

“All Learners will Enjoy this!” The (Limited) Integration of Individual Differences in Primary EFL Teachers’ Task Planning

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Abstract

The present study investigates how pre-service and in-service primary EFL teachers in Germany consider individual differences (IDs) when making long- and short-term planning decisions. Participants were presented with two vignettes designed to initiate prospective reflection processes typical of (professional) planning. The resulting written reflections were analyzed alongside qualitative content analysis with a focus on the nature and degree of learner referencing. Results indicate that learner references were predominantly generic, while differentiated references occurred less frequently. When differentiation was present, it was primarily performance-based. Although references to ID dimensions appeared comparatively rarely and unsystematically, they addressed a broad variety of ID dimensions. The study discusses the implications of these findings for teacher education, arguing for more structured and supported opportunities to practice knowledge-based, heterogeneity-sensitive prospective reflection.

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Introduction

Although individual differences (IDs) did not constitute a mainstream focus in foreign language learning research for a considerable period of time, early contributions already drew attention to their potential significance for many decades (e.g. Dörnyei & Skehan, 2003; Skehan, 1991). More recently, IDs have gained rapid prominence and

now represent one of the most intensively investigated areas in the field, as evidenced by an ever-growing body of research from both theoretical and empirical perspectives (for an overview: Li et al., 2023). By 2026, there seems to be consensual agreement that foreign language learning processes and outcomes do not only depend on instructional factors, but are also shaped by a complex, dynamic, and reciprocal interplay of various learner-sided factors.

At the same time, despite extensive research efforts, the field has yet to develop a fully comprehensive and integrative model that accounts for all relevant IDs. Rather than leading toward a coherent framework, ongoing research seems to expand the complexity of the field even further, as each newly identified variable and interrelation adds additional layers to an already intricate picture. But while researchers can – and should - continue to refine their models and pursue further theoretical and empirical outreaches, teachers are already confronted with learner diversity on a daily basis and are constantly required to make pedagogical decisions under conditions of epistemic uncertainty in order to accompany and support learners' diverse language learning journeys.

Such demands are evident across all school forms, yet particularly evident in those which cannot rely on pre-selective mechanisms to produce (partial) homogenization of learner groups such as German primary schools for instance (KMK, 2023). Since private schools on the one side only constitute a small segment of the local education system and special needs education on the other side is increasingly being pushed back in favor of inclusive schooling, primary school classrooms often reflect a heterogeneous cross-section of the respective school district. Consequently, such school forms shift the necessity for differentiation from the macro level of the school system to the micro level of classroom instruction (Trautmann & Wischer, 2011), transferring responsibility for dealing with heterogeneity on the individual teachers.

Against this background, the question is not only which IDs are (most) relevant for foreign language learning, but also which IDs are perceived as (most) relevant by teachers and how these perceptions shape their everyday pedagogical practice. Accordingly, the present study does not seek to contribute to the ongoing search for the “holy grail” of individual differences (Dewaele, 2013), but adopts a practice-oriented perspective. It provides empirical insight into how pre- and in-service primary EFL teachers in Germany prospectively reflect on heterogeneous learner groups in the context of lesson planning, with a particular focus on the IDs they explicitly or implicitly draw on. From a longer-term perspective, this line of inquiry may inform the development of targeted EFL teacher education interventions aimed at fostering a more differentiated consideration of learner perspectives in planning processes and contribute to the further refinement of ID frameworks likewise.

Theoretical Background

Individual Differences

The concept of individual differences originates in psychology, where it has long been used to explain interindividual variability in learning. It comprises “traits that are relatively stable within a single individual but that vary across individuals” (Loewen, 2020, p. 207), which are suspected to have (positive or negative) effects on learning processes or outcomes. This research agenda was later adopted and further specified within the field of applied linguistics, with a focus on factors influencing language acquisition in particular. As a result, a continually expanding catalogue of more than 100 learner characteristics (Larsen-Freeman, 2018, p. 59) was assembled, ranging from observable features such as age or gender to more complex inner constructs such as motivation (Wolff, 2011). Building on this work, foreign language education research has further narrowed this focus to IDs relevant for language learning in institutionalized settings. Despite conceptual overlap, insights from psychology and applied linguistics cannot be transferred directly to the context of institutionalized foreign language learning. The specific conditions of formal classroom instruction may result in different constellations and relative importance of IDs, with some variables becoming more or less influential compared to non-institutionalized (language) learning contexts.

Across both applied linguistics and foreign language education research, a range of taxonomies were proposed to structure IDs and their interrelations (among others: Berthele & Udry, 2021; Dörnyei, 2005; Ellis, 2008; Hufeisen, 2018; Larsen-Freeman & Long, 2014). These range from linear, unidimensional approaches (e.g. Dörnyei & Ryan, 2015) to binary differentiation of cognitive IDs and affective IDs (e.g. Tan et al., 2026) to more complex, network-like representations (e.g. Li et al., 2023) seeking to capture multivariate interrelations among variables (e.g. Kersten, 2020) or to embed IDs within the larger idea of language learners as “Complex Dynamic Systems” (e.g. Griffiths & Soruç, 2020). On a positive note, these contesting conceptualizations have likely contributed to awareness of and an increasingly differentiated debate on IDs. At the same time, highly complex models should not be regarded as inherently superior merely by virtue of incorporating larger numbers of variables. Rather, they invite critical reflection on whether all included factors are equally relevant to language learning processes or whether emphasis should rather be placed on those for which robust empirical support exists.

However, despite surface-level differences, closer inspection reveals a substantial degree of convergence across frameworks. Differences mainly concern terminology, selective inclusion of certain variables or the clustering of presumably related constructs (Wolff, 2011). When viewed in a comparative perspective, a largely consensually shared core of IDs becomes evident, that is assumed to comprise

- biological, physical and neurophysiological factors such as age, sex, sensory impairments (e.g., visual or auditory difficulties) and speech-related constraints;

- general and language-related cognitive factors such as intelligence, language aptitude, working memory capacity, executive control and learning strategies;
- affective, motivational and emotional factors such as motivation, volition, anxiety, willingness to communicate; attitudes and beliefs toward learning and the target language (including self-efficacy beliefs) and emotional regulation;
- personality-related factors such as openness, conscientiousness, agreeableness; extraversion, neuroticism, tolerance of ambiguity, risk-taking, self-confidence; and empathy;
- language-specific factors such as proficiency in the first and any additional languages (apart from English), interlanguage development in additional languages, prior foreign language learning experience and language learning strategies;
- Social and socio-economic factors such as socio-economic status (SES) including cultural, social and economic capital, parenting style, home environment stress level and media use.

This overview does not claim to be exhaustive or definitive, neither does it seek to imply a ranking of their relative significance, as the field remains highly dynamic and subject to ongoing research¹. Rather, it reflects a body of literature that has shaped the discourse within applied linguistics and foreign language education research and that has, directly or indirectly, informed how IDs are introduced in EFL teacher education programs at (German) universities (Caspari & Grünewald, 2022). Consequently, it is to be assumed German EFL teachers' understanding of learner heterogeneity may be (partly) grounded in these conceptualizations of IDs².

