

Preparing Pre-Service English Teachers for Differentiation in the Swedish Primary School

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Abstract

Pre-service teachers face both challenges and opportunities as they prepare to teach English in the increasingly diverse Swedish compulsory school (Years 0–9). Differentiation, understood here as the deliberate adaptation of teaching content, process, product, and learning environment to address learners' varying needs and readiness levels, is a critical strategy that teachers must develop to address the wide variations in English language proficiency among pupils in Swedish schools, driven by factors like differing levels of exposure to English outside school, unequal quality of English instruction, and linguistic diversity. This study is informed by Vygotsky's sociocultural theory, emphasizing learning through social interaction in the Zone of Proximal Development (ZPD), and Tomlinson's differentiation model, focusing on adjusting content, process, product, and environment. It explores how pre-service English teachers may understand and apply differentiation for Years 4–6 in their lesson planning assignment within the teacher education course *English Language Learning and Teaching* (ELLT). Focusing on five cohorts of pre-service teachers who completed the ELLT course, the study employs content analysis of their lesson plans, specifically examining their strategies for differentiation. The results indicate that pre-service teachers demonstrate varied differentiation strategies in lesson plans, such as group work, peer collaboration, and task variation. Process modification was by far the most common strategy, but content and product modifications were less salient. Most lesson plans targeted low proficiency pupils, while limited attention was given to high proficiency learners. While theoretically sound, practical applications are less evident in their planning, highlighting the need for more hands-on experience.

Keywords: differentiation, primary teacher education, English language learning and teaching, lesson planning

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1. Introduction

Classrooms today are increasingly characterized by pupils with varying proficiency levels, interests, and language backgrounds. In Swedish compulsory schools (Years 0–9), this diversity is particularly evident in English language classrooms, where pupils demonstrate wide variations in English language proficiency. These variations stem from factors such as unequal quality of instruction, the increasing linguistic diversity of the pupil population, and differing levels of exposure to English outside school (e.g., Sundqvist and Olin-Scheller 2013). These disparities highlight the necessity of differentiated instruction (DI), an approach that emphasizes tailoring teaching to meet the unique needs of all learners. DI is not simply a strategy but is rather a framework that offers a way to adjust content, processes, products, and environment to support pupils' learning and development (Tomlinson et al. 2003; Tomlinson 2014).

The question 'How can I include all the pupils when their levels of English are so different?', posed by one of our pre-service teachers, captures the core challenge faced by many future educators navigating the realities of heterogeneous classrooms. In Sweden, the inclusion of differentiation in teacher education is grounded in national policy. The national curriculum emphasises adapting teaching to individual pupils' circumstances and needs (Skolverket 2022: 6). Recent national policy discussions further reinforce this inclusive focus, emphasizing teaching and learning designed to meet the needs of all pupils (Swedish Government Official Reports [SOU] 2025:19). Sweden thus provides a particularly relevant context for studying differentiation, as its education system is guided by the long-standing principle of a school for all (Blossing et al. 2014), combined with growing linguistic and proficiency-related diversity in English classrooms.

Incorporating DI into classrooms requires teachers to first identify learners' proficiency levels, interests, and learning profiles. As outlined by Pham (2012) and Tomlinson et al. (2003), this involves proactive planning to ensure instruction, materials, and assessments are tailored to diverse abilities while maintaining an inclusive, community-oriented environment. By modifying content complexity, sequencing instructional processes, and offering varied modes of assessment, teachers can engage pupils meaningfully, supporting both struggling and advanced learners.

The need to examine strategies for teaching in mixed-proficiency classrooms has become increasingly urgent as highlighted by recent

research on the importance of inclusive education. Despite its recognized importance, differentiation remains a challenging area for teacher development. Research suggests that teachers still lack knowledge about comprehensive frameworks to guide them in effectively implementing DI in diverse classrooms (Gaitas and Martins 2017; Rovai and Pflingsthorst 2022; Tomlinson et al. 2003). Many new teachers, in particular, face challenges in developing the confidence needed to apply differentiation strategies in practice (Dixon et al. 2014). Additionally, pre-service teachers (PSTs) often struggle to bridge the gap between theoretical knowledge and its practical application in real classroom settings (Crichton et al. 2021; Paulsrud and Gheitas 2024). These difficulties reflect a broader distinction noted in research, that is, pre-service teachers may develop a semantic understanding of DI, being able to describe its purpose and key principles, yet struggle to achieve pragmatic clarity, that is, knowing how to translate these principles into concrete planning decisions and responsive teaching moves (Obrovská et al. 2024; Rovai and Pflingsthorst 2022). Integrating this distinction into teacher education highlights the importance of providing PSTs with structured opportunities to practice designing differentiated tasks, receive feedback, and engage in guided reflection that links theoretical models of DI to the practical realities of classroom work.

