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“To me, authenticity means credibility and correctness”: Encouraging Pre-Service Teachers to Re-Evaluate their Understanding of ‘Authentic English’ using Data-Driven Learning

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Abstract

Languages are known to vary greatly across different situational contexts of use. However, many teachers perceive language as a monolithic entity: teachers’ beliefs of ‘authentic English’ in the classroom are often associated with dichotomous categorisation of ‘correct’ versus ‘incorrect’ grammar. These beliefs are often in direct contradiction with their desire to follow a communicative language teaching approach. To address this, a multiliteracies-aligned unit was designed. In addition to individual and group reflection, the unit revolves around a data-driven learning (DDL) activity to raise pre-service English as a Foreign Language (EFL) teachers’ awareness of situational language variation. It relies on corpus data and corpus-linguistic tools and methods to challenge participants’ preconceived beliefs of ‘authenticity’ and ‘correctness’. This study evaluates the outcomes of the unit as implemented in two iterations of a pre-service EFL teacher education seminar in Germany. To this end, students’ responses to the unit’s four asynchronous tasks are analysed using mixed methods. The analysis reveals a significant shift in participants’ initial definitions of authenticity. Most identified DDL as beneficial for a more empirically grounded and differentiated understanding of ‘authentic’ and ‘correct’ language use. The results highlight the importance of integrating individual and collaborative, asynchronous and synchronous activities to tackle (pre-service) teacher beliefs. The findings may inform future pedagogical interventions challenging other entrenched beliefs in language education in both pre- and in-service teacher training.

Introduction and rationale

Across all disciplines, teachers are known to frequently rely on their beliefs to make important decisions about teaching objectives and pedagogical approaches (see, e.g., König, 2012). In the context of (foreign/second) language teaching, teaching targets and norms are profoundly shaped by teachers' beliefs of what constitutes 'correct' and/or 'authentic' language use. The title of this chapter, a quote from a participant of the intervention presented in this article, underscores a prevalent teacher belief that language 'authenticity' and 'correctness' are closely intertwined. This belief is problematic as both terms are frequently associated with native speakerism, a deep-seated ideology in language teaching that has far-reaching repercussions (see, e.g., Lowe & Lawrence, 2018; Swan et al., 2015). As a global language and *lingua franca*, 'authentic' and 'correct' English use cannot be reduced to that of an idealised native speaker or hailed as a realistic or desirable aim for all learners of English worldwide (cf. Callies, Hehner, et al., 2021; Galloway & Rose, 2015). Recognizing the substantial influence of subject-related teacher beliefs, it is therefore crucial that (pre-service) language teachers are given the opportunity to reflect on, challenge, and discuss their personal beliefs of 'authenticity' and 'correctness' in language education.

To this end, a multiliteracies-aligned blended-learning unit was developed to encourage pre-service English as a Foreign Language (EFL) teachers to question and reflect on these beliefs with the support of corpus data and online corpus-linguistic tools. The unit's strategic alignment with the multiliteracies framework acknowledges the growing cultural and linguistic diversity of English as a global language, as well as the emergence of diverse text forms facilitated by existing and emerging communication technologies (see, e.g., Anstey & Bull, 2018; Cope & Kalantzis, 2013; Kalantzis et al., 2016; The New London Group, 1996). By integrating corpus-linguistic tools and a data-driven learning approach (DDL; for an overview, see Boulton & Vyatkina, 2020), the unit's rationale addresses the need for pre-service language teachers to acquire new skills to successfully navigate evolving literacies in a progressively diversified environment. In line with the multiliteracies framework, online corpus tools and DDL supplement traditional teaching methodologies, affording pre-service teachers an augmented toolkit for language analysis and instruction. The unit's alignment with the multiliteracies framework also serves to highlight linguistic diversity, exposing pre-service teachers to different registers, dialects, and usage patterns. By equipping teachers with new skills relevant to evolving literacies, the teaching unit thus aims to prepare pre-service EFL teachers to adeptly navigate the complexities of EFL learning and teaching in an increasingly diversified and digitalised society in which teachers and school teaching materials are no longer the sole source of their learners' English input (see, e.g., Sockett, 2014; Sundqvist & Sylvén, 2016).

The present study analyses the effectiveness of this multiliteracies-aligned unit, focusing on pre-service teachers' responses to four asynchronous tasks designed to support them in the (re-)evaluation of their personal beliefs of 'correct' and 'authentic' English. Exploratory

quantitative and qualitative corpus-linguistic methods are applied to seek answers to the following questions:

1. To what extent was the unit effective in supporting pre-service teachers' (re-) evaluation of their pre-existing beliefs about authenticity in the EFL classroom?
2. To what extent did participants' reactions to the unit differ?
3. Which challenges did they face with regards to developing the corpus literacy skills necessary to successfully complete the task?

Theoretical background

Teachers' attitudes towards linguistic variation: the *status quo*

Recent attitudinal studies (e.g., Grau, 2009; Hartmann, 2021; Jansen et al., 2021; Mohr et al., 2019) suggest that (European) EFL teachers' beliefs of what constitutes 'correct' or 'authentic' English remains strongly anchored in 'Standard English' ideology. While official curricula in most European countries no longer specify that a particular variety should be seen at the target norm (Meer, 2021), teachers' beliefs and internal school curricula nonetheless frequently continue to reinforce the notion of standard target varieties (Bieswanger, 2008; Galloway & Rose, 2015, pp. 196–202; Jansen et al., 2021). Thus, many (European) EFL teachers continue to conceptualise 'correct' English as corresponding to one of two *de facto* teaching standards: (Southern) British English or ('General') American English (see, e.g., Rose & Syrbe, 2018 and aforementioned references). This suggests a limited awareness of variation within the English language and reflects deeply ingrained beliefs about the inherent stability and uniformity of languages. Such notions are often reinforced by EFL textbooks and other commercially published teaching materials, on which teachers in Germany and elsewhere rely heavily, especially at lower secondary level (see, e.g., Kurtz, 2019; Volkman, 2010, p. 235). These materials often (implicitly) present to teachers and learners a largely homogenous variety of English that supposedly represents a fixed and 'correct' set of rules – deviations from which are frequently labelled as 'incorrect' (Syrbe & Rose, 2018).

