the text of the article.

The second summary was better organised and included most of the main aspects of the summary. As a result, the text was more coherent and concise, which may explain the significantly lesser number of words written in the second summary. P3 also used more psychology terms in the correct context. As to vocabulary, he used simpler phrases than in the first summary, but he wrote in his own words instead of copying phrases and sentences from the text of the article. Besides, he made some punctuation mistakes; however, they were rather minor and involved mainly the use of a comma in longer sentences. Most of the sentences have a simple structure, but they were correctly formed.

P3 found the differentiated sheet useful. It facilitated the understanding of the text and supported summary writing. He said that 'it [the sheet] contained things I already knew, but was a very good reminder to have on the side.'

4.4. Participant 4 (P4)

P4 received 17 points for his first summary and 22 for the second one. The difference was statistically significant ($t(14) = 3.99$, $p = .005$), however, the effect size was small ($d = 0.25$). Also, the second text was longer by 305 words or 64 per cent.

The first summary written by P4 was not concise, too elaborative, and included language that was not scientific enough. The text lacked details about key elements of the summary. He used psychology terms; however, in some cases, they were either used in the wrong context and incorrectly explained. Although the vocabulary P4 used was rather advanced, it was often used in an incorrect context, and formal and informal words and expressions were used in the same sentence. Besides, P4 made some grammatical, punctuation, and spelling mistakes that included article omission, and the use of tenses and commas in longer sentences.

The second summary demonstrated more relevant knowledge and understanding, and most psychology terms were used correctly. The structure of the text was also better organised, and the content was more elaborative with detailed information about the key elements of the summary. P4 used advanced vocabulary in the correct context. He made very few spelling mistakes, and only with more complex spelling patterns. He still struggled with the correct use of the comma in longer sentences.

P4 found the differentiated resources useful. The differentiated sheet helped him to use the correct phrases and 'the highlighted portions of the study did find it easier for me, and made it more time-efficient to summarise the study.'

5. Discussion

In this study, we investigated the effect of DI on summary writing in the IBDP psychology classroom using individualised adaptations. Our first research question enquired about individualised adaptations. By adopting a convergent position (Ribé 2003), we provided participants with different learning materials that aimed at facilitating summary writing, which was the common learning goal for the whole class. Drawing on the participants' needs analysis that was based on the first summary draft and information from the teacher, the common adaptations included sentence starters and model sentences for each part of the summary, keywords and psychological terminology phrases from the text, and synonyms to avoid repetition and copying from the original texts. Adaptations specific for individual students were key information highlighted in the text of the article to facilitate finding the relevant information, advice on how to use a wider range of connectives to increase text coherence, proofreading skills for spelling and grammar miscues, underlined word parts that were likely to be misspelt to increase the correct spelling of the keywords, a reminder of using full sentence structure and correct punctuation, and advice on how to write shorter and well-structured sentences. These findings support theoretical considerations that differentiation should be learner-centred to recognise the learner's unique needs (Blaz 2016; Hall et al. 2012; Tomlinson 2001, 2014).

Our second question asked about the effectiveness of DI. We wanted to know whether the individualised adaptations would improve the participants' summary writing. Although the difference between the first and the second draft was significant in the case of three participants ($p < .05$), the effect size was small in the case of all of them (between $d = 0.07$ and $d = 0.25$), which means that the instruction had little to no impact in practice. These results are in line with the findings of Hattie and the Education Endowment Foundation (2009 and n.d. in Smale-Jacobse et al., 2019:4-5, respectively) on individualised instruction: individualisation was reported to have a small effect on the students' academic achievement (between $d = -0.07$ and $+0.40$).

However, other qualitative data suggested improvement. In the case of most participants, the text of the second summary was more detailed and longer by three to 64 per cent. One participant (P3) wrote a significantly shorter text for the second summary draft; however, it was more concise and coherent and written in his own words. In contrast, the first draft contained many copied sentences from the article.

Further on the qualitative data, the quality of the second summary text was improved in the following areas: text organisation, discussion of all relevant information from the article in a detailed manner, key terms usage, and advanced vocabulary usage.