Prospective Reflection in Lesson Planning

For decades, the reflective practitioner (Schön, 1983) has been regarded as a central ideal of teacher professionalism. It refers to a teacher who critically examines their everyday practice, while simultaneously drawing on professional knowledge and personal experience as well as adopting multiple perspectives, all in order to continuously refine their teaching practice and further develop as a professional. Importantly, a reflective practitioner does not only use reflection as a response to acute problems. Rather, they adopt a sustained reflective mindset making them attentive to and even actively searching for moments of irritation and uncertainty, which are less seen as obstacles to be minimized, but as potentially productive starting points for reflective interaction (Farrell, 2022, p. 17).

¹ Establishing a general hierarchy of IDs does not only lie beyond the scope of the present overview, whether it is meaningful to strive for such a hierarchical structure remains open to debate. The significance of a particular variable may vary across learners, learning contexts and stages of development. Consequently, factors that are highly consequential for some learners may be largely irrelevant for others, challenging attempts to establish universal rankings.

² Importantly, the relationship between teacher education and teachers' understandings should not be conceived as a straightforward process of knowledge transmission. Individual conceptualizations of IDs are likely not fully congruent with theoretical conceptualizations, but also mediated by each teacher's individual beliefs, attitudes, biographical and professional experiences.

One recurring situation in teachers' everyday professional practice in which such moments of irritation and uncertainty frequently arise is the planning of learning arrangements across different temporal and organizational levels (Yinger, 1980). When planning future teaching, teachers are confronted with competing demands, (partially) conflicting goals and heterogeneous learner needs. This inherently tensed constellation makes it an "ill-structured problem" (King & Kitchener, 2002) and as such, does not allow for straight-forward decision-making, but necessitates reflective consideration (König et al., 2017, p. 122; Tsui, 2003).

Contrary to the common use of the term, reflection is not limited to the critical examination of objects of reflection situated in the past or present. Reflection may also be oriented toward future objects and situations that are not yet realized, but can be anticipated. Combining experience, logical reasoning and creative thinking, reflective practitioners are able to explore multiple scenarios and their respective opportunities and challenges in advance, allowing for early identification and prevention of potential problems. This "reflection for action" (Kilion & Todnem, 1991) or "anticipatory reflection" (van Manen, 1977) has been discussed in the literature for decades, oftentimes closely associated with teachers' planning activities (e.g. Farrell, 2015; Olteanu, 2017). Importantly, however, lesson planning and prospective reflection should not be understood as synonymous. Planning may include elements of prospective reflection, yet does not do so per default. (Prospective) Reflection only occurs when a teacher recognizes an irritation or tension, intentionally pauses and takes distance in order to engage in deliberate, critical thinking instead of relying on routine and intuitive decision-making (e.g. Schön, 1983). And even though planning situations create circumstances that allow for such thinking much more than active teaching situations, it cannot be taken for granted that teachers consistently activate it in every case. As Häcker (2022) points out, reflection can be seen as a *conditio humana* in theory, yet underlies "reservation of possibility" (translation A.H.) in practice, as its enactment always remains optional and depends on various contextual and individual factors.

Across all temporal modes, a central hallmark of reflection can be seen in a systematic expansion of one's own perspective through a (comparative) consideration of external perspectives. In pedagogical contexts, this primarily concerns the perspective of learners, as reflected in notions that refer to a "primacy of learners' interests" (Häcker & Rihm, 2005, p. 374, translation A.H.) or a continuous search for balance between the teacher's and the learners' perspective (Tsui, 2003, p. 251). However, in light of learner heterogeneity with regards to various individual differences (see above), adopting "the" learner perspective is neither possible nor sufficient. Consequently, (planning) decisions should not only be oriented toward an "imaginary average pupil" (Helmke, 2008, p. 9), but acknowledge a plurality of learner perspectives. Moving away from the average learner as the main reference point of (planning) decisions seems to present significant challenges for teachers. This figure does not only serve as a simplifying heuristic that decreases complexity within decision-making processes, it

also operates as a “system-stabilizing” construct (Häcker & Rihm, 2005, p. 368, translation A.H.): It allows any learning difficulties to be framed as deviations from an (assumed) norm, shifting responsibility away from the teacher to the individual learner. In light of these considerations, it is hardly surprising that EFL teachers, too, appear to show a tendency to align their (planning) decisions with imaginary average learners. As Appel (2000) observes, even when teachers express strong concern for learners as individuals, their (planning) decisions are frequently oriented toward the group as a whole. In this sense, it seems as if the imagined subject engaging with anticipated learning activities is often not an individual learner, but what Bromme (1992) described as the abstract entity of a “collective of learners” (p. 84, translation A.H.).

Importantly, this tendency should not be misunderstood as deliberate neglect, but as a pragmatic, unquestioned routine that follows the path of least resistance in a situation characterized by complex and competing demands.

Methodology

Sample

The present study draws on an actively recruited sample of $n = 57$ pre- and in-service teachers in the German federal state of Baden-Württemberg. The sample comprised 17 participants enrolled in the early phase of university-based teacher education (Bachelor level), 14 participants in an advanced phase of university-based teacher education (Master level), 13 participants completing the practical phase of teacher education (preparatory service) and 13 fully certified teachers with between 3 and 30 years of teaching experience.

Participants were actively recruited via personal contact and e-mail acquisition. Compared to a passively recruited sample, this approach was chosen to increase the likelihood of participation, allow for greater control over sample composition and reduce selection bias (Robbins et al., 2018). Apart from the participants' professional experience, diversity regarding additional characteristics, especially within the subgroup of in-service teachers, was emphasized. In particular, attention was paid to including different teacher training facilities, subject-trained and out-of-field teachers, full-time and part-time teachers, as well as teachers working in urban and rural school districts.

Data Collection

Participants were presented with two reflection vignettes through an online survey tool. Vignettes in general are short descriptive episodes portraying fictional or real cases in textual, visual, or video-based form. They frequently depict dilemma situations and require participants to position themselves, evaluate or respond to the scenario (Bradbury-Jones et al., 2014). Reflection vignettes constitute a specific subtype of vignettes designed to imitate an irritation in an everyday (professional) practice situation calling for reflection. They may include explicit reflection prompts

to maximize the likelihood that reflective processes are actually initiated (Bernabeo et al., 2013).