In the context of L1 English teaching in the UK, Cushing (2019) found that teachers frequently rely on the 'rules' of language that they were themselves taught, thus echoing Lortie's (1975) construct of the 'apprenticeship of observation'. In the context of EFL too, teachers tend to resort to the familiar, binary 'correct' vs. 'incorrect' framework when assessing learners' language production (see, e.g., Jansen et al., 2021). According to Kircher and Fox (2019, p. 792), this "dichotomy is based on an ideology in which the correctness and legitimacy of the standard are taken for granted". It is resistant to change given that it is "taught in schools, promoted by the media, institutionalised by the corporate sector, and reinforced in many other areas of public life" (Kircher & Fox, 2019, p. 792).

At the same time, Forsberg et al. (2019) report that teachers are frequently torn between, on the one hand, their desire to embrace a communicative approach to language teaching and, on the other, their perceived need to adhere to the notion of 'fixed' target varieties. Indeed, a communicative approach implies that language use is adapted for specific purposes and

therefore varies across different communicative situations and aims. However, the currently prevalent beliefs that language is a fixed and homogenous entity means that such functional linguistic variation is often not taught (or even tolerated) in school-based EFL contexts. In addition to rarely being explicitly taught, such functional variation is also only very partially represented in teaching materials. Whilst it is well known that language varies greatly across different situational and functional contexts (e.g., Biber, 1988), multivariate linguistic analyses of Textbook English have shown that lower secondary school EFL textbooks feature far less register-based lexico-grammatical variation than across situationally similar registers that EFL learners can be expected to encounter outside the classroom (Le Foll, 2021b, forthcoming, to appear)¹. This combined lack of awareness and acceptance of linguistic variation among (pre-service) EFL teachers and limited representation of naturally occurring linguistic variation in EFL textbooks is highly problematic. Not only does it convey the flawed notion that ‘correct’, ‘authentic’ language is a monolithic entity, but, as young people increasingly engage in English-medium extracurricular activities, it also risks alienating EFL learners from school-based English tuition (see, e.g., Le Foll, forthcoming; Sundqvist & Sylvén, 2016).

A register approach to challenging notions of ‘authenticity’ and ‘correctness’

Pedagogical interventions designed to tackle EFL teachers’ misconception of English as a monolithic construct have, so far, tended to focus on attempting to shift (pre-service) EFL teachers’ attitudes and beliefs towards global (e.g., English as a *lingua franca*), national and regional varieties of English (e.g., Bayyurt & Sifakis, 2015; Callies, Haase, et al., 2021; Krajka, 2019; Matsuda, 2017; Mukherjee, 2009) more than register-based linguistic variation. In this context, many have pointed to the potential of corpora and DDL to achieve such a change of mindset as it allows (pre-service) teachers and learners to observe and quantify systematic patterns of variation. Whilst also centred around a corpus-based DDL activity, the pedagogical intervention described and evaluated in the present study focuses on functional language variation. In line with its rationale, it follows a ‘register approach’, as developed by Rühlemann (2008, p. 688) in response to “the mismatch between school English and spoken English [that] amounts to a mismatch between the end and the means deployed to reach [English proficiency]”. Indeed, whilst modern EFL curricula stress the need for learners to learn to communicate in diverse situations, English is still largely conceptualised and taught as a monolithic entity. In contrast, corpus-based register studies have shown time and again, that language varies considerably according to its situational use (e.g., Biber, 1988). English lexico-grammar, specifically, has been shown to be subject to much greater variation across different modes and situational contexts of use than across different regional varieties (see, e.g., Bohmann, 2019).

¹ Note, however, that modern, corpus-informed grammars of English no longer present ‘Standard English’ as a single, homogenous language variety (as did, e.g., Quirk et al., 1985) but rather show how grammar varies across modes (e.g., *Cambridge Grammar of English*; Carter & McCarthy, 2006) and/or major registers (e.g., *Longman Grammar of Spoken and Written English*; Biber et al., 1999, 2021).

The present intervention was therefore conceived as an introduction to the relevance of functional, i.e., register-based, linguistic variation in EFL teaching and learning. It applies the register approach to “shift the emphasis from a monolithic view of language to a register-sensitive view thus acknowledging the fundamental functional diversity of language use” (Rühlemann, 2008, p. 672). Although in contradiction with prevalent teachers’ beliefs and only partially reflected in current teaching materials, this approach is fully in line with European school curricula that officially place spontaneous spoken interactions at the heart of their learning objectives (Le Foll, to appear). As mentioned above, however, current research on EFL teachers’ beliefs suggests that many (future) teachers do not fully grasp the implications of teaching spoken English, i.e. that conversational English cannot be expected to adhere to the same norms as, e.g., for essay writing or professional correspondence. By expanding Rühlemann’s (2008) register approach beyond the written vs. spoken modes, the present intervention also aligns well with the Common European Framework of Reference for Languages (CEFR; Council of Europe, 2001) on which most European school curricula are now based: Indeed, the CEFR implicitly adopts a more fine-grained register approach when it differentiates between learners’ ability to interact in “formal discussion (meetings)” vs. “conversation” and “informational discussion” or to produce “[written] correspondence” vs. “creative writing” (Council of Europe, 2001, p. 222 among others). Hence, the present intervention aims to encourage pre-service EFL teachers to realise the potential of the register approach to meet the curricular aims. It achieves this by supporting participants in developing the necessary corpus literacy to identify relevant patterns of register-based lexicogrammatical variation based on large corpora of naturally occurring English. The long-term objectives are thus two-fold: first, pre-service teachers are to use their newly acquired corpus literacy skills to develop an awareness of register-based variation and, in a subsequent step, to learn how to use DDL to teach register-based variation.

