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Differentiated instruction in secondary education – constraint or prospect in the foreign language classroom?

A literature review on teachers' perceptions

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Abstract (English)

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Title:	Differentiated instruction in secondary education – constraint or prospect in the foreign language classroom. A literature review on teachers' perceptions
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Summary:	Differentiated instruction is a widely known approach used in different educational settings, especially in diverse classrooms. Teachers are expected to be able to meet the need of all learners and differentiate instructional parameters such as content, process and product accordingly. While previous research has shown that a successful implementation of the concept is beneficial for the students, teachers have remained hesitant towards the use of DI. This review examines foreign language teachers' perceptions of DI in secondary education. Findings indicate that practical reasons such as time constraints and the lack of professional training in how to implement DI constitute significant obstacles for teachers in using the method in the foreign language classroom.
Keywords:	Review, differentiation, differentiated instruction, secondary education, foreign language classroom, teachers' perceptions

Abstrakt (Svenska)

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Sammanfattning:	Differentierad undervisning (DU) är ett allmänt känt undervisningskoncept som används i olika utbildningsmiljöer. Lärare förväntas kunna möta behoven hos alla elever och differentiera instruktionsparametrar såsom innehåll, process och produkt därefter. Medan tidigare forskning har visat att en framgångsrik implementering av konceptet är fördelaktigt för eleverna, men också att lärarna har varit tveksamma till att använda DU. Denna forskningsöversikt undersöker språklärares uppfattningar om DU i kontexten av högstadie- och gymnasieutbildning. Resultaten tyder på att praktiska skäl som upplevd tidsbrist och bristen på professionell utbildning i hur man implementerar DU utgör betydande hinder för lärare att använda metoden i språkundervisningen.
Nyckelord:	Review, differentiation, differentiated instruction, secondary education, foreign language classroom, teachers' perceptions

“In order to deal with the increasing diversity inside classrooms, teachers have to move away from traditional ‘one-size-fits-all’ educational methods to a DI approach.”

“When teachers differentiate according to students’ academic readiness, their goal is to provide every student with appropriately challenging learning experiences.”

(Pozas & Schneider, 2019, p. 75)

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Preface

During the fall term 2021 all students attending the complementary educational program had a session of subject didactics in modern languages. The main emphasis of that session consisted of what is known as Differentiated instruction (DI). We were introduced to publications written by the American teacher and researcher Deborah Blaz, that served as course literature. At that point, I had never heard about the concept and became curious how and to what extent it might be applied in the foreign language classroom. As I was supposed to start my second period of a compulsory internship at a Junior High school in Åhus, Sweden, I was eager to see the concept being used for real as I thought it sounded interesting. But I had to realize quickly, that the concept was not used to the extent I had expected – or not at all, and I began to understand, why that might be so. Is it fair to expect a teacher to be able to provide 30 individuals in one classroom with appropriate academic challenges in order to improve their individual learning progress? Is that not too far from reality or merely wishful thinking?

Because I wanted an answer to the above stated question, I decided to make a research project of it, and look at the way modern language teachers perceive Differentiated instruction. A special *Thank You* to Ingela Johansson for excellent supervision of this review!

1. Introduction

1.1 Background

Differentiated instruction (DI) is nothing new, the concept has been part of the academic discourse for at least three decades. In the beginning, DI was mainly used in special-needs education, but today it is considered being a self-evident part of subject didactics within educational science (Blaz, 2013, p. 2). It is mainly being viewed as a pedagogical approach framework or philosophy that provides students with different methods of acquiring knowledge related to their individual prerequisites for learning regardless of differences in their ability. “It comprises a complex and time-intensive set of assessment, organizational, and instructional practices that are guided by several general principles and critical elements.” (Gibbs & Beamish, 2021, p. 97)

The North American researcher Carol Ann Tomlinson, who is considered being one of the pioneers when it comes to Differentiated instruction, defines the method as a possible way to tailor teaching and instruction according to the individual prerequisites of the student body:

At its most basic level, differentiation consists of the efforts of teachers to respond to variance among learners in the classroom. Whenever a teacher reaches out to an individual or small group to vary his or her teaching in order to create the best learning experience possible, that teacher is differentiating instruction. Teachers can differentiate at least four classroom elements based on student readiness, interest, or learning profile: Content – what the student needs to learn or how the student will get access to the information; Process – activities in which the student engages in order to make sense of or master the content; Products – culminating projects that ask the student to rehearse, apply, and extend what he or she has learned in a unit; and Learning environment – the way the classroom works and feels. (Tomlinson, n.d.)

Another advocate, Deborah Blaz, summarizes the purpose of the concept with an emphasis on its practical advantages:

This term [Differentiated instruction] encompasses a wide range of teaching strategies and attitudes that focus on the two concerns of any good educator: students and learn-

ing. The standards and curriculum tell us what students need to know and differentiated-instruction techniques help us get them there while we teach them how to learn. (Blaz, 2013, p. 1)

The method can be placed within the theoretical framework of constructivism, where human perception and the construction of knowledge plays a crucial part. Known precursors for what we today call Differentiated instruction were, among others, the Russian psychologist Lev Vygotskij, but even the American educational reformer John Dewey and the Swiss psychologist Jean Piaget. All of them emphasized, long before the term Differentiated instruction was coined, the importance of a classroom perspective that was student-centered. The teacher should be able to perceive the students' different personalities, talents, skills and previous experiences. Piaget and Vygotskij both highlight the fact that the individual human being *constructs* his or her own knowledge, most often in relation to the physical and social surroundings (Brinkkjaer & Høyen, 2020, p. 174). The acquisition of knowledge is thus seen as a social construct.

Furthermore, Vygotskij has advocated the concept of the so-called Zone of Proximal Development being a necessary precondition for effective learning, which can be directly related to the idea behind Differentiated instruction: "The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). In other words, Vygotskij assumes that there is a distance between what a student can do without assistance or support from an adult (the teacher) and what a student can do with the help and guidance of an adult or fellow students.