In the present study, two predominantly text-based reflection vignettes (V1 & V2) were employed. V1 was designed to elicit prospective reflection processes related to longer-term planning decisions, presenting the beginning of a conversation between two teachers discussing whether textbooks are suitable task sources for heterogeneous EFL classrooms and invited participants to continue the discussion (with themselves) and justify their position. V2 was based on an authentic textbook page (“Storytime”, Duncan-Hauff et al., 2015, pp. 52–53) and targeted prospective reflection in the context of short-term lesson planning. Both vignettes embedded a clear moment of irritation, arising from a discrepancy between the *status quo* depicted and the vignette teacher’s aspiration to address the needs of a heterogeneous learner group. Both vignettes were accompanied by an explicit reflection prompt asking participants to verbalize their thoughts as comprehensively and unfiltered as possible and document them in form of reflective writing.

Written externalization was chosen for two reasons. First, it shows closer resemblance to teachers’ authentic planning practices than oral externalization: Planning *processes* themselves are usually largely mental, yet their (core) *outcomes* are sometimes captured in written notes, sketches or fragmentary lesson outlines (Farrell, 2024; Weingarten, 2019). Oral articulation of planning-related thoughts was only observed in cooperative planning settings so far, which seem to play a minor role in everyday teaching practice in Germany (Weingarten, 2019). Second, written externalization has been associated with advantages for reflection: The writing-induced deceleration of thinking processes is assumed to release temporal resources, therefore allowing for increased awareness and more deliberate engagement with one’s thoughts (Farrell, 2024, p. 21; Poldner et al., 2014).

Importantly, it has to be acknowledged that any form of externalization remains inherently limited, as rapid, non-linear mental processes cannot be fully captured regardless of format. Additionally, although written externalization is considered a catalyst of (mental) reflective depth and breadth, it cannot be assumed that all cognitive operations performed mentally are fully represented in the written product. Especially in university contexts, written genres are shaped by (partially) implicit conventions, which often privilege the presentation of coherent outcomes over the documentation of exploratory reasoning, including aberrations, revisions, abandoned lines of thought and unresolved tensions. Thus, participants may feel the urge to selectively externalize their thoughts or subsequently smooth their written work (Hatton & Smith, 1995).

Despite these limitations, as for right now, no methodological alternatives are available. At the current state of technology, mental processes cannot be accessed directly, but only inferred from their externalized manifestation. This makes it all the

more important to accompany written externalization with explicit instructional prompts. By clarifying that academic writing norms do not apply in this context and that there is no “right” or “wrong”, participants have to be actively encouraged to articulate their thoughts as directly and comprehensively as possible (Rieger et al., 2013).

Data collection took place under naturalistic conditions rather than in a controlled setting: Participants were free to conduct their reflective writing at different times and locations and were not restricted with regards to their use of resources, including access to scientific literature. This approach was chosen despite its reduced experimental control to reflect authentic planning processes and enable low-threshold participation for teachers from a broader geographical area.

Data Analysis

The 114 written reflections were analyzed alongside qualitative content analysis following Kuckartz and Rädiker (2023). Core of this approach is a category system, which is applied to the data to structure and analyze them. However, it is not to be seen as a static framework, but remains provisional throughout the whole analysis process and is continuously developed on the basis of the data. Hence, the category system serves as analytical instrument and key outcome simultaneously. In the present study, category development followed a hybrid deductive-inductive logic. Based on previous research findings (Appel, 2000; Helmke, 2008), the distinction between a generic and a differentiated perspective formed two initial theory-driven main categories. These were then tested on the data in a first coding iteration, gradually subdivided, expanded and refined data-driven (Elo & Kyngäs, 2008) until the category system allowed for comprehensive and systematic categorization of all data segments relevant to the research question/s. Beyond following the codified procedure outlined by Kuckartz and Rädiker (2023), intersubjective transparency was further supported through consensual coding of randomly chosen extended data segments as well as selected borderline cases.

The results of the conducted data analysis will be presented in a category-oriented manner (Kuckartz & Rädiker, 2023, p. 21) with a focus on qualitative insight into the data. In line with the methodological approach, the data were additionally condensed and quantified for visualization purposes.

Results

Level 1: Generic vs Differentiated Learner Referencing

Across the 114 (prospective) written reflections, a total of 659 text segments were identified in which participants explicitly or implicitly referred to learners, their interests, abilities, skills, needs, anticipated reactions or behavior.

Of these, 371 suggested a predominantly generic orientation toward learners. This category comprised all data extracts in which participants did not explicitly

acknowledge variation among learners but instead referred to learners in generalized terms, as an allegedly homogeneous group with shared characteristics, interests, and/or needs. Conceptually, this orientation resembles Helmkes (2008) "average pupil thinking", whereby instructional decisions are guided by assumptions about a prototypical learner rather than by consideration of differences within the learner group. Importantly, though, generic referencing in one or even several instances should not be interpreted as evidence that teachers reject or deliberately ignore learner heterogeneity but may reflect an unquestioned, routine use of cognitive shortcuts and simplification strategies to cope with the complexity of lesson planning under conditions of limited time and cognitive resources (see the theoretical background).

Such an orientation can be interpreted from references to the learner group as a whole without any (explicit) acknowledgment of internal heterogeneity, as the following example illustrates:

It could be that a [textbook] task is not appropriate for the level of knowledge of the class (BA_10_V1)³

In this segment, the class as a whole functions as the point of reference for evaluating the suitability of a task presented in a textbook. The formulation suggests an assumption of a shared and internally homogeneous level of knowledge, against which a task can be estimated as either appropriate or inappropriate. Consequently, this indicates the premise a uniform fit is something to be achieved. Within the segment, no explicit consideration is given to the possibility that learners may deviate in their possession of linguistic and/or content-related knowledge. Therefore, it remains unaddressed that a single task may align well with some members of the class's prior knowledge while simultaneously over- or under-challenging others.

Furthermore, a generic orientation toward learners was coded whenever learners, their interests, abilities, skills, needs, anticipated reactions or behaviors were mentioned or described without specifying the learners any further, as exemplified in the following data excerpt:

The students will enjoy this lesson because they are given the opportunity to perform the role play in front of the class in the end. This will motivate them to practice it well. (BA_03_V2)

The reflecting person describes a universally motivating effect of a certain task design feature based on the underlying assumption that public performance is perceived