In the Swedish context, where teachers frequently encounter mixed-proficiency classrooms, they may lack the necessary training to manage diverse learning needs effectively, often overlooking pupils' differing experiences and skill levels in their instruction (Svensson 2017). As a result, as noted by The Swedish Schools Inspectorate, some pupils may not receive appropriate stimulation, leading to disengagement and a loss of motivation, particularly for high achieving learners (Skolinspektionen 2011; 2018; 2022).

Given these challenges, this study explores whether instructing PSTs for Years 4–6 in the theoretical foundations of differentiation can support their effective understanding and implementation of differentiation strategies in lesson planning. By analyzing their lesson unit plans (LUPs) within the course on English Language Learning and Teaching (ELLT), we have examined the ways in which they incorporate differentiation strategies to address the diverse proficiency levels of their future pupils. The focus on Years 4–6 is key as at this stage in their education, pupils are consolidating early literacy skills in English while transitioning toward

more abstract and independent language use, laying a critical foundation for continued English learning throughout secondary school.

1.1. Aim and research questions

The rationale for this study stems from our experiences as teacher educators of English language teaching and learning, our interactions with students, and our research. The aim of the present study is to explore how pre-service English teachers of Years 4–6 conceptualize and apply differentiation in their lesson Unit plans (LUPs) within the course English Language Learning and Teaching (ELLT). The focus is therefore exploratory rather than evaluative, aiming to understand how these future teachers interpret and operationalize differentiation in their planning.

Specifically, we analyzed their lesson unit assignments to identify how they employ differentiation in their planning, guided by the following research question: How do the pre-service teachers' LUPs reflect different forms of differentiated instruction?

2. Review of literature

Differentiated Instruction (DI) has gained significant attention as a pedagogical approach that accommodates diverse pupil needs and promotes equity in education. The emphasis in Sweden on an inclusive school for all has long placed pedagogical differentiation at the center of educational policies (Blossing et al. 2014). Likewise, the approach has been widely advocated in response to global initiatives, such as *Education for All*, which call for inclusive teaching practices that ensure all learners have access to meaningful education (UNESCO 2020). DI provides multiple pathways for pupils to engage with content, process new knowledge, and demonstrate their understanding, making it a flexible and pupil-centered approach (Tomlinson 2014).

While differentiation is widely advocated in education, research suggests that teachers face numerous challenges in its implementation. Studies across different educational contexts highlight three primary obstacles: 1) Time and resource constraints: teachers often struggle with limited preparation time and insufficient materials tailored to differentiation (Gaitas and Martins 2017; Zólyomi 2022); 2) Limited teacher training: pre-service and in-service teacher education programs do not always provide sufficient training on DI strategies, making it difficult for teachers to implement differentiation in practice (Rovai and

Pfingsthorn 2022); 3) Theoretical vs. practical gaps: while teachers may be aware of theoretical frameworks for differentiation, they often lack concrete strategies for applying them in the classroom (Obrovská et al. 2024; Riordan and Convery 2022).

Although education policies such as the Swedish national curriculum encourage teachers to adapt instruction to the diverse needs of pupils, research highlights a gap between policy and practice. Teachers often struggle to translate these principles into classroom action, particularly when differentiating for average and high performing pupils. Studies show that teachers frequently concentrate on supporting learners with visible difficulties while overlooking others' prior knowledge and language experiences in lesson planning (Obrovská et al. 2024; Skolinspektionen 2011, 2022; Svensson 2017). The result is a one-size-fits-all approach that may leave advanced pupils both insufficiently challenged and less motivated (Lightbown and Spada 2013). Limited training and professional development further constrain teachers' ability to implement differentiation systematically (Gaitas and Martins 2017).

In Sweden, variation in pupils' English proficiency is particularly pronounced, largely due to differing degrees of exposure to English outside school and pupils' multilingual backgrounds (Schurz and Sundqvist 2022; Sundqvist 2020). Some pupils engage extensively with English through media and gaming, while others have limited contact with the language before formal instruction. This creates substantial differences in readiness and progress within the same classroom. Differentiated instruction is therefore not merely an option but a necessity for ensuring equitable learning conditions. This pedagogical approach aligns closely with national education policy, which emphasizes teaching that meets each pupil's circumstances and promotes knowledge development for all (Swedish Government Official Reports [SOU] 2025). The report *Knowledge for all: New curricula with a focus on teaching and learning* (SOU 2025:19) underscores the importance of adapting instruction to pupils' diverse experiences and providing equivalent opportunities for all to develop their English.

Research suggests several strategies for managing mixed-proficiency classrooms through differentiated instruction. One widely recommended approach is flexible grouping, which involves organizing pupils into temporary or ability-based groups that allow instruction to be tailored according to pupils' progress and needs (Gaitas and Martins 2017).