When it comes to secondary education, we often assume that students of the same age are a homogeneous group of people, but that does not have to be the case. There can be huge differences in terms of sex, gender, native language, motivation and maturity, but even when it comes to knowledge requirements that a teacher might assume all students have met. Against the background of a presumably heterogeneous classroom consisting of different individuals that according to the ideas of (social-) constructivism, assemble their knowledge in relation to, and/or in interaction with their surroundings, a teacher is permanently being challenged with finding an appropriate level for each of the students sitting in the classroom. The main challenge for the teacher that

makes use of DI is to meet the students' individual preconditions so that they can acquire knowledge in a constructive and meaningful way – which contrasts with the already mentioned approach of “one-size-fits-all” (Pozas & Schneider, 2019, p. 75).

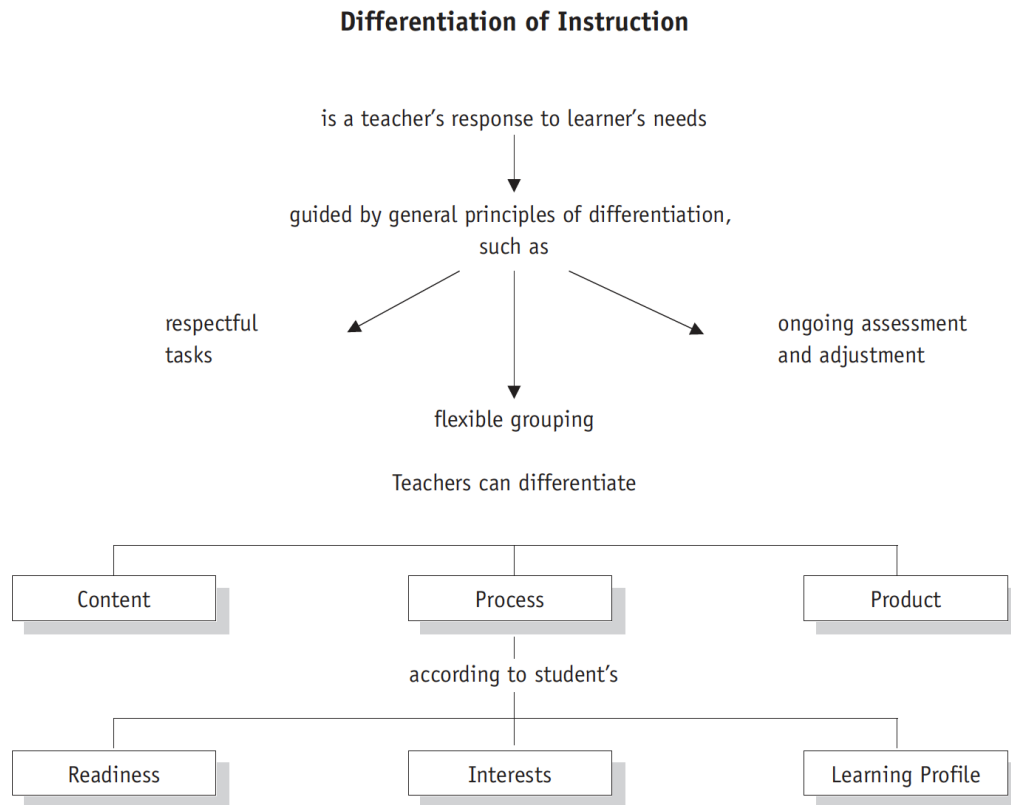
In order to solve this educational dilemma between “one-size-fits-all” and a point of view that takes into account that students have different preconditions and needs, differentiated instruction may provide a possible solution, because it aims to contribute “appropriately challenging learning experiences” for all students (Pozas & Schneider, 2019, p. 75).

After having looked at the theoretical framework of DI, we will now look at the more practical means of differentiation of instruction. As mentioned before, Tomlinson has been seen as one of the pioneering researchers in the field, and she has also defined several areas in which teachers can make use of differentiation. As we see in Figure 1, Tomlinson outlines three major categories on level one, which are guided by the general principles of differentiation. Teachers can differentiate content, process and product when it comes to a heterogeneous group of students. Content can be related to the curriculum, *what* a student needs to learn. Process is the way *how* content is acquired, e. g. individually, in small groups, with the help of the teacher. Product means mainly that *length and scope*, or in other words the shape of an assignment or exercise, can differ.

Furthermore, Tomlinson relates the differentiation of process closely to another level which is linked to students' *readiness* (students do not learn at the same pace or have the same level of cognitive maturity in order to be able to process new content), *interest* (students respond to the content according to their personal interests) and *learning profile* (students vary in how they best acquire knowledge). In total, she lists six detailed, closely interrelated means of how to differentiate instruction, which together with the already mentioned general principles outlined in Figure 1, form the practical framework of Differentiated instruction.

Figure 1

“Differentiation of Instruction”: Visualization of the DI-method according to Carol Ann Tomlinson (Tomlinson, 1999, p. 15)



How can Tomlinson’s model then be applied to the foreign language classroom? I will illustrate this with an example related to Figure 1: when Swedish students start with their secondary education (in the Swedish context, this refers to the non-compulsory *Gymnasiet* from grade 10 to 12) at least one course of English is compulsory for all programs (ENG05). The knowledge requirements state that students should gain understanding about English as a global language (Skolverket, SKOLFS 2010:261). Let us assume, the teacher does, in the context of an English 5 course, a feature about new English words that were recently added to the *Oxford English Dictionary*, with a special focus on words deriving from varieties of English spoken in different parts of the world (content). The class consists of a heterogeneous group of students, in which the teacher

can identify three groups: one of easy adapters for whom effective learning is best done individually, one group that acquires knowledge best in a context of small groups and peer learning, and the third group needs special assistance due to dyslexia and difficulties with reading. The teacher decides to split the class according to the three groups (general principles) and lets the first group work on their own with a more academic and longer text (process) that keeps them occupied during the lesson while group two will be working in smaller groups with an easier and shorter text (process) that, after the students have read it, can be discussed within the groups (product). Group three will not be reading a text. They will be listening to the text (process) – and can choose if they want to listen to the more academic text or the easier version that later will be discussed within group three (product) according to which text the students chose to listen to. This is how DI can look like in the foreign language classroom. Instead of giving the exact same assignment to all students, the teacher adjusts the content to the recipients, not on an individual level, but on a group level – after the teacher identified three major groups in the class where differentiation would be appropriate.

