



HACETTEPE ÜNİVERSİTESİ
EĞİTİM BİLİMLERİ ENSTİTÜSÜ

Department of Foreign Language Education

English Language Teaching Program

DISPLAYS OF CO-CONSTRUCTED CONTENT KNOWLEDGE USING
TRANSLANGUAGING IN EMI UNIVERSITY CLASSROOMS

Merve BOZBIYIK

Ph.D. Dissertation

Ankara, 2023



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ARACILIĞIYLA BİRLİKTE İNŞA EDİLMİŞ İÇERİK BİLGİSİNİN GÖSTERİMİ

Merve BOZBIYIK

Ph.D. Dissertation

Ankara, 2023

Acceptance and Approval

To the Graduate School of Educational Sciences,

This dissertation, prepared by **Merve BOZBIYIK** and entitled “Displays of Co-Constructed Content Knowledge using Translanguaging in EMI university classrooms” has been approved as a thesis for the Degree of **Ph.D.** in the **Program of English Language Teaching** in the **Department of Foreign Language Education** by the members of the Examining Committee.

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Second Supervisor	Assoc. Prof. Dr. Hale Işık-Güler	Decision of the Board of Directors of the Graduate School, issued on/....../.... with the number of
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This is to certify that this thesis/dissertation has been approved by the aforementioned examining committee members on 24/04/2023 in accordance with the relevant articles of the Rules and Regulations of Hacettepe University Graduate School of Educational Sciences, and was accepted as a **Ph.D. Dissertation** in the **Program of English Language Teaching** by the Board of Directors of the Graduate School of Educational Sciences from/....../.....

Prof. Dr. Selahattin GELBAL

Director of Graduate School of Educational Sciences

Abstract

In recent years, the use of English as a medium of instruction (EMI) has been prevalent in higher education institutions in non-Anglophone contexts due to globalization and internationalization. This enables the researchers to investigate EMI universities through different research foci. Although a few researchers closely examined EMI classroom interactions in face-to-face environments, the multifaceted interactional organization of content knowledge co-construction process remains an under-researched phenomenon in the EMI settings. With this in mind, this dissertation focuses on how participants (lecturers and undergraduate students) collaboratively construct content knowledge through translanguaging across multiple phases of video-mediated classroom episodes. The dataset of the study includes 18 hours of video and screen recordings of the classroom interaction in three online and one face-to-face EMI classrooms at a state EMI university in Türkiye. Using multimodal Conversation Analysis as the research methodology, this dissertation shows how translanguaging plays a significant role in collaborative content knowledge construction processes and facilitates the participants' displays of content knowledge through various classroom interaction practices across for interconnected phases of the online classroom episodes including the lecturer talk in the whole-class video-mediated classroom, pre-task, task engagement in small groups in the breakout rooms of the videoconferencing tool, and finally sharing outputs in the main room. The findings of the dissertation provide implications for a fuller understanding of the interactional organization of EMI classroom interactions in and beyond online teaching and learning environments and mainly with reference to content knowledge co-construction process across the multiple phases of the EMI setting at hand.

Keywords: content knowledge, knowledge co-construction, translanguaging, english medium instruction, online classroom interaction, multimodal conversation analysis

Öz

Son yıllarda, eğitim dili olarak İngilizcenin (EDİ) kullanımı küreselleşme ve uluslararasılaşma nedeniyle ana dili İngilizce olmayan bağlamlardaki yüksek öğretim kurumlarında yaygınlaşmıştır. Bu durum araştırmacıların EDİ üniversitelerini katılımcıların EDİ uygulamalarına karşı tutumları gibi farklı araştırma odaklarıyla incelemelerini sağlamıştır. Birkaç araştırmacı yüz yüze ortamlardaki EDİ sınıf içi etkileşimini yakından incelemesine rağmen içerik bilgisinin birlikte inşa sürecinin çok yönlü etkileşimsel yapısı EDİ alanında araştırılmamış bir fenomendir. Bu çalışma katılımcıların (öğretim elemanları ve lisans öğrencileri) çevrimiçi sınıf içi bölümlerin farklı aşamaları boyunca diller arası geçişlilik aracılığıyla içerik bilgisini birlikte nasıl inşa ettiklerine odaklanmaktadır. Bu çalışmanın veri seti Türkiye’de bir EDİ devlet üniversitesinde üç çevrimiçi ve bir yüz yüze (pilot) EDİ sınıfının 18 saatlik video ve ekran kaydından oluşmaktadır. Bu çalışma çokkipli Konuşma Çözümlemesi yöntemi kullanarak öğretim elemanı konuşması, görev öncesi, ara oturumlarda görev inşası ve ana oturumda çıktı paylaşımı olarak adlandırılan birbiriyle bağlantılı çevrimiçi sınıf içi bölümler boyunca içerik bilgisinin birlikte inşası sürecinde diller arası geçişliliğin nasıl önemli bir rol oynadığını göstermektedir. Bu çalışma çevrimiçi eğitim ve öğretim ortamlarında ve ötesinde EDİ sınıf içi etkileşimin etkileşimsel yapısını anlamak için çıkarımlar sağlamaktadır.

Anahtar sözcükler: içerik bilgisi, bilginin birlikte inşası, diller arası geçişlilik, eğitim dili olarak İngilizce, çevrimiçi sınıf etkileşimi, çokkipli konuşma çözümlemesi

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To Fatmanur, Ahsen, and Mehmet Eren,

To 100th anniversary of the Republic of Türkiye

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Symbols and Abbreviations

CA: Conversation Analysis

CEFR: Common European Framework of Reference for Languages

CIC: Classroom Interactional Competence

CIK: Claim of insufficient knowledge

CLIL: Content and Language Integrated Learning

EMI: English Medium Instruction

ESC: Epistemic Status Check

IELTS: International English Language Testing System

L1: First Language (Mother Tongue)

L2: Second/Foreign language

LCT: Legitimation Code Theory

METU: Middle East Technical University

TOEFL: Test of English as a Foreign Language

Chapter 1

Introduction

The growth of the internationalization and globalization has resulted in the increasing adoption of English as a medium of instruction (English Medium Instruction, EMI) in the higher education institutions in non-Anglophone contexts (e.g., Lasagabaster, 2022). EMI language policy provides varying affordances for different educational stakeholders such as local/international students, lecturers, administrators, and universities themselves with varying affordances such as study and work abroad, attracting international stakeholders, having higher ranking in terms of the internationalization-based goals of the EMI universities as well as developing language skills of the stakeholders and access to English resources (Chen & Kraklow, 2015; Coleman, 2006; Muthanna & Miao, 2015; Rose et al., 2019). On the other hand, EMI implementations have been noted to come with a number of drawbacks for the local culture and language, stakeholders, and institutions including the creation of an elite class, excessive workload for lecturers, universities' challenges for providing EMI training, and insufficient English proficiency levels of the participants (Bradford, 2013; Doiz et al., 2011; Kırkgöz, 2005; Lasagabaster, 2015). Despite the socioculturally and educationally criticisms, EMI policy has not only been increasingly preferred by the administrators, but also been recently investigated through different research phenomena such as students' linguistic and cognitive development (e.g., Kırkıcı, 2004), teachers' inefficient delivery (e.g., Ekoç, 2018), or attitudes, beliefs, and perceptions of the participants (teachers and students) (e.g., Chapple, 2015; Sert, 2008; Soruç et al., 2021), students' academic success (e.g., Curle et al., 2020), and provision of recommendations EMI lecturers' professional development (Guarda & Helm, 2017; Hellekjær et al., 2018). In the existing literature informing EMI, the studies have largely resulted in insightful contributions to the previous EMI literature using surveys, (e.g., Costa & Coleman, 2013; Kang & Park, 2005) or interviews (e.g., Vu & Burns, 2014) rather than observational and naturally occurring interactional data.

Macaro et al. (2018) underlined four problematic areas which should be investigated in the prospective EMI studies: 1) the insufficient understanding about the knowledge and proficiency through EMI implementations, 2) the lack of EMI classroom research especially in higher education institutions, 3) the widely-examined single case studies in EMI, 4) the scarcity of the studies focusing on the content teaching and learning. In order to fill these research gaps, a few researchers have closely examined the multifaceted nature of EMI classrooms with an emphasis on interactional organization and content learning aspects using the methodological tools of multimodal Conversation Analysis (CA) (e.g., Bozbiyik & Morton, 2023a; Bozbiyik & Balaman, 2023; Bozbiyik et al., under review; Duran & Jacknick, 2020; Duran & Sert, 2021). These studies mainly documented interactional practices of the participants (lecturer and students) including verbal statements and embodied actions (e.g., hand gestures, gaze) to investigate exemplification and elicitation practices and multi-unit questions within the whole-class teaching and learning events. However, there is still a lack of research on the dynamicity of classroom practices especially oriented to content knowledge construction in EMI classrooms from a bottom-up research perspective. With this mind, this study aims to investigate how the participants (lecturers and undergraduate students) co-construct target knowledge and display their funds of knowledge through interactional and translingual practices across the multiple phases of online classroom events in EMI classrooms.

Statement of the Problem

In institutional and non-institutional teaching and learning environments, knowledge construction refers to interactive and collaborative knowledge exchange processes in minute-by-minute interaction, which falls within the scope of epistemics in interaction research (Heritage, 2012a, 2012b, 2013). During these dynamic processes, interactants demonstrate their knowledge, find an equilibrium between their epistemic status, and minimize or close their knowledge gaps in talk-in-interaction. In language and/or content (CLIL) classrooms, which mark a context with shared yet divergent properties with EMI,

some researchers have investigated various interactional and pedagogical practices such as epistemic search sequences (ESSs) (Jakonen & Morton, 2015) and downgrading displays of knowledge (Raymond & Heritage, 2006) in teacher-student and peer interactions. The interactants do not only manage the collaborative knowledge construction process, but also track learnable target knowledge at a single and/or multiple conversational events using different interactional resources such as questioning (e.g., declarative, tag questions) (e.g., Kämäräinen et al., 2019), and nodding and/or headshakes (e.g., Sert & Walsh, 2013). In task-based digital learning environments, the participants coordinated spoken, written, and mutually accessible online materials to find an equilibrium between one another's epistemic positioning, manage knowledge building and task accomplishment (Balaman & Sert, 2017a, 2017b). In brief, CA studies have shed light on the interactional organization of the knowledge construction process in face-to-face and online pedagogical environments. However, the ways in which the participants collaboratively construct content knowledge through various resources in EMI classrooms still remains as an under-examined phenomenon in the literature, which points to the primary gap that this dissertation sets out to fill.

In EMI classrooms, the interactants mostly utilise multilingual resources to accomplish their teaching and learning activities in spite of the declared monolingual (English-only) policy, and each EMI context creates a distinct setting in which all the shared linguistic and multimodal repertoires are deployed for content teaching and learning purposes. Such multilingual content-based environments have paved way for a new conceptualization for both researchers and interactants to produce and examine language alternation practices with a recent concept, translanguaging. This concept is based on all observable practices emerging from multilingual, multisensory, multisemiotic, and multimodal resources to establish and maintain mutual understanding, and thus achieve pedagogical goals of target content learning in interaction (Wei, 2018). In recent years, translanguaging has also been examined through various research foci such as

interactants' attitudes towards translanguaging (e.g., Kuteeva, 2020), and translingual classroom practices (e.g., Şahan, 2020). In addition to the investigation of translanguaging through semi-structured interviews and/or classroom observation, Tai and Wei provided bottom-up classroom interaction research findings, and teachers' related opinions about their translanguaging practices at secondary level EMI classrooms in Hong Kong by documenting how translanguaging enhanced content teaching and learning through different practices such as bringing outside knowledge (Tai & Wei, 2020) and co-learning (Tai & Wei, 2021a). To the best of my knowledge, there are not any studies that show how the participants produce translingual classroom practices for collaborative content knowledge construction at tertiary level face-to-face and online EMI classrooms (i.e., the main scope of the dissertation) in Türkiye. With this in mind, this dissertation will closely examine one face-to-face, and three online EMI classrooms to investigate the participants' translanguaging practices during content knowledge co-construction procedure. The aims of the study will be introduced in more detail in the following section.

Aims of the Study

This dissertation aims to reveal locally managed content knowledge co-construction processes in three online EMI classrooms as well as one face-to-face classroom with a close attention to the microscopic details of the ongoing interactions while the participants (lecturers and undergraduate students) try to establish and maintain intersubjectivity, and to accomplish target content knowledge building in a co-constructed way. For the purpose of this study, multimodal Conversation Analysis is used to uncover emergent, data-driven classroom dynamics of the interaction in four different departments at a state Turkish EMI university.

In this study, each EMI course has context-specific interactional and pedagogical organizations in terms of weekly course goals, general departmental concerns, classroom participants, and teaching and learning spaces. Every week, the lecturers have a main

course content including the introduction of the field-specific terminological knowledge, and teach the target content in an interconnected way through different classroom activities such as peer interaction in the breakout room sessions in the synchronous online EMI classrooms. During the content teaching and learning activities, both the lecturers and undergraduate students display their target content knowledge, orient to each other's knowledge demonstration, resolve understanding problems, complete pedagogical tasks of the course collaboratively on a moment-by-moment basis in interaction, which is a process referred to as the target content knowledge co-construction in this study.

The database of the study includes video recordings of one face-to-face and screen recordings of three online EMI classrooms data collected during pre-pandemic and pandemic times respectively. Through the data-driven examination of the face-to-face data, this study aims to show how the participants manage to resolve understanding problems within translingual turns during the collaborative content knowledge building process. Relatedly, using the emic research perspective of multimodal CA, this dissertation mainly aims at exploring collaborative target content knowledge construction through translanguaging practices across multiple phases of classroom activities in three online EMI courses in three different EMI departments in an EMI university in Türkiye. In line with the goals of this study, the research questions will be presented in the following section.

Research Questions of the Study

The current dissertation addresses the following research questions in order to unpack how lecturers and students enact, and orient to collaborative content knowledge construction procedures in line with the pedagogical objectives of the EMI courses and mutual understanding, and to explore the coordination of spoken, written, and accessible material usage with an emphasis on a wide range of translanguaging practices during the meaning making and knowledge construction in EMI classroom environments. Adopting

multimodal CA as the research methodology, the following research questions were formulated to represent the scope of the current study:

- How do the participants (lecturers and undergraduate students) co-construct the target content knowledge across different classroom episodes in online EMI classrooms (mainly across the breakout rooms and the main session) as well as in one face-to-face classroom?
- What is the role of translanguaging as an interactional resource for marking the procedural unfolding of knowledge co-construction in online EMI interactions?

It needs to be marked that Conversation Analysts do not utilise any predetermined theories or assumptions before collecting the data. Thus, the research questions above emerged through in-depth inquiries of the dataset, and were reformulated and refined over time in light of the collections of phenomena emerging from naturally occurring interactions. The next section will also explain the significance of this study based on micro-analytic findings and potential contributions to EMI classroom discourse and teacher education fields.