Another key strategy is the use of tiered assignments, where the complexity and cognitive demands of tasks are adjusted rather than simply changing the quantity of work, thus ensuring meaningful engagement for all learners (Bell 2012). Gamification also offers promise, as interactive, game-based learning tasks provide varied levels of challenge and help maintain motivation among pupils with different skill levels (Gheitasi 2022; Zólyomi 2022). Additionally, scaffolded peer learning has proven beneficial, particularly when pupils engage in structured collaboration where more proficient peers support others. This aligns with Vygotsky's concept of the Zone of Proximal Development (ZPD), wherein learning is facilitated through guided social interaction (Riordan and Convery 2022). Lastly, an inclusive classroom environment plays a foundational role in successful differentiation by creating a safe and supportive space where all pupils feel valued and are encouraged to participate and take academic risks (Tomlinson 2014).

Although international research on DI is expanding, studies specifically examining how Swedish English teachers implement differentiation strategies remain limited. Given Sweden's strong emphasis on inclusive education (Skolverket 2022; Swedish Government Official Reports [SOU] 2025), it is critical to investigate how English teachers differentiate instruction, and how teacher training programs can better support them. In this review, we have considered previous research involving both in-service and pre-service teachers to provide a broad understanding of the challenges and practices surrounding differentiated instruction. However, the focus of our study is specifically on pre-service English teachers. By analyzing their LUPs, we contribute to a deeper understanding of how differentiation is conceptualized and applied during teacher education in the Swedish context. In doing so, the study seeks to offer insights into how training in DI strategies might be effectively integrated into teacher education programs, equipping future educators with the tools needed to support all learners in increasingly diverse and multilingual classrooms.

3. Theoretical framework

This study draws on two complementary frameworks: Vygotsky's (1978) sociocultural theory and Tomlinson's model of differentiated instruction (2001, 2014). Together, they provide a lens for understanding how pre-

service teachers design learning activities that respond to pupils' diverse readiness levels, interests, and learning profiles.

Vygotsky's (1978) sociocultural theory emphasizes learning as a socially mediated process where knowledge is constructed through interaction with others. Central to this theory is the Zone of Proximal Development (ZPD), which represents the gap between what learners can achieve independently and what they can accomplish with guidance from a more knowledgeable other (Vygotsky 1978). In DI, this concept underscores the importance of tailoring teaching to meet pupils' readiness levels while fostering their progression toward autonomy. Scaffolding, a key instructional strategy rooted in ZPD, involves providing temporary support to help learners complete tasks they would not be able to achieve on their own (Wood et al. 1976). Teachers play a crucial role in facilitating this process, adapting instruction to provide the appropriate level of challenge and support for each learner. In a differentiated classroom, scaffolding can take various forms, such as adjusting content complexity, varying instructional methods, or encouraging structured peer collaboration. Effective DI thus requires teachers to identify learners' current knowledge and guide them from the familiar to the unfamiliar through responsive pedagogical design.

Tomlinson's model complements this theoretical foundation by offering a practical framework for differentiation through modification of content, process, product of instruction, and learning environment (2001, 2014). *Content modification* involves adjusting the complexity and scope of what pupils learn to align with their developmental levels and individual progress, centering on essential concepts and skills for all pupils. Pre-assessment may help teachers match pupils with suitable activities, offer choices, and provide both basic and advanced resources corresponding to pupils' levels of understanding. *Process modification* refers to varying the instructional methods, tasks, and activities used to support new learning. Effective instructional planning should present content in a logical progression, from simple to complex or concrete to abstract, ensuring that lessons are meaningful and engaging within an enriched academic setting. *Product modification* allows pupils to demonstrate their learning in different ways, showcasing their understanding and application of content. Offering varied types of assignments enables pupils to put their learning into practice in ways that suit their strengths and interests. *Learning environment modification* entails adjusting the classroom climate or tone

to create a supportive and responsive learning atmosphere in which every pupil is valued and accepted.

With DI, content, process, product, and the learning environment are modified according to pupils' readiness, diverse interests, and learning profiles (Tomlinson 2014: 25–26). Readiness reflects entry points in knowledge or skills, which may be more or less developed. Interests refer to individual likes and dislikes, while learning profiles indicate preferences for learning activities. Teachers should also consider pupils' learning profiles and preferences by incorporating critical and creative thinking, increasing task complexity, and offering diverse opportunities for engagement. As a teaching philosophy, differentiation emphasizes responsive pedagogy rather than fixed instructional methods to foster inclusive learning.

By combining sociocultural theory and Tomlinson's differentiation model, this study situates differentiation as both a theoretical principle of mediated learning and a practical framework for instructional design. This combination supports our analytical focus on how pre-service teachers conceptualize and apply differentiation in lesson planning.

4. Methods and materials

According to the Swedish National Agency for Education (Skolverket 2022), teaching should be designed so that pupils receive guidance and stimulation as well as extra adaptations or special support needed. Teachers should consider each pupil's needs, circumstances, experiences, and mindset. Thus, pre-service teachers need to learn how to proactively respond to pupils' needs in the classroom, steered by both classroom practices in response to pupils' levels and by the national curriculum. The primary teacher education program in Sweden is a four-year course designed around explicit learning objectives within a national framework established by the Swedish state. As English is a required school subject during pupils' compulsory education from ages 6 to 16 (Years 0–9), all pre-service primary teachers in Sweden are required to study 30 ECTS credits (20 weeks of fulltime studies) of English as part of their teacher education program for Years 4–6.