Teaching corpus literacy as a pedagogy of multiliteracies

The term ‘corpus literacy’ was originally coined to refer to the comprehensive set of skills required to search, analyse and interpret language corpus data in the context of language teacher education (see Mukherjee, 2002, pp. 179–180, 2006, p. 14). It was later extended to explicitly include the ability to meaningfully integrate corpora in teaching and learning (e.g., Breyer, 2009; Callies, 2016; Leńko-Szymańska, 2017; Li & Xu, 2022). The direct use of corpora in pedagogical contexts is commonly referred to as data-driven learning (DDL; for an overview, see Boulton & Vyatkina, 2020). In the present unit, not only do the participants gain new insights into register-based variation on the basis of corpus data but, in doing so, they also experience DDL first hand. This is often considered an important step in developing corpus literacy among (pre-service) teachers (see, e.g., Le Foll, accepted; Mukherjee, 2004, p. 245). DDL involves learners actively exploring and analysing language data, identifying patterns, and making generalisations about language structures and usage. By incorporating DDL into their own teaching practices, language teachers can create more learner-centred and communicative language learning environments (see, e.g., Boulton, 2017; O’Keeffe, 2021).

This paper argues that DDL develops both teachers' and learners' critical multiliteracies competence by fostering critical thinking skills and language awareness, as they are progressively encouraged to engage in analysing and interpreting language data using digital tools. In teacher education, corpus literacy can therefore be understood as a multiliteracies competence that combines linguistic literacy, digital literacy, critical data literacy, and didactic competences. Multiliteracies pedagogy emphasises the importance of critically engaging with diverse forms of multimodal communication and literacy practices (see, e.g., Anstey & Bull, 2018; Blume, this volume; Cope & Kalantzis, 2013; The New London Group, 1996). DDL aligns well with this approach by providing language users with the data, tools and skills to critically engage with linguistic variation. By engaging with corpora of naturally occurring texts from a wide range of registers and varieties, pre-service EFL teachers can gain insights into the situational, functional, social and cultural dimensions of language use. It is hoped that such an approach can help pre-service teachers challenge dominant discourses and ideologies around 'authenticity' and 'correctness' and empower them to promote more relevant and inclusive language practices in their teaching.

The pedagogical intervention

The following sections describe the pedagogical intervention at the heart of the present study. Commencing with information about the institutional context in which it was designed and the course in which it was embedded, the subsequent sections outline the various components of the unit, focusing on the four asynchronous tasks which are evaluated as part of the present study.

Institutional context

The unit was integrated in a master's level course on corpus linguistics for EFL teaching and learning. The course was taught by the author at Osnabrück University (Germany) as part of pre-service English teacher education for future primary, secondary, and vocational school English teachers. Pre-service teacher education in Germany generally comprises a three-year bachelor's degree and a two-year Master of Education (M.Ed.). For both degrees, students are required to take courses in two school subjects and follow a core 'general pedagogy' curriculum. At the B.A.-level, future EFL teachers attend compulsory introduction courses to English linguistics, English Language Teaching (hereafter: ELT) and general teaching methodology. To be admitted to the master's programme at Osnabrück University, future EFL teachers must have an excellent command of the English language (equivalent to CEFR C1 level).

Course design

The course was an elective as part of the "English Language Teaching and Learning: Theory and Practice" module, which the author taught over three consecutive semesters to three different student cohorts. Each iteration ran over a period of 12 to 14 weeks with weekly 90-minute sessions, after which students had two months to complete a final seminar assignment (Le Foll, accepted). Designed as a project-based course, the course project consisted in the co-creation of an Open Educational Resource (OER) entitled "Creating

Corpus-Informed Materials for the English as a Foreign Language Classroom: A step-by-step guide for (trainee) teachers using online resources” (Le Foll, 2021a).

Following a ‘flipped classroom’ approach (Reidsema et al., 2017), the necessary corpus-linguistic and pedagogical competences to complete the final assessment were taught partly in synchronous course sessions and partly asynchronously. All course materials were compiled into an online learning portfolio built in the university’s in-house Learning Management System (LMS). Only the final assessment was graded; the e-learning portfolio tasks were not graded, but a minimum of 80% completion was required to validate the course.

As a result of the COVID-19 pandemic, the second and third iterations were taught exclusively online with bi-weekly synchronous sessions held using the videoconferencing tool integrated in the LMS. The unit described and evaluated in the present article was integrated in the second and third iterations of the course. It was added as it transpired that for many, if not most participants of the first course iteration, the main appeal of corpora for language teaching and learning was the ability to access large quantities of language produced by native speakers of English who, in addition to being perceived as the sole owners of ‘authentic’ and ‘correct’ English, were expected to all adhere to the same norms across all modes and registers. Hence this unit was specifically designed to expand pre-service teachers’ understanding of authenticity in ELT by introducing the concept of register variation using a DDL approach.

Unit design

The unit began with a short, asynchronous written task, which students answered individually in the e-learning portfolio. As an introspective task, responses to this question were not shared with the rest of the class.

Pre-task: Personal concept of authenticity

What do you personally understand by the term ‘authentic’ in the context of EFL (English as a Foreign Language) teaching materials?

The subsequent task was also completed asynchronously in the e-learning portfolio. It was only visible to students who had already submitted an answer to the first task (which was set a week earlier though students completed the tasks at their own pace). It consisted of a reading (Gilmore, 2019) followed by an individual written reflection task. Students’ answers to these questions were also not shared with the rest of the group. However, they were used as a starting point for a subsequent synchronous class discussion on the meaning of ‘authenticity’ in EFL education.

Task 1: Individual reflection task: A new understanding of authenticity?