However, we believe that for some participants, differentiation should be extended because of their more complex learning needs. In the future, P1, due to her specific learning difficulties (dyslexia), may require additional support from the teacher to improve her reading comprehension and summarising skills to be able to write longer well-structured texts. This may include, for example, writing together each part of the summary so that P1 creates her own model sentences and paragraphs. Whereas P3, because of the characteristics of his home language, may require additional language practice to be able to use more advanced vocabulary and structures.

Regarding our last research question, most participants found differentiated resources beneficial. They helped them understand unknown vocabulary, locate relevant information, and organise their text. As a result, article comprehension and summary writing were more efficient. In contrast, according to P1, the differentiated resources had little impact on her article understanding and summary writing. As stated above, this participant would need more individualised support due to her specific learning difficulties.

In sum, since data analysis in this study showed mixed results, it is difficult to establish the overall beneficial effect of DI in the form of individualised adaptations. It may also be suggested that increasing students' achievement using such DI is minimal, which corroborates other researchers' conclusions (Hattie 2009; Little et al. 2014; Smale-Jacobse et al. 2019). Yet, the qualitative data need to be considered. Drawing on Smale-Jacobse et al. (2019) and Brühwiler and Vogt (2020), they showed that individualised adaptations had indirect effects with practical pedagogical implications. Following Little, McCoach, and Reis (2014), Subban (2006), and Tomlinson et al. (2003), it may be assumed that the engagement of student participants with the text of the article and summary writing was higher and will have a positive effect on future written assignment with a similar learning goal.

6. Conclusion

In this case study, we examined the effect of differentiated instruction in the form of individualised adaptations for multilingual students in an IBDP psychology classroom. All the participants recognised the value of the differentiated resources, and quantitative and qualitative data showed the beneficial effect of differentiation, though to some extent.

The starting point of each participant was considered, and therefore, the outcomes of summary writing differed among participants but showed improvement within their individual learning profile. On the other hand, many common approaches were applied for all the participants that all students in the classroom may find beneficial.

Undoubtedly, this research has limitations. Therefore, its results should be considered with caution. The study was conducted in a specific learning context, and its findings were drawn on a small sample and a single pre- and post-test. The further effect of differentiation could have been examined using a delayed test; however, it could not be administered because the time of the research was conducted (the summer academic term). The investigation could have involved a higher number of students, if not all in the classroom, however, in this study we aimed at the students who struggled to meet the standard of summary writing as of the requirements of the IBDP psychology exam and were likely to either not

to meet their predicted grade or fail the exam. Therefore, the provided support to the participants was individualised adaptations that considered differentiation by content and text.

Nevertheless, we hope that this study will inform the scope and methodology of further research on the effect of differentiation, and provide useful information for teachers on how differentiated instruction can be implemented in a classroom of students with a wide range of learning needs that stem from different linguistic backgrounds and cognitive profiles.

References

Ashton, K. (2019), *Approaches to teaching in the multi-level language classroom,* (in:) "Innovation in Language Learning and Teaching" 13(2), 162–177.

Benjamin, A. (2003), *Differentiated Instruction. A Guide for Elementary School Teachers.* Larchmont: Eye on Education.

Blaz, D. (2016), *Differentiated Instruction. A Guide for World Language Teachers* (2nd ed.) New York, NY: Routledge.

Bray, B./K. McClaskey (2016), *How to Personalize Learning: A Practical Guide for Getting Started and Going Deeper.* Thousand Oaks, USA: Corwin.

Brühwiler, C./ F. Vogt (2020), *Adaptive teaching competency. Effects on quality of instruction and learning outcomes*, (in:) "The Journal of Educational Research" 12(1), 119–142.

Canagarajah, S. (2016), *Crossing borders, addressing diversity, (in:)* "Language Teaching" 49(3), 438–454. (URL http:/doi.org/10.1017/S0261444816000069). [Accessed: 9.10.2022].