In response to the emphasis on inclusivity and support for diverse learning needs in Swedish education policy, we developed the module 'Lesson planning in English teaching' (3 higher education credits, two weeks of study) in the obligatory pre-service teacher ELLT course for

Years 4–6. For this course, PSTs develop a five-week LUP focusing on process writing with themes touching on conflicts, power and/or social relations (e.g., bullying). The PSTs must address differentiation in their lesson plans, with support of the course literature (e.g., Gregory and Burkman 2011) and/or practical ideas on differentiation covered in the course seminars (e.g., from Diaz 2019). In the section specifically addressing differentiation, the PSTs had the question *How will you address differentiation (meeting all of the pupils' needs and levels)?*

For this study, PSTs who had already completed the course and received their grades were contacted. In accordance with the research ethics of the Swedish Research Council (2017), we provided information on the study and requested informed consent. Forty-two PSTs from five cohorts gave us permission to use their LUPs for a series of research studies (e.g., Paulsrud and Gheitasi 2024). Due to changes in the ELLT course over the five years, only 31 of the LUPS addressed differentiation. After anonymizing these 31 LUPs, we created a master document including each PST's section written about how they planned to incorporate differentiation. The length of the text in the section on differentiation varied substantially, ranging from 31 to 296 words.

We uploaded each anonymized LUP into ATLAS.ti for a detailed examination of how the PSTs applied differentiation strategies in their planning. We conducted content analysis and manually coded the data deductively, according to Tomlinson's (2014) four modifications of differentiation (content, process, product, learning environment). In addition, we conducted an inductive analysis to identify patterns not accounted for by the initial framework. This resulted in the development of a fifth category of coding focusing on high and low proficiency pupils, which we coded as 'target of differentiation'. This dual approach ensured sensitivity both to theory and to context-specific variation.

Following Creswell and Poth's (2017) recommendations for ensuring the credibility of qualitative research, we applied the strategy of using two evaluators and consistent coding practices. To ensure reliability and validity, triangulation was employed through intra-rater and inter-rater consistency checks. Intra-rater reliability was established by each researcher independently reviewing all codes multiple times with reference to the four defined categories. Inter-rater reliability was calculated through percent agreement, which reached approximately 90% before the joint review. The joint review of codes refers to the process by

which both researchers met to discuss and reconcile any remaining differences, examining each instance of coding until full consensus was reached. After this collaborative verification, agreement increased to 100%, confirming the consistency of coding decisions across the dataset.

5. Results

The analysis of 31 LUPs written by the PSTs revealed a range of approaches to DI. This section presents the findings through the lens of Tomlinson's (1999, 2001, 2014) four key dimensions of modification for DI: content, process, product, and learning environment. The data is organized according to these categories, with illustrative examples drawn directly from the LUPs. Examples included in the tables were selected because they represent typical patterns identified within each category of differentiation, illustrating how these strategies appeared in the lesson plans. Each participant is identified by a pseudonym (PST1–PST42). All excerpts are presented verbatim, preserving original language, word choices, grammar, and spelling to reflect the authentic voices of the PSTs.

5.1 Differentiated instruction

Analysis of the LUPs was conducted to identify and code instances of the four dimensions of DI: content, process, product, and learning environment. The results of this coding process are summarized in Table 1.

Table 1: Overview of the Four Dimensions of Differentiated Instruction

	Content	Process	Product	Environ- ment	Totals
Number of instances	18	81	20	21	140
Percentage of instances	12.86	57.86	14.29	15	100%

As the table illustrates, process differentiation was by far the most frequently applied modification, with 81 instances identified across the dataset. In contrast, content differentiation was the least commonly observed, with only 18 instances recorded. Product differentiation appeared in 20 instances, while learning environment considerations were

noted in 21 instances. The following sections examine each of these categories in more detail, with representative examples drawn from the LUPs to illustrate how the PSTs planned to implement differentiation in their planning.

5.2. Content Modification

Content differentiation involves modifying instructional materials or learning objectives based on pupils' readiness and learning profiles. The data indicate that content differentiation was the least frequently addressed aspect with a total number of 18 instances. Only a few lesson plans (15 LUPs) included adjustments to content complexity. While some PSTs planned to provide multiple versions of a text at different complexity levels (e.g., adjusting vocabulary or offering simplified vs. advanced texts), few engaged in deeper content modifications, with minimal adaptation for different proficiency levels. These PSTs focused on modifying the complexity of input, adapting vocabulary or text difficulty, and offering alternative modes of content access to better suit varying readiness levels. A notable trend was the frequent use of differentiated vocabulary scaffolding strategies, such as word banks or adapted word lists, which appeared in at least five instances of content differentiation. In some cases, PSTs planned for open-ended tasks where pupils could choose a topic or level of difficulty, adaptive technologies or pre-assessment to inform the selection of content materials.