Significance of the Study

The existing literature in EMI provides a comprehensive understanding of the stakeholders' perceptions on EMI implementations, and shows that EMI has positive and negative aspects at macro level reasons based on sociological, political, and personal backgrounds. In the last six years, some researchers have also started to explore interactional organization of the EMI classrooms at secondary (e.g., Tai & Wei, 2021a) and tertiary (e.g., Duran & Sert, 2021) levels. Although these studies have shown some interactional practices such as word search and translanguaging in one focal face-to-face EMI classroom interaction in each context, there are no examinations on the multifaceted interactional organizations of the multiple online EMI university classrooms. Against this background, the current study initially provides broader and rich EMI classroom descriptions

with the data from various disciplines from the educational sciences to psychology departments at undergraduate levels at a state EMI university in Türkiye. In doing so, multimodal Conversation Analysis (CA) is used to closely examine diverse interactional resources during the target content knowledge building processes in three online EMI classrooms in addition to one face-to-face EMI classroom at an EMI university. This fills the research gap underlined the lack of multiple case studies in the EMI context thereby exploring the collaborative content knowledge building through translanguaging in different disciplines having their own special discourses. Moreover, the current study investigates how the participants (EMI lecturers and undergraduate students) co-construct the target content knowledge using translanguaging within three online EMI university classrooms in addition to one face-to-face EMI context through the bottom-up approach of the multimodal CA. Therefore, the findings of this study help us explore knowledge building, which refers to epistemics in social interactional research, at both the micro level and in the construction of different disciplinary knowledge in the EMI higher education context.

The main database of the study comes from three online EMI classrooms in which the participants deploy their interactional resources in talk-in-interaction over time during the collaborative knowledge building procedure. Therefore, the present study documents the architecture of the online EMI classrooms at different disciplines. As one of the reiterative interactional practices, the interactants utilise translanguaging and managed to co-construct the target content knowledge across the interconnected online classroom episodes in the main and breakout room sessions. Thus, the micro analytic findings of this study present how translanguaging space is used in a trackable way over time, and how the breakout room sessions play an important role in organising collaborative teaching and learning in the online EMI classrooms. The nature of the EMI online classrooms also shows the trackability of the collaborative meaning making and content knowledge building processes across multiple online classroom episodes due to the interrelation between the nature of data and the affordances of the specific type of research design.

In the existing literature, some researchers (e.g., Farrell, 2020) also highlighted the lack of EMI lecturer training programs which are more context-specific and data-driven, because every non-Anglophone context entails a diverse nature of EMI implementations based on varying dimensions such as the colonization history of the context and the extent of the multicultural classroom atmosphere. In order to fill this research gap, the current study does not only explore the interactional resources of the participants using the emic perspective of multimodal CA, but also provides implications for EMI lecturers to organize multiple phases of online classroom episodes as an instance of good practices during content knowledge building processes. In doing so, the study brings new insights into context knowledge co-construction by introducing the concept in a multiphase process rather than framing it as an outcome. These findings can also be utilised to create digitally enhanced pre- and in-service teacher training materials by academic units and other internal and external stakeholders in English medium universities at local and global levels. The next section will illustrate the basic assumptions of this study.

Assumptions of the Study

In the scope of the current study, video and/or screen recordings of EMI classroom interactions were collected in line with the research questions of the study. During the data collection process, it was assumed that all the participants (lecturers and undergraduate students) would act in a natural way during the teaching and learning sessions. In addition, all the students took the departmental courses after they had passed an obligatory English proficiency exam at the focal university. Thus, it was believed that all the participants had adequate English proficiency to participate in the classroom interaction. In the next section, limitations of this study will be introduced.

Limitations of the Study

There are some limitations of the current study that should be acknowledged to better introduce the dissertation. First of all, the database of the study included video-

recordings of classroom interactions from four different departments at a state English Medium university. Therefore, one can claim that the dataset is inadequate to generalize the analytic findings to all the EMI higher education institutions in Türkiye, and possibly beyond. However, Conversation Analysts (e.g., Markee, 2015; Seedhouse, 2004) exclusively focus on instances of social interaction emerging from different contexts to gain context-specific and empirical findings rather than making generalizations. Thus, the findings of this study provide representative examples from the research purposes within the face-to-face and online EMI classroom interactions.

Another limitation can be that the data could be collected with all the details including talk, text, and artefacts simultaneously from individual screen of the participants through a screen-recording software. However, the screen recording software was not adopted for the current study due to data collection challenges in the setting at hand. In order to resolve this issue, the researcher received screen recordings using the built-in recorder of the video-conferencing tool, Zoom, which did not cause any methodological problems as it reflected the emic perspectives of the participants. The following section will provide the definitions of terms that are commonly used in this study.

Definition of Terms

Classroom Interactional Competence: “teachers’ and learners’ ability to use interaction as a tool for mediating and assisting learning” (Walsh, 2011, p. 158)

Content Knowledge Co-Construction: “the interactional procedure that the participants (EMI lecturers and undergraduate students) display their target content knowledge, orient to each other’s knowledge demonstration, resolve understanding problems, and complete pedagogical tasks of the course collaboratively on a moment-by-moment basis in interaction”

English Medium Instruction: “using English as a medium of instruction to teach academic subjects in countries or jurisdictions where people are not native speakers of English” (Dearden, 2014, p. 2)

Translanguaging: “one linguistic and interactional repertoire including all accessible linguistic and semiotic resources to increase active participation of the interactants, and establish and maintain mutual understanding and collaborative content knowledge co-construction within dynamic meaning-making procedures (e.g., Canagarajah, 2013)”

Organization of the Study

This dissertation consists of five main chapters with multiple subsections. In the following chapter (Chapter 2), I present the literature review based on the EMI, classroom interaction, knowledge construction, and translanguaging. This chapter provides comprehensive reviews of English Medium Instruction as global and local (Türkiye) levels, knowledge construction related to epistemics in interaction research, and translanguaging in teaching and learning environments, particularly in EMI contexts. Chapter 3 will firstly present the research purposes and questions of the study, and then introduce the detailed information about the research context and participants of the study. In this chapter, I will also explain the data collection procedures, ethical considerations, and multimodal CA as a data-driven and bottom-up research methodology. I will finalize the Methodology chapter with a detailed account of the data analysis procedures, and validity and reliability of the study. Subsequently, Chapter 4 will demonstrate the micro-analytic findings of this study with 16 extracts in two main sections. First of all, the first section of the chapter will show how the participants resolve understanding troubles within translingual turns during the collaborative content knowledge construction processes in the face-to-face (EMI classroom) during pre-pandemic times. Through switching the teaching and learning activities from the face-to-face to online platforms during COVID-19 pandemic, the content knowledge construction process in EMI settings was also carried out in the main and

breakout room sessions via videoconferencing tools, which enabled us to track the target content knowledge co-construction procedures based on translanguaging practices across the interconnected online classroom episodes. Thus, the second section will introduce the interconnected multiple phases of online classroom episodes emerging from three online EMI courses, and document how translanguaging space is utilised for the collaborative content knowledge construction across the multiple phases in three subsections based on three EMI courses. In Chapter 5, I will initially discuss the micro analytic findings of the study in light of the existing literature in EMI, epistemics and knowledge building, and translanguaging in educational settings. Finally, I will conclude the dissertation manuscript by explaining the contributions of the study and providing research-based and pedagogical implications.

Chapter 2

Literature Review

In this chapter, the existing literature on the foci research phenomenon of the dissertation, the co-construction of the content knowledge using translanguaging in English medium university classrooms will be documented. In the first section, English Medium Instruction will be introduced through different research findings across the world. Secondly, the same phenomenon will be elaborated with the implementations particularly in the Turkish context. The third subsection will present the relevant research on the classroom interaction including online EMI classrooms interaction in detail. The fourth section will explain the knowledge building procedures with a particular focus on epistemic relations. Finally, the fifth section will introduce the conceptualization of translanguaging concerning the issues of language alternation in content teaching and learning settings. Overall, the literature review of the dissertation including English Medium Instruction, knowledge building in interaction, and translanguaging practices in the classrooms will be presented in this chapter.

English Medium Instruction (EMI) in the Global Context

In recent years, the levels of socio-economic, political, and technological development have led to significant changes in internationalization and globalization. These changes have also influenced on the language policy of the higher education institutions, and the universities have adopted English as a medium of instruction for the design and organization of a globally academic atmosphere in order to reach their internationalization-related policies (Dafouz & Smit, 2016; Dearden & Macaro, 2016; Lasagabaster, 2022). English functions as a lingua franca for the stakeholders including lecturers, students, and administrators from various linguistic and ethnic backgrounds (Şahan, 2020). Dearden (2014) identifies English Medium Instruction (EMI) language policy as “the use of the English language to teach academic subjects in countries or jurisdictions where the first

language (L1) of the majority of the population is not English” (p. 2). This common definition means that the instructions are provided in English for teaching and learning purposes in the higher education institutions within the expanding circle countries (Kachru, 1986) wherein English has foreign language status compared to inner circle countries (i.e., having English as the home and official language) such as Australia, the United Kingdom, and the United States.

In order to achieve international, political, and social targets at local and global contexts, 2637 higher education institutions around the world have provided 8089 programs taught entirely in English (Wächter & Maiworm, 2014). The implementations of the EMI language policy offer varying advantages for both these universities and their participants (lecturers and students). Firstly, EMI universities can establish a more international profile, and enable to remain in the competitive global education market (e.g., Coleman, 2006; Wächter & Maiworm, 2014). Thus, these universities do not only attract international students from different countries, but also generate high income due to their undergraduate and graduate EMI programs (e.g., Cho, 2012; Muthanna & Miao, 2015). In addition, EMI university policy enables the lecturers and the students to improve themselves, and get ready for global and international education, training, and job markets in their educational and professional careers (e.g., Doiz et al., 2011; Huang, 2011; Lin, 2020; Rose et al., 2019). In addition to the increasing level of the student and staff mobility, EMI higher education institutions allow the lecturers and students to develop their language and communication skills (e.g., Byun et al., 2011; Galloway et al., 2017), and have access to English resources (Chen & Kraklow, 2015).

On the other hand, the challenging points of EMI language policy have been pointed out through some adverse consequences regarding the stakeholders, university, and local culture and society. First of all, teaching content in a foreign language is an extra workload for the lecturers, and most of the EMI universities do not provide them with EMI-specific professional development opportunities (e.g., Doiz et al., 2011; Tamtam et al., 2012).

Furthermore, the local and/or international students may have insufficient English proficiency levels, and this negatively impacts on content teaching and learning processes (e.g., Macaro et al., 2018; Vu & Burns, 2014). As well as the organizational and administrative issues for EMI universities (e.g., Bradford, 2013), using English for content teaching and learning at tertiary level can have adverse effects on socio-cultural lives in non-Anglophone contexts. To illustrate, some researchers claim that EMI can result in discrepancy of the educational facilities for students, and create an elite social class (e.g., Coleman, 2016; Dimova et al., 2015). Also, EMI language policy can jeopardize the local languages and cultural identities of the expanding countries (e.g., Jensen & Thorgersen, 2011; Lasagabaster, 2015). Finally, Bradford (2013) stated that the international classrooms including both local and international students can cause cultural conflicts based on the classroom management and/or assessment and evaluation procedure. Overall, even though EMI implementations have been criticized in terms of the impacts on participants, university, and socio-cultural dimensions, EMI plays a crucial role in content teaching, and has more benefits than constraints for higher education institutions (Smith, 2004).

Understanding the scope of EMI requires responding to a few questions: at which age students start English, how much they are exposed to English, how balanced the level is between the academic content and English as a foreign/additional/second language as well as the expected outcomes of the programs, and the declared language policy (Morton, 2018). EMI can be more related to Content and Language Integrated Learning (CLIL) in which the content and a foreign/second/additional language is taught at the same time with a difference regarding the target of content and language, though. Thus, both EMI and CLIL should have an institutional teaching and learning context and the medium should be different from the participants' native languages (e.g., Duran, 2017). Moreover, the lecturers and students do not have to be native speakers of the medium of instruction.

EMI has also some distinctive features from CLIL environments. EMI mainly focuses on content teaching rather than simultaneous focus on content and language teaching and

learning (Coyle et al., 2010). Thus, EMI does not aim at developing the students' English proficiency levels, and the language alternation practices are more common and expectable in EMI settings (e.g., Jiang et al., 2019). Unlike the European roots of CLIL, EMI has not emerged from any particular European programs such as Bologna Declaration. In addition, EMI needs to be conducted in English for all the teaching and learning activities whereas CLIL has no particular foreign language selection.

CLIL researchers have investigated the interactional dynamics of co-constructed classroom conversations between teachers and students as well as other significant components such as English language teacher awareness (Yalçın et al., 2020) within different dual-focused content and language integration contexts including secondary science classrooms (e.g., Evnitskaya & Morton, 2011) or group work interaction (e.g., Moore & Dooly, 2010). Through a micro-analytic lens, earlier research documented the sequential organizations of varying CLIL practices such as clarification requests (Kääntä & Kasper, 2018), turn-taking and repair practices (Kääntä, 2010), feedback moves (Nikula, 2007), and multimodal resources in students' explanations (Kupetz, 2011). To illustrate, Nikula (2007) explored that learners initiate much longer responses, and the teacher also produces more expanded feedback turns to the students in CLIL environments than other educational settings. Furthermore, CLIL teachers produce more factual questions to elicit short and precise student responses (Llinares & Pena, 2015). In sum, such analytic findings of CLIL studies align to classroom practices of EMI settings and embraces varying bilingual education labels (e.g., CLIL, EMI, ICLHE) as an umbrella term.

Some researchers have also used more specific labels for EMI implementations in higher education such as Integrating Content and Language in Higher Education (ICLHE) (e.g., Fortanet-Gómez, 2013) and English Medium Education in Multilingual University Settings (EMEMUS) (Dafouz & Smit, 2016, 2020). These specified terms offer a more inclusive approach including varying research and pedagogical usages in different teaching and learning spaces (i.e., face-to-face, and online) and EMI teacher/lecturer professional

development (e.g., ROAD-MAPPING Framework, Dafouz & Smit, 2020). In addition, most of the researchers prefer to use CLIL for investigating language and content integration especially at the school level (i.e., pre-tertiary) rather than EMI (Lasagabaster, 2022). For example, Pecorari and Malmström (2018) overviewed 496 research studies investigating the content teaching using EMI as the query term, and explored found that 432 of these studies were carried out in the tertiary education context, which signals the close connection between EMI and higher education. In this sense, EMI is the preferred label for exploring the interactional dimensions of the content teaching at the tertiary level.