Read Chapter 20 *Materials and authenticity in language teaching* by Alex Gilmore from *The Routledge Handbook of English Language Teacher Education* (2019).

Look back at how you described what “authentic” meant to you in English as a Foreign Language teaching materials in the previous writing task.

- Has your personal understanding of the concept of “authenticity” changed having read Gilmore’s chapter on *Materials and authenticity in language teaching*? If so, how and why?
- Did any points made by Gilmore not convince you? If so, why not?
- Which aspects do you personally think are the most important to consider when designing “authentic” materials for the English classroom?

In the following 90-minute synchronous session, students were familiarised with the online corpus platform www.english-corpora.org in a series of short, teacher-led data-driven learning (DDL) activities. In these activities, students first discussed their intuitions regarding the use of the adjectives *beautiful* and *attractive* in contemporary British and American English before testing their hypotheses using the COCA (Davies, 2010) and the BNC1994 (BNC Consortium, 2007). A summary of the corpus functions covered can be found in the revision video originally created for the e-learning portfolio and later made available under a CC-BY license (https://youtu.be/kDRpyJSE_6s).

Following this synchronous introduction to an online corpus tool, students completed a four-part quiz in the e-learning portfolio designed to test their understanding of key corpus-linguistic concepts. They had the support of the revision video to do so. The quiz afforded them the opportunity to practice conducting searches in subcorpora of the BNC and the COCA, comparing frequencies across different text types, interpreting the results of basic corpus queries, and qualitatively analysing concordance lines to deduce the semantic and pragmatic meaning of specific forms. Responses to the quiz were automatically evaluated so that students received immediate feedback on their answers. A chat forum was inserted in the LMS just below the quiz for students and the lecturer to discuss any technical issues and additional questions.

Task 2, at the heart of unit, required students to read and individually try out a corpus-based lesson plan from Friginal (2018, pp. 299–303). In this DDL lesson, Campbell (one of Friginal’s students and a pre-service English teacher) encourages students to compare the use of *doing well* vs. *doing good* in spoken and academic American English. The lesson is a hands-on DDL activity based on the COCA (Davies, 2010) accessed via english-corpora.org.

To ensure that students did not encounter any technical issues in replicating the corpus-querying steps described in Campbell’s lesson plan, the e-learning portfolio included a short quiz that covered these technical aspects. Automatic feedback on this quiz enabled students to be confident that they were using the tool as intended or, if necessary, to adjust their corpus-querying strategies. Campbell’s lesson plan closes with four discussion questions, which participants were asked to answer individually in the e-learning portfolio.

Task 2: A corpus-based DDL lesson plan (by Maxi-Ann Campbell in Friginal 2018)

1. Read and complete all the activities of the lesson plan
2. Answer the lesson's discussion questions:
 - Q1: What part(s) of speech does "good" serve in spoken language? Do you find the same pattern in academic language?
 - Q2: What part(s) of speech does "well" serve in spoken language? Do you find the same pattern in academic language?
 - Q3: Can you identify a rule for when to use "doing good" and "doing well"? Is one of them simply incorrect?
 - Q4: Can you think of another way to characterize language use other than correct vs. incorrect?

Subsequently, students were asked to (re-)read the short interview with the author of the lesson plan that they had just tried out (Friginal, 2018, pp. 303–305). Finally, students reflected on the entire unit in the form of audio recordings which they shared with the rest of the class via the LMS. Students listened to each other and often commented on and responded to their peers' answers.

Audio reflection: Asynchronous group reflection

- Record a short audio reflection to share with everyone in the group. Tell us:
 1. What did you think of Maxi-Ann Campbell's lesson?
 2. What did you learn by working your way through the lesson plan? (note that this could be linguistic, pedagogical and/or technical knowledge)
 3. Do you think that Campbell's lesson plan contributes to teaching "authentic language" in the EFL classroom? Why/why not?
 4. In your opinion, how could the lesson be improved/adapted for different learning settings?
- Listen to your peers and find out if you've had similar experiences. Share your ideas and/or opinions.

The teaching unit aligns with a pedagogy of multiliteracies (see, e.g., Anstey & Bull, 2018; Cope & Kalantzis, 2013; Kalantzis et al., 2016; The New London Group, 1996) by fostering pre-service teachers' critical thinking in diverse communication modes. By initiating a reflective process that encourages participants to critically analyse their (implicit) beliefs about authenticity and correctness in the context of EFL education (Pre-task), it addresses the social dimension of multiliteracies. Furthermore, through a combination of theoretical insights (Task 1) and guided, practical, data-driven input (Task 2), the unit emphasises the multimodal dimension of multiliteracies. It exposes participants to corpora representing different varieties, modes, and registers of the English language and encourages them to realise the

potential of corpora and DDL to adopt a register approach. Finally, it aims to motivate participants to acquire the multiliteracies skills required to integrate DDL activities in their own teaching practice. The remaining sections of this chapter examine the extent to which the teaching unit successfully met these aims in two iterations of the course. It exposes the range of students' reactions to the unit, and the nature of the challenges they faced. The data and methods employed to do so are outlined in the following section.

Data and methods

The unit was taught as part of two iterations of the course, which were completed by 31 and 38 students respectively. As both course iterations were held online, students' responses to the asynchronous tasks, chat posts and vocal message interactions were all recorded in the LMS. Students were given the option to opt-in to participating in this research via an online consent form. The form explained the purpose of the research, the data collection and anonymisation procedures, and informed students that their (non-)participation would in no way affect their ability to participate in the course or their grade. Contact details of the author were provided and participating students were told that they could request their data be removed from the research database at any stage. The data of the consenting students was downloaded from the LMS for analysis.

Across the two iterations, 64 students opted to participate in the study. Of these, 22 were studying to teach EFL in primary schools, five in lower-level secondary schools (*Haupt- and Realschulen*), 30 in upper-level secondary schools (*Gymnasien*) and seven in vocational schools (*Berufskollegen*). With just 19 males and two non-binary participants, there is a strong female bias in the data. The median participant age was 22 years (MAD = 1.48).