The examples in Table 2 below demonstrate PSTs' plans to work with content differentiation. In excerpt 1, PST5 planned to use graded reading materials, suggesting that pupils could engage with letters written by other learners at similar proficiency levels. This approach reflects content differentiation by aligning textual input with language readiness. Similarly, in excerpt 2, PST27 structured vocabulary learning by assigning different word lists to pupils, enabling them to build distinct lexical sets and teach one another in a follow-up peer activity.

Table 2: Content Modification

Example	Text from LUP
1.	PST5: My idea is that the pupils should be able to read letters from other pupils who are at a similar level to themselves. /.../
2.	PST27: During the lesson the vocabulary learning will be through searching, reading and discussing the words. One aspect is also that the pupils will start with different words so that they also will be able to teach each other new words when doing the third activity. /.../
3.	PST42: Begin the lesson with a quick pre-assessment to gauge students ' prior knowledge and understanding of conflicts and diversity /.../ Provide a range of materials suited to different levels and offer translated key terms or instructions /.../ Utilize educational apps that adjust difficulty levels based on students' progress, providing personalized learning experiences /.../

PST27's task demonstrates an attempt to differentiate content input while embedding collaboration. Another approach was evident in PST42's LUP, where a pre-assessment was used to gauge pupils' prior knowledge. Based on this, PST42 proposed offering tiered materials, translated key terms, and adaptive educational apps that calibrate content difficulty according to pupils' proficiency levels, addressing both readiness and individual learning profiles.

5.3. *Process Modification*

Process differentiation refers to the ways in which pupils engage with the material during the learning process. It was the most frequently employed differentiation strategy in the lesson plans. Analysis of the data showed that PSTs addressed pupils' diverse readiness levels and learning profiles by implementing scaffolding techniques, structured group work, peer support, use of visual and technological aids, and step-by-step guidance. These strategies aimed to vary the way content was delivered or the level of support offered during learning activities. Many PSTs incorporated peer-assisted learning, whereby more proficient pupils could support those who were struggling. This strategy appeared in at least 21 instances, including flexible grouping, pair work and peer feedback. It was

sometimes used together with teacher scaffolding, such as templates or visual materials to promote inclusive participation and learning from peers. Scaffolding approaches also included sentence starters, mind maps, shared writing activities, and the breakdown of tasks into manageable steps. Furthermore, translanguaging was identified in approximately seven plans, where PSTs encouraged the use of pupils' strongest languages either as a support tool or a mode of classroom communication.

Table 3: Process Modification

Example	Text from LUP
4.	PST3: /.../ First of all, brainstorming is included in this lesson plan /.../ Furthermore, shared writing is included in this lesson plan /.../ Moreover, pupils work in groups, where less proficient pupils are assisted by more proficient pupils /.../ Additionally, pupils are provided with a title and questions for the group work, which helps structuring the writing /.../. Lastly, the teacher motivates pupils through effective feedback, where attention is on the next step to take rather than pupils weaknesses /.../.
5.	PST8: /.../ Some pupils may need some questions they can answer to get started, therefore I will give some examples on the whiteboard so they easily can get started. Some of them may need support from their mother tongue language to be able to express themselves /.../ The templates that are being used is also something that take differentiation into account. It helps the pupils focusing on the task, what should be in it and how they can write.
6.	PST21: To meet every pupil needs and give them the tools so they can succeed with their class /.../ Here is it great to use ICT tool. Using ICT tools will help more pupils to understand and see the different between the characters and sort out the information for the pupils /.../ During the warmup activity when the teacher presents the four characters from Alice in Wonderland will be post on the white board with photo and name /.../ The teacher have a bigger chance to reach every pupils with break down the lesson and clarify every single part of it in both oral, written, and visual for the pupils.

Additionally, parallel to multimodal instruction (e.g., both oral and visual instructions), several PSTs emphasized the role of ICT tools and assistive technologies such as text-to-speech, spell checkers, and apps like AppWriter to support different processing needs and learning preferences.

As illustrated in the examples in Table 3 above, several PSTs used flexible grouping and structured collaboration to support diverse learners. For instance, in excerpt 4, PST3 included a combination of brainstorming, shared writing, and group work reflecting a multi-layered scaffolding strategy where pupils were supported through both teacher-initiated structures and peer collaboration. Parallel to teacher feedback as a source of scaffolding, grouping was used intentionally to ensure peer support. PST8's lesson plan demonstrated differentiated entry points into writing tasks, offering several layers of support to pupils. Translanguaging practices, along with use of visual scaffolds and structured templates, were suggested to enable pupils with different readiness levels and language repertoires to participate in the task. Technology was another tool used to support differentiated processes. In excerpt 6, PST21 introduced multimodal instruction and the use of ICT tools to scaffold learning. The lesson plan combined visual aids (photos), structured character comparison tasks, and accessible formats (oral, visual, written) to support learners with varying language and processing needs.