As the reader might have noticed, this teaching approach demands a more extensive preparation regarding the material, facilities (it would be helpful to have access to spare rooms so that the different groups won't be disturbing each other), interaction and guidance and even regarding the final assessment if there is one. Many teachers will not have time to conduct a lesson like the one outlined above, or just get the impression that DI involves too much work. The method might sound appealing in theory, but maybe not in practice.

Previous research indicates that the effects of DI have shown good results, but despite that, studies have also made clear that it is not being used to the extent one could expect (Pozas & Schneider, 2019). This leads us to the crucial question of why this might be so – and eventually to the next part of this thesis, where I will present the purpose and aim.

1.2 Purpose and aim

As I outlined above, there seems to be a discrepancy between research outcome, that shows a good effect of DI, and the limited use of the method in practice. In general, teachers seem to be reluctant towards the implementation of DI for their instruction. There

might be different reasons for that. Blaz' (2013) description of the method as an "Ideas Smorgasbord" implies a huge outlay of possibilities for conducting DI in the foreign language classroom. Teachers might be overwhelmed by the sheer number of different options and suggestions that need to be dealt with in order to find appropriate means for applying the method in class. Pozas and Schneider (2020) argue that many teachers might not understand the purpose of the method, neither the thought behind it, which partly goes hand in hand with the researchers' conclusion that DI as a method might be too theoretical in its appearance:

While existing DI models (Hall, 2002; Lawrence-Brown, 2004; Tomlinson 2005a, 2005b, 2017) focus on the important tasks of pre-assessment, formative assessment, and planning and adapting instruction, they still view DI in a quite theoretical way. Thus, none of these models are fully appropriate for answering teachers' legitimate practical questions regarding the concrete options they have at hand for differentiating instruction. (Pozas & Schneider, 2019, s. 84)

Taking the mentioned discourse about the use of the method into account, the main aim of my study is to find possible reasons why DI is not used to a wider extent in the foreign language classroom so far. I would like to investigate how language teachers working with secondary education perceive DI, and if they consider the method to be a constraint or a prospect for their instruction. In order to be able to answer my research question, I will conduct a literature review that analyzes teachers' perceptions on Differentiated instruction. That implies, that my research will have two main parts: I will present recent studies on the subject as well as analyze the studies' conclusions regarding my essential question as formulated in the title of my thesis.

Why focus on the teacher? The teacher plays a crucial part when it comes to knowledge dissemination in a school context, in this case, the foreign language classroom. Many teachers want their instruction to be relevant to the most recent research in subject didactics and educational science. Furthermore, the Swedish *Curriculum for the upper secondary school* makes it very clear, that all education must be science-based: "Education should impart and establish respect for human rights and the fundamental democratic values on which Swedish society is based. The education should be based on scientific grounds and proven experience" (Skolverket, 2013, p. 4). During my initial research concerning teachers' perceptions I have not found any other research publications

that has dealt with the same objective as I aim to do, which makes my study hopefully even more relevant.

Most recent studies have dealt with the frequency of DI or student achievement as Pozas and Schneider point out in their summary of current research objectives regarding Differentiated instruction:

In summary, although extensive research on the use of DI has been carried out, most studies are limited to reporting the mere frequency of DI or the impact of one global one-dimensional construct of DI on student achievement. Some specific DI practices such as peer tutoring or staggered nonverbal learning aids have not been sufficiently submitted to empirical research. Additionally, DI can also be expected to impact non-achievement outcomes such as motivation or academic self-concept (ASC) and should not be neglected in DI research. (Pozas & Schneider, 2019, p. 77)

Another reason why I chose to examine teachers' perceptions of the DI method is the bibliometric overview published in 2020 in the *European Journal of Educational Research*. The authors Shareefa and Moosa present an overview of the 100 most cited studies dealing with Differentiated instruction between 1999 and 2018. They have also analyzed which specific topics and objectives were dominant regarding the most cited surveys. What the authors categorize as "Teachers' Perceptions" is placed at the end of the list with only two articles cited (Aguilar, 2017; Gierl & Lai, 2013), which gives an indication that teachers' perception of DI has not been investigated to the same extent as e.g. links between DI and "Instructional Strategies" and "Learning Disabilities" as shown in Table 1 below.

Table 1

Area of Research of the 100 most-cited papers and their total Number of Articles including Reference listings (Shareefa & Moosa, 2020, p. 336).

No	Area of Research	No. of Articles (References)
1	Assessing the Effect of DI in general	7 ^{11 12 14 17 31 79 82 98}
2	Between Countries	2 ^{16 64}
3	Implementation of DI	10 ^{94 12 14 21 60 73 80 81 92}
4	Institutional (School-based) Variables	7 ^{13 43 50 57 62 86 91}
5	Instructional Strategies	25 ^{2 10 12 14 20 21 22 24 25 27 34 39 41 45 48 51 58 61 67 68 70 79 92 95 98}
6	Learning Disabilities	3 ^{58 65 87}
7	Learning Styles and Preferences	2 ^{40 52}
8	Literacy Development	18 ^{6 14 17 19 31 34 48 49 53 58 61 69 71 77 79 87 91 92}
9	Mathematics	5 ^{45 52 58 64 73}
10	Parent Involvement	2 ^{35 97}
11	Professional Expertise	3 ^{28 32 50}
12	Review of Literature on DI	2 ^{7 15}
13	School-based DI	2 ^{46 47}
14	Science	5 ^{81 82 93 98 100}
15	Student Development and Well-being	5 ^{8 9 17 26 44}
16	Students' Understanding and Conceptualization	6 ^{5 26 45 56 66 98}
17	Teacher Traits and Qualities	5 ^{3 13 16 20 43}
18	Teachers' Perceptions	2 ^{86 94}
19	Teachers' Knowledge	2 ^{50 100}
20	Use of ICT	4 ^{2 7 33 96}

Note: Some of these studies covered more than one topic and were classified depending on the aim of the study and the main outcomes.