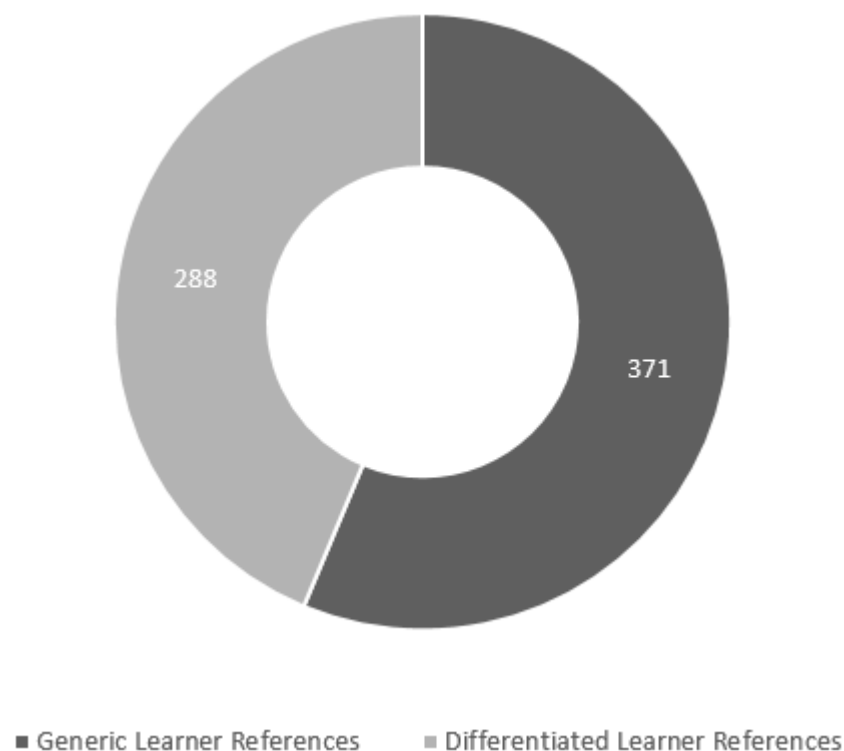
³ Participants were free to respond to the vignettes either in German or English. As most reflections were written in German, all excerpts presented in this article were subsequently translated into English by the author, aiming to preserve the original wording as closely as possible.

positively across individuals. Thus, the reflecting person seems to operate on the base of learners as an inherently homogeneous entity with (certain) shared dispositions. They do not explicitly account for variations in individual differences, especially regarding affective-motivational and personality-related factors, that could cause some learners to experience public speaking or performing as inhibiting rather than motivating. As a result, the possibility that learners may not respond positively to the task design remains unanticipated, inhibiting the exploration of alternative task designs, the provision of choice, the intentional creation of a low-stress presentation setting, or other preventive approaches to address challenges in task implementation.

The remaining 288 learner references employed a more differentiated perspective. In these instances, the learners discussed were characterized more specifically within the immediate or broader syntactic context, for example through the use of adjectives, attributes, or descriptive (subordinate) clauses. The dimensions along which such characterizations were made will be examined in greater detail down below.

Figure 1

Generic and Differentiated Learner References across all Reflections



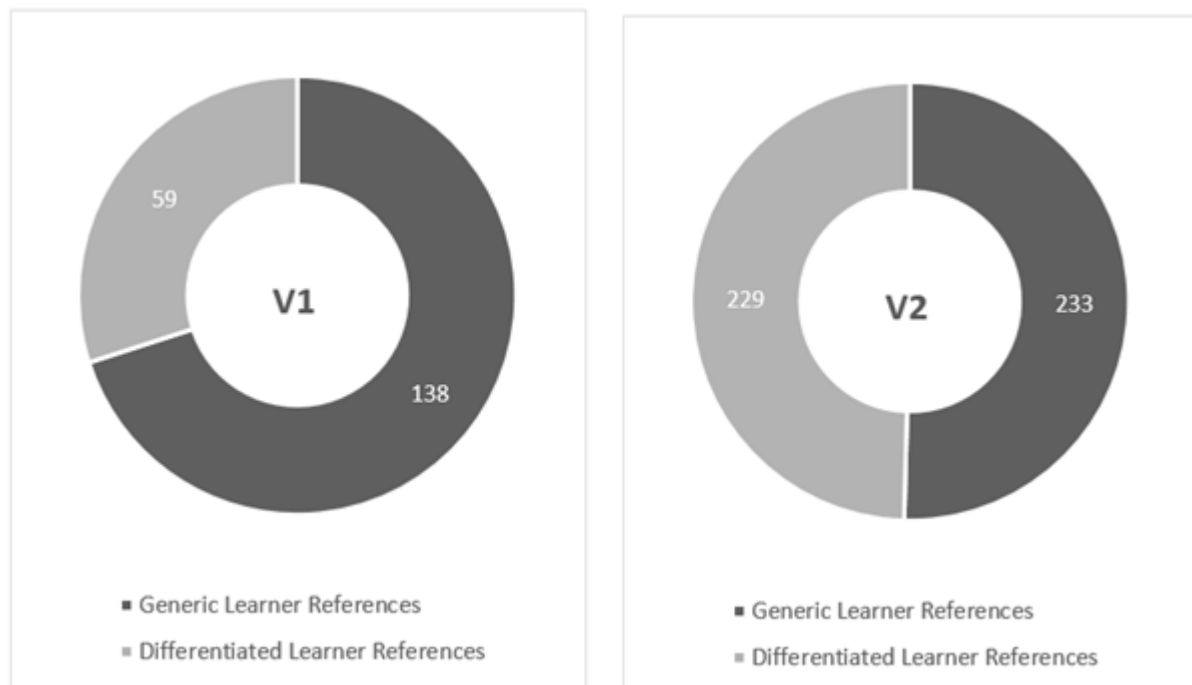
Across all reflections, the number of generic learner references ($n = 371$) exceeded that of differentiated learner references ($n = 288$).

Notably, the ratio of generic to differentiated learner references varied depending on the underlying vignette. Reflections based on the vignette simulating a long-term planning setting (V1) contained substantially fewer learner references overall ($n = 197$)

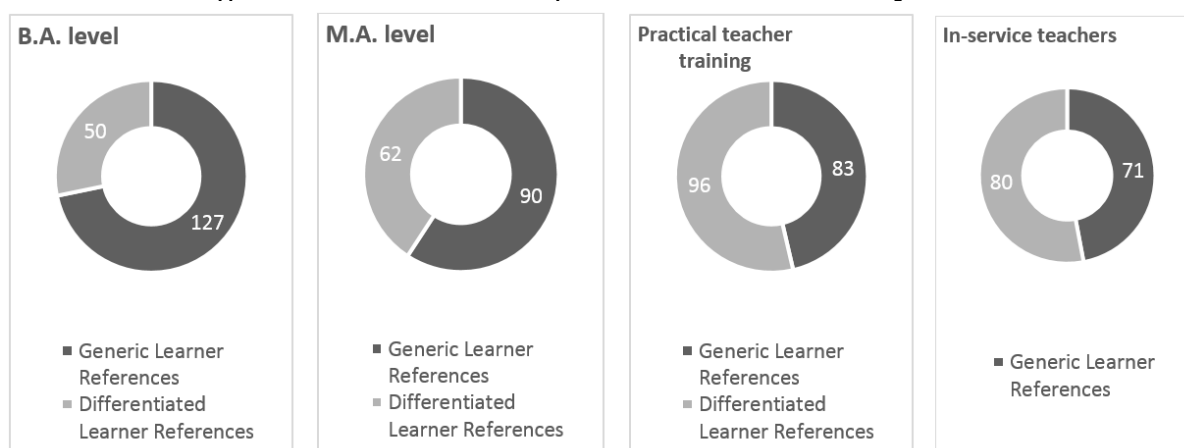
and showed a clear predominance of generic references, whereas reflections elicited by the vignette representing a short-term planning setting (V2) showed a higher total number of learner references ($n = 462$), with generic and differentiated references distributed nearly evenly. Importantly, the present data do not allow for the conclusion that short-term planning per se fosters more differentiated learner references. Such a hypothesis would require verification based on a larger and more representative sample. Moreover, potential differences may also be attributed to vignette-specific characteristics rather than the planning dimension alone. Although previous research suggests that the modality of vignettes (text-, image-, or video-based) does not affect response behavior significantly (Nagele, 2021), a more controlled design would be necessary to allow for more robust conclusions.