5.4. Product Modification

Product differentiation, which entails providing multiple ways for pupils to demonstrate their learning, was the second least emphasized form of differentiation in the lesson plans. While a few PSTs offered options or flexible outcomes for pupils' work, the majority relied on a single task or assessment format, with limited opportunities for learners to choose how to present their understanding. Among the 31 LUPs a total of 13 PSTs clearly addressed product differentiation. The examples that did appear typically included open-ended task length and content complexity, use of visual or multimedia elements to support or replace written expression, and choice of output format such as written stories, storytelling, or film. The most frequently used strategy was variation in word or text length, which appeared in 7 LUPs. In these cases, pupils were invited to write more or less depending of their proficiency levels. Several PSTs also offered non-written output options such as drawing and audio recording as well as flexible assessment criteria that took individual levels into account.

Table 4: Product Modification

Example	Text from LUP
7.	PST7: /.../ The reason why they write their own comic books is also so that they can write as long, or as short, comic books as they want, based on their individual needs and abilities. Those who have difficulties in writing can, for example, add more pictures to their comic books, to strengthen the text they have written./.../
8.	PST26: /.../ All pupils will have their own feedback that will help them get further. The pupils will take part of this assignment in many different forms. From storytelling to movie.
9.	PST35: To accommodate pupils' varying levels of proficiency and enable them to choose what works best for them with teacher support, writing tasks are divided into centers /.../ Higher level pupils have the opportunity to elaborate on their stories with more detail, expanded vocabulary, and fluency.

One example of product differentiation is in PST7's lesson plan (see Table 4), where pupils were asked to create their own comic books. In this case, the pupils' product was adaptable in both length and modality, allowing pupils to emphasize images over text if needed which allowed for differentiated expression of understanding, particularly supporting learners with lower writing proficiency. PST26 also incorporated multiple output formats in their assignment by introducing flexible product design where pupils could choose between narrative writing and a digital or performative format such as film, depending on their strengths and interests. Likewise, PST35, as shown in excerpt 9, applied product differentiation by structuring writing tasks into learning centers, giving learners room to vary the complexity of their output. PST35 enabled variation in the depth and complexity of the final written product, which allowed for differentiation based on pupil readiness.

5.4. Learning Environment

Learning environment differentiation, which involves adapting the physical and emotional setting of the classroom to support all learners, was addressed by several PSTs in their lesson plans. Although less commonly

addressed than process differentiation, environment differentiation appeared in 17 LUPs. Some examples of differentiation of the learning environment included responsiveness, emotional safety, and teacher presence to reduce exclusion and promote belonging. PSTs referred to practices such as providing spaces for pupils to work based on preference, allowing flexibility in how and where pupils learn to increase comfort and focus, supporting emotional well-being through encouragement, patience, and individualized attention, and creating respectful peer groups that promote trust and collaboration. Several PSTs explicitly stated they wanted ‘every pupil to feel they can try their best to succeed’ and emphasized ‘creating a respectful classroom for all’.

Table 5: Learning Environment

Example	Text from LUP
10.	PST18: I have considered this, and I will do this unit in a class that I know and can then adjust the pairs so that the students feel safe with each other and are suitable for working together. I have met students who for various reasons cannot work with others, then I will be their partner /.../ The students are also welcome to change places in the classroom and maby sit in a group room or in the hall.
11.	PST20: The feedback session will not be too long for those who may have concentration issues as well as not too short so that pupils with e.g. dyslexia will have the time they need. By adapting the instructions etc. after every pupil in the class is hard but still needed. It is important to include all pupils, not only the ones that may find it hardest /.../
12.	PST36: It is important for me to see the differentiations of the pupils in a positive way, instead of seeing a negative thing /.../ I will always be there and support them too.

As shown in the examples in Table 5, several PSTs emphasized the importance of emotional safety and positive peer dynamics as a foundation for learning. PST18 noted the need to tailor groupings based on pupils’ comfort levels highlighting flexible use of space and intentional group formation used to foster a secure and inclusive environment. In the other example, excerpt 11, PST20 focused on managing time and instructions to accommodate diverse learning needs, including pupils with dyslexia and

attention difficulties. In this way, PST20 addresses pupils' cognitive and emotional needs through structured time management and personalized support strategies. In addition, PST36 framed differentiation as part of a broader philosophy of inclusion and support to reduce exclusion and promote belonging.

5.5. Target of Differentiation

An analysis of the LUPs reveals that most PSTs targeted their differentiation strategies primarily toward learners with low English proficiency. These learners were the most frequently referenced group when planning for support, and the strategies aimed at them were more detailed and varied. In contrast, only a few PSTs addressed the needs of high-proficiency learners, and these mentions were often general, lacking specific instructional strategies.