English Medium Instruction policies have been closely examined through a wide range of research foci within various EMI contexts (e.g., Costa, 2012; Jensen & Thorgersen, 2011; Lasagabaster, 2015). Particularly, the existing research has centred on teacher and student beliefs and attitudes towards EMI language policy for content teaching in their country and institution settings (e.g., Aguilar, 2017; Chapple, 2015; Cho, 2012; Dearden & Macaro, 2016; Deignan & Morton, 2022; Earls, 2016; Erling & Hilgendorf, 2006; Hu et al., 2014). As an illustration, Erling and Hilgendorf (2006) asserted that the participants having inadequate proficiency level of English have negative attitudes towards the EMI implementations. In addition, Aguilar (2017) investigated the engineering lecturers' viewpoints about EMI in the Spanish context, and found that the participants rejected English language teaching and assessment despite their positive attitudes towards using English for content teaching rather than language. Some researchers also investigated effective teaching practices (e.g., Kling, 2015; Klaassen, 2001). For example, Kling (2015) reported that a group of EMI lecturers in Denmark used their native language or visual resources when they had difficulties in explaining field-specific terms in English. Furthermore, Klaassen (2001) examined the impact of effective teaching practices in EMI implementations at a technical university in the Netherlands thereby conducting interviews with EMI lecturers. In this article, he highlighted diversified teaching strategies: adopting a more student-based approach, providing concrete instances, using visual resources, giving

space for student questionings, and introducing with different words. Also, Klassen recommended that some support mechanisms based on language proficiency and teaching techniques should be provided to the students in EMI classroom environments. Moreover, Hu and Lei (2014) investigated a case from an EMI Business Administration program in China, and evidenced the non-alignment between the language policy and classroom practices.

Another significant phenomenon in the literature is the exploration of EMI implementation and provision of diverse suggestions for increasing quality of EMI teacher training and professional development (e.g., Dafouz & Smit, 2016, 2020; Dimova & Kling, 2018; Guarda & Helm, 2017; Hellekjær et al., 2018; Klaassen & De Graaf, 2001; O'Dowd, 2018). To illustrate, O'Dowd (2018) scrutinized 70 EMI universities in Europe and their EMI teacher training programs, and revealed that EMI training should focus on the teachers/lecturers' communication and interaction skills with a particular focus on the development of their language proficiency and the usage of field specific terminology as well as general English vocabulary knowledge (Dimova & Kling, 2018). Dafouz and Smit (2016, 2020) also offered a broader conceptualization for EMI policy named as ROAD-MAPPING. This framework is a sociolinguistic approach to EMI implementations with six different components including Roles of English, Academic Disciplines, (language) Management, Agents, Practices and Processes, and Internationalization and Glocalization. They recommended that all the complementary dimensions need to be investigated to grasp the dynamic components of their relations, and to provide more holistic implications for EMI lecturers' professional development. In addition to these research papers, Cambridge Assessment offers a 40-hour online course, namely "Certificate in EMI Skills" (www.cambridgeenglish.org/emi). This online course includes eight different modules such as language for lecture and language for evaluation and feedback, which may be conducted in different higher education institutions all over the world. Yet, this online course has not been developed regarding the socio-cultural dimensions of various country contexts.

In their systematic review of the literature on EMI, Macaro et al. (2018) also pinpointed four main problematic areas which are ripe for future research. These include: (a) the lack of understanding about knowledge and proficiency through EMI teaching and learning activities; (b) the scarcity of the classroom interaction research in EMI higher education contexts; (c) the predominance of single case studies and lack of multi-site studies in the EMI research field; and (d) the inadequacy of EMI studies with an emphasis on content teaching and learning. Against this background, this dissertation aims to explore the content knowledge building process using translanguaging within multiple-case classroom contexts in Türkiye. In order to achieve the research purposes of this study, firstly, the following section will introduce Turkish EMI contexts with its specific features and the previous studies in the EMI literature.

English Medium Instruction in Turkish Context

Due to the global needs, EMI is increasingly preferred in Turkish higher education context as in other countries all over the world. Some of the countries and regions such as Hong Kong, India, Latin America, South Africa, and Taiwan experienced colonization and socioeconomic dominance in the past. Relatedly, EMI policy was mostly preferred by the students and their parents because of its alleged reputation and the impact of the colonization history (e.g., Lin & Man 2009; Probyn, 2019; Tai, 2022; Tejada-Sánchez & Molina-Naar, 2020; Tollefson & Tsui, 2014). However, the rest of the expanding circle countries such as the Netherlands, Spain, Italy, and Türkiye have different rationales behind EMI implementations at different levels (i.e., %100, 70, and 30), and English has a status of foreign language without the effect of the colonization history.

In Türkiye, English was originally used as a Medium of Instruction by Robert College which was an American private school in the 19th century. In 1956, The Middle East Technical University was established as the first Turkish university using English as a medium of instruction with all the implementations at undergraduate and graduate levels by

law. Following this, Boğaziçi University was founded building on the 150-year tradition of Robert College in 1971 to provide EMI teaching and learning activities at all education levels. Bilkent University was also the first private EMI university in Türkiye. These universities having English as an official education language built the first generation of EMI higher education institutions (Karakaş & Bayyurt, 2019). Since 2000, the adoption of the Bologna process and the student mobility between Türkiye and other European countries led to an increase in EMI institutions (Arık & Arık, 2014; Macaro et al., 2016), which are conceptualized as the second and/or new generation of EMI (Ege et al., 2022). Therefore, EMI policy has also been followed by 207 universities with 1737 undergraduate programs (<http://www.studyinturkey.gov.tr>) in Türkiye. Thus, as one of the countries in the expanding circle (Kachru, 1992), Türkiye has a more extensive internationalization coverage in place through EMI implementations at both state and private higher education institutions.

Similar to other implementations at the global context, EMI has always been a disputable and sensitive topic in Turkish education policy (Alptekin & Tatar, 2011; Arkın, 2013; Selvi, 2014). Turkish researchers emphasized the contribution of EMI policy on students' linguistic and cognitive development (Alptekin, 1998; Kırkıcı, 2004). EMI universities also prepare Turkish students and staff for international education, training, work, and touristic activities as well as supporting them in their classroom practices such as asking questions, and following the course content (e.g., British Council, 2015; Kırkgöz, 2005, 2009; Turhan & Kırkgöz, 2018). In addition, EMI allows the Turkish universities to employ more qualified staff at an international level and involve in the competition between the universities all over the world regarding the internationalization (Çetiner et al., 2011). However, other Turkish researchers have also highlighted some negative aspects of EMI implementations including alienated and privileged community creation (Demircan, 2006; Köksal, 1995), damage to Turkish language and culture (Sinanoğlu, 2000), and difficulties of understanding the content knowledge for the students (Kırkgöz, 2005, 2009).

In recent years, the increasing demands for EMI in Türkiye have attracted the national and international researchers to investigate EMI higher education institutions through quantitative (e.g., Kırkgöz, 2005; Derintuna, 2006), qualitative (e.g., Karakaş & Bayyurt, 2019; Selvi, 2014), and mixed-methods (e.g., Curle et al., 2020) research approaches. Many studies have reported a wide range of research phenomena including resources that enhance EMI programs (e.g., British Council, 2015), student motivation, beliefs, and perceptions (e.g., Kırkgöz, 2005; Macaro & Akıncioğlu, 2018; Soruç et al., 2021), lecturers' perceptions and expectations (e.g., Başıbek et al., 2014; İnan et al., 2012), exploration of EMI challenges and strategies for dealing with them (e.g., Dalkız, 2002; Soruç & Griffiths, 2018), students' learning skills, proficiency, and academic success (e.g., Curle et al., 2020; Karakaş, 2016; Sert, 2008) at both the undergraduate (e.g., Kırkgöz, 2009) and graduate (e.g., Bozbıyık & Uysal, 2022) levels. To illustrate, Karakaş and Bayyurt (2019) explored the linguistic diversity of an EMI university in Türkiye regarding the dominance of the English and Turkish, and reported that the standardized native English is more preferred and acceptable as the academic English, and the linguistic landscape is mostly dominated by Turkish and English rather than other languages. As another illustration, Dalkız (2002) stated that learners got into difficulties in capturing their lecturers' questions, and they could not provide correct responses to the lecturers in EMI settings. Regarding the studies focusing on the learners' language skills, Karakaş (2016) highlighted that the weakest language skills of the students is their speaking skill, and the students in 3 different EMI universities stated that their classmates have insufficient levels of English proficiency. Curle et al. (2020) conducted a mixed-methods research based on the students' test scores, their English proficiency scores, and interviews with these students to inquire into their academic success at a state Turkish university. They found that the students' English proficiency scores did not lead to significant differences in their academic success, and the Turkish courses helped them understand English content as a supportive factor for their academic success.

In addition to research papers based on the EMI approach, different workshops have been also organized to discuss current issues and propose solutions in Türkiye. Different stakeholders of EMI contexts including students, lecturers, and administrators also participated in these meetings called as “Using English as a Medium of Instruction: A Holistic Approach” in İstanbul (<http://www.khas.edu.tr/news/1892>), İzmir (<http://www.ieu.edu.tr/butuncul-bir-yaklasim>), Gazi Mağusa- TRNC (<https://emi-sempozyum.emu.edu.tr/tr>), and Ankara (<http://emi.metu.edu.tr/en>). To illustrate, during the regional workshop organized at Kadir Has University in İstanbul in 2018, it was suggested that diverse strategies such as technological and visual support or increasing interactive in-class activities should be integrated to enhance efficiency of EMI courses (Kerestecioğlu & Bayyurt, 2018). Furthermore, a national symposium was organized at the Middle East Technical University in 2019 in Ankara with the participation of 190 stakeholders (Işık-Güler et al., 2020). During three panel discussions based on the expectations of internal and external stakeholders, the participants have assessed the current situation, offered potential solutions and recommendations to EMI institutions in Türkiye. Following these regional and national symposium series, a group of researchers from 4 different EMI universities (i.e., Middle East Technical University, Boğaziçi University, Bilkent University, and Kadir Has University) started a new fully-funded TÜBİTAK project (The Scientific and Technological Research Council in Türkiye) (Project ID: 121K227) to investigate the teaching and learning procedures at English Medium Instruction (EMI) universities in Turkey in an attempt to explore the effective and ineffective practices, and develop an in-service training framework for the lecturers in English Medium universities through accessible online education modules (Işık-Güler et al., 2021).

Even though the existing EMI literature in Türkiye have mainly focused on the participants' viewpoints on EMI implementations, some researchers have closely examined the actual classroom practices through interviews, observations, and/or focus group meetings (e.g., Arkin & Osam, 2015; Şahan, 2020; Şahan et al. 2021). Arkin and Osam

(2015) reported that the university lecturers provide more repetitions and speak more slowly in EMI classrooms than teaching the same content in Turkish. Şahan also observed 14 hours of classroom data from Engineering departments in a Turkish university, and showed that the lecturers utilise Turkish as a communicative strategy. In another similar study, Şahan et al. (2021) carried out semi-structured interviews with 21 lecturers at the engineering departments in 7 Turkish universities, and revealed Turkish usage and pedagogical practices in terms of three university categorizations (i.e., elite, large, and small). In a more recent study, Ege et al. (2022) investigated classroom discourse strategies produced by 7 EMI lecturers through corpus-based analysis, and identified fillers, self-rephrasing, and code-switching as the most common strategies to deal with linguistic problems, and to promote students' comprehension. All of these studies contribute to the EMI classroom discourse literature through top-down approaches by analysing their data with predetermined categories. However, there remains an urgent need to document how content knowledge and mutual understanding are constructed and maintained through a data-driven and bottom-up approach to the investigation of Turkish EMI universities. In the following section, classroom interaction research will be introduced with reference to face-to-face and online teaching and learning environments.

Micro Analytic Research on Classroom Interactions including Online EMI Classrooms

In classrooms, teachers and students establish and maintain mutual understanding and knowledge exchange, and thus manage interactional and pedagogical activities in talk-in-interaction. The interactants do not only utilize linguistic knowledge, but they also deploy semiotic resources in line with locally emergent classroom needs for their teaching and learning purposes (e.g., Pekarek Doehler, 2010; Waring, 2015). These co-constructed verbal and nonverbal practices have been investigated in the classroom discourse research in different scholarly traditions ranging from 'cognitive interactionists' (e.g., Ellis et al., 2019) to 'conversation analytic' (e.g., Sack et al., 1974; Sert, 2015). While 'cognitive

interactionists/psycholinguists examine the discourse produced by students during teaching and learning activities focusing on a cognitive view of language, conversation analysts unpack publicly displayed interactional and pedagogical classroom practices deployed by teachers and students in situ. While investigating the features of classroom discourse, psycholinguists adopt a researcher-oriented, theory-driven research perspective informed by experimental research designs to examine causal relations between classroom discourse and SLA, and thus reaching generalizable results in line with the cognitive and psychological properties. In addition, through the Vygotskian psychological tradition, the sociocultural theory deals with the ways how interactants improve language in their natural social contexts by identifying teachers' and learners' scaffolding practices based on exogenous theoretical foundations (e.g., Zuengler & Miller, 2006). Classroom ethnography researchers also utilize different combined methods such as classroom observations and semi-structured interviews to raise their understandings about the social and cultural dimensions that influence on learning and teaching processes.

Through the process-oriented, bottom-up investigation of the classroom discourse, conversation analysts closely examine how the classroom interaction is organized in talk-in-interaction (e.g., Balaman, 2023a; Markee et al., 2021; Sert, 2015). Conversation analysis (CA) allows both researchers and teachers to unpack pedagogical practices based on different interactional features of classrooms such as turn-taking (e.g., Cekaite, 2007), preference organization (e.g., Pekarek-Doehler & Pochon-Berger, 2011) or repair (e.g., Seedhouse, 2004) sequences within various classroom environments including English as a Foreign Language (EFL) (e.g., aus der Wieschen & Sert 2021) and English Medium Instruction (EMI) (e.g., Duran et al., 2019). CA presents detailed descriptions of the complex interactions with its data-driven and emic analysis of observable interactional practices (Can Daşkın & Hatipoğlu, 2019; Sert & Walsh, 2013). Therefore, conversation analysts can explore how participants deploy target learning objects in situ, and display second language learning (e.g., Markee, 2008).

As a dynamic and flexible procedure, investigating language in classroom interaction enables trackability of learning objects at two different time spans (i.e., longitudinal, and cross-sectional). Longitudinal examination entails researchers and teachers to observe learning beyond individuals through descriptions of the changing features of interactional practices such as turn-taking across time (e.g., Hellerman, 2008, 2011). On the other hand, researchers can identify some dimensions of teaching and learning processes through cross-sectional investigation within short time spans (e.g., Firth, 2009). Particularly, longitudinal studies allow researchers to explore how knowledge and learning are pursued through observable practices within various interactional episodes of the classrooms. This aligns with the notion that learning is also inherently longitudinal and can be observed over time (Sahlström, 2011, p. 45). During such teaching and learning processes, the participants (teachers/lecturers and students) utilize “interaction as a tool for mediating and assisting learning” (Walsh, 2011, p. 158), which refers to Classroom Interactional Competence (CIC) (Walsh, 2006). Relatedly, CA provides a more systematic and particular understanding of classroom interactional competence (Wong & Waring, 2010). Previous CA studies have mostly dealt with teachers’ practices for promoting learning opportunities, and displaying CIC (e.g., Balaman, 2023a; Sert, 2017). Conversation analysts have described a wide range of practices including convergent language usage regarding pedagogical purposes of the moment (e.g., Seedhouse, 2004; Walsh, 2006, 2013), maximizing interactional space (e.g., Schwab, 2011), shaping learner contributions (e.g., Can Daşkın, 2015), teachers’ instructional idiolect (e.g., Walsh, 2011), questioning practices (e.g., Bozbiyık et al., 2021), effective use of eliciting (e.g., Duran & Jacknick, 2020), effective usage of reference to past learning (e.g., Can Daşkın & Hatipoğlu, 2019), management of language alternation (e.g., aus der Wieschen & Sert, 2021), claims of insufficient knowledge (e.g., Sert & Walsh, 2013), and unwillingness to participate (e.g., Evnitskaya & Berger, 2017).