These 64 students' responses form the basis of the data analysed in the present chapter. The unit included both synchronous and asynchronous components; however, in the present study, only the asynchronous components are evaluated. As Table 1 shows, not all participating students completed all tasks. In addition, nine audio files recorded for the final reflection task were no longer recoverable from the LMS platform at the time of data collection. The remaining audio files were orthographically transcribed by the author. Filled pauses and false starts were ignored but repetitions were transcribed. No punctuation was added. The number of words reported for the audio reflection was calculated on the basis of these transcriptions.

Table 1: Number of analysed responses to the four asynchronous tasks

	First cohort	Second cohort	No. of contributions	No. of words
Pre-task	30	34	64	6,519
Task 1	30	34	64	14,774
Task 2	27	34	61	13,882
Audio reflection	16	28	44	7,058

Student responses were analysed using quantitative and qualitative corpus-assisted discourse analysis (Gillings et al., 2023) methods. First, keywords were extracted from the eight corpora of task responses (answers to the four questions of Task 2 were analysed as separate corpora). In this study, keyword extraction was performed on the basis of lemmas (rather than word forms) and both keywords and key *n*-grams were extracted. The reference corpus used to measure keyness was the enTenTen21, a 52-billion-word corpus of Web English that covers a broad range of registers and regional varieties (Jakubíček et al., 2013; see also <https://www.sketchengine.eu/ententen-english-corpus/>). The ‘simple maths’ method (Kilgariff, 2009) as implemented in Sketch Engine (https://www.sketchengine.eu/my_keywords/keyword/) was applied. The parameters in Sketch Engine were set to 100 for the most common words and five for the minimum frequency. The resulting most salient keywords and key *n*-grams were then examined qualitatively on the basis of the corresponding concordance lines.

Results

This section presents the results of the quantitative and qualitative analysis of students’ responses to the four asynchronous tasks in the order in which they were completed by the students. The results are discussed in the following section.

Pre-task: Personal beliefs of authenticity in EFL materials

The key bigram most strongly associated with students’ responses to the pre-task is ‘native speaker’. The term was mentioned 23 times in 15 student responses (hereafter these statistics are summarised in the following format: 23/15). This corresponds to the conclusions of previous studies (e.g., Galloway & Rose, 2015, pp. 196–202 in the context of Germany). ‘Native speaker’ was most often used by students to equate authentic language use to native speakers’ language use, e.g.:

- (1) To me, authenticity for teaching materials means credibility and correctness. It means that it was made by a English **native speaker**.²
- (2) To me, the term “authentic” in English as a Foreign Language teaching materials means that the language is portrayed exactly in the way that it is used by **native speakers**.
- (3) The term authentic teaching material describes materials that work with language that **native speakers** actually use in real contexts [...]

A few students relativised this notion by extending their definition of authentic materials to that produced by ‘native speakers’ with an ‘or at least’ clause, e.g.:

- (4) If I want a foreign language material that is used for teaching to be authentic, it should check off a few boxes. All of these boxes have something to do with the

² Students’ written responses were not standardised for spelling or modified in any other way as part of the data processing. All quoted excerpts correspond to how the students submitted their responses in the LMS except for bold emphasis added to mark the relevant keywords. Square brackets are used in the rare cases where information either had to be anonymised or added for clarification.

native speakers of the language **or at least** speakers that use the language on a regular basis and simply need it for daily communication.

Only two students (out of 64) demonstrated an awareness of language variation across L1 usage in this introductory task:

- (5) Grammar is very fluent and changing so I think that the teaching materials should take that into account. It is inauthentic to convey that EVERYONE of the **native speakers** always says things like that and never like that especially considering that if you'd ask 3 **native speakers** they'd probably give you 3 different answers.
- (6) For me, authenticity includes "real" language, as it is used by **native speakers** and, thus, different registers, styles, dialects, differentiation between oral and written English.

A number of key bigrams reflect students' interpretation of the situational use and function of "authentic language": 'real life' [situation] (14/10 [5/4]), 'daily life' (9/7), and 'real world' (7/6). This is also the case of the keywords 'everyday' (11/11), 'real-life' (7/6) and 'daily' (13/10). Furthermore, students defined authentic materials in terms of the 'context(s)' (28/24) in which they are presented; these contexts were described as 'meaningful' (2/2), 'plausible' (1/1), 'actual' (1/1), 'real-life' (1/1) and 'real' (2/2). Two additional keywords that were repeatedly used to exemplify such 'real-life' contexts were 'newspaper' (9/9) and 'conversation' (10/9).

A final keyword that emerged from the analysis of students' responses to the pre-task worth highlighting is 'textbook' (35/21). This term was used very differently by the 21 students who mentioned it in their responses. Several focused on the authenticity of textbooks' cultural representations, e.g.:

- (7) Authenticity is not only related to grammatical structures or reality, but also to cultural aspects which are represented in **textbooks** as well.

Others referred to the topics covered in textbooks, e.g.:

- (8) Authenticity in this context means to me that the **textbook** contains topics that the students can relate to.

Most, however, commented on the limits of textbooks in terms of authenticity, e.g.:

- (9) **Textbooks** clearly are limited in this matter [of authenticity]. Most forms of text, except for transcripts of real situations, are in some way staged and formed by an author.
- (10) Many conversations in English **textbooks** seem to be unreal.

Task 1: Updated beliefs of authenticity in EFL materials

Whilst the term 'learner' was also mentioned in response to the pre-task (27/16), it was more strongly associated with responses to the reading activity (Task 1) (67/28). This is because many students reported not having considered learners' experiences of authenticity in their

original definitions of the term. Most highlighted this aspect as a welcome and/or necessary addition to their personal understandings of authenticity in the EFL classroom, e.g.:

- (11) One should not persist on controlling every aspect of the lesson but rather be open-minded for spontaneous and unexpected turns during a lesson, which, in the end, are authenticated by **learners**.