Of 31 PSTs, 17 explicitly addressed the needs of pupils with lower levels of proficiency. These PSTs employed various forms of scaffolding, such as guided writing, sentence starters, vocabulary support, use of visual materials, peer collaboration, and adjustments for pupils with special educational needs. For instance, PST3 noted that 'less proficient pupils are assisted by more proficient pupils' and emphasized teachers' feedback focused on 'the next step to take rather than pupils' weaknesses.' Likewise, PST24 provided multiple forms of support: offering writing prompts, using audio recordings for pupils who struggle with writing, and providing an activity box for pupils who have difficulty sitting still. Several PSTs also included translanguaging strategies, allowed extra processing time, or made use of assistive technologies such as text-to-speech functions, spell check tools, and recorded instructions to support accessibility.

In contrast, only eight PSTs mentioned pupils with higher English proficiency, and these references were typically brief and less developed. The strategies provided were limited to allowing more advanced pupils to work at their own pace, write longer texts, or engage in more complex discussions. For instance, PST32 stated 'the more secure pupils can write more freely' implying tiered expectations but without further detail. Similarly, PST16 noted that 'the pupils who are further in their language development can get responses from another on the same level and the teacher can spend their time supporting the pupils who need it', indicating an awareness of peer grouping based on proficiency levels. However, this

statement also underscores that instructional attention was primarily allocated to lower-proficiency pupils, with limited direct differentiation strategies planned for those who may benefit from additional challenges.

6. Discussion

This study set out to explore how pre-service English teachers (PSTs) for Years 4–6 in Sweden conceptualize and apply differentiated instruction (DI) in their lesson unit plans (LUPs). Drawing on Tomlinson's DI framework as well as sociocultural theory (Vygotsky 1978), the findings offer insights into how PSTs attempt to address diverse learner needs in the English classroom and where challenges remain. The results highlight promising areas of engagement with differentiation, particularly through process and learning environment modifications, but also reveal critical gaps in the depth and scope of implementation, especially regarding content and product differentiation and attention to high-proficiency learners.

Consistent with previous studies (Gaitas and Martins 2017; Rovai and Pfingsthorn 2022), this research confirms that process differentiation was the most commonly applied approach. PSTs frequently used peer support, scaffolding, visual aids, and ICT tools to accommodate diverse learner needs during instruction. These findings align well with Vygotsky's concept of the Zone of Proximal Development (ZPD), where learning is mediated through social interaction and scaffolding (Vygotsky 1978). PSTs' use of peer collaboration and structured guidance echoes the importance of instructional support to bridge pupils' current competence and potential development. However, despite the range of process-based strategies, the execution plans often lacked specificity regarding real-time management and instructional flexibility, reflecting the gap between theoretical knowledge and classroom application that has been emphasized in earlier studies (Crichton et al. 2021; Obrovská et al. 2024). PSTs were often able to explain what they intended to do (semantic clarity) but struggled to articulate how they would adapt or implement these strategies in a live, responsive manner (pragmatic clarity). This distinction underscores the broader issue identified by Crichton et al. (2021): PSTs may be able to describe differentiation in theory but lack the experience and pedagogical repertoire to translate it into responsive classroom practice.

In contrast, content differentiation was the least addressed category, found in less than half of the LUPs. Although some PSTs suggested adapting texts or vocabulary levels, these modifications remained limited in scope and lacked systematic planning. This confirms findings from Svensson (2017), who noted that Swedish English teachers often struggle to meaningfully differentiate input, tending toward uniform instructional materials. The limited attention to content adjustment suggests that PSTs may still view curriculum content as fixed rather than adaptable, possibly due to lack of confidence or insufficient exposure to flexible planning tools during teacher education.

Similarly, product differentiation was inconsistently applied. While some PSTs allowed for variation in text length or format (e.g., oral vs. written expression), the majority relied on a single assessment format. This aligns with Obrovská et al.'s (2024) finding that PSTs tend to offer uniform learning outputs, often neglecting the diverse ways pupils can demonstrate understanding. Few LUPs integrated creative or multimodal options beyond the written mode, indicating a limited repertoire of assessment strategies and suggesting that more explicit training on tiered assignments and alternative assessments is needed (Bell 2012; Tomlinson 2014).

Regarding the learning environment, several PSTs demonstrated an awareness of the emotional and physical contexts in which learning takes place. Many included strategies to build safe, respectful classroom climates and to adapt seating or group configurations to pupil comfort and needs. These practices reflect Tomlinson's (2014) emphasis on affective dimensions of DI and are encouraging in light of research showing that a secure environment enhances pupils' willingness to take academic risks. Furthermore, some PSTs connected their approach to broader values of inclusion and learner dignity (Stadler-Heer 2019), suggesting an emerging awareness of the ethical foundations of differentiation. However, while some PSTs articulated inclusive philosophies, others presented such ideas vaguely, without concrete methods for fostering belonging and emotional safety.