Furthermore, as we can see in Table 1, the listed references of the bibliometric analysis done by Shareefa and Moosa (2020) show a significant imbalance when it comes to assessing teachers' perceptions in relation to firstly, the foreign language classroom and secondly, the context of (upper) secondary education in general, compared to other subjects (e. g. mathematics) and other levels of education (e. g. elementary and primary education) that are referred to more frequently in the analysis (Melesse, T., 2015; Merawi, T. M., 2018; Nedellec, C. M., 2015; Reilly, E., & Migyanka, J., 2016). I will present a more thorough overview of current research related to my topic in chapter 2, but in general, it can be concluded that current research indicates "that secondary teachers reported having more negative beliefs about DI and using the approach less often than their counterparts in middle school" (Whitley et al., 2019).

These two reasons, the teachers' seemingly non-existent use of the DI method that current research indicates, and the somewhat limited number of cited research stud-

ies on teachers' perceptions of the DI method, are my main motivation for doing this research, and they also explain my purpose: I want to know *what* the teachers think about the DI method and *how* they justify their views.

1.3 Method and material

The aim of my study is, as mentioned above, to find out how teachers perceive the DI method in order to be able to get an answer to the question why the method is not used more frequently in the foreign language classroom. To carry out my review, however, I will not only analyze current studies that are related to my research question but also present a background analysis on Differentiated instruction in secondary education. My thesis will therefore consist of two parts: Part 1 will consist of an introduction and a thorough research overview. Part 2 will consist of the presentation and analysis of the literature review itself.

In order to make a systematic research overview that provides answers to my research question formulated above, I will use certain keywords to search for relevant scientific articles and studies in English, German and Swedish in academic databases that focus on language teachers' perception of Differentiated instruction in secondary education. The reason for my choice of English, German and Swedish is mainly of a practical nature. English and German are my teaching subjects (the latter is even my native language) and Swedish is my everyday language, since I am living in Sweden, where I am enrolled at the University of Lund for my teacher education. I will limit my research to (upper) secondary education, which in Sweden includes grades 10 to 12, whereas English- and German-speaking countries might have slightly different levels of classifications:

Secondary education or post-primary education covers two phases on the International Standard Classification of Education scale. Level 2 or lower secondary education (less commonly junior secondary education) is considered the second and final phase of basic education, and level 3 (upper) secondary education is the stage before tertiary education. Every country aims to provide basic education, but the systems and terminology remain unique to them. Secondary education typically takes place after six years of primary education and is followed by higher education, vocational education or employment. (Wikipedia, 2022)

The limitation to secondary education has both practical reasons, as the number of publications might be too numerous for an exhaustive literature review, and personal motives. I am enrolled to become an English and German teacher for grade 7 to 12 in the Swedish school system. My interest in secondary education related to DI in the foreign language classroom is therefore even a personal matter.

Accordingly, my definition of a language teacher in this context is a teacher who teaches a language that is foreign to the students (most often referred to as L2, L3), in contrast to their native language(s). My aim from the beginning was to be able to find at least 10 to 15 relevant studies that provide an overall answer to the question why many language teachers in secondary education are hesitant about the DI method when it comes to practice, with the lowest limit of five relevant studies as a minimum number for conducting the review. The studies' *Abstract* served as an effective tool for the selection of relevant publications. A detailed overview of keywords, databases and inclusion criteria that were used for the selection process will be presented further below.

The method I chose for this research overview is based on a proven strategy that is mainly based on different, well-defined steps, including “defining the review question, developing the search strategy, the search string, selecting search sources and databases, selecting inclusion and exclusion criteria, screening and coding of studies, appraising their quality, and finally synthesizing and reporting the results” (Zawacki-Richter, 2020, p. vii). One of the main problems with a systematic research overview is to be able to limit the criteria that constitute the framework for the process of searching in academic databases – in simple language: to be able to find what you are looking for (Zawacki-Richter, 2020, p. xii). Furthermore, it might even be helpful to limit the research area itself, which I believe my research question already has given proof of regarding the bibliometric analysis mentioned above, which showed that research publications on teachers' perceptions of the DI method do not belong to the most cited studies. It seems as if there is no disproportionate number of articles and studies on my chosen research question, which indicates that my thesis can hopefully contribute to gaining new insights into why teachers do not use Differentiated instruction to a greater extent: “The logic of systematic reviews is that reviews are a form of research and thus can be improved by using appropriate and explicit methods... Thus, the term ‘systematic re-

view' is used [...] to refer to a family of research approaches that are a form of secondary level analysis (secondary research) that brings together the findings of primary research to answer a research question" (Newman & Gough, 2020, p. 4).

Below I list a detailed overview of relevant keywords, databases and inclusion criteria I will make use of when conducting my search for publications that deal with teachers' perceptions of Differentiated instruction:

1. Keywords (English, German, Swedish):

Differentiated instruction in combination with

- Language acquisition (Spracherwerb, språkinläring)
- Language Classroom (Sprachunterricht, språkundervisning)
- Second language acquisition (Zweitspracherwerb, andraspråksinläring)
- Secondary education (upper secondary schools, gymnasiet)
- Teachers' perceptions (Lehrermeinungen, Lehrerwahrnehmung, lärarnas uppfattning)
- L2, L3 (1./2. Fremdsprache, andraspråksinläring, tredjespråksinläring)

2. Databases:

- LUBsearch
- Google Scholar
- ERIC
- DOI
- LIBRIS
- Diva-Portal
- EEO (Encyclopedia of Educational Sciences Online)
- Fachportal Pädagogik

3. Inclusion criteria:

- The study is published after the year 2000
- The study is published in a scientific publication
- The study is available in English, German or Swedish
- The study was conducted at upper secondary school level

- The study deals, at least in parts, with teachers' perception of Differentiated instruction in the context of the foreign language classroom.

2. Research overview

In order to narrow the scope of my research, I decided to solely focus on foreign language teachers' perceptions of DI in the context of secondary education. Therefore, I will start this chapter with a presentation of more general research results of prior studies that were conducted in this setting in order to be able to contextualize my own findings.