Figure 2

Generic and Differentiated Learner References in V1 and V2



Furthermore, the ratio varied across subsamples. The data suggest a tentative trend toward a higher proportion of differentiated learner references as (prospective) teachers progress through successive stages of teacher education. However, due to the cross-sectional design, limited size and representativeness of the subsamples, this observation should be interpreted with caution and understood as exploratory rather than confirmatory.

Figure 3*Generic and Differentiated Learner References across Subsamples**Level 2: Performance-Based vs. ID-based Differentiated Learner Referencing*

Building on the previous section, the category “differentiated learner references” is now further unpacked into subcategories to allow for a more fine-grained analysis.

A closer examination of the 288 differentiated learner references shows that 201 of them differentiated learners primarily based on performance. Such references typically relied on binary categorizations, with learners being positioned along opposing poles. Particularly frequent dichotomies employed terminological pairs such as “fast” vs. “slow”, “high-performer” vs. “low-performer” or “strong” vs “weak”, as to be observed in this example segment:

When such activities are carried out in a plenary, the strong students usually take center stage, as they are keen to participate actively and showcase their knowledge. In this situation, it is not uncommon to overlook the weaker learners, for whom the plenary approach is primarily intended, resulting in them no longer being cognitively engaged and basically just copying the work of their stronger peers. (LP_11_V2)

In this example, learner differentiation is structured alongside a spectrum between the two poles “strong students” and “weak students”, with comparative forms (“stronger”, “weaker”) used suggesting gradation within this dichotomy. Based on their positioning on the proclaimed spectrum, the reflecting person expects certain patterns of participation, engagement and learning behavior in an anticipated plenary activity. However, no further investigation of the reasons underlying a learner’s classification seems to take place. On the one side, it remains unaddressed, which criteria lead to a learner being labelled as strong or weak in general or in relation to the situation described. On the other side, no attempt is made to track which underlying learner predispositions may account for perceived performance differences. In this sense,

performance differences are merely described but not explored or explained on a deeper level.

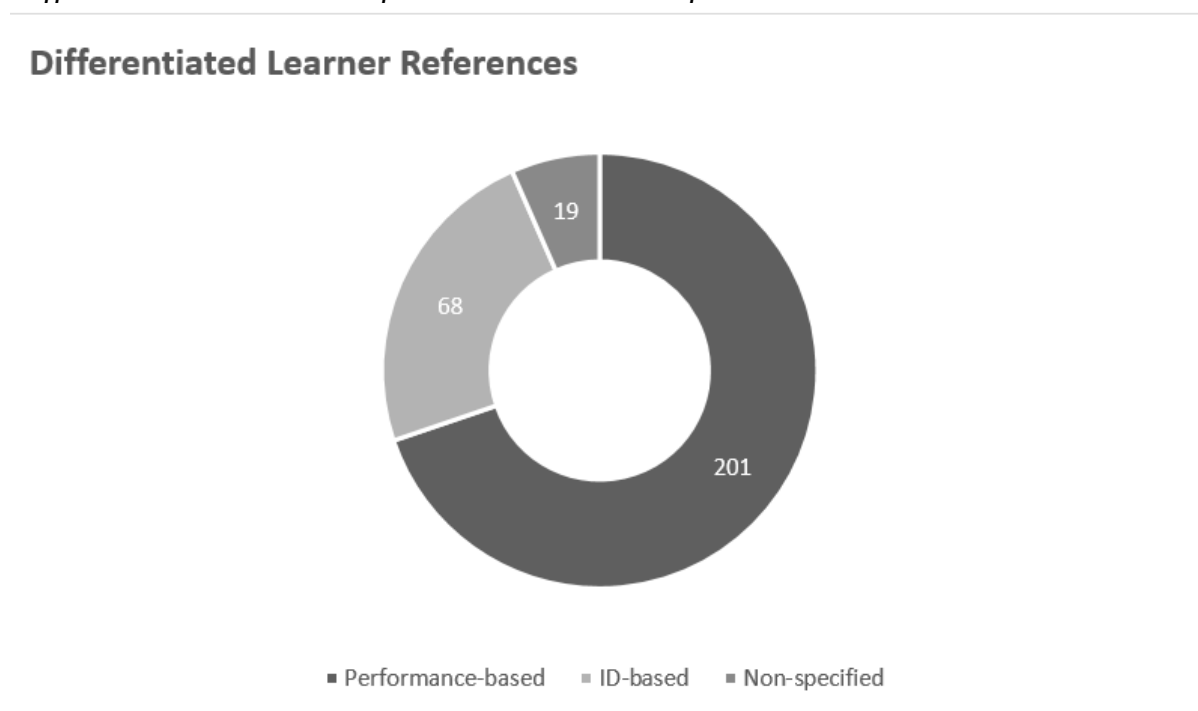
While this performance-based differentiation constitutes a step beyond generic learner referencing and may allow for basic anticipatory consideration of differentiation necessities, it remains limited in potential. Without engaging with the underlying causes of observed performance, pedagogical responses risk being broad and unspecific rather than tailored to learners' actual needs.

By contrast, 68 differentiated learner references focused on learner subgroups defined by specific manifestations of certain IDs, which are assumed to lead to certain interests, abilities, needs, and anticipated behaviors aligning with or (partially) deviating from the average learner's. The particular IDs addressed will be subject of the next section.

Apart from that, 19 differentiated learner references occupied a borderline position approximating generic learner referencing (see above). These references explicitly acknowledged learner heterogeneity by stating that learners differ in interests, abilities or needs, yet they refrained from specifying the nature of these differences. As learners were not differentiated along any specific characteristics or dimensions, these instances were neither coded as performance-based nor ID-based, but left aside.