Through the micro analytic research findings based on CIC, conversation analysts have also developed teacher education frameworks such as SETT (Walsh, 2006), IMDAT (Sert, 2015), and SWEAR (Waring, 2021) to help teachers increase their awareness of classroom dynamics, and improve their skills to promote student participation in their own classrooms. SETT framework (Walsh, 2006, 2011) enables teachers to identify concepts of actual classroom interactions (e.g., request for clarification) in terms of their pedagogical purposes (e.g., to clarify when necessary) within four classroom “modes” (managerial mode, materials mode, skills and systems mode, classroom context mode) at a given time (Walsh 2011, p. 113). Following SETT framework, Sert (2015) not only developed the reflective IMDAT framework for pre-service teachers to develop their CIC, but also (Sert, 2019) also integrated mobile video-tagging tools into this framework through evidence-based and data-led (Mann & Walsh, 2017) reflection and feedback practices. In the scope of the IMDAT framework, pre-service teachers can change their interactional and pedagogical practices, and raise their language awareness over time. Although these frameworks have been suggested for the professional development of language teachers based on micro-analytic details of actual classroom interactions, such reflective training programs are yet to be improved for lecturers who teach content knowledge in EMI universities.

In addition to CIC-related studies, other CA researchers have also demonstrated diverse classroom practices such as questioning (e.g., designedly incomplete utterances-Koshik, 2002), code-switching (Üstünel & Seedhouse, 2005), learner initiatives (e.g., Waring, 2011), peer involvement (e.g., Bozbıyık & Can Daşkın, 2022) and providing conversational clues (Okada, 2010) in language classrooms. To illustrate, Bozbıyık and Can Daşkın (2022) showed how peers involved in ongoing interaction to provide responses to learner initiatives following the teacher’s lack of knowledge, and to help their peers challenge the teacher’s responses to learner initiatives. Therefore, peer involvement led to raising teaching and learning opportunities for both the teacher and the students in an

English as a foreign language classroom. In addition to the conversation analytic studies conducted in language teaching and learning environments, the researchers have also investigated the interactional dynamics of co-constructed classroom conversations between teachers and students within different CLIL (Content and Language Integrated Learning) contexts including secondary science classrooms (e.g., Evnitskaya & Morton, 2011) and group work interactions (e.g., Moore & Dooly, 2010). Through a micro-analytic lens, earlier research documented the sequential organizations of varying CLIL practices such as clarification requests (Kääntä & Kasper, 2018), turn-taking and repair practices (Kääntä, 2010), feedback moves (Nikula, 2007), and multimodal resources in students' explanations (Kupetz, 2011). To illustrate, Nikula (2007) explored that learners deliver much longer responses, and the teacher produces more expanded feedback turns in CLIL environments than other educational settings. Furthermore, CLIL teachers produce more factual questions to elicit short and precise student responses (Llinares & Pena, 2015). In sum, such analytic findings of CLIL studies align with the classroom practices of EMI settings and embrace varying bilingual education labels (e.g., CLIL, EMI, ICLHE) as an umbrella term.

As stated in the earlier sections, some EMI researchers (e.g., Macaro et al., 2018) highlighted the scarcity of the studies investigating EMI classroom interaction. In this regard, Duran and her colleagues worked on 30 hours of video recordings of a higher education 'Guidance' course using the data-driven and bottom-up research perspective of CA methodology at the department of Educational Sciences in a state university in Türkiye. Duran and Sert (2019) documented how the focal lecturer showed her dispreference towards previous student utterances before the students initiated their turns within content-based pedagogical events. Duran et al. (2022) also presented the participants' joint word search practices using bilingual (English and Turkish), verbal (e.g., how can I say it?), and embodied actions. Through micro-analytic investigations into the same database, Duran and Jacknick (2020) documented the lecturer's elicitation practices in whole-class post-task discussions, and illustrated that the lecturer developed a personalized response model

while also deploying varying multimodal sources. Duran and Sert (2021) also demonstrated various functions of student-initiated multi-unit questions (MUQs) with reference to the turn design features (e.g., prefaces, multiple questions, and follow-up initiations) such as producing background information and assuring the previous response using follow-up questions. However, there are not any studies that closely examine the multifaceted organization of online EMI classroom settings.

In the last thirty years, technology has had a crucial impact on teaching and learning processes, as it promotes communication and interaction in the classroom. The emergency of distance education due to COVID-19 has further evidenced the indispensability of technology for education. During this period, teachers all over the world benefitted from different digital tools to support their students and they learned how to apply technological resources in terms of their students' needs (Bao, 2020; Kessler & Hubbard, 2017). This emergency period forced schools and universities to change their teaching activities from face-to-face to online educational settings. Even though face-to-face education is still regarded as one of the best teaching modalities especially for the students who cannot have self-discipline (Jocuns et al., 2020), teaching and learning had to be effectively conducted at all the levels of education in the new digital world.

During COVID-19 pandemic, some scholars reported classroom discourse practices from a macro-level perspective through diverse methodologies such as content analysis (e.g., Sulistyani, & Riwayatiningsih, 2020) or mediated discourse analysis (e.g., Jocuns et al., 2020). For example, Sulistyani and Riwayatiningsih (2020) suggested that students need to be provided with tasks which allow spontaneous collaborative discussions through conversational cues in the online classroom. In addition, Jocuns et al. (2020) mainly investigated changing features from face-to-face to online classroom interactions by interviewing five different teachers (four of them from the universities and one of them from the middle school) in China. They underlined that teacher-student interaction was much more frequent than peer interaction, which marked a negative effect of virtual classrooms.

In their paper, the teachers also stated that they had to revise their practices and materials in terms of their teaching goals, and thus offered more diversified sources including music, relational internet sites or applications. Moreover, Querol-Julian (2023) adopted multimodal interaction analysis to examine how the classroom interaction was managed in an EMI live online lecture at the master programme in the Business Administration programme, and underlined the significance of the lecturer's waiting time provision, functional variety of the feedback phase, and the roles of discourse markers in the online interaction. Querol-Julian (2023) also suggested that these multimodal resources can help teachers increase their multimodal awareness (Morell et al., 2020) to promote students' engagement in interaction.

Conversation analysts have examined online interactions in addition to face-to-face conversations (e.g., Balaman & Sert, 2017a; González-Lloret, 2015; Meredith, 2019; Murray, 1989). By scrutinizing the sequential organization of interaction, they have explored how participants co-construct social actions during a variety of online environments including *Skype* video calls (e.g., Licoppe, & Morel, 2012), *Facebook* chats (e.g., Meredith & Stokoe, 2014), gameplay (e.g., Rachels & Rockinson-Szapkiw, 2018), and task-oriented video mediated interaction (e.g., Pekarek Doehler & Balaman, 2021). However, only a few researchers (e.g., Hjulstad, 2016; Veronesi et al., 2020) have addressed online classroom interaction as an institutional setting using CA. To illustrate, Veronesi et al. (2020) examined 34-hour video recordings of online classroom interaction on both school and university settings by grasping interlocutors' actions in talk-in-interaction (i.e., opening the conversational events and instructors' practices for maintaining students' participations). By presenting four short extracts, they documented that instructors asked direct questions to particular students to make up for the physical absence in virtual classrooms. On the other hand, the instructors sometimes initiated non-addressed questions, which could cause longer silences or overlaps within multi-party online classroom interaction. In a more recent study, Badem-Korkmaz and Balaman (2022) worked on the screen recordings of video-mediated EFL higher education classrooms using multimodal CA, and showed that the

teacher managed to not only elicit the students' responses following her questions which were not responded, but also to further elaborate more preferred student responses that were incomplete or inaccurate.

Regarding online EMI classroom interaction, Bozbiyık and Morton (2022a, 2023a) combined multimodal Conversation Analysis and the autonomy dimension of Legitimation Code Theory (LCT) (Maton, 2014) to analyse the online interactional structure of EMI classrooms at a state EMI university in Türkiye. Bozbiyık and Morton (2022a) explored how a lecturer skilfully utilised outside knowledge from the participants' daily lives during the target content (inside) knowledge building process in an online chemistry course. Bozbiyık and Morton (2023a) also documented that three lecturers displayed exemplification practices using a range of interactional and multilingual resources such as positioning the students as knowledgeable during knowledge construction process in three different EMI departments (i.e., chemistry, business administration, and food engineering). These studies also showed how the lecturers navigated different autonomy dimensions of knowledge during the knowledge building processes using LCT in addition to the exploration of multifaceted interactional organization of these online EMI classrooms in the main sessions of the online EMI classroom settings.

In the main session of the online classroom interaction (i.e., whole-class large group video-mediated meetings), teachers/lecturers mostly produce monologues and answer their own questions (AOQs) (Bozbiyık & Morton, 2022a) because of the difficulty of adapting to online learning environments (e.g., Kohnke & Moorhouse, 2022; Premji, 2021). In order to increase student-student interaction in online platforms such as Zoom, MS_Teams, Blackboard Collaborate, or Webex, breakout rooms are used as small-group meeting spaces in which a few participants talk about particular tasks before they turn back to the main session (Reher & Pinilla 2022; Tsihouridis et al., 2020). As the hosts of the online teaching and learning spaces, teachers/lecturers decide numbers of the small-group participants, the specific discussion topics, and the duration of small group activities (e.g.,

Ng, 2020). Then, they can assign students to the breakout rooms, and bring them back to the main sessions to elicit the outputs of the small group activities. During COVID-19 pandemic, breakout rooms were actively used in line with the context-specific objectives such as practicing clinical interviewing skills labs with standardized patients (e.g., Gustafsson, 2020; Rucker et al., 2020), and enabling the students to engage in online activities more actively (e.g., Saltz & Heckman, 2020).

Some researchers underlined the positive aspects of utilizing breakout room sessions (e.g., Chandler, 2016). First of all, teachers/lecturers can create a more collaborative and interactive online classroom atmosphere by organizing breakout room sessions. Therefore, the students can exchange their opinions, provide suggestions, and learn from each other more freely and comfortably, which is rare with a larger audience in the main sessions. In addition, using breakout rooms can provide a significant opportunity for the students to build a close relationship with their classmates (e.g., Chandler, 2016; Fitzgibbons et al., 2021). During these synchronous small-group meetings, the students can also plan and work on the assigned tasks such as discussions and role plays collaboratively by using different virtual resources such as Google Forms and Google Docs (e.g., Reher & Pinilla, 2022). While working on these online tools, the students may also screen shares their ongoing productive outputs, and thus they can check one another's production, and increase peer engagement (Kohnke & Moorhouse, 2022). Furthermore, active participation in the breakout room sessions can make students feel more confident and satisfied in the online lessons (Tsihouridis et al., 2020). On the other hand, challenging aspects of using breakout room sessions have been reported in terms of students' negative attitudes, lack of motivation, and technology usage (e.g., Reher & Pinilla, 2022; Tsihouridis et al., 2020). To illustrate, the students can have adverse attitudes towards small group activities, and then do not actively contribute to task completion processes when they experience interactional problems with the other group members. Thus, the presence of the students in the breakout room sessions does not readily provide an active involvement in the student-

student interaction. Furthermore, homogeneity of the student groups can result in dissatisfaction about both the breakout room activities and the general course content (e.g., Wang & Tokiwa, 2021). In order to prevent negative aspects of utilizing breakout rooms, the teachers/lecturers need to organize better structured and enjoyable tasks to be completed by more heterogeneous student groups. In addition, they can include prompts to facilitate students' understandings of the structures of the assigned tasks, which enables the students to complete them more easily (Fitzgibbons et al., 2021). Ng (2020) also suggested that teachers can join the breakout room sessions in order to control if the students are working on the tasks, and using the target language.

In the last four years, some studies have reported the functions of the breakout room sessions, and the participants' viewpoints towards these specialized virtual spaces (e.g., Gruber & Bauer, 2020; Li et al., 2021; Romero-Ivanova et al., 2020). Gruber and Bauer (2020) described how one instructor organized Zoom breakout room sessions to enable the students to work individually, and enhance collaborative and interactive small-group activities in German language classrooms. This study also showed that the teacher assigned (1) information gap activities for practising question words and pronouns in German, and (2) the 'battle ships' game activities for asking questions in a competitive way. In addition, Tsihouridis et al (2020) conducted questionnaires, semi-structured interviews, and focus group meetings with the university students to explore their opinions about using the breakout room sessions. The findings showed that they have positive attitudes towards using the breakout room sessions due to a wide range of benefits such as enhancing collaboration, expressing themselves freely, creating togetherness among the students, decreasing loneliness and isolation. The students also suggested that longer periods of time should be provided to interact with each other, and carry out their assigned tasks in a coordinated way. Utilizing an exploratory sequential research design, Rahayu (2020) indicated that the university students' positive reflections are based on three important elements: communication, lesson material and study process about the Zoom breakout

room sessions. All in all, although there have been a few studies investigating the participants' attitudes towards using the breakout room session, there is no study that shows interactional organization of the small-group activities in the breakout room sessions. In this regard, this study aims to show how the content knowledge is co-constructed using translanguaging within different online episodes (i.e., mainly the main and the breakout room sessions, see Chapter 3) in EMI university classrooms in Türkiye. In the following section, the research background of knowledge co-construction processes will be introduced in detail.

Knowledge Construction in Teaching and Learning Environments

The construction of knowledge is interactively achieved, and displayed in a dynamic and context-sensitive way within institutional and non-institutional teaching and learning environments, which falls into the scope of epistemics in interaction research (Heritage, 2012a, 2012b, 2013). The participants make their funds of knowledge observable to one another on a minute-by-minute basis for knowledge co-construction, which has been analysed using Conversation Analysis by many researchers (e.g., Balaman & Sert, 2017a; Heritage & Raymond, 2005; Jakonen & Morton, 2015). Some CA researchers (Goodwin, 2013; Raymond, 2018; Stivers et al., 2011) also stated that the organization of knowledge exchange and/or epistemics is one of the main features of social interaction such as turn-taking, preference organization, and repair. Stivers et al. (2011) also reported three dimensions of epistemics: epistemic access, epistemic primacy, and epistemic responsibility. While epistemic access encompasses knowing/not knowing, level of certainty, knowledge resources, epistemic primacy is based on the interactants' rights for claiming and knowing, and the dominance of knowledge provision (e.g., Heritage & Raymond, 2005). In addition, the interactants also orient to knowledge as a shared problem, and take epistemic responsibility for knowing and/or not knowing (Keevallik, 2011), and this plays a significant role in managing learning particularly in classroom interaction (Seedhouse & Walsh, 2010). In doing so, the interactants utilise the first-hand (experiencing

the knowledge) and/or derivative knowledge (learning the knowledge through other resources such as online resources-Mondada, 2011) (Pomerantz, 1980) to demonstrate their knowledge based on the two concepts of epistemics (i.e., epistemic status and epistemic stance) (Heritage, 2012a). While epistemic status refers to “a relational concept concerning the relative access to some domain of two (or more) persons at some point in time”, epistemic stance depends on how this access to knowledge is deployed through minute-by-minute interaction (Heritage, 2012a, p. 4). Thus, epistemic status can be diversified and changed in terms of the interactants and knowledge to establish and maintain mutual understanding in talk-in-interaction.