However, two students made clear that they did not see this addition as helpful:

- (12) [...] I did find the definition of authenticity equating the finding of personal meaning in **learner's** experiences etc. a little far-fetched.
- (13) [This addition] is an interesting idea but really not practical because all **learners** will react different and so, in the end, it is still the teacher who has to decide what is authentic English or not.

In addition to 'learner', 'teacher' was also much more frequently used in students' responses to Task 1 (52/32) than in the pre-task (22/18). Having read the article by Gilmore (2019), students showed greater awareness of the role of the teacher in "authenticating" not just teaching materials, but also tasks, assessments, classroom interactions and the entire design of language courses, e.g.:

- (14) I believe that situational authenticity should be used more in assessments, even if it means more work for the **teacher**.
- (15) I found it particularly worth highlighting that as a **teacher**, you can not only choose materials in an authentic way, but also design the entire course authentically.

'Communicative competence' (32/26) and 'intercultural' (15/14) also came out as salient keywords in Task 1 responses. These keywords point to another aspect Gilmore's (2019) article that many students reacted to: the concept of authenticity as 'intercultural' 'communicative competence' (11/11). Most students reported that this idea was new to them. Most also agreed that it was important, although some felt it should not dominate English lessons, e.g.:

- (16) [...] I think that English lessons should rather focus on linguistic **competence**. This does not mean that the other components of the **communicative competence** model should not be completely ignored. However, I do not think that if teachers focus mainly on linguistic **competence**, the lessons will be inauthentic.

Task 2: Trying out and responding to Campbell's DDL lesson plan

Most students were able to identify the patterns of use of 'good' and 'well' in the context of 'doing good/well' in both spoken conversational English and written academic English. This shows that, by this stage of the teaching unit, students had mastered the necessary technical corpus literacy to query the Corpus of American English (COCA). In answer to Q1, many described the use of 'good' in spoken English as an 'adverb' (50/44), although other terms were used to refer to the same observed pattern of use. Many students backed up their conclusions with example sentences from the corpus:

- (17) In spoken language "good" serve as a postmodifier for the verb [do] which is in fact an adverb. Another function is the usage as an adjective that modify the following

noun. The results in academic language shows the adjective function as well. Additionally, “good” is often used as adjectival noun such as “wanting to do good.”

One student, however, reported struggling to answer the first two questions. Whilst they made accurate observations on the basis of well-executed corpus queries, the observed findings generated uncertainties:

(18) I’ve been struggling with these kind of questions... in spoken language: “good” serves as adjective in spoken language : “doing good” is a construct of a verb and an adverb. Because of laziness (?!) speakers use the adjective good as adverb in a wrong form. “well” would be the correct form to the answer how one is feeling, as an adverb an adverb is needed in this phrase. [...]

This uncertainty was expressed by many more students in their responses to Q3, which, in the first part, required students to interpret their corpus-based findings (“Can you identify a rule for when to use ‘doing good’ and ‘doing well?’) and, in the second, invited them to question their concept of ‘correctness’ as a binary variable (“Is one of them simply incorrect?”). In students’ responses to Q3, five keywords immediately stand out: ‘incorrect’ (29/28), ‘correct’ (23/19), ‘grammatically’ (13/9), ‘grammatical’ (5/4) and ‘wrong’ (5/5). Many students used these words to explain that, whilst they had indeed observed on the basis of corpus data that ‘doing good’ was used in the sense of ‘doing well’ in spoken conversation, they considered this use to be ‘grammatically incorrect’ or ‘grammatically wrong’:

(19) In Spoken language the phrase “doing good” is often used. You can definitely say this but it is **grammatically not correct**. I think another way to characterize language use is to differentiate between what appears naturally by native speakers in spoken language and what is **grammatically completely correct**. Sometimes everyone knows that it is actually **grammatically wrong** but sure that everyone understands what you want to say [...]

(20) answering “doing good” on the question how one feels is **simply grammatically incorrect**. I believe it is used because people try to avoid saying “well”. I feel like “well” has a higher connotation to feeling really well, while “good” is only a kind of average feeling.

As in the extract above, a number of students relied on their language intuition in an attempt to resolve the tension between their (often detailed) analysis of the corpus data and what they personally consider(ed) to be ‘[grammatically] correct’. Some students resorted to acquired grammar rules even when these directly contradicted what they had just observed in their analysis of the corresponding concordance lines, e.g.:

(21) No, I cannot identify a rule by using the COCA. But while thinking about it myself, I would say that after the verb “doing”, you have to put an adverb and are not allowed to put an adjective. Therefore, “doing well” would be **grammatically correct** and “doing good” **incorrect**.

As in the pre-task, ‘native’ (6/6) and ‘native speaker’ (4/4) were also salient keywords in responses to Q3 in Task 2. Some students concluded that if native speakers of English use a form, it cannot – based on their understanding of native speakers’ ownership of ‘authenticity’ – be ‘incorrect’ (29/28):

- (22) The COCA as the Corpus of Contemporary American English provides **native speaker** language samples which is the reason why I would not entitle the usage as “doing good (adv)” as **incorrect**. English is widely spread across the world with numerous varieties.
- (23) Both of them are **correct** because **native speakers** do not stick to one of the utterances.

It is worth noting that, at this stage in the unit, only one student mentioned frequency of use:

- (24) I would not necessarily describe one as being incorrect, as “I’m doing good” is used regularly by **native** English **speakers**.

Additionally, some students correctly highlighted the COCA can only be representative of (US) American English. Strikingly, a few went on to claim that ‘doing good’ is “okay in AE [American English] but not in BE [British English]” or “is not sth. that British people would ever say”; however, they did not attempt to back up these claims with data from a corpus of British English (although the BNC was introduced and queried in a previous course session).