Figure 4

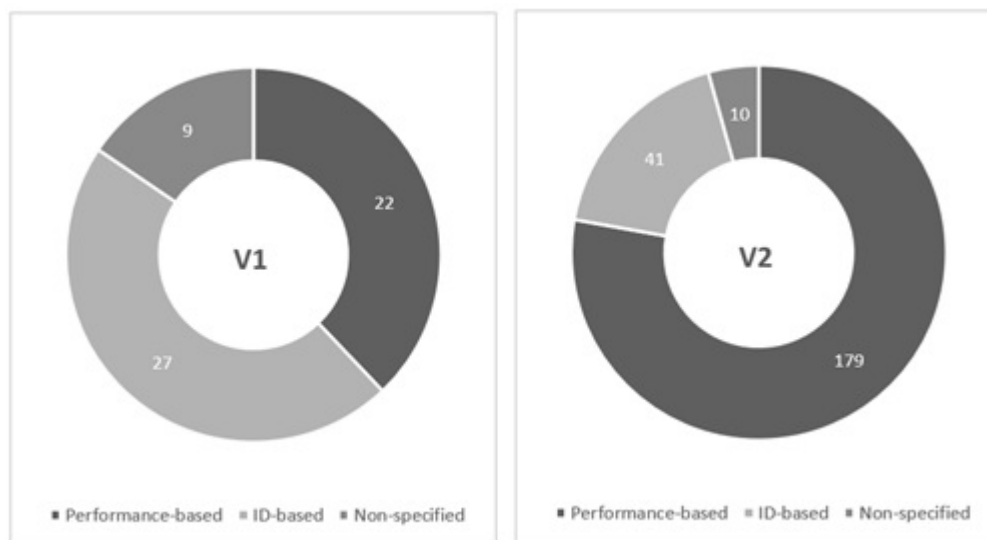
Differentiated Learner References across all Reflections



The distribution of performance-based and ID-based differentiated learner references showed considerable variation depending on the vignette underlying. Prospective reflections situated in the context of long-term planning (V1) contained substantially fewer differentiated learner references overall, within this smaller set, however, a slight tendency toward ID-based differentiation was to be observed. Contrasting, prospective reflections elicited by the short-term planning vignette (V2) comprised higher total numbers of differentiated learner references, yet with a large proportion relying on performance-based distinction.

Figure 5

Differentiated Learner References in V1 and V2



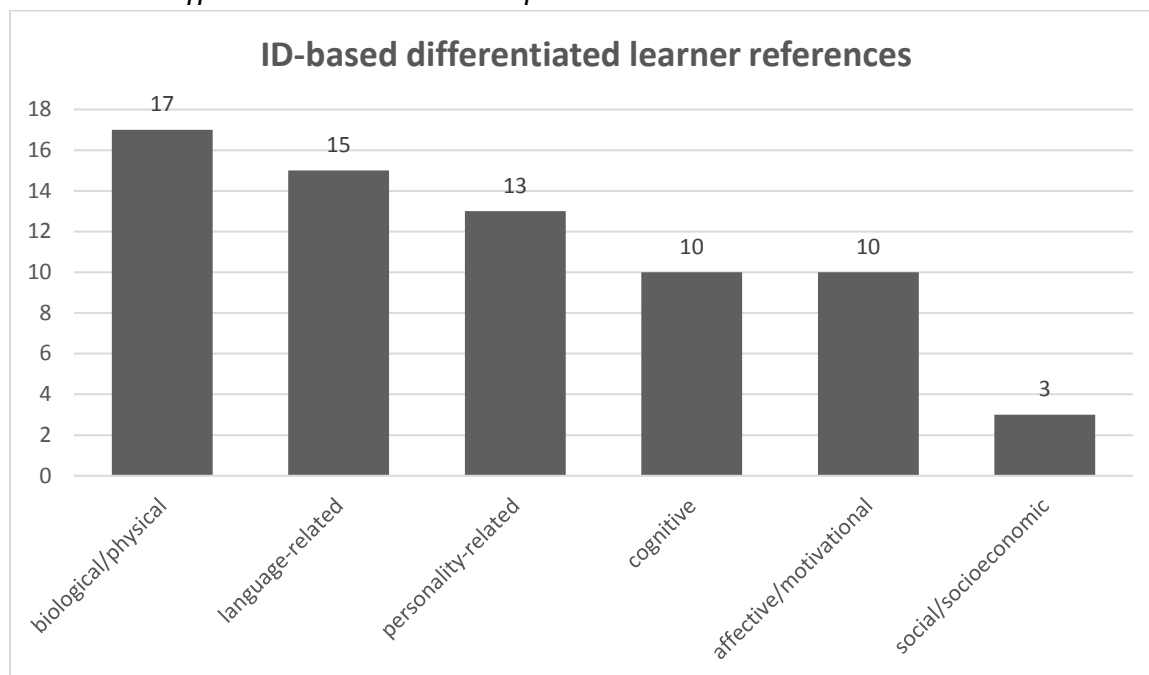
It is important to mention, though, observations are based on relatively small numbers of differentiated learner references, particularly in reflections based on V1, therefore cautious interpretation is recommended. Likewise, the number of references distributed across the four subsamples was too small to allow for meaningful analyses by stage of professional development. Consequently, such comparisons were deliberately omitted.

Level 3: Subfacets of ID-based Differentiated Learner Referencing

Further examination of the 68 ID-based differentiated learner references revealed a high degree of variation. All dimensions of IDs outlined in the literature (see the theoretical background) were represented in the data, however, the frequency of codings within each dimension remained low, ranging from low double digits to single digits.

Figure 6

ID-Based Differentiated Learner References



A total of 17 ID-based learner references were assigned to the category of biological and physical factors, including references to age, gender, and sensory impairments, as this example segment shows.

For example, I have a student with a visual impairment, for whom the level of differentiation in the textbook is not sufficient. (LA_05_V1)

The reflecting teacher draws on their own experience taking care of a learner with a visual impairment. This experience appears to have sensitized them to the need for a level of differentiation that goes beyond what is provided by the textbook. Consequently, this segment can be seen as an attempt to evaluate a long-term planning decision, such as the use of a textbook, in light of its compatibility with the potentially deviating interests, abilities, and needs of distinct individual learners and anticipate potential challenges and limitations.

Fifteen ID-based differentiated learner references were classified as language-related, referring to learners' oral and written proficiency in their first language and additional languages, along with their experience in learning languages. For example,

On the one hand, there may be children who, due to a bilingual upbringing, already have a lot of prior knowledge, in which case the textbook is far too easy. (BA_02_V1)

In this segment, the reflecting teacher points to the possibility that a learner group may include children growing up in bilingual households. The first languages involved are not explicitly specified, however, the surrounding context suggests that bilingualism, in this case, may be understood as involving English as one first language (L1), since it is directly linked with increased prior knowledge and consequently, the assumption that the EFL textbook may be insufficiently challenging. At the same time, the alternative interpretation, bilingual upbringing without English being one L1, cannot be ruled out completely: In this reading, the assumed advantage would rest on enhanced resources for cross-linguistic transfer, a mechanism that is barely implied, but not further specified or explained. Nevertheless, across both readings, the segment reflects an effort to weigh a long-term planning decision in light of learners with high levels of linguistic prior knowledge and to anticipate how their interests, abilities, and needs may deviate in terms of fit with instructional materials.