The participants position themselves as more (K+) and/or less (K-) knowledgeable on a dynamic epistemic gradient (Balaman & Sert, 2017b; Heritage & Raymond, 2005; Melander, 2012), and so they work to find a balance between their epistemic status to close the sequence through mutual intelligibility and congruence between interaction and pedagogical purposes. In teacher-fronted teaching and learning environments, epistemic asymmetry is more evident than online learning meetings and daily conversations (Filipi, 2018; Stivers et al., 2011), because teachers have epistemic authority (Heritage, 2013) responsibility for providing knowledge to the students claiming epistemic rights to learn. However, in both conversational contexts (i.e., face-to-face, and online), the interactants utilise multimodal resources including verbal (e.g., declarative sentences, interrogative, wh, and tag questions, references to past learning) and embodied actions (e.g., nodding, hand gestures, gaze) to display their epistemic stance (Can Daşkın & Hatipoğlu, 2019; Jakonen & Morton, 2015; Kämäräinen et al., 2019; Sert & Walsh, 2013). They may also request for elaboration, and produce post-expansion sequences by downgrading their epistemic knowledge through evidential markers and hedging (e.g., Enfield, 2011; Heritage, 2012a; Nguyen et al., 2022; Raymond & Heritage, 2006; Weatherall, 2011). On the epistemic progression of the knowledge exchange (Gardner, 2007), other participants also orient to the knowledge provider using boosters and hedges (Heritage, 2012a), oh-prefaced

declaratives (Heritage, 1984; Seuren et al., 2016) as well as nonverbal interactional practices (e.g., head shakes). Therefore, the interactants do not only design the epistemic asymmetry based on the dynamic relationship of their epistemic stances and status as the crucial phase of learning and teaching (Rusk et al., 2014), but also track learning objects (i.e., target knowledge) in single and/or multiple conversational activities through verbal and semiotic resources (Markee, 2008).

Exchange and co-construction of knowledge has been mostly reported based on different participation frameworks (i.e., teacher-student, peer interaction) in both face-to-face and online language learning and teaching environments. First of all, CA researchers have focused on how teachers/lecturers initiate questions to enable students to show their knowing vs. unknowing epistemic status (e.g., Koole, 2010; Sert, 2011, 2013; Sert & Walsh, 2013) in whole-class interaction. Koole (2010) closely examined Dutch mathematics classrooms using multimodal CA, distinguished two fundamental dimensions of the epistemic access: displays of knowing and understanding to show how the students claim and show their understanding and knowing through verbal (e.g., acknowledgement, using “oh” as a change of state token-Heritage, 1984) and embodied actions (e.g., nodding) following the teachers’ probing questions (e.g., Mikkola & Lehtinen, 2019). Sert and Walsh also (2013) reported the simultaneous gaze movements, head shakes, and verbal claims of students’ insufficient knowledge (CIK) (e.g., I don’t know) (Sert, 2011) based on the analysis of 16 hours video recordings of English language classroom in Luxembourg. This study also showed that the teacher/lecturer managed to change the students’ unknowing epistemic status to a knowing one using embodied vocabulary demonstrations, and by utilizing Designedly Incomplete Utterances (DIU) (Koshik, 2002), which provided implications for Walsh’s (2011) L2 Classroom Interactional Competence. Sert and Jacknick (2015) highlighted that the students’ smiling can be an embodied indicator for claims of understanding troubles and/or insufficient knowledge, which can be used to achieve epistemic balance by changing these students’ epistemic status from less to more

knowledgeable. Furthermore, Sert (2013) highlighted the teacher's involvement using 'epistemic status checks' (ESCs) (e.g., you don't know?), and giving next turn to other students after the students delayed their responses, and showed their unwillingness to participate through gaze and body movements. Similarly, Filipi (2018) demonstrated that an English language teacher produced recognition check questions and declaratives such as '(do you) remember' (You, 2015) to enable shared knowledge construction and epistemic stance, and direct the ongoing classroom interaction through references to past learning and knowledge at a state secondary school in Australia. In addition, the ways how students initiate questions, and display their knowledge by orienting to lecturers as epistemic authority have been documented in especially face-to-face classroom interaction (Kääntä, 2014; Macbeth, 2004; Solem, 2016). Solem (2016) showed that the students' initiatives are formulated through interrogative questions across the epistemic gradient between the teacher (K+) and the students (K-), and thus this shapes the topicalization and interactional organization of the ongoing classroom conversations for unpacking the knowledge gaps, and changing the epistemic asymmetry. Kääntä (2014) examined interactional sequences in the Content-and-Language-Integrated-Learning (CLIL) English classroom, and showed that the students initiate corrections after embodied noticing challenging the teacher's epistemic authority through 'doing demonstrating knowledge'. In brief, the previous studies highlighted that both teacher-initiated questions, and learner initiatives resulted in verbal and embodied displays of the students' epistemic knowledge, and switched the epistemic gradient of the knowledge construction in talk-in-interaction.

The existing literature on epistemics also covers knowledge construction and exchange in peer interactions in face-to-face classroom settings (e.g., Herder et al., 2022; Jakonen, 2015; Jakonen & Morton, 2015; Kämäräinen et al., 2019). Similar to the studies in teacher-student interaction, some studies showed that the students initiate known-answer questions through polar and wh- questions to check each other's epistemic status, and find an equilibrium between their epistemic status in peer interaction (Hauser, 2018;

Kämäräinen et al., 2019; Rusk et al., 2017). In addition, Jakonen (2014, 2015; Jakonen & Morton, 2015) worked on L2 epistemics through a few studies in task-oriented peer interaction in CLIL classrooms. Jakonen (2014) emphasized the students' task engagement, and explained that learning takes place when the students verbally display their knowledge by transferring past learnings within knowledge exchange sequences. Jakonen and Morton (2015) also described how epistemic search sequences (ESSs) were managed to resolve the students' knowledge gaps through a wide range of interactional practices such as asking interrogative questions and head shakes during collaborative task accomplishment. The authors also reported that epistemic knowledge gap was understood as a joint trouble which all the group members need to take the epistemic responsibility to resolve for achieving the target content and language-oriented classroom tasks. Furthermore, Jakonen (2015) pinpointed that written materials such as handouts and task sheets play a significant role in knowledge co-construction processes. Therefore, Jakonen contributed to the epistemics literature through his studies on moment-by-moment interactional organization of knowledge exchange between the co-participants across various peer interaction events.

Herder et al. (2022) also closely examined video recordings from small groups of the students working on a collaborative writing group activity at a primary school in Netherlands, and documented how the students positioned themselves as more knowledgeable to preannounce their recommendations, provide responses for each other's inquiry questions, and strengthen their epistemic claims through their past learnings, and in- and out-class experiences (e.g., Bozbıyık & Morton, 2023a; Can Daşkın & Hatipoğlu, 2019). Also, this study showed how these students claimed the shared epistemic access to knowledge using 'I know, you know, we know' constructions to get alignment from other students, control one another's epistemic status, display their non-alignments to their peers' recommendations, and highlight the collaboratively produced new knowledge.

There are also a few studies carried out in synchronous online learning environments to show how students utilise spoken, written, and screen-based multimodal resources during knowledge co-construction and management of epistemic progression process for the accomplishment of information-gap tasks (Balaman & Sert, 2017a, 2017b). Balaman and Sert (2017a, 2017b) analysed 70 hours of video recordings of online student-student interaction coming from a leisure time English conversational club activity of the undergraduate students in the department of English language teaching in Türkiye. Balaman and Sert (2017a) explored how the students coordinated their spoken interaction with the task interface to achieve epistemic progression on the knowledge co-construction process. They (2017b) also documented how the students longitudinally developed their L2 interactional competence through diversifying interactional resources for task completion over time. Similar to these studies based on the non-institutional synchronous learning context, some CA researchers (e.g., Nguyen et al., 2022) also demonstrated how the participants used mutually accessible online resources such as Internet and screenshared task interface to manage epistemic positioning for task accomplishment during tutor-tutee interaction through Skype platform. Put simply, Conversation Analytic research expectedly explored how target knowledge is co-constructed in both whole-class and peer interactional patterns within both face-to-face and online teaching and learning settings. However, how content knowledge co-construction is handled using different interactional resources, and how the interactants (lecturer and students) display their knowledge is an under-examined phenomenon in online EMI classrooms. Against this background, this dissertation aims at documenting not only the content knowledge building processes but also the procedures for achieving epistemic progression through the participants' translanguaging practices as an interactional resource across multiple phases of online EMI courses. In the section below, the conceptualization of translanguaging will be elaborated with a focus on educational contexts.

Translanguaging as an Interactional Resource in Content Knowledge Construction

In EMI teaching and learning environments, participants are officially expected to use English only in all their spoken and written activities as the prescribed and declared language policy (Bonacina-Pugh, 2012, Lasagabaster, 2022). In other words, as the part of Englishization process based on the monolingual policy in non-Anglophone contexts, using English is favoured as the perceived language policy in EMI classroom events. In terms of Spolsky's (2004) three dimensions of language policy (i.e., language management, beliefs, practice), English is declared as the medium of instruction with the official documents (language management), and it is believed that stakeholders accept the formal policy to carry out their implementations (beliefs). In spite of the language policy and the expected beliefs about EMI implementations, to what extent participants use English-only for their practices (practice) is a controversial issue due to diverse applications across countries, higher education institutions, departments, and courses (e.g., Rose, 2021). Therefore, the practical level of English language policy in EMI has taken increasing attention from researchers all around the world in recent years. Particularly, Bonacina-Pugh and Gafaranga (e.g., Bonacina-Pugh, 2013, 2020; Bonacina & Gafaranga, 2011; Gafaranga, 2018) highlighted the divergence between the practiced language policy and declared language policy in multilingual teaching and learning environments. The interactants dynamically alternate shared linguistic codes for functional purposes between and within the turn-taking system, and thus no language can be regarded as the language of interaction in bi/multilingual classrooms (Auer, 2000; Gafaranga & Torras, 2001).

The research on multilingual classrooms also divided multilingual contexts into two parts: While lecturer and students share the same multilingual repertoire in symmetrical multilingual classrooms, one of these parties (lecturer or students) do not share the similar resources in asymmetrical multilingual classrooms (Bonacina-Pugh, 2013). In addition, every classroom has their particular symmetrical linguistic and semiotic resources that have locally developed legitimacy in line with the context-sensitive structure of classroom

interaction (Bonacina-Pugh, 2020). In symmetrical EMI classrooms, participants mostly utilise their legitimate verbal utterances through dynamic alternations between English and their native language, which refers to “doing being bilingual” (Auer, 1984), and language alternation as the umbrella term for changing one language to another in the same turn (Filipi & Markee, 2018; Musk & Cromdal, 2018). Both lecturers and learners produce language alternation to manage local classroom interactions and to involve in knowledge building processes as well as the emotional goals embedded in learning environments (e.g., Auer, 2000; Bozbiyik & Morton, under review; Ferguson, 2009; Probyn, 2019). Language alternation practices do not come from the bi/multilingual interactants’ competence, but it is based on their observable, daily behaviours to maintain ongoing social interactions (Auer, 2000). Therefore, bi/multilingual people can use more diverse and available interactional resources than monolingual interactants at local contexts, which can reveal the principles beyond language alternation at the overall level (Gafaranga, 2010, 2016).

In literature, there are different conceptualizations of language alternation practices, such as code-switching, code-mixing, code-meshing, and translanguaging as well as multilanguaging, and flexible bilingualism (Nikula & Moore, 2006; Wei, 2018). The code-mixing and code-switching take place when the speakers utilize the linguistic features of two languages such as clauses and phrases. While code-switching refers to using more than one language (mother tongue-L1 and second language-L2) at sentence level, interactants can switch from one language to another within word and/or phrase levels, which is regarded as code-mixing (e.g., Canagarajah, 2011; Grosjean, 1982; Pennycook, 2008). In addition, code-meshing is defined as “the integration of two languages as part of a single integrated system”, and the researchers avoid examining the separate sentences of the languages, and various functions of code-meshing practices (Canagarajah, 2011, p. 403). As the most common one, code-switching refers to a shift between named languages, and a conversational activity shaped in turn constructional units in the general interactional organization (Wei, 2005). The previous studies have shown that code-switching is used to

provide clarifications on English instructions (e.g., Üstünel & Seedhouse, 2005), initiate repairs to previous turns and word searches (e.g., Duran et al., 2022; Gafaranga, 2016), to explain the subject-specific L2 terminology (e.g., Costa, 2012; Macaro et al., 2018), and increase student involvement (Şahan, 2020) as well as closing conversation (e.g., Söderlundh, 2013) at varying levels in most of the EMI higher education institutions (Şahan et al., 2021). Code-switching is viewed as a controversial practice mainly because it marks the lack of interactional and linguistic competence, and the participants' indolence to establish and maintain ongoing conversation in a foreign/second/additional language (Jakonen et al., 2018; Wei & Lin, 2019). However, recent trends towards varying types of hybridity such as cultural, musical, and racial hybridism have promoted increasing tolerance for language code-switching in the modern society (Gardner-Chloros, 2009). Thus, in teaching and learning environments, both researchers and lecturers have believed that code-switching emerges from the interactants' high competence, and is used as an interactional resource for maintaining classroom interaction, and promote students' understanding during knowledge building procedures (Creese & Blackledge, 2015; Gafaranga, 2016). Despite its increasing acceptability, code-switching comes from the ideology of language separation based on the political and ideological association with the particular focus on various functions of the named languages (Canagarajah, 2011; Garcia, 2009; Lewis et al., 2012). However, multilingual people use their integrated language repertoires for their interactional and pedagogical purposes rather than becoming fully competent about distinct languages. This signals another recent conceptualization of language alternation known as "translanguaging".

Translanguaging is defined as one linguistic repertoire including all accessible linguistic and semiotic resources to increase active participation of the interactants from different linguistic and ethnic backgrounds within dynamic meaning-making procedures (Canagarajah, 2013). Similarly, Baker (2011) defines translanguaging as the knowledge building process using all the linguistic resources to design and facilitate understanding and

learning. Wei (2011, 2018) also broadened the concept of translanguaging in a way to encompass multilingual, multisensory, multisemiotic, and multimodal resources to promote intelligibility beyond the named languages, language varieties, and sanctioned language policies (Garcia, 2009). Therefore, translanguaging emphasizes observable language production rather than specific language and/or code.