In their answers to Q4 (“Can you think of another way to characterize language use other than correct vs. incorrect?”), the most frequently used alternatives were inappropriate (9/9) and appropriate (17/13) language use. Salient keywords also include the words ‘frequency’ (8/8), ‘frequent’ (7/7), ‘common’ (16/12), ‘uncommon’ (5/4) and ‘commonly’ (5/3). These suggest that, having gone through the DDL lesson, many students began to recognise that frequency of use may be a valid way to characterise language use. In fact, the verb ‘use’ (64/40) and the noun ‘usage’ (7/7) are also on the list of salient keywords for Q4 responses. Other salient keywords include ‘depend’ (20/19), ‘situation’ (24/24), ‘formal’ (12/8), ‘academic’ (8/6), ‘speech’ (7/6), ‘register’ (7/7) and ‘dialect’ (5/2). These keywords testify to a (new) awareness of functional and situational linguistic variation, e.g.:

- (25) I hadn’t thought about it in this way before but [i]f I’m honest my use of vocabulary and even grammar **depends** on who I am talking to in what environment. For example, I use more **formal** language when I am writing to a lecturer and more colloquial and everyday language when I am writing with a friend. Rather than saying correct vs incorrect, I would rather use the term “**appropriate**”. The speech we use should be **appropriate** to the **situation**.

Audio reflections

The keyword analysis of the transcripts of students’ audio reflection brought to light several evaluative adjectives that students used to describe the DDL lesson and, more generally, to comment on teaching language variation in the EFL classroom. They are all positive and include ‘important’ (44/30), ‘helpful’ (10/9), ‘motivating’ (6/5), ‘interesting’ (13/13) and ‘useful’ (7/5), e.g.:

- (26) I think it [data-driven learning] has a lot of possibilities and speaking of [unclear] language variation I think it is actually essential if you want to create an authentic classroom or authenticity in your classroom because I think [unclear] is very **important** to show the students that there are other possibilities when using language in real communication or better to say that it depends on the situation

The few negative evaluative adjectives that were used refer exclusively to the technical aspects of the corpus-based lesson:

- (27) Working my way through her lesson plan has been quite **challenging** at first and at first it has been quite **frustrating** because I didn't get the answers that I wanted but as I got the hang of it it became quite easy

It is worth remembering that students' responses to this final audio reflection task were shared with the entire class so that students listened to each other's opinions and reacted to them asynchronously. As a result, the keywords for this corpus of transcribed reflections include the verbs 'think' (129/44) and 'agree' (28/28). Although no occurrence of 'agree' were negated, this does not mean that all students (entirely) agreed with the author of the DDL lesson or their peers that situational linguistic variation should be taught in the EFL classroom. A few agreed with the premise of authentic language necessarily exhibiting situational variation yet expressed doubts as to how variation could reasonably be integrated in the EFL classroom, e.g.:

- (28) As to the usefulness of language variation in the classroom I'm a little bit on the fence. I think on the one hand it's extremely **important** for students to get to know different variations of English and to think simply in terms of right and wrong when it comes to grammar is not very **motivating** for most students I feel like because being corrected at every turn for deviating slightly from proper speech is maybe a little bit demotivating for some. But on the other hand I think that we are going to have to draw the lines somewhere because we have to have a basis on which to compare different performances of different students right? And what is that supposed to happen if many variations of grammar for example are suddenly valid?

Assessment was seen as particular challenge, e.g.:

- (29) [...] the problem is that teachers have to **assess** learners and their progress and if basically everything or pretty much everything is okay because native speakers also make mistakes all the time then what can the teacher do to help their students to speak better English?

Students also critically discussed the appropriate level at which language variation can or should be introduced in the EFL classroom. This became evident in the qualitative analysis of the keyword 'advanced' (8/5) and the key bigram 'primary school' (6/5) in the audio reflections, e.g.:

- (30) I don't think that language variation should be discussed in **primary schools**. The younger children are just starting to learn the English language and might be confused by all the different possibilities of the language that is why I would argue that advanced pupils who are quite familiar with the language should work with [unclear] corpora whereas younger pupils should get some time to get a first understanding of basic rules before learning something about language variation
- (31) I do think it's an important topic for the EFL classroom, however, I also think when learning a language you do need rules and you do need some kind of concept to follow in order to become familiar with the language. I feel like so far data-driven learning or just generally corpus linguistics can only be suitable for students who already have a highly skilled level of language because in order to understand the concordance lines you need to have some **advanced** level.

Discussion and limitations

The analysis of participants' responses across the four asynchronous tasks of the unit highlights a significant shift in students' personal understanding of 'authenticity' and 'correctness' in ELT. Initially, the participating pre-service EFL teachers predominantly associated 'authenticity' with native speakers. These were perceived as the (more or less) exclusive guardians of '(grammatical) correctness' and '(linguistic) credibility'. However, as the unit progressed, students' perspectives evolved. In their responses to the reading (Task 1), many began to consider learners' perspectives and the role of the teacher as additional, crucial components of the multifaceted concept of authenticity. However, despite Gilmore's (2019) article proposing many alternatives to the concept of 'produced by native speakers', students' responses presented no evidence that the article had encouraged them to challenge their previously formulated definitions of 'authenticity'.

By contrast, the DDL activity reported on in Task 2 was considerably more successful in challenging students' preconceived notions of 'authenticity' and 'grammatical correctness'. By the end of the task, most students appeared to have recognised the significance of situational and functional language variation. Guided by the DDL activity, they began to acknowledge that frequency of use and register appropriateness may supersede conventional binary notions of (grammatical) correctness and authenticity.

Several students reported discomfort and/or confusion when faced with the dilemma of native speakers using forms that, on the basis of their acquired grammatical norms, they identified as 'grammatically incorrect'. In light of students' strong prior beliefs about the credibility of native speakers, it proved very effective for students to experience this tension between actual language usage and traditional binary grammar rules in the context of US American English (as one of the two widely accepted target language standards).