Capp, M.J. (2017), *The effectiveness of Universal Design for Learning: A meta-analysis of literature between 2013 and 2016*, (in:) "International Journal of Inclusive Education" 21(8), 791–807. (URL https://doi.org/10.1080/13603116.2017.1325074). [Accessed: 11.10.2022].

Cohen J. (1988), *Statistical Power Analysis for the Behavioral Sciences*. New York, NY: Routledge Academic.

Convery, A./ D. Coyle (1993), *Differentiation – Taking the Initiative*. London: CiLT

Council of Europe (2018), *Common European Framework of Reference for Languages: Learning, Teaching, Assessment—Companion Volume with New Descriptors. Strasbourg: Council of Europe.* (URL https://rm.coe.int/cefr-companion-volume-with-new-descriptors-2018/1680787989). [Accessed: 2.2.2020].

Courcier, I. (2007), *Teachers' Perceptions of Personalised Learning, (in:)* "Evaluation & Research in Education" 20(2), 59–80. (URL https://doi.org/10.2167/eri405.0). [Accessed: 24.4.2020].

Fox, J./ W. Hoffman (2011), The *Differentiated Instruction Book of Lists.* San Francisco: Jossey-Bass.

Griffiths, G./ K. Griff/ K. Keohane (2000), *Personalizing Language Learning.* Cambridge: Cambridge University Press.

Hall, T.E./ A. Meyer/ D.H. Rose (2012), *Universal Design for Learning in the Classroom: Practical Applications.* London, UK: Guilford.

Hattie, J. (2009), *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement.* New York, NY: Routledge.

Hayden, M./ J. Thomson (2008), *International Schools: Growth and Influence,* (in:) "Fundamentals of Educational Planning" 92. Paris: UNESCO.

International Baccalaureate Organization (2018), *Diploma Programme Subject Brief. Individuals and societies: Psychology.* (URL https://www.ibo.org/contentassets/5895a05412144fe890312bad52b17044/psychology-sl-hl-2019-en.pdf). [Accessed: 2.2020].

Janicka, M. (2018), *Indywidualizacja nauczania na lekcji języka obcego – utopia czy konieczność?*, (in:) "Applied Linguistics Papers" 25(1), 85–97.

Jaworska, M. (2013), *Indywidualizacja procesu nauczania języków obcych a instytucjonalny kontekst edukacyjny*, (in:) "Lingwistyka Stosowana" 8, 43–52.

Kałdonek-Crnjaković, A. (2020), *Differentiation in second and foreign language teaching,* (in:) I. Szymańska/ A. Piskorska (eds.), Between cultures, between languages: Essays in honour of Professor Aniela Korzeniowska. Warszawa: Wydawnictwo Naukowe Semper, 172–183.

Lamb, T. (2003), *Individualising Learning: Organising a Flexible Learning Environment,* (in:) M.J. Raya/T. Lamb (eds.), Differentiation in the Modern Languages Classroom 177–194. Frankfurt am Main: Peter Lang.

Little, D./ L. Dam/ L. Legenhausen (2017), Lang*uage Learner Autonomy: Theory, Practice and Research.* Bristol, UK: Multilingual Matters.

Little, C. A./ D. B. McCoach/ S. M. Reis (2014), *Effects of differentiated reading instruction on student achievement in middle school*, (in:) "Journal of Advanced Academics" 25(4), 384–402. (URL https://doi.org/10.1177/1932202X14549250). [Accessed: 10.10.2022].

Loughland, T./ D. Alonzo (2019), *Teacher Adaptive Practices: A Key Factor in Teachers' Implementation of Assessment for Learning.* (in:) "Australian Journal of Teacher Education" 44(7), 18–30. (URL http://dx.doi.org/10.14221/ajte.2019v44n7.2). [Accessed: 10.10.2022].

Mills, M. et al. (2014), *Differentiated learning: from policy to classroom.* (in:) "Oxford Review of Education" 40(3), 331–348. (URL https://doi.org/10.1080/03054985.2014.911725). [Accessed: 11.10.2022].