'Translanguaging term' originated from the work of Cen Williams, who is a well-known Welsh educationalist, which should be interpreted with regards to the changing perspective to Welsh and English languages. Before 1970s, English was a dominant language while Welsh became endangered as a minority language due to social injustice and conflict in the society. Through the impact of positive trends towards bilingual child development, the holistic usage of Welsh and English led to the social admission of translanguaging at the educational context. In Wales context, translanguaging signifies that people get the information in English, and transfer it themselves through another medium of language (i.e., Welsh) (Williams, 1996). In other words, people read and discuss about the text topic in one language, and have a writing task in another language. Thus, translanguaging requires in-depth understanding and critical thinking rather than translation from one language to another. In 1990s, using more than one language was deemed as an advantage through social and cognitive capabilities in line with bilingualism and multilingualism. Thus, the concept of translanguaging has been revisited with the research on the minoritized communities in the inner circle countries such as Chinese people in the United Kingdom (e.g., Wei, 2018), and Hispanic community in the United States (e.g., Garcia, 2009). The research on the minoritized communities broadened the concept of languaging (Baker, 2001) to translanguaging. From the sociocultural theory perspective, Swain (2006) described languaging as "the cognitive process of using language for meaning making" (p. 97). Then, Wei (2018) broadened languaging to translanguaging as "the fluid heterogenous activity orchestrating neural, verbal, and embodied dynamic practices by highlighting varying dimensions such as the feeling, history, beliefs, and culture". Therefore,

in terms of translanguaging perspective on interaction, every person has their own idiolect and language coming from their linguistic and cultural background, and they display their shared linguistic repertoires with other speakers to establish understanding and exchange knowledge in talk-in-interaction.

Wei (2018) also introduced two fundamental concepts to link the sociocultural perspective with the cognitive approaches of translanguaging: Translanguaging Space and Translanguaging Instinct. *Translanguaging Space* is an interactional space for the interactants to bring all their linguistic, ideological, historical, environmental, cultural, and personal experiences for the co-construction of meaningful interaction beyond the boundaries of the named languages. Garcia and Wei (2014) also pinpointed that institutional education can be a translanguaging space for participants (i.e., lecturers and students) to create new understanding of language and education systems by challenging the previous language policies based on their focus on static named language norms and structures. *Translanguaging Instinct* focuses on the relationship between well-known understandings of language (people's internal capability for language acquisition) and other semiotic resources, and opens a space for interactants to avoid inconsistencies, and troubles by using all the cognitive and semiotic systems. Thus, the concept of Translanguaging Instinct embraces all the multifaceted nature of social interaction and learning. In brief, both dimensions open a new gateway for the interactants to shape knowledge building, and effective interaction through multisensorial, multimodal, and multilingual nature of the shared linguistic repertoires beyond the distinct linguistic structures.

In addition to the leading role of translanguaging on the recognizable classroom practices in word and sentence levels of meaning making processes (e.g., Creese & Blackledge, 2015; Şahan & Rose, 2021), García (2019) and Wei (2022) broadened translanguaging to problematize the nation-centric state of the named languages that leads to social imbalance, and instead proposed the adoption of a dynamic structure of

multilingual classroom practices. Similarly, Wei and García (2022) also represented experiences of two bilingual learners who lived in UK and the US as the members of a minoritized community to clarify the conception of translanguaging. They switched its identification from using participants' linguistic repertoires in interaction to naming translanguaging as a 'decolonized project'. They also claimed that the updated conceptualization of translanguaging also marks a social justice space for minoritized community students. Moreover, Wei (2022) stated that the political position of translanguaging comes from the political role of language, and its labelling as native, foreign, or heritage language linking to the ideologies like racialism or minority communities. Furthermore, Wei (2019) criticized longstanding EMI policies due to their neo-colonialism package by imposing power to English language. García (2019) and Wei (2022) also highlighted that the decolonizing project of translanguaging is not solely about providing space for the interactants to use different named languages, and/or describing their multilingual practices in talk-in-interaction. However, the real decolonizing dimension of translanguaging should also aim at raising our understandings and critical awareness about the dynamic usage of translanguaging practices during knowledge building processes within both language learning and EMI classrooms.

Wei (2022) also introduced the development of translanguaging from three different perspectives (practical, theoretical, and analytic):

(1) Practical: The participants can utilise their own intact linguistic repertoire beyond the named languages within learning and teaching activities.

(2) Theoretical: Translanguaging assumes that named languages based on political and ideological concepts do not have any neuropsychological bases, and thus people can exceed the limits of named languages through their natural ability during meaning-making processes.

(3) Analytical: Translanguaging moves from a theoretically regulated pattern to human being's practical usage of language in different contexts having significantly planned activities.

In line with the first and third dimension of the translanguaging concept outlined above, this study will present analytic findings coming from English Medium classrooms in which participants go beyond named languages using their own interactional repertoires during multiple steps of the task accomplishment process. However, the present study does not build arguments for the activist or political stances of decolonizing and neocolonialism, because the context of study is a state university in Türkiye which is a country without any history of colonization, and the participants do not come from any minoritized communities from the expanding circle countries.

Translanguaging enables interactants to not only utilise various interactional resources emerging from the sociocultural dimensions based on their beliefs, experiences, or ideologies (Wei, 2011, 2018), but also share their knowledge productively for problem-solving, dynamically construct knowledge and learning in addition to changing power relations (e.g., Baker, 2011; Creese & Blackledge 2015; Garcia, 2009; Wu & Lin, 2019; Fang et al., 2020). Moreover, translanguaging encourages multilingual learners to involve in teaching and learning events more actively through their multilingual self-identities (e.g., Garcia & Wei, 2014; Makalela, 2019; Wei & Lin, 2019; Woodley, 2016). In educational contexts such as EMI, teachers/lecturers deploy translanguaging as an interactional and pedagogical resource to reach course targets, construct more collaborative classroom atmospheres, bring target knowledge closer to students, develop students' critical thinking and academic knowledge, and create more enjoyable learning environments (e.g., Bozbiyik & Morton, under review; Garcia & Wei, 2014; Lewis et al., 2012; Pun & Tai, 2021; Tai & Wei, 2020; Tai, 2022). Furthermore, translanguaging itself underlines the dynamic and complex nature of multilingual and multimodal resources displayed in moment-by-moment social interaction (Pun & Tai, 2021). Although some researchers (e.g., Tai, 2022) claim that

translanguaging provides equality and social justice for multilingual learners during their knowledge building processes, translanguaging can also lead to inequality for international students who do not share the same native language and other semiotic resources such as culture-specific exemplifications and humours (e.g., Bozbıyık & Morton, 2023a; Kuteeva, 2020; Lasagabaster, 2022). Similarly, the participants need to be familiar with both their individual and each other's multilingual (different languages, dialects, jargons, registers, and other variations) and multimodal (e.g., body orientations, hand gestures, material usage) repertoires for knowledge co-construction, which may cause interactional problems as well as an excessive workload for the interactants. Also, the participants may not communicate in the second language during meaning making processes when they utilise their mother tongue too often (Lin, 2020), and thus this can move them away from the pedagogical targets of both translanguaging and knowledge building.

In recent years, highlighting the lack of classroom interaction studies, and context-specific implementations of translanguaging have encouraged many researchers to investigate translanguaging through various research foci such as lecturer and learner attitudes towards translanguaging (e.g., Kırkgöz & Küçük, 2021; Kuteeva, 2020; Yüzlü & Dikilitaş, 2021), different functions of translanguaging (e.g., Sah & Li, 2020; Mazak & Herbas-Donoso, 2015; Wang & Curdt-Christiansen, 2019) as well as multilingual and multimodal translanguaging classroom practices (e.g., Jakonen et al., 2018; Lin et al., 2020; Şahan et al., 2021). First of all, some researchers carried out interviews to examine both learners' and lecturers' conceptualizations, and attitudes towards translanguaging in different EMI contexts such as Sweden (Kuteeva, 2020), and Türkiye (Kırkgöz & Küçük, 2021). Kuteeva (2020) explored the opinions of the national and international students about translanguaging in Business Studies in Sweden. She demonstrated that the students connected the translingual practices with the exception and promotion of the standardized language by translingual elite groups rather than the inclusive perspective on the students' L1 usage. Therefore, the approval of translingual practices in EMI can dynamically shift

between the standard and non-standard perspectives on translanguaging. In the Nepalese context, Sah and Li (2020) highlighted that translanguaging practices with the dominant language (i.e., Nepali) led to a discriminatory, unbalanced space for the linguistically minoritized students. In addition to student viewpoints on translanguaging, Kırkgöz and Küçük (2021) showed two lecturers' positive perspective towards translanguaging in a Turkish EMI higher education institution, and their purposes of using translanguaging (i.e., instructional, and affective) through interviews and classroom observations. Yüzlü and Dikilitaş (2021) carried out a longitudinal quasi-experimental study and semi-structured interviews, and showed that the translanguaging created a cosy classroom atmosphere, offered various resources to enhance content learning, and thus the students linked translanguaging as seen in their positive perceptions.

Some researchers also investigated varying goals of translanguaging through different research methods such as ethnography (e.g., Mazak & Herbas-Donoso, 2015). Through an ethnographic inquiry of a science classroom, Mazak and Herbas-Donoso (2015) showed that L1 (i.e., Spanish) was used for classroom interaction with bilingual students in spite of English written materials, and recommended that translanguaging can be used as a communicative resource for science teaching. Similarly, Wang and Curdt-Christiansen (2019) indicated four goals of using translanguaging including (1) terminology translation, (2) simultaneous meaning construction on two languages, (3) L1 summary provision following L2 instruction, and (4) local context-related exemplification through their ethnographic study in the Chinese context.

How language alternation and especially translanguaging are deployed in EMI settings were further explored. Şahan and Rose (2021) collected classroom observation data and self-reports of the lecturers from different EMI engineering courses in Türkiye, and analysed the data through inductive content analysis. This study reported that EMI lecturers utilised translanguaging for representing the unknown content, question initiation and responding, and terminology description during lecture-dominant engineering courses. She

also mentioned that the lecturers never dwelled on English-only language policy, and accepted the students' translanguaging practices. Additionally, Aguilar-Pérez and Arnó-Macià (2020) illuminated that the same lecturer managed to teach the same content using the similar pedagogical practices both in English and Catalan languages, and which language is preferred is not the main concern of meaning-making processes in EMI engineering classrooms. In brief, these studies mostly investigated perceptions towards translanguaging, and functions of translanguaging practices using different predetermined categories, and research phenomena with different research methods such as ethnography, semi-structured interviews, and focus group meetings. What remained lacking as a research focus in this line of literature was *a data-driven, emic research perspective on translanguaging using multimodal Conversation Analysis in the classroom interaction*.

With this in mind, more recently, some Conversation Analysts have closely examined translanguaging practices for the purposes of content knowledge construction and mutual understanding in CLIL (e.g., Jakonen et al., 2018; Kääntä et al., 2018), and EMI (e.g., Tai & Wei, 2020; Pun & Tai, 2021) contexts. Using Multimodal CA, Kääntä et al. (2018) analysed video recordings of physics course in which the teachers introduced a scientific hypothesis (i.e., Hooke's Law) in a Finnish CLIL school, and found that the physics teachers coordinated multilingual and multimodal resources to place the focal scientific theory into the context in translingual turns. Moreover, Jakonen et al. (2018) collected video recordings of English-medium British history lessons in a secondary CLIL classroom in Finland to investigate the translanguaging of the students whose native languages are Finnish and Swedish. They demonstrated how a student's translingual turn in response to the teacher's English-only execution led to other peers' translanguaging practices as "language mix" in the CLIL history class. The study also revealed that the students produced their translingual turns including the hybrid usage of both lexicality and grammar of English and Finnish spontaneously.

In some of the countries/provinces either with a colonization history or recent internationalization targets, English Medium Instruction is adopted to embrace teaching and learning content in English at all the educational levels (i.e., primary, secondary, and tertiary) unlike the use of CLIL in European countries. In this sense, Tai and his colleagues closely worked on the classroom interaction of the EMI secondary schools, and the teachers' viewpoints on translinguaging in Hong Kong. In doing so, they mainly utilised multimodal Conversation Analysis to explore the dynamic nature of meaning making processes in EMI secondary classroom interactions, and also drew on Interpretative Phenomenological Analysis (IPA) to scrutinize the participants' perceptions of their translinguaging practices. First of all, Tai and Wei (2020) reported that the lecturer brought outside (daily life) knowledge in his playful talks into the knowledge building process to elaborate inside (target content knowledge), and to back up the students' understanding processes in EMI mathematics classrooms in Hong Kong. This study also documented that translinguaging helped both the teachers and students to display their funds of knowledge, and create new perspectives of content knowledge building. Additionally, Tai and Wei (2021a) worked on how the students and the teacher oriented to each other's observable classroom actions, and collaboratively learnt from one another through translinguaging to reach interactional and pedagogical goals of the mathematical contents in EMI face-to-face classes. Therefore, the study showed that translinguaging created a co-learning space for both parties of the classroom interaction, established equality on the knowledge construction process, and contested the teacher-fronted nature of EMI classroom interaction. Moreover, Tai and Wei (2021b) revealed that translinguaging space prompted playful talk in the classroom, which allowed the participants (teachers and students) to make creative demonstrations during knowledge construction procedure. Tai and Wei (2021c) also illustrated that the mathematics teacher benefitted from iPad as a technological tool to widen his semiotic translinguaging repertoire for building a technology-mediated EMI classroom space. In addition to his co-authored studies with Li Wei, who is one of the leading figures in translinguaging research, individually Tai (2022a) also analysed a

multicultural EMI science classroom consisting of Cantonese minority, local, and overseas Chinese students in Hong Kong, and showed how the teacher connected the students from different cultural backgrounds with the culture of the science and mathematics using translanguaging as an effective practice of inclusive educational pedagogy in order to increase the active participation of the culturally diverse learners during mathematics and science knowledge building procedures. Furthermore, Tai (2022b) revisited the concept of teacher contingency by exploring how the teacher contingently demonstrated translanguaging practices including (1) the researcher involvement in the ongoing interaction, (2) producing a fictional story, and (3) providing response to learner initiatives during unforeseen classroom events in history classrooms in Hong Kong. In addition to the studies conducted in whole-class interactions, Pun and Tai (2022) investigated the students' translanguaging practices during peer interactions in science laboratory sessions in an EMI secondary school in Hong Kong using inductive discourse analysis with the adoption of Lin's (2019) pedagogical functions of translanguaging. In this study, they documented how translanguaging helped the students enhance their understandings and peer work accomplishment as well as building a pleasurable learning environment in an EMI science laboratory. In a more recent study, Tai (2023) also explored that the teacher deployed linguistic and semiotic resources within translingual turns to cope with student behaviours treated as irrelevant to the classroom management norms. Overall, Tai and his colleagues have made a significant contribution to the exploration of the translanguaging practices in the EMI secondary classroom interaction.