A particularly striking finding was the uneven attention to different proficiency levels. Most differentiation strategies targeted learners with low proficiency, aligning with previous research suggesting that teachers tend to focus on visible learning difficulties (Obrovská et al., 2024). These PSTs often proposed detailed scaffolding strategies such as

translanguaging, audio support, or visual aids, indicating an awareness of how to support struggling learners within their ZPD. In contrast, differentiation for learners with higher proficiency was rarely addressed and when mentioned the strategies lacked specificity, typically referring only to independent work or producing longer texts (Svensson 2017). The absence of tiered tasks, enrichment activities, or open ended challenges represents a missed opportunity to extend learning for more advanced pupils and echoes findings from The Swedish Schools Inspectorate, which has repeatedly noted insufficient stimulation for pupils with higher language proficiency (Skolinspektionen 2011, 2018, 2022). As a result, these pupils risk disengagement and stagnation in their learning. Despite the well-documented need to provide meaningful challenges for all learners, only a few PSTs in this study proposed tasks intended to push advanced learners beyond their current levels. As Tomlinson and Imbeau (2010) emphasize, truly differentiated instruction involves responding to the needs of all pupils, both those who need support and those who require greater challenge.

To address this gap, teacher education programs may need to provide more explicit opportunities for PSTs to practice designing differentiation for advanced learners. Examples include tiered tasks that increase in cognitive or linguistic demand, optional enrichment pathways, deeper analytical reading or writing tasks, open-ended inquiry or problem-solving activities, and opportunities for extended independent projects. Embedding such examples into coursework and offering structured feedback can help PSTs develop a broader repertoire of approaches that stimulate advanced learners as deliberately as they support those who require additional scaffolding.

The results suggest that PSTs may lack the strategies, experience, or confidence to design differentiated instruction that challenges more advanced pupils, a finding supported by Rovai and Pfingsthorn (2022), Dixon et al. (2014) and Crichton et al. (2021). This also reflects the importance of teacher cognition in shaping classroom practice. Novice teachers' instructional decisions are shaped by prior schooling experiences, beliefs, and training (Borg 2003). Without substantial classroom experience or robust modeling during their education, PSTs may rely on intuitive practices rather than deliberate, theory-informed strategies. Making such modelling more explicit within teacher education

may help PSTs move toward more intentional and evidence-based planning.

The overall pattern across the data suggests that while PSTs have a basic conceptual understanding of DI, particularly in its process and emotional dimensions, many struggle to translate this knowledge into comprehensive and balanced practice. This gap between semantic and pragmatic clarity, that is, between knowing what differentiation is and knowing how to enact it, underscores the need for teacher education programs to not only introduce DI theory, but also to create structured, practice-oriented opportunities for PSTs to apply, test, and reflect on these strategies in simulated or authentic classroom settings.

As differentiation becomes increasingly central to equitable language teaching in linguistically diverse contexts like Sweden (UNESCO 2020; Skolverket 2022), ensuring that pre-service teachers are equipped with both the mindset and methodological tools to implement DI effectively is essential. This includes not only strategies for struggling learners but also high-quality instruction and extension opportunities for advanced pupils. Teacher education programs must foster deeper engagement with differentiation by modeling its application, supporting reflective practice, and bridging the theory-practice divide through meaningful experience.

7. Conclusion

This study has examined how pre-service English teachers for Years 4–6 conceptualize and apply differentiated instruction in their lesson planning. The findings of this study reveal that most PSTs demonstrated an emerging understanding of DI, particularly in relation to process differentiation and the creation of supportive classroom environments. These illustrate that PSTs are beginning to draw on sociocultural notions of scaffolding and interaction to address diversity.

At the same time, the limited attention given to content and product differentiation indicates that PSTs may still view certain instructional components as fixed rather than adaptable. Additionally, the uneven focus across learner proficiency levels, with most strategies directed toward low-proficiency pupils and far fewer toward pupils with advanced proficiency, further highlights the need for a more balanced and comprehensive understanding of differentiation. This imbalance reflects the broader gap between semantic clarity, knowing what differentiation is, and pragmatic

clarity, being able to enact it in responsive and purposeful ways in classroom planning.

These findings can inform future teacher training programs. Supporting PSTs in developing practical, theory-informed strategies for all learners requires more explicit modelling of differentiated practices, opportunities for guided experimentation, and targeted feedback. This includes strengthening PSTs' repertoires for extending learning for advanced pupils through tiered tasks, enrichment pathways, and open-ended challenges, as well as reinforcing strategies for supporting pupils who require additional scaffolding.

As English classrooms in Sweden continue to reflect wide variation in learners' language experiences and proficiency levels, it is increasingly important that teacher education programs equip PSTs with the skills and confidence needed to plan inclusive, flexible, and equitable instruction. Enhancing both semantic and pragmatic clarity around differentiation, and bridging the theory–practice divide through authentic, practice-oriented learning opportunities, will be essential steps toward preparing future teachers to meet the needs of all learners.

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Authors' contributions

Author 1 had the overall responsibility for the organization and progression of the manuscript. Both Author 1 and Author 2 organized and analyzed the data. Author 1 wrote the first drafts of the introduction, literature review, theoretical background, results and discussion. Author 2 was responsible for the work in Atlas.ti and wrote the first draft of the methods and materials. Each then revised and developed all sections. Both authors completed the final revisions (content and form) and approved the submitted version.

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