2.1 Differentiated instruction in secondary education

2.1.1 Teachers making use of DI frequently are a rare species

“Concerning the general research question, teachers do in fact make use of DI practices, nonetheless, in a very low frequency. This result is in line with previous international research [...]” (Pozas & Schneider, 2020, p. 222). As the cited lines from the German researchers Marzela Pozas and Christoph Schneider indicate, there are good news and bad news, when it comes to current studies on the use of Differentiated instruction: The good news is that the method indeed is used in classrooms throughout the world, but the bad news, unfortunately, is that it is not used as often as one might expect – as I have referred to above. There are, however, several factors, that need to be taken into consideration when it comes to recent research on DI, and I will shortly present the most significant ones that Pozas and Schneider have identified in the context of secondary education during the last years.

Current research indicates that the effects of DI on student outcomes, or in other words students' academic achievement, in general are of mixed character. The reason for that derives not only from a lack of studies as one might assume, but because “diverging definitions of the instructional approach make it a challenge to compare results from different studies on the effects of DI, [...]” (Pozas et al., 2021).

Based on earlier research, Pozas and Schneider (2019) come to the conclusion that existing DI frameworks most often describe single instruction practices that in the majority of cases have no empirical evidence which teachers can rely on. The “Smorgasbord of Ideas” as Deborah Blaz put it (2013) seems to provide only little help to teachers when it comes to practical questions of how and why to apply instructional methods related to DI. In their attempt to present an “exhaustive categorization of prac-

tices” of DI, Pozas and Schneider (2019) wanted to establish a scientific connection between the literature on DI-research and a possible taxonomy of practices associated with Differentiated instruction.

Furthermore, they suspect that the available quantity of guidelines, practices, approaches and actions being offered to teachers in recent pedagogical literature on Differentiated instruction might seem overwhelming (“Smorgasbord of Ideas”). Because of that, teachers might select single DI-practices arbitrarily (Pozas & Schneider, 2019). The two German researchers have seen, in one of their previous studies, that teachers who use DI “[...] mostly adhere to tiered assignments and heterogeneous ability groups which clearly indicates that teachers hold a rather low variance of DI practices” (Pozas & Schneider, 2020, p. 222). From this, they conclude that DI-methods that are used the most are those that are easily prepared and carried out (Pozas & Schneider, 2020), which could be directly related to the teacher being either overwhelmed or hesitant by the mere amount of choices, and in order to solve that dilemma, chooses those single instruction practices that can be adapted without significant effort.

To summarize the research on Differentiated instruction of Marzela Pozas and Christoph Schneider, which mainly focuses on secondary education in a German context, their studies highlight three major problems: Firstly, they mention the lack of a coherent theoretical framework (“diverging definitions”). Secondly, the researchers describe the lack of empirical evidence when it comes to single instruction practices (“no scientific connection”). Thirdly, DI is often seen as a “Smorgasbord of Ideas” that provides too many choices that might force the teacher to make decisions that are based on practical means such as time, feasibility and usefulness. Similar findings were highlighted by Suprayogi, Valcke and Godwin, who conducted a study on teacher variables and classroom size related to DI implementation in Grade-A-level schools in Indonesia and came to the conclusion that “[...] findings show that DI implementation seems high, but is still below a critical benchmark” (Suprayogi, Valcke & Godwin, 2017, p. 291).

2.1.2 Lack of current empirical evidence for DI-approaches

“Although differentiated instruction has gained a lot of attention in practice and research, not much is known about the status of the empirical evidence and its benefits for

enhancing student achievement in secondary education” (Smale-Jacobse et al., 2019, p. 1). The Dutch educational scientist Annemieke E. Smale-Jacobse and her colleagues point out – similar to the German studies – that empirical evidence concerning the benefits of Differentiated instruction in secondary education still lacks a solidifying research base. Their systematic review of relevant literature from 2006 to 2016 indicates only “small to moderate positive effects of differentiated instruction on student achievement” (Smale-Jacobse et al., 2019, p. 1). In contrast to the field of primary education, where preconditions of differentiation are different, and analyzed to a greater extent, the possible effects of DI in secondary education are still quite befogged. Additionally, Smale-Jacobse et al. point out that “although the concept of differentiated instruction is quite well-known, teachers find it difficult to grasp how differentiated instruction should be implemented in their classrooms” (Smale-Jacobse et al., 2019, p. 2). This was the main motivation for Smale-Jacobse et al. to carry out their review. They conclude their findings with the following analysis:

Overall, from previous review studies we can draw the conclusion that there is some evidence that differentiated instruction has potential power to affect students’ academic achievement positively with small to medium effects. [...] Furthermore, most studies [...] were executed in the context of primary education, while only few studies focus specifically on secondary education. [...] Researchers and teachers lack a systematic overview of the current empirical evidence for different approaches to within-class differentiated instruction in secondary education. (Smale-Jacobse et al., 2019, p. 5)

Unfortunately, the included articles that were analyzed for the review were almost solely carried out within mathematics and science. The researchers took account of 12 articles in total, that met certain criteria which were defined beforehand (Smale-Jacobsen et al., 2019, p. 6). On page 9 to 12 all articles are listed in a systematic table overview where one of the columns defines the subject in which the research was carried out. 11 of 12 were done in math-class or science-related subjects. One Swiss study was conducted with an emphasis on “Student outcomes in language and math”, where a standardized electronic achievement test was conducted in German, which in this case was the native language of the students since it was conducted in the German-speaking part of Switzerland and carried out by researchers from the St. Gallen University of Teacher Education (Smale-Jacobsen et al., 2019, p. 11; Vogt & Rogalla, 2009). So,

none of the included articles refer to settings in the foreign language classroom – which seems to underline the lack of sufficient empirical evidence the researchers highlighted in the above cited paragraph. The effects of Differentiated instruction in secondary education in general have only been investigated to a very small extent, but research on the effects of DI related to second language acquisition in secondary schools seems to be almost non-existent.