Using multimodal Conversation Analysis, Bozbiyık and Balaman (2023) also showed that the students displayed translingual peer involvement using their multilingual (i.e., English, Turkish, and inventive language) and multimodal (e.g., hand gestures, gaze) resources to deal with understanding problems in a face-to-face course in an undergraduate Mathematics and Science Education program at an EMI university in Türkiye. This study also explored that translanguaging created an interactional space for the lecturer to facilitate

students' participation, and to elaborate the target content knowledge. In addition, Bozbiyık and Morton (under review) closely examined the face-to-face molecular pharmacology course at an EMI postgraduate master programme at a state Spanish university in Madrid, and indicated that the EMI lecturer deployed multilingual (i.e., English and Spanish) and multimodal (e.g., culture-specific embodied actions) translanguaging practices to bring the target content much closer to the master students.

Against this background, although participants' translanguaging practices have been described as an interactional resource for content knowledge construction in various face-to-face EMI secondary (e.g., Tai & Wei, 2020; Pun & Tai, 2021) and tertiary classrooms (e.g., Bozbiyık & Balaman, 2023), a wide range of other translanguaging practices within online co-construction of content knowledge in different disciplines at a state university is an unexplored phenomenon in the EMI and translanguaging research field. With this in mind, this dissertation aims to investigate how the participants (EMI lecturers, and undergraduate students) deploy translanguaging emerging from their shared interactional repertoires across the different teaching and learning spaces in one face-to-face and three EMI courses in Türkiye.

Conclusion

This chapter presented a conceptual background relevant to the purposes of the current study based on the existing literature in four different sections. The first section introduced the concept of EMI, its origin as well as a wide range of the research studies all around the world. More specifically, how EMI was initially implemented in the Turkish context, the benefits and challenges of EMI, and the previous studies in EMI was presented in the second section. Then, the classroom interaction was explained with the existing literature on the face-to-face and online teaching and learning spaces. In the third section, the knowledge construction in teaching and learning environments was demonstrated in relation with the epistemics research mainly in content and language teaching settings.

Finally, the fourth section introduced the notion of translanguaging based on the existing studies and laid the ground for the research focus of this study. The following chapter will introduce the research context, participants, research methodology, data collection and analysis procedures, and the validity and reliability of the study in detail.



Chapter 3

Methods

In this chapter, research questions, research context of the study, data collection process, ethics, the research methodology, data analysis, validity and reliability of the study, and summary of the chapter will be presented in eight sections. In the first section, the research questions of this dissertation will be introduced in line with the research purposes of the study. Secondly, the information about the participants and the research context will be provided in a detailed way. After explaining the data collection process and ethical issues in the third and fourth sections consecutively, multimodal Conversation Analysis will be highlighted as the research methodology of the study with its fundamental principles and approach to analyse interactional features of naturally occurring interactions. Then, the sixth section will present how the data analysis procedures based on the emic perspective of participants through multimodal Conversation Analysis (CA) were carried out, and the research data were zoomed for collection-building purposes with a particular focus on the main phenomenon of the study. In the seventh section, the validity and reliability of the CA methodology and this dissertation will be presented. Then, the chapter will be finalized with a brief summary.

Research Questions

As explained in the existing literature in EMI and translanguaging, unpacking the multifaceted structure of EMI classroom interactions lacks a micro analytic perspective, and the research on the stakeholders' perceptions of these matters does not sufficiently explain the content knowledge co-construction process in the classroom. In the last five years, there have been increasing numbers of the studies uncovering the dynamic and complex nature of actual EMI classroom practices using Conversation Analysis as a data-driven method (e.g., Duran & Sert, 2021; Tai & Wei, 2020). Although these studies have documented some interactional patterns such as multi-unit questions and translanguaging, they do not focus

on multiple discipline-specific EMI classrooms and describe the diverse procedures leading to knowledge co-construction in different teaching and learning spaces. Against this background, the current study aims to investigate the target content knowledge co-construction based on the participants' displays of knowledge using translanguaging in various institutional online spaces of the three different EMI courses at a state EMI university in Türkiye. For this purpose, the following research questions will be responded in this study:

1. How do the participants (lecturers and undergraduate students) co-construct the target content knowledge within online EMI classrooms as well as in one face-to-face classroom?
2. What is the role of translanguaging as an interactional resource in the procedural unfolding of content knowledge co-construction in online EMI interactions?

In the following subsection, the research context in which the study was conducted will be introduced in addition to the participants of the study.

Research Context and Participants of the Study

The data for this dissertation come from the Middle East Technical University (METU) founded in 1956 as the first EMI university in Türkiye, and ranks one of the top higher education institutions in the country ever since. METU provides around 7.800 EMI courses in all 220-degree programs to 26.451 students with 2.162 lecturers (<http://ilkbakista.odtu.edu.tr/english/>) through its English-only language policy. In order to study at METU, all the students need to evidence their English proficiency level with the official exam results (e.g., TOEFL, IELTS), or pass the English language proficiency exam conducted by the METU preparatory with the B2 level in CEFR (Common European Framework of Reference for Languages). Also, lecturers should receive their doctoral degree and/or work during post-doctoral studies abroad in international universities to have permanent teaching and research positions at METU. Thus, METU was determined as the

focal research context of this study to clearly identify the interactional practices in a 100% EMI university.

After the ethical approvals were received from the METU Human Research Ethics Committee and the Hacettepe University Ethics Boards and Commissions (see Appendix E and F), the collection of the face-to-face data coincided with the beginning of the COVID-19 pandemic in March 2020, and the data were collected from 'Teaching Elementary School Mathematics' course in the department of mathematics and science education at the Faculty of Education for one week only. During the COVID-19 pandemic, all the teaching and learning events switched from face-to-face to online spaces in the focal EMI university, and then the main database was compiled from 3 different field-specific EMI courses (i.e., Turkish Educational System and School Management, Consumer Behavior, Developmental Psychology) in 3 departments (see Table 1). The dataset of the dissertation involves around 45 hours 8 minutes of video recordings of face-to-face and online EMI classroom interaction. Although the face-to-face classroom interactions remained limited in data size and length, it led to the initial exploration of the focal phenomenon in an extended yet single episode, which was later identified to be a recurrent and multi-phase participant method that enables bridging the different online EMI classroom activities. That is to say, the limited amount of the face-to-face still managed to inform the main focal context, online EMI classroom interactions. The participants of the study were 4 EMI lecturers, and around 150 undergraduate students enrolled to the courses as the sophomores and juniors. All the lecturers of the courses studied for their doctoral degrees in or did post-doc research visits to the United States, and had more than 10 years of teaching and research experience in their specific disciplines.

Table 1*Description of the Database*

Course Name	Total Week	Duration (min)	Department	Faculty
Face-to-face Dataset				
Teaching Elementary School Mathematics	1	139.53	Department of Mathematics and Science Education	Faculty of Education
Online Screen-recorded Database				
Consumer Behavior	11	1.469,68	Department of Business Administration	Faculty of Economics and Administrative Sciences
Developmental Psychology	5	434.69	Department of Psychology	Faculty of Arts and Sciences
Turkish Educational System and School Management	7	637.18	Department of Educational Sciences	Faculty of Education
TOTAL		2.681,08 (45 h 8 min)		

After completing the data collection and analysis processes informed by multimodal Conversation Analysis as the research methodology, it was initially identified that translanguaging plays a central role in the target knowledge co-construction. This initial observation was based on the examination of the face-to-face classrooms in the pre-pandemic days. After the analysis of this part of the dataset, the examination of the online EMI classrooms started, and it was explored that content knowledge co-construction was carried out by the participants (both the lecturers and the students) mainly through using translanguaging across multiple phases in digital spaces (i.e., the breakout room sessions and main sessions). Thus, the main dataset of the online EMI classrooms was narrowed down to the data in which the interconnectedness of the phases leading to knowledge co-construction becomes visible, which includes 16 hours 3 minutes of screen recordings of the focal online EMI courses. Therefore, this dissertation specifically deals with 16-hours of

online EMI sessions and 2 hours of face-to-face interactions at the pre-pandemic days, thus informing the design of the dissertation. The following part will present how the face-to-face and online data were collected during pre-pandemic and COVID-19 pandemic times.

Data Collection Procedure

In the current study, the data consist of video recordings of one face-to-face context, and three online EMI course contexts of the diverse disciplines including mathematics and science education, educational sciences, psychology, and business administration in the focal EMI university. These recordings featured varying classroom modes and activities such as lecturer talk, lecturer-student interaction, and peer interaction within institutional teaching and learning environments. At the beginning of the data collection procedure, ethical approvals were received from the research ethics committee of two universities (i.e., METU and Hacettepe University). Then, the focal EMI courses were selected based on different factors such as the distribution of voluntary participants, recommendations of departments, indicators of high performance, and student evaluations of lecturers. After the initial contact with the lecturers of the focal EMI courses, the researcher informed them about the scope of this study, the methods for securing participants' identities (using pseudonyms, blurring video images, and changing participant voices), and ethical approvals of the study. When the lecturers accepted to participate in the study and determined which courses would be recorded, the researcher also shared the same details with all the students who received these courses, and volunteered to participants by signing written consent forms (Appendix A and B) of the study.

The data collection was initially planned to be carried out with three different cameras to collect video-recordings of classroom interactions in 2020. The face-to-face data of this dissertation were collected from Teaching Elementary School Mathematics for one week in the Spring semester of 2019-2020 academic year. It was also initially planned that the entire database would be collected from face-to-face classrooms. Three video cameras

were placed on three different parts of the classroom in which the students were seated in U-shaped classrooms. While two of the cameras were situated on the right and left backside of the class to capture the embodied actions and the visual teaching materials (e.g., the blackboard, the informative PowerPoint slides), one camera was located behind the teacher table to record the students' actions. Therefore, all multimodal actions in the ongoing classroom interactions were captured for in-depth investigations of the face-to-face EMI course.

The obligations of physical distancing imposed due to the COVID-19 pandemic forced universities to change their teaching and learning events from face-to-face to online for almost three years. Therefore, the main data of this dissertation were collected online in the 2021-2022 academic year. In order to respond to the research questions of the current study, 45-hour online EMI classroom data were screen-recorded in various lengths of weeks throughout the semesters (5, 7, 11 weeks). The researcher utilised the Screencast-o-matic online tool for screen capturing purposes to easily create, edit and analyse the videos as well as images (<https://screencast-o-matic.com/home>). Thus, the researcher could capture all the accessible online sources that the participants used in and through talk-in-interaction simultaneously (e.g., chat box, emojis, different programs) across various classroom modes. As a result, the dissertation deals with 18-hour video recordings of the face-to-face and online EMI interactions collected through both video cameras and the screen-recording tool. In the following section, the ethical considerations of this dissertation will be explained in detail.

Ethical Issues

The research on the qualitative data such as interviews and video-recordings of the social interaction requires the researchers to consider ethical issues and develop pre-emptive measure (Dörnyei, 2007; Silvermann, 2016). In this sense, the researcher of this study managed to complete the necessary ethical considerations in different stages (before,

while, and after data collection and analysis). First of all, in the research context of the current study, it is obligatory that researchers (including doctoral students) have to inform the local councils of the universities about their research design, data collection process and ethical issues about the participants, and then receive ethical approval before collecting data. Thus, as the researcher of this study, I applied for the ethical boards of two state universities with the informative documents. Accordingly, I started to initially collect the face-to-face data, and during COVID-19 pandemic, the online data of the study based on the ethical approval by the two universities. Furthermore, as introduced earlier, I explained the research context, and the ethical considerations of the study to all the participants (lecturers and undergraduate students) through informative PowerPoint slides verbally, and then requested their written consent forms. These consent forms were prepared in Turkish and English languages for both local and international students to avoid any understanding troubles (e.g., Mackey & Gass, 2005) (see Appendix A and B). In the verbal introduction and written informative document, I provided detailed information about how the confidentiality of the participants' identities would be secured in this study. In doing so, I did not only exemplify how their names would be changed with the pseudonyms, but also shared sample images to evidence how their faces would be blurred. I also guaranteed that their voices would be changed if the audio recordings are used during any academic events such as conferences. Additionally, I stated that the parts in which the participants attended to classroom interaction would be extracted from the dataset if some students did not want to participate in this study. Finally, I clearly explained that I would only share the data with the dissertation supervisors and the field experts, but would still protect the participants' anonymity in so doing. Therefore, all the participants of the current study participated in the study voluntarily, and filled their consent forms, which marks the trustworthiness and confidentiality as indicators of the ethical criteria (Silverman, 2016). Overall, the main ethical principles have been attended to establish and maintain ethical appropriacy. The research methodology of this dissertation will be elaborated in the following section.

Research Methodology: Multimodal Conversation Analysis

This study adopted multimodal Conversation Analysis (CA) (Sacks et al., 1974) to examine EMI classroom interactions including the translanguaging practices in the form of verbal utterances, embodied actions, and real and/or virtual materials over the course of content knowledge co-construction processes in the EMI courses. CA is enacted a data-driven methodology to identify, examine, and foster understanding the talk as a main founding component of social life of human beings (Sidnell, 2010). Through the participant-relevant (i.e., emic) perspective (Markee, 2013; Markee & Kasper, 2004) and in-depth analysis of the social interaction, multimodal CA unpacks how social actions (for doing target content knowledge construction in this study) are collaboratively designed and managed by the members of a particular participant group in and through talk-in-interaction (e.g., Brouwer & Wagner, 2004; Sidnell & Stivers, 2012). Multimodal CA allows researchers and/or lecturers to pursue “what is publicly transacted, not what is privately thought or felt” (Antaki, 2012, p. 9) through unmotivated looking (ten Have, 2007), and thus they achieve to raise their understanding of the interactional nature of teaching and learning environments by merits of a participant-oriented approach rather than drawing from individualistic and psychological notions largely associated with theories of teaching and learning.

The methodological approach of Conversation Analysis originated from Harvey Sacks, Emanuel Schegloff and Gail Jefferson who are the pioneers of ethnomethodology in the 1960s. In addition to varying research fields such as linguistics, sociology, and anthropology, CA is informed by Garfinkel’s ethnomethodological perspective (1967) towards socially routine activities and Goffman’s sociology (1967) dealing with observations of people in interaction. Since 1970s, there have been an increasing number of multimodal CA studies in institutional contexts such as medical interaction (e.g., Maynard & Heritage, 2005; Nguyen & Austin, 2018; Wu, 2021), classroom discourse (e.g., Badem-Korkmaz & Balaman, 2020; Koole, 2010; Sert, 2015) or courtrooms (e.g., Atkinson & Drew, 1979;

Franzén & Aronsson, 2018; Romaniuk & Ehrlich, 2013) as well as non-institutional settings (ordinary conversations) (e.g., Conrad, 2019; Laurier et al., 2000; Raymond, 2003). As a research methodology, CA provides analytical and theoretical insights by responding a fundamental question, “why that, in that way, right now?”, and thus uncovers the micro analytic details of naturally occurring interactions (Seedhouse, 2004).