A total of 13 ID-based learner references were classified as personality-related, with a noticeable focus on introversion vs. extraversion, which accounted for 10 of the 13 references. As a central factor within the Big Five personality model, introversion vs. extraversion has been widely investigated in relation to (language) learning behavior, processes and outcomes (Chen et al., 2022; Shehni & Khezrab, 2020) and seems to be regarded as relevant by teachers likewise. In their (prospective) reflections, teachers drew on this factor to anticipate differences in learners' participation patterns, preferences for classroom settings and social forms, as well as foreign language learning outcomes with respect to fluency and accuracy.

Sometimes it can also be difficult for the children to be constantly observed by the teacher; insecure, introverted children sometimes react in an inhibited way and no longer dare to use the L2. (LA_07_V2)

The segment shows the reflecting teacher anticipating that a particular design feature of a task may affect learners with an introverted and insecure personality structure negatively by inhibiting their L2 use under conditions of constant observation. It remains unclear whether introversion and insecurity are understood as synonymous or mutually reinforcing characteristics, or whether they are principally regarded as separate characteristics, but leading to similar anticipated outcomes in the present case. Either way, the conscious awareness of possible inhibition forms the basis for considering alternative approaches, such as modification of the task design, additional support, or deliberate adjustment of the teacher's own behavior during task implementation.

Cognitive factors were addressed in 10 ID-based learner references. Notably, these references were limited to cognitive characteristics assumed to influence learning processes and outcomes in a general sense. Cognitive factors specifically linked to foreign language learning and considered highly influential in research, such as

language aptitude (Berthele & Udry, 2021), were not featured in any (prospective) reflection in the present sample. Instead, the concept of Multiple Intelligences (Gardner, 1983), which is widely regarded as outdated in contemporary research, seems to continue to play a role in teachers' planning. In addition, several references addressed cognitive impairments such as dyslexia, as exemplified in the following excerpt:

This is too difficult for many students [...] for others because they are weak at reading (in extreme cases, suffer from dyslexia)" (LA_03_V2)

In this excerpt, the reflecting teacher anticipates potential difficulties arising from the (partially) heavy on reading textbook task displayed in vignette 2. Different groups of learners are identified who may struggle with the task design in particular. Among others, learners with general reading difficulties are mentioned, with dyslexia subsequently introduced as a more severe manifestation, thus hinting awareness of a necessary distinction between temporarily performance-related challenges and a clinically defined cognitive impairment as described within the ICD-10.

Likewise, 10 ID-based learner references were assigned to the category "affective/motivational", most of which focused on differences in learners' motivational orientations toward learning in general, foreign language learning or particular instructional settings and activity formats.

I see this problem particularly with highly motivated children, who may then voluntarily work ahead and read through material that has not yet been introduced in class. (BA_11_V1)

Prior to this statement, the reflecting teacher outlined a potential problem related to the use of a textbook: As learners may engage with written language displayed independently before it has been properly introduced orally, development of inaccurate pronunciation could be a potential consequence. This concern is first articulated in general terms and then specified by highlighting above-average motivated learners as a subgroup that may be particularly likely to encounter this problem due to a perceived tendency to work ahead voluntarily. This example illustrates that heterogeneity-sensitive planning can extend beyond learners commonly associated with (language) learning difficulties, but may also involve conscious consideration of 'privileged' learners' behavior in order to anticipate and prevent specific challenges.

Lastly, three ID-based learner references were of a social or socioeconomic nature, taking learners' broader environment as a factor influencing their in-class behavior and (language) learning into account. Notably, these references primarily focused proximal manifestations (Kersten, 2020), whereas references to distal background

variables such as parental educational level were absent from the present sample. This also shows in the following example excerpt:

Many children learn English using the internet, especially children from socially disadvantaged backgrounds who spend a lot of time in front of screens at home, playing video games and using social media.
(LP_03_V1)

Within the context of long-term planning, the reflecting teacher sketches an assumed mechanism of socioeconomic disadvantage potentially leading to distinct media use patterns, which again may lead to increased extramural contact with English and advantages in (foreign) language learning. Overall, the segment demonstrates how socioeconomic heterogeneity among learners may be incorporated into planning decisions, even though it remains unclear to what extent the assumptions expressed in this segment are informed by empirical evidence as opposed to anecdotal evidence or personal experience. Therefore, the example draws attention to an issue that extends beyond the present case: The mere presence of differentiated learner references should not be taken as proof of heterogeneity-sensitive planning per se. Their value may vary significantly depending on how they are substantiated, processed and ultimately translated into concrete pedagogical decisions. While a comprehensive examination of this issue exceeds the scope of the present analysis, its implications for interpreting ID-based references will be taken up in the discussion section.

Across the data, ID-based learner references occurred largely unsystematic. Rather than following a consistent or comprehensive logic of differentiation, references to individual differences happened punctually and strikingly often in combination with (explicit) descriptions of personal experiences. This recurring overlap suggests that prior experiences may play a role in shaping the emergence of particular learner differences. While the present data do not permit causal inferences, implications for future research arising from this observation will be explored in the discussion.

Discussion

The present study aimed to explore how learner heterogeneity is taken into account in prospective reflections within pre- and in-service primary EFL teachers' planning processes. Two reflection vignettes were employed to confront them with an authentic irritation and therefore initiate prospective reflection in the context of both long- and short-term planning. The resulting written reflections were analyzed with regard to the amount and nature of references made to learners, their interests, abilities, skills, needs, anticipated reactions or behavior.

As a central finding, many planning considerations seem to remain anchored in a generic learner perspective, frequently oriented toward an "imaginary average pupil" (Helmke, 2008, p. 9). In this respect, the present study aligns with earlier research by

Wolff (2011) and Appel (2000), raising the concern that, despite an increased prominence of topics such as learner heterogeneity, inclusion and differentiation in German teacher education curricula (Caspari & Grünewald, 2022), these emphases did not translate into teachers' planning practices, yet. Apart from that, the persistence of a generic learner perspective raises further questions:

A first question concerns the extent to which generic learner referencing may not only be prevalent, but also functionally necessary. (Prospective) Reflection within planning settings must happen under conditions of limited time and cognitive resources and therefore inevitably rely on generalization to keep cognitive load manageable (Häcker & Rihm, 2005). Against this background, the crucial issue may not be whether generic referencing occurs at all, but where a productive balance between generic and differentiated references lies and how different types of references are handled and interrelated. Both forms may contribute to high-quality planning when subjected to critical reflection, hence justified validly, questioned critically and translated into concrete pedagogical decisions (Haase, in print).

A further issue relates to the nature of the “imaginary average pupil” (Helmke, 2008, p. 9) construct itself. Research on pre-service teachers suggests that they might not be completely imaginary after all, but closely linked to the teachers' own educational biographies:

The student teachers' own educational background and the resulting potential for identification with the respective children emerge as particularly relevant for determining a child's degree of normality. Attributes that are perceived as unfamiliar when compared to one's own socialization [...] are categorized as deviant (Meier et al., 2019, p. 118, translated A.H.).