Despite that matter, which will be of relevance for my own research below, Smale-Jacobse et al. conclude their review with a slightly hopeful result concerning the benefits of DI in secondary education:

Although we cannot give a conclusive answer about the effectiveness of differentiated instruction in secondary education, most of the included studies do illustrate the possibility of improving student achievement by means of differentiated instruction. (Smale-Jacobse et al., 2019, p. 17)

2.1.3 Causal relationships between teachers' beliefs and the use of DI

Austrian researcher Susanne Schwab and her international colleagues Umesh Sharma (Australia) and Lisa Hoffmann (Germany) conducted a study dealing with students' perceptions on what the authors call *inclusive teaching practices* with 665 secondary grade students in two of the main subjects Math, German and English. In order to contextualize the study, Schwab et al. (2019) refer to previous research dealing with frequently reported factors that influence the use of inclusive teaching practices, e.g. the attitudes and beliefs of teachers concerning self-efficacy. According to Smale-Jacobse et al. (2019), the concept of inclusive education and teaching is a means of meeting students' learning needs in a heterogenous setting, and as such part of the discourse on Differentiated instruction (Smale-Jacobsen et al., 2019, p. 1-2). Against that background, Schwab et al. refer to some significant studies focusing on the causal relationship between teachers' attitudes and beliefs regarding the use of DI and/or instructional practices:

In addition, De Neve, Devos, and Tuytens (2015) found a close link between teachers' self-efficacy beliefs and the use of differentiated instruction. Holzberger, Philipp, and Kunter (2013) interviewed 155 secondary mathematics teachers and showed that teachers with higher self-efficacy beliefs have a higher instructional quality in teaching.” (Schwab et al., 2019, p. 63-64)

As pointed out before, even here we can see an imbalance concerning the subject relation. In the quoted studies, one study was carried out by interviewing secondary mathematics teachers – attitudes and beliefs of language teachers are not mentioned, even though it could be hypothesized that there might be a close correlation between language teachers' attitudes and beliefs and their use of differentiating teaching practices as well.

After the above presented background research and contextualization of the subject, I will in the next chapter take a closer look on my research objective as stated in the title of this thesis: “Differentiated instruction in secondary education – constraint or prospect in the foreign language classroom? A literature review on teachers' perceptions”. I will present my search results and analyze my findings.

3. Literature review

3.1 Selection process

As outlined earlier in this paper, I conducted my research for relevant studies and publications with the help of selected keywords, databases and inclusion criteria, and was hoping to find 10 to 15 different studies that are focusing on modern language teachers' perceptions of Differentiated instructions in a secondary education setting. As I screened the papers, I applied three different coding parameters, that all studies that would be examined should meet: The study is (at least in parts) conducted at secondary school level (1), the study deals (at least in parts) with teachers' perception of Differentiated instruction (2) in the context of the foreign language classroom (3). Studies that only deal with Differentiated instruction in secondary education in general terms were not included, neither research studies that have their focus on Differentiated foreign language instruction in an elementary setting.

Table 2

Inclusion criteria, categories and allocation of chosen studies

Inclusion criteria	Category A (6 studies)	Category B (3 studies)	Category C (3 studies)
Study is conducted (at least in parts) at secondary level (1)	X		
Study deals (at least in parts) with teachers' perceptions of DI (2)	X	X	X
Study is focusing on foreign language instruction (3)	X		
Study is conducted in higher education (Additional)		X	

As shown in table 2, I divided the papers into three different categories (A, B, C) based on title, abstract and keywords. In total, I found 12 relevant studies, but only six met all three of the criteria mentioned above (Category A). Category B consists of three studies (Güvenç, 2021, Ginja & Chen, 2020, Said Al Siyabi & Abdullah Al Shekaili, 2021) that

met criterion number 2 (teachers' perceptions on Differentiated instruction), and one additional criterion (higher education setting). Category C consists of three studies (Burkett, 2013, Hersi & Bal, 2021, Heng & Son, 2020) that only met criterion number 2. Those studies provide some valuable insights in line with previously mentioned findings but were not included in the actual review.

To summarize my research process, I will highlight problems I observed during my database search. Firstly, it was harder to find relevant studies than I thought. Reading the papers' abstract did not always help making clear in which setting a study had been conducted, e. g. in primary or secondary education, or in both. Many studies were rather vague about their setting or did not even specify the context until method and material was discussed. Another problem was that many studies focusing on teachers did not always give an account of which subject participating educators taught. This might be mentioned incidentally but was not necessarily self-evident.

3.2 Presentation of research studies

In Table 3 below, I list the six articles that met all the inclusion criteria in chronological order, based on the year they were published, including title and country where the corresponding study was conducted. All of them are written in English but were conducted in different parts of the world.

Table 3

Papers that met all three inclusion criteria: The study is, at least in parts, conducted at secondary school level (1), the study deals, at least in parts, with teachers' perception of Differentiated instruction (2) in the context of the foreign language classroom (3).

Nr.	Title (and authors)	Place (country)	Publishing year
1.	Teachers' perceptions towards differentiated instruction approach in secondary schools of Namangan City (Jamoliddinova, N., & Kuchkarova, Y.)	Uzbekistan	2022
2.	Differentiated instruction across EFL classrooms: A conceptual review (Suwastini, N. K. A., Rinawati, N. K. A., Jayantini, I. G. A. S. R., & Dantes, G. R.)	Indonesia	2021
3.	Conversations with Australian teachers and School leaders about using Differentiated instruction in a mainstream secondary school (Gibbs, K. & Beamish, W.)	Australia	2021
4.	The effects of differentiated instruction on Turkish students' L2 achievement, and student and teacher perceptions (Yavuz, A. C.)	Turkey	2020
5.	Secondary English teachers' perceptions of differentiated instruction for limited English proficient students (Langley, M. L.)	USA	2015
6.	Perceptions about Implementation of differentiated instruction (Robinson, L., Maldonado, N. & Whaley, J.)	USA	2014

As we can see in Table 3, it might be noteworthy that none of the studies were conducted in a central European setting, which could be an indicator for the lack of interest in the subject. During my search, I came across one (unpublished) Master thesis from Iceland that was dealing with a similar objective as mine, but was conducted as an empirical study (Oliver, 2016).

A more detailed overview regarding some of the most important parameters of studies being listed in category A can be seen in Table 4 below.

Table 4

Systematic overview of participants, methods and grade levels of the chosen studies listed in category A.