Conversation Analysts (e.g., Seedhouse, 2005; Sidnell & Stivers, 2012) highlighted four foundational principles: The first fundamental principle is about ‘the order at all points in interaction’, which underlines the systematicity and orderliness of naturally occurring interactions (Schegloff & Sacks, 1973). Through talk-in-interaction, participants orient to the lived order (ten Have, 2007, p.3), and display their orientations to one another for conversation completions (Gafaranga, 2018). The scrutiny of the systematicity and orderliness refers to description of the actual social actions and language usage, and thus CA is an appropriate methodology to document the lived orderliness (Sidnell & Stivers, 2012). As the second principle of CA methodology, we see “each contribution to interaction is context-shaped and context-renewing” (Seedhouse, 2005, p.166-7), which refers to the procedural consequentiality of the immediate interactional context (Schegloff, 1992). In social interaction, interactional sequences can be shaped and renewed by the dynamic interactional events, because every turn adds a new context shaped by the prior turns and also shaping the following utterances. Thirdly, in CA methodology, all the details of the interaction including verbal and embodied actions are relevant, and play a crucial role in unpacking participants’ orientations to each other in talk-in-interaction (Waring, 2015). Therefore, fine-grained descriptions of the interactional details should be documented by Conversation Analysts to make the interactions accessible for the readers, and to increase the validity and reliability of the micro-analytic research findings. The last principle of CA underlines the bottom-up and data-driven analysis. This indicates that the data analysed through CA are not based on the predetermined theoretical frameworks and/or phenomenon. Through unmotivated looking and emic perspective, the data need to show

what actually happens in talk-in-interaction (Psathas, 1994). Thus, CA allows researchers to analyse the members' methods for the investigation of the local contextualization of the context-specific talk. In brief, the four founding principles of CA guide the researchers to document interactional fingerprints of the social interaction, and to explore their micro-analytic focus on their qualitative studies.

Conversation Analysis has been grounded on four main interactional structures: turn-taking, sequence organisation, repair, and embodiment/multimodality. Firstly, turn-taking demonstrates how participants take, share, and allocate the turns orderly by orienting to one another's prior and following turns (Sacks et al., 1974). Therefore, turn-taking is closely investigated with the principle of "context-sensitive and context-renewing" structure of the conversational events, and thus interactional organizations of the institutional and non-institutional environments can be explored in real time (e.g., Sacks et al., 1974; Mchoul, 1985; Seedhouse, 2004). In addition, sequence organization is based on how interactants collaboratively organize and achieve their conversational exchange. During this meaning-making process, they can expand the ongoing conversation within three different ways as well as adjacency pair: pre-, insert-, and post-expansion sequences (Heritage & Clayman, 2010; Stivers, 2012). Repair is also produced to resolve the interactional troubles in understanding and/or hearing, and to reshape the ongoing conversation for establishing mutual understanding between interlocutors (Schegloff, 1979). There are four types of repair sequences in terms of which speakers initiate, and do repairs in interaction: self-initiated self-repair, other-initiated other-repair, self-initiated other-repair, and other-initiated self-repair (e.g., Sert, 2015). Repair describes the interactional asymmetry as a dynamic notion of the social interaction. Finally, embodiment/multimodality is locally seen in the meaningful production of actions as well as talk, and video and screen recording contribute to the richness of embodiment/multimodality (e.g., Mondada, 2019). All in all, Conversation Analysis is a robust qualitative research methodology to explore the multifaceted structure of institutional and non-institutional social environments through its fundamental principles

(e.g., orderliness, context-renewing, data-driven) and the interactional dimensions (e.g., turn-taking, repair). In this regard, the micro-analytic research perspective of CA perfectly matches with the purposes and the context of this dissertation. In the subsection below, Conversation Analytic data analysis processes involved in this study will be introduced.

Data Analysis

The current study followed the data analysis procedures of multimodal Conversation Analysis to analyse the video and screen recordings of EMI courses at a state university in Türkiye. During the first stage of the data analysis, video recordings of the face-to-face and online classroom interactions were watched repeatedly through ‘unmotivated looking’ (ten Have, 2007) in order to identify iterative interactional patterns, and notice potential research phenomena for the collection building (e.g., Kasper & Wagner, 2014). Then, all the recordings were transcribed using Jeffersonian (Jefferson, 2004) (Appendix C) and Mondada’s (Mondada, 2018) (Appendix D) CA transcription conventions to describe every detail and orderliness of talk (Hepburn & Bolden, 2013; Waring, 2008). In order to transcribe the data systematically, Transana software was used for transcribing, data basing, and analysing video data and through a line-by-line inspection of the fine-grained transcripts (<https://www.transana.com>). Through the line-by-line examination of sequences with an emphasis upon turn-taking, embodiment/multimodality, repair, and sequence and preference organization, possible collections were identified as the result of participants’ moment-by-moment actions (Filipi & Markee, 2018; Hutchby & Wooffitt, 2008). By conducting case-by-case analysis, the interactional organization of the target content knowledge co-construction was determined as the main focus of this dissertation. In the scope of this focal phenomenon, I closely examined how the participants (lecturers and undergraduate students) collaboratively achieved the new content knowledge construction procedures through verbal utterances, embodied actions as well as actual and virtual teaching materials within both face-to-face and further online teaching and learning spaces.

During the in-depth investigations of these multimodal practices based on the participants' emic perspectives, the primary question of CA "why that, in that language, right now?" (Üstünel & Seedhouse, 2005, p.310) guided the analysis and led to closely examine translanguaging practices co-produced by the interactants. Therefore, every case was checked to investigate how the lecturers and the learners deploy translanguaging practices as an interactional and pedagogical action (why that) in that particular language (and translingually) during those specific moments (right now). Following this procedure, the participants' translanguaging processes were inspected with a context-sensitive focus on both face-to-face and online datasets.

Firstly, the face-to-face data were closely examined, and enabled to document how the participants dealt with understanding troubles, and displayed their knowledge using translanguaging based on their shared linguistic (i.e., English, Turkish, invented language) and interactional (e.g., hand movements, gaze) repertoires during content knowledge co-construction process in the face-to-face EMI classroom interaction. The collection of the face-to-face data (2-hour 19 min) showcasing the participants' displays of knowledge using translanguaging included 6 case, and one representative instance of this collection will be represented as the first case of the study (see the first section of the Chapter 4). Building on this finding, the online EMI classroom data were investigated with a particular emphasis on the target knowledge co-construction processes, it was identified that the lecturers and undergraduate students demonstrated their funds of knowledge in a more comprehensive way through technological affordances of the online learning environments across multiple phases of the digital spaces (mainly the breakout room sessions and the main sessions). While translanguaging was identified to be a common practice in displaying co-constructed knowledge in both face-to-face and online settings, the trackability of the displayed knowledge across multiple phases became only possible in the online EMI classroom interaction data, which indicates the main focus of the dissertation. More specifically, it was explored that the lecturers assigned the focal content-related tasks to the students in the

breakout room sessions, and the students completed these assigned tasks with references to the lecturers' previous talk and informative course materials within translingual turn structures. Subsequently, it was documented that both the lecturers and the students drew on translanguaging practices to connect the different phases of the courses (i.e., lecturer talk, student to teacher interaction, peer interaction, and teacher to student interaction), which enabled them to eventually achieve the target content knowledge co-construction. In order to capture the relationship between each phase around translanguaging during knowledge co-construction, the multiple phases of the courses were retrospectively and prospectively tracked in all instances. Then, it was found that 10 different online sessions manifested such an interconnectedness across multiple phases (16-hour 3 min) (see Table 2 below), and the focal collection consisted of 130 extracts coming from 10 different online cases. All the instances of this collection included the participants' connected interactional practices within the translingual turns, which enabled us to follow the trackable content knowledge co-construction, and dynamic teaching and learning processes in and through interaction. In the following chapter, three representative cases of the collection emerging from three different fields will be illustrated to show how to mark the procedural co-construction of content knowledge across the multiple phases of the online EMI classrooms. Therefore, the whole database of the study totally involved 18-hour 22 min (the combination of the trackable phases of the online courses and the face-to-face data) (see Table 3).

Table 2

Description of the Entire Online EMI Classroom Data and the Assigned Tasks during the Classes

Course Name	Date	Data Length	Task
Turkish Educational System and School Management	22.04.2021	98.11	What are the big ideas behind Turkish modernization (Tanzimat, Republican Reforms) in education?

Turkish Educational System and School Management	6.05.2021	107.59	Discussion about 3 most emerging issues in Turkish Education System
Turkish Educational System and School Management	20.05.2021	94.39	Designing a school model regarding administrative theories
Turkish Educational System and School Management	27.05.2021	93.59	What can be educational characteristics of an educational leader?
Consumer Behavior	15.04.2021	32.9	Designing a pudding advertisement including slogan, sketch, and explanation in terms of id, ego, superego-1
Consumer Behavior	20.04.2021	133.0	Designing a pudding advertisement including slogan, sketch, and explanation in terms of id, ego, superego-2
Developmental Psychology	15.04.2021	154.12	Selecting a child type, and specific temperament, and discussion on fitted parental attitudes to this temperament and child type
Developmental Psychology	20.05.2021	58.32	Designing a research study based on the experiment from YouTube video, and a further study topic
Developmental Psychology	3.06.2021	73.56	Writing 2 exam questions about language development and gender development
Developmental Psychology	11.06.2021	53.29	Writing 2 questions about Piaget's moral development to ask the lecturer in the classroom
TOTAL		898,87 (16 h 3 min)	

Table 3*Description of the focal database*

Face-to-face Dataset	139.53 min (2-hour 19 min)
Online Screen-recorded Dataset	898,87 min (16-hour 3 min)
TOTAL	1.038 (18-hour 22 min)

Overall, one face-to-face case from the mathematics and science education, and three different cases from the educational sciences, psychology, and business administration will be introduced to unpack the content knowledge co-construction using translanguaging within EMI classroom interactions in the next chapter. In addition, sixteen different extracts will be presented with the extract names including the name of extract-specific instances (e.g., ego, student), the department code (i.e., edu, business, psycho), the related phase (e.g., phase 1, 2), the date of recording (e.g., 15-04-21), and the beginning and ending times (e.g., 18.21-19.43). Therefore, each instance has their own particular name to identify the metadata information (e.g., student_edu_phase1_20-05-21_17.41-22.54). In the following section, the validity and reliability of the study will be discussed in detail.

Validity and Reliability of the Study

In qualitative research, validity and reliability of the studies need to be proven with the trustworthiness of the research design, collections, analysis, and findings (Arminen, 2005). Peräkylä (1997) identified the validity as the accuracy of the research findings regarding the declared research claims, and reliability as the possible repeatability of the research findings in other contexts. In qualitative research, CA has been criticized due to its alleged incapacity to generalize research findings mainly in single case studies and collection-based studies with an inadequate frequency of cases (Psathas, 1994). However, CA aims to produce robust, cumulative micro analytic findings on the local organization of social interactions rather than aiming for data generalization, quantification, and generating theories (e.g., Gardner, 2004). On the other hand, CA does not only document the context-sensitive features of singular instances, but also reports the general sequential organization in diverse social interactional settings. Thus, this marks the potential generalizability of CA findings based on the descriptions of the interactional organization of social actions as well as increasing the validity (Seedhouse, 2005). In addition, the notion of next-turn-proof procedure can help CA researchers validate their research findings by following the

previous and following turns on a minute-by-minute basis as well as through the participant-relevant research perspective of CA studies that categorically disregard any predetermined constructs informed by existing theories or sociocultural dimensions based on the participants' background information (Arminen, 2005; Sidnell, 2003).

Data collection, selection, and analysis processes add to the validity of CA research through detailed analysis of naturally occurring interactions. Firstly, technical facilities play an important role in capturing all the multimodal details in talk-in-interaction, which directly improves the validity of the findings (e.g., Goodwin, 2000). In this study, the face-to-face data were collected with three different video cameras located in three angles in the U-shaped classrooms while the online EMI classroom interaction were recorded using the screen-recording software for simultaneous recording of the screen, chat box, and audio. Thus, all the data have good quality of audio and video recordings to explore each detail of the interaction patterns in talk-in-interaction. In addition, the amount of video recordings is another significant issue to argue for reliability and validity. Seedhouse (2004) indicated that CA research mainly deals with unpacking the interactional system for the accomplishment of the sequential organization and order, and the data between five and ten hours can be sufficient to draw conclusions. Considering this specific concern, the database of the study includes 18 hours of video and screen recordings, which can be considered as adequate classroom data to reach analytic claims. As the most significant step for the in-depth investigation of the classroom interaction, Conversation Analysts also provide detailed transcriptions of the dataset in different ways (Peräkylä, 1997; Sert, 2011) using Jeffersonian (2004) and Mondada (2018) standardized transcription conventions.

Validating the micro-analytic CA findings with a critical friend or a community of practice in different academic events such as dyadic meetings with supervisors, data sessions, conferences, and research visits are further common practices in CA research. I firstly had a one-year research visit to work with EMI and CLIL experts in the Content and Language Integration Learning research group at Universidad Autónoma de Madrid (UAM-

CLIL) (<https://uam-clil.org/>). During this process, I had regular meetings with my supervisor at the host university as well as my supervisors in Türkiye. In the meantime, some short extracts were selected from the main collection of the dissertation, and shared with the academic experts in the national and international data sessions with MARG, ERUMARG, DISCORE, UIC, MIND, MARG research groups in different countries including Spain, Denmark, Sweden, Türkiye, and United Kingdom (ten Have, 1999). I received detailed feedback about the transcription and analytic findings of the dissertation in 7 (seven) different international and national data sessions. I also presented three different cases based on the dissertation data at three international conferences (Bozbıyık, 2022a, 2022b; Bozbıyık & Morton, 2022b). In addition to the data sharing events, I also attended to a doctoral training event, EMCA bootcamp with the focus on analysing social practices for sense making and developing analytic skills organized by the University of Southern Denmark for 5 days in Odense, Denmark. I did not only improve my analytic capacity of EMCA, multimodality, data collection and analysis, but also discussed my dissertation focus, and received valuable feedback from CA experts in the event (see Education below). Thus, these academic events with the experts enabled to improve the transcription and analysis, and therefore validity and reliability of the dissertation.

Summary of the Chapter

This chapter introduced the methodological framework of the study in eight different sections. In the first section, the research purposes of the study were revisited, and then two research questions were presented to show the scope of this dissertation based on the target content knowledge co-construction processes through translanguaging in online EMI university classrooms. The second section of the chapter provided detailed information about the research context of the study, the description of the dataset collected during the pre-pandemic and COVID-19 pandemic times, and the general profiles of the participants. Subsequently, the third section presented how the data collection process was organized, how the data of the study were collected through video cameras in face-to-face EMI

classroom interaction, and through screen-recording tools in online EMI courses. The fourth section summarized the different activities conducted to meet the ethical considerations to conduct a reliable and valid CA study, and to attend to ethical issues during research design and data collection procedures. In the fifth section, multimodal Conversation Analysis was briefly introduced with reference to the origins of the methodology, four underlying principles of CA, the main research question that drives CA analyses, and the fundamental structures of social interaction in detail. Then, the sixth section explained how the data of this study was closely examined in line with the micro-analytic procedures of multimodal CA, and how the focal phenomenon of the study was determined with the collections