Future research could explore whether these patterns can be observed among (pre- and in-service) EFL teachers likewise and to what extent teachers' own linguistic and cultural backgrounds further inform these processes. Apart from teachers' own educational biographies, (professional) experiences may likewise play a role in shaping how learner heterogeneity is perceived and addressed. As indicated in the present data, references to particular IDs frequently co-occurred with reports of past experiences involving individual learners. Possibly, challenges or perceived mismatches between instructional decisions and learner responses in the past may function as catalysts, increasing the likelihood that the respective individual differences are taken into account in future planning considerations. Further research is needed to examine how and to which extent such experiences inform teachers' planning-related reasoning.

A level deeper, a central finding of the present study concerns the manner in which differentiated learner references were realized within prospective reflections. Predominantly, differentiation was grounded in performance-based dichotomies, whereas differentiation grounded in IDs remained rare. This observation mirrors results reported by Appel (2000) who also describes performance differences as the primary lens through which teachers perceive classroom heterogeneity (p. 116). Similar tendencies have been documented in general pedagogy research: Meier et al. (2019) show that distinguishing high- and low-performing learners in a binary fashion seems to be common practice among in-service teachers across all subjects (p. 119). However, their findings also indicate that such categorizations may (in some cases) be underpinned by un verbalized considerations of ID characteristics such as (L1) language proficiency or attention span, with a proportion of teachers being able to reflect critically on the risk of jumping to conclusions too quickly.

Nevertheless, the observed dominance of generic and performance-based perspectives suggests a discrepancy between normative expectations on the one side and EFL teachers' actual planning practices on the other side: Despite top-down educational policy initiatives seeking to anchor heterogeneity-sensitive education as a guiding principle, an ever-increasing body of research on IDs' influence on foreign language learning processes and efforts to develop increasingly nuanced classifications and theoretical models (2.1), the insights gathered seem to have limited influence on teachers when weighing and justifying planning decisions. References to IDs in the present data appeared not only scarce, but also in a largely unsystematic, ad hoc manner and seemed to be predominantly rooted in individual experience rather than in systematically organized theoretical knowledge of learner heterogeneity. While this aligns with the notion that retrospective and prospective reflection are closely intertwined and mutually constitutive (Farrell, 2015, p. 5), it also feeds into the ongoing discussion on practical usability of theoretical knowledge taught in university-based teacher education (e.g. Gerlach, 2018)

In sum, the present study suggests that both pre- and in-service primary EFL teachers are principally capable of adopting a variety of differentiated, ID-informed learner perspectives and externalize them when engaging in prospective reflection within planning contexts. At the same time, the findings indicate that the potential is far away from being fully exploited and there seems to be a lack of systematicity and theoretical grounding. Although it cannot be excluded that additional differentiated considerations occurred at a mental level and were not externalized, the explicit and carefully structured reflection prompts (see the data collection) reduce the likelihood that the observed patterns can be attributed solely to externalization barriers. The low frequency and limited systematicity observed thus appears to reflect a structural issue rather than a purely methodological limitation. This raises implications for both teacher educators and researchers.

Concerning teacher education (in Germany), the current approach toward preparing pre-service teachers to respond to learners' individual differences must be called into question. While (active) engagement with research literature on individual differences and the acquisition of conceptual knowledge constitute an important knowledge foundation, this alone does currently not prove sufficient to foster systematic, heterogeneity-sensitive planning practices. What seems to be required in addition are repeated and supported opportunities to apply acquired knowledge within authentic and practice-oriented prospective reflections (e.g. Körkkö et al., 2016) under the use of targeted support systems (e.g. checklists, Baumann, 2023). A combination of individual-monologic and collegial-dialogic reflection, accompanied by explicit prompts to integrate multiple learner perspectives and tangible feedback from both peers and teacher educators, may contribute to the application of ID frameworks and the gradual development of more a differentiated point of view in planning contexts. However, it must be acknowledged that this can only be understood as a starting point of a long-term developmental process. Internalization, routinization and effortless enactment of such multidimensional reflective practice is likely to emerge only through years of engagement in authentic planning situations. Nevertheless, it is within teacher education's responsibility to lay the groundwork in form of initial awareness and sensitivity toward learner heterogeneity as a base for longer-term professional development.

At the same time, a more differentiated consideration of learners within planning processes should neither be understood as a guarantee for better teaching practice nor as an unrestrictedly positive desire. From a critical perspective, any efforts to address heterogeneity may, paradoxically, contribute to the stabilization of differences. Dynamically, this phenomenon is conceptualized as “doing differences” (Walgenbach, 2016; West & Fenstermaker, 1995), structurally as a “dilemma of difference” according to which “every pedagogical [...] consideration of difference inevitably leads to its reproduction and consolidation” (Kuhn, 2014, p. 134, translation A.H.). When learner characteristics become central reference points of planning processes, they may shape teachers' expectations in ways that feed into confirmation biases or self-fulfilling prophecies. Consequently, this ambivalence needs to be made transparent and collaboratively reflected upon in teacher education settings in order to help (pre-service) teachers develop a balanced and (self-)critical approach.

Apart from that, one might argue that the proposals outlined above add yet another nail to the coffin of what some critics have labeled the “reflection regime” of contemporary teacher education (Leonhard, 2022). Reflection may become counterproductive if it expands without limits: the aspiration to consider ever more learner perspectives can result in what is known as “reflection instead of action”, a state of permanent reflection associated with overthinking, uncertainty, frustration, and delayed or even inhibited action (Häcker, 2019). In order to avoid that and risk short-term performance losses and a long-term negative attitude toward (prospective)

reflection, setting realistic expectations and recognizing that not all dimensions of learner heterogeneity can be considered at all times is crucial.

In terms of research, the (limited) representation of IDs in the present data should not be played down as a shortcoming on the teachers' side alone. Rather than merely indicating a lack of research-informed knowledge application, the discrepancy between theory and practice may also point toward differences between the factors considered theoretically influential and those experienced as practically relevant. Factors that have received considerable research attention (e.g. cognitive IDs such as language aptitude), were largely absent from participants' reflections (4.3). This raises the possibility that teachers' day-to-day experiences generate alternative hierarchies of relevance, foregrounding those learner differences that become particularly visible and problematic in the classroom or the ones that teachers perceive as more pedagogically manageable. Further research taking teachers' perspectives into account could help inform ID frameworks that do not solely reflect theoretical and empirical findings but also incorporate practitioners' experiences and perceptions of relevance.

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Ethics Declarations

World Medical Association (WMA) Declaration of Helsinki–Ethical Principles for Medical Research Involving Human Participants

The researcher observed the code of ethics of WMA in the participants recruitment and data collection procedure.

Competing Interests

The author has no competing interests to declare

Data Availability

All data used for this article are stored on secure servers in compliance with German data protection regulations and can only be made available by the corresponding author upon reasonable request and in accordance with applicable data protection requirements.

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