Nr.	Participants	Method	Grade level
1	English teachers at public schools	Semi-structured interviews, questionnaire, observation	Primary and secondary schools
2	EFL classrooms	Conceptual review	Elementary and secondary schools
3	Teachers of different subjects including languages and 2 school leaders	Semi-structured interviews	Secondary school
4	L2 Teachers	Reflective journal analysis	Grade 9 (secondary school)
5	L2 Teachers	Interviews	Secondary school
6	Teachers with different subjects including languages	Open-ended surveys, interviews and document analysis	Elementary, middle and secondary schools

As shown above, five out of six studies were conducted as empirical research (nr. 1, 3, 4, 5, 6) and one was a conceptual review (nr. 2). Table 4 shows clearly that all studies being allocated to category A were meeting all three inclusion criteria that are outlined in Table 2.

3.3 DI in the foreign language classroom – constraint or prospect?

Even though there are valid research results concerning teachers' perception of DI in general, the context of foreign language teaching in secondary education is not taken into account on a larger scale yet. Even though there are many studies that indicate that DI is a beneficial framework that positively influences student outcome and achievement as well as student motivation (Robinson, Maldonado & Whaley, 2014), research focusing on teachers' perception has shown that teachers most often consider DI as time-consuming and requiring in-depth training as well as a high degree of learner assessment (Yavuz, 2020) – in other words, teachers seem to perceive DI as a possible constraint rather than a prospect, despite the positive effects that can be related to the use of DI in different context of education. Additionally, the pedagogical discourse in educational science and subject didactics considers DI being an imperative to teachers,

advising them to meet the individual needs of all learners according to individual readiness, interests, and learning styles by providing a differentiated learning environment that facilitates appropriate possibilities for a diverse student body to reach their full academic potential (Robinson, Maldonado & Whaley, 2014). Against this idealistic picture of what teachers are told by authorities to apply and achieve in their classrooms, it might not be a surprise that many teachers are still hesitant towards DI and that the number of recurrent challenges mentioned in connection with Differentiated instruction seem to be a much bigger constraint to many compared to the benefits of applying the framework of DI in class on a regular basis.

As my research objective focusses on foreign language teachers' perception of DI in a secondary school setting, it will be interesting to see if the previous findings outlined above match the results of my study review. Below, I will present my analysis and document my discoveries.

3.4 What do teachers think about DI and how do they justify their views?

The analysis of the chosen studies has provided considerable results. I shortly summarized each of the studies and highlighted the most important findings.

Study 1 (Jamoliddinova & Kuchkarova, 2022)

Jamoliddinova and Kuchkarova, two researchers based at Namagan State University in Uzbekistan, conducted an empirical research study among 100 English teachers at ten public schools teaching grade 1-11, whereas the majority was teaching in grades 5-11, with the help of semi-structured interviews, a questionnaire and classroom observation. Results showed a significant gap between the self-awareness of the participating teachers and reality. According to interviews and questionnaire results, most of them perceived themselves conducting DI-oriented lessons, but reality, as observed in class, was different, mainly when in relation to content and process: “This study has found that generally, teachers are not so much aware of DI; teachers are textbook oriented; teachers assume that they are conducting lessons in a communicative approach but in reality, it can rarely be observed”. (p. 45). Furthermore, the study could show, that experience plays a major role for the implementation of DI: “The results indicate that teachers have

different points of view on differentiated instruction strategies based on their experience. [...] The analyses of data show that being familiar with DI is statistically significant toward the age, working experience, and grade currently teaching”. (p. 37).

Study 2 (Suwastini et. al, 2021)

The study conducted by Suwastine et. al, based in Indonesia, was designed as a conceptual review examining the use of DI in EFL classrooms, both elementary and secondary, by adapting Mary W. George’s (2008) method of so-called library research (“The study was designed as library research by adopting the model from George (2008) into a conceptual review on definition, characteristics, implementation, strength, and weakness of differentiated instruction by deriving mainly from experts’ opinions and previous studies on the topic”, p. 16). The review was based on the analysis of 32 different sources (e. g. books, articles, websites) after applying three different steps to outline the study: 1. identifying the topic, 2. proposing the research question, 3. determining the research plan. The researchers found out that it is quite clear that DI is beneficial for the students but poses significant challenges for the teachers. Suwastini et. al identified a range of teacher-related constraints, or perceived weaknesses of DI, as they chose to call it, such as time-consuming preparations; increased workload even during and after class, especially in relation to classes that had a big variation among students (“the more varied the classroom is, the more preparation it takes before the instruction”, p. 32); possible misunderstandings and concerns among students as well as parents due to different treatments of students in class; more complex classroom management (“It will be hard to control the group in a big class that involves more than 30 students in a class”, p. 33) and a very high demand of constant adaptations and classroom research (“the teachers keep trying different strategies, method, and media for improving the students’ general outcome”, p. 35). The researchers summarize their findings with an emphasis on the negative feelings many teachers seem to experience when being confronted with DI-approaches: “Many teachers admitted that they feel frustrated when attempting to deal with learner variety. (p. 33).

Study 3 (Gibbs & Beamish, 2021)

The Australian researchers Gibbs and Beamish, based at Griffith University in Brisbane, conducted an empirical study with teachers of different subjects (including foreign languages) with the help of semi-structured interviews in a secondary school. They identified a set of obstacles that hinders an effective implementation of DI in classrooms, such as limited time or lack of time for planning, preparing and instruction (“a commonly identified factor inhibiting the use of DI in secondary settings”, p. 106), lack of administrative support and rather inflexible organizational structures in secondary schools such as timetabling. Even though the study showed that DI was an important instructional means (“Teachers reported using several well-known DI strategies, with experienced teachers applying a more considered approach.”, p. 97) – mainly due to student diversity – findings also highlighted important concerns, where the time factor seemed to be the main obstacle being perceived by teachers. Furthermore, as stated in the quotation, even experience plays a major role when it comes to the implementation of DI, which is in line with results of study 1.

Study 4 (Yavuz, 2020)

Turkish researcher Ahmet C. Yavuz analyzed, among other parameters, the perception of teachers regarding DI within the context of Turkish L2-students. While students perceived DI as entertaining, engaging, instructive, the analysis of so-called reflective journals of the corresponding teachers at a private Turkish high school highlight some important issues regarding possible obstacles to DI-implementation such as time constraints, difficulties to acquire in-depth knowledge of learner characteristics and the demand of meeting the needs and abilities of all learners, the lack of professional training or lack of knowledge how to differentiate effectively, ambiguous perceptions of DI among teachers and the empirical lack of scholarly effort, the need to keep up with school schedule and DI at the same time as well as meeting institutional curricular requirements. Even Yavuz concluded that: “Although DI looks like a potential solution for grappling with learner differences, and thus maximizing achievement, most teachers maintain traditional instruction and abstain from espousing DI in their contexts [...]” (p. 314). According to his findings, Yavuz makes his audience aware of the many challenges the Turkish teachers perceived in relation to DI.