Perk, D. (2017), *Comment Mettre en œuvre la Différenciation Pédagogique en Classe? [How to Implement Educational Differentiation in Class?]* MA dissertation. Académie d'Aix en Provance.

Plonsky, L./ F.L. Oswald (2014), *How big is "big"? Interpreting effect sizes in L2 research*. (in:) "Language Learning", 64.4, 878–912. (URL https://doi.org/10.1111/lang.12079). [Accessed: 11.10.2022].

Raya, M.J./ T. Lamb (2003), *Dealing with Diversity in the Modern Languages Class,* (in:) M.J. Raya/ T. Lamb (eds.), Differentiation in the Modern Languages Classroom. Frankfurt a. M. Peter Lang, 13–20.

Ribé, R. (2003), *Individual Differences in the FL Classroom: A Pedagogical perspective,* (in:) M.J. Raya/ T. Lamb (eds.), Differentiation in the Modern Languages Classroom. Frankfurt a. M. Peter Lang, 125–164.

Rose, H./ J. McKinley/ J. Briggs Baffoe-Djan (2020), *Data Collection Research Methods in Applied Linguistics.* London, UK: Bloomsbury Academic.

Schiffrin, D./ D. Tannen / H. Hamilton (2001), *The Handbook of Discourse Analysis.* Malden, UK: Blackwell.

Smale-Jacobse, A.E. et al. (2019), *Differentiated Instruction in secondary education: a systematic review of research evidence,* (in:) "Frontiers in Psychology" 10. (URL https://doi.org/10.3389/fpsyg.2019.02366). [Accessed: 12.10.2022].

Stadler-Heer, S. (2019), *Inclusion*, (in:) "ELT Journal" 73(2), 219–222. (URL https://doi.org/10.1093/elt/ccz004). [Accessed: 11.10.2022].

Subban, P. (2006), *Differentiated Instruction: a research basis,* (in:) "International Education Journal" 7, 935–947. (URL http://ehlt.flinders.edu.au/education/iej/articles/v7n7/Subban/BEGIN.HTM). [Accessed: 12.10.2022].

Suprayogi, M.N./ M. Vackle/ R. Godwin (2017), *Teachers and their implementation of Differentiated Instruction in the classroom*, (in:) "Teaching and Teacher Education" 67, 291–301. (URL https://doi.org/10.1016/j.tate.2017.06.020). [Accessed: 12.10.2022].

Thomas, A. (1992), *Individualised Teaching*, (in:) "Oxford Review of Education" 18(1), 59–74.

Tomlinson, C.A. (2001), *How to Differentiate Instruction in Mixed Ability Classrooms* (2nd ed.). Alexandria, USA: Association for Supervision and Curriculum Development.

Tomlinson, C.A. (2014), *The Differentiated Classroom: Responding to the Needs of All Learners* (2nd ed.). Alexandria, USA: Association for Supervision and Curriculum Development.

Tomlinson, C.A. et al. (2003), *Differentiating instruction in response to student readiness, interest, and learning profile in academically diverse classrooms: a review of literature*, (in:) "Journal for the Education of the Gifted" 27, 119–145. (URL https://doi.org/10.1177/016235320302700203). [Accessed: 13.10.2022].

UNESCO (2005), *Guidelines for Inclusion: Ensuring Access to Education for All,* (in:) "Paris: UNESCO". (URL http://www.ibe.unesco.org/sites/default/files/Guidelines_for_Inclusion_UNESCO_2006.pdf). [Accessed: 7.7.2020].

van Geel, M. et al. (2019), *Capturing the complexity of differentiated instruction,* (in:) "School Effectiveness and School Improvement" 30(1), 51–67. (URL https://doi.org/10.1080/09243453.2018.1539013). [Accessed: 12.10.2022].

Waxman, H.C./ B.L. Alford/ D.B. Brown (2013), *Individualized instruction*, (in:) J. Hattie/ E.M. Anderman (eds.), International Guide to Student Achievement, 405–407. New York, NY: Routledge.