In this intervention, DDL was used to encourage students to rely less on their intuition and more on empirical evidence when discussing language authenticity and correctness. This hands-on, corpus-based approach proved fruitful for many, but not all, students. Whilst all participating students clearly mastered the technical aspects of the corpus queries, some struggled with the interpretation of corpus results. This is not to say that students experienced no technical difficulties, but rather that, as is emphasised in multiliteracies pedagogy, overt instruction within the unit (live demonstrations, synchronous group practice, automatically assessed quizzes, revision video, etc.) designed to mitigate these challenges appears to have successfully relegated technical issues to the background to focus the discussions on the pedagogical implications of the unit.

Students exhibited varying reactions and evolving perspectives throughout the unit. A few students displayed early awareness of language variation within native speakers' usage, whilst others took considerably longer to embrace this notion. Some resistance remained apparent in the unit's final audio reflections, as demonstrated in the continued use of terms such as 'proper English' and 'correct language use' by individual students, e.g.:

- (32) I think it is important to tell [EFL learners] in certain cases you can say it like that people will understand you but it's grammatically incorrect but also teach them that

in specific situations or circumstances it is important to follow **proper English** or grammar rules like for example when writing an application or anything like that

- (33) Yes, language use can also be characterized as comprehensible vs incomprehensible whereas the correct use of words and grammar is not that important. Instead, the focus is set on language use as the transmission of meaning and if it is understandable in a given utterance (even though the **correct language use** might not be given).

Moreover, students' reactions to the unit partly depended on their personal lived language learning experiences, e.g.:

- (34) I think it is important to show them [EFL learners] that there is not only the formal standard English because I think we all know that situation when we went abroad for the first time or spoke to a native speaker that maybe there was the thought okay what did I even learn in English class nobody actually talks like this or nobody actually uses the vocabulary we learned in school [...]

The unit incorporated various feedback loops in which students and the lecturer engaged in mutual reading and listening. These exchanges happened both during the synchronous sessions and asynchronously via the LMS. The synchronous, dialogical and collaborative, aspects of the unit proved to be crucial both for students to be able to voice doubts and ask additional questions, as well as for the lecturer to flexibly respond to the occasional misunderstanding and/or flawed conclusion. Such responses in the LMS were used anonymously as a basis for discussion during the unit's synchronous sessions. This encouraged further reflection, ultimately contributing to a deeper understanding of the concepts explored in the unit. Similarly, whilst many students expressed enthusiasm for DDL and emphasised its potential for fostering access to 'authentic' language in the EFL classroom, some expressed doubts and reservations about the applicability of a register-based approach to teaching EFL, especially for assessment and with younger and/or low-ability learners. These concerns also served as a fruitful basis for discussion during the unit's synchronous sessions. The expression of these concerns is evaluated positively as they show that students engaged in critical thinking about the implications of their newly defined notions of 'authenticity' and 'correctness' for their own teaching practice.

While offering valuable insights into students' experiences in engaging with DDL to gain register awareness and challenge their preconceived notions of 'authenticity' and 'correctness', this study is not without its limitations. For a start, the findings are evidently limited to two cohorts taught in a specific educational context; the same intervention may trigger very different reactions with different groups of pre-service teachers in different educational contexts (cf. situational nature of multiliteracies pedagogy, see, e.g., Cope & Kalantzis, 2013). Self-selection bias may also be an issue as not all course attendees chose to contribute their responses for research purposes (though 93% did). Moreover, students' responses to the asynchronous tasks may have been subject to additional biases, e.g., social desirability bias or students' reluctance to express dissenting opinions. Lastly, further research is needed to assess the potential (long-term) impact of this pedagogical intervention on participants' actual teaching practices.

Conclusion

This study has presented and evaluated a DDL-based multiliteracies unit designed to bring to light the contradictions that exist in the minds of many (pre-service) EFL teachers: the tension between their desire to teach 'authentic English' following a communicative language teaching approach and their reliance on rigid 'correct' vs. 'incorrect' language use dichotomies – often assumed to apply universally across all situational contexts.

The core of the unit involved a DDL activity with the aim of enhancing pre-service teachers' awareness of situational and functional variation in English. The analysis of students' asynchronous responses to the unit suggested transformed understandings emerging from these tasks. It also provided strong evidence for the development of multiple components of corpus literacy among the participating pre-service EFL teachers. While some participants raised valid concerns about the practicality of introducing language variation in primary schools and worried about its impact on language assessment, the majority recognised the benefits of this approach in promoting a more empirically grounded understanding of authentic language use that embraces functional and situational language variation.

The results further suggest that, in order to be effective, a unit designed to challenge deeply entrenched beliefs that have the potential to significantly influence the self-identities of pre-service teachers should offer opportunities for both individual reflection and group discussion. In this intervention, the integration of both asynchronous and synchronous elements allowed for the co-construction of knowledge in student-student and student-teacher interactions, which proved crucial to reaping the full benefits of the unit. The analysis of the task responses also showed that substantial scaffolding, encompassing both technical and pedagogical aspects, is often necessary to support students on this journey to challenge preconceived beliefs.

It is hoped that this study may provide a foundation for further research exploring the implications of integrating corpus literacy in the context of critical multiliteracies pedagogy into teacher education programmes to reshape the way language educators approach their beliefs, roles, and, ultimately, (future) teaching practices. Looking ahead, DDL as understood within the framework of critical multiliteracies pedagogy holds promise for challenging other deeply rooted beliefs that language teachers may hold about language, language learning, and language teaching, in both pre-service and in-service teacher training contexts. Future investigations ought to delve into the long-term impact of such interventions on teachers' classroom practices and their students' language learning experiences to further our understanding of the dynamic interplay between teacher and learner beliefs and attitudes, teaching practices, and learning outcomes.

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