Study 5 (Langley, 2015)

The doctoral study of M.L. Langley, carried out at Walden University in Minnesota, USA examines secondary English teachers' perception of DI for students with limited proficiency with the help of interviews. Among other factors, the study identified similar issues to those already mentioned in previous paragraphs such as difficulties with trying to keep up with everyday requirements teachers face, lack of time ("for being able to successfully collaborate with their colleagues in order to fully understand what differentiated instruction is and how to better serve LEP students with this concept", p. 79), students not possessing sufficient skills to be able to work DI-based as well as a need for DI-modelling in order to see it in reality and "on location". But Langley also makes clear that: "According to the study findings, the participants in the study used differentiated instruction strategies in many aspects of their lessons and activities including modeling, grouping, and technology." (p. 79).

Study 6 (Robinson, Maldonado, & Whaley, 2014)

The US-American researchers Robinson, Maldonado and Whaley, based at Walden University in Minnesota identified a range of significant key findings and obstacles regarding perceptions about the implementation of DI-approaches. They conducted a study among teachers of different subjects including foreign languages at elementary, middle and high school level with the help of open-ended surveys, interviews and document analysis. Results of their research highlight a perceived lack of professional teacher development ("need for professional development opportunities for differentiated instruction which addresses classroom management, implementation processes, hands on sessions to create differentiated lessons and plans, and strategies that have been proven to work in classrooms across the curriculum", p. 17), time constraints, a lack of clear evidence about how differentiated instruction meets the needs of all learners, difficulties of learning how to initially implement differentiated instruction, the (unproven) belief that differentiated instruction is essential for student success, and maybe just another educational trend that will quickly pass, an impression amongst educators that differentiated instruction requires teaching students one by one. ("Participant 5 stated she overcame her obstacle when she realized differentiated instruction did not have to be done with every student, every day; it was a tool to be used when needed,

Participant 9 stated overcoming her obstacle meant including bigger differentiated instruction projects with smaller collaborative assignments along the way—not trying to do everything all at once”, p. 15) and fear of losing control of the students.

Despite the many constraints, teachers that participated in the study shared a consensus about why DI is important for their instruction – because students are different and therefore a need a variety of instructional approaches in order to succeed, *but*: “The findings showed that teachers perceive successful implementation of differentiated instruction as something that does take time to incorporate within the classroom, but practice and diligence make it possible.” (p. 17). In addition, the researchers concluded, that many teachers might be familiar with the term, but the implementation still seems to be a mystery to many educators, and those that use it need to cope with a range of constraints which they mostly had to face by themselves: “While the teachers within this study were actively engaged in implementing differentiated instruction, they faced many obstacles along the way and had to learn to overcome them on their own.” (p. 19).

3.5 Summary

Looking into the research result of the six presented studies provided me with considerable insight regarding foreign language teachers’ perceptions of Differentiated instruction in secondary education – even though not all research projects were carried out solely on secondary level or with foreign language teachers. That is important to keep in mind, it reflects the fact that the current state of the art of my research objective as still being fragmentary. But in my opinion, the overall research results can provide a sufficient answer to my scientific research question on *what* the teachers think about the DI method and *how* they justify their views. Each of the presented studies contributed relevant and legitimate perceptions from teachers regarding Differentiated instruction. Almost all studies referred to teachers perceiving time constraints and/or lack of time in order to successfully implement DI in their classrooms, together with a range of other practical obstacles such as lack of experience and/or professional training, problems related to classroom management such as a high demand on teachers of constantly evaluating the relevance of their instruction methods in order to be able to meet the need of all students accordingly and subjective misconceptions of DI being an educational trend or an approach were each student should be taught one on one.

On the other hand, some of the studies' results indicate a broad consensus regarding DI – many teachers are convinced that in order to be able to meet an increasingly diverse student body, DI is a necessity – at least in theory. Practically, the constraints seem to be significant though. Summing up, the studies show a clear picture of why DI, in theory, is a valid instructional approach for diverse classrooms. But the perceived constraints and obstacles teachers face when they try to implement DI, seem to outnumber the possible gain of positive effects, and the foreign language classroom in secondary education is, unfortunately, no exception to that perception.

4. Conclusion

The present study intended to find out how foreign language teachers in secondary education perceive the instructional approach known as Differentiated instruction as reported in current research articles that were retrieved through an extensive search in relevant databases. Firstly, it was found that research focusing on secondary teachers' perception of DI in the foreign language classroom is incoherent as less articles and publications taking this perspective into account were found, as initially expected. Distinctive qualitative and quantitative research on secondary L2 and L3 teachers' perceptions of DI occurs only rarely, the same applies for research on teacher perceptions in general (cf. Hersi & Bal, 2021).

Secondly, it was found that, even though DI is a widely accepted instructional approach that is seen as a necessity in a diverse classroom by most (secondary) teachers (in the foreign language classroom), many teachers perceive significant constraints when implementing DI in their classroom, where lack of time was the most important obstacle mentioned. The lack of sufficient professional teacher training in DI is another constraint frequently mentioned in the conducted review as well as general misconceptions of DI. The gap between the desired and actual use of DI is also of significance when analyzing teachers' perceptions of DI. Research indicates that, in theory, teachers agree that they want to use it, and maybe even think, they actually do (cf. Jamoliddinova & Kuchkarova, 2022), but in reality they do not know how to successfully implement the concept in class.

Regarding recommendations and limitations of this research, it should be noted that this study could provide relevant findings, but a broader scale research of the field is needed in order to generate more representative research results, especially in European settings, where empirical studies conducted in foreign language instruction in secondary education seems to be (almost) non-existent.

To conclude, I hope the findings of this study can serve as a motivation to initiate further research that aims to investigate foreign language teachers' perceptions of DI in secondary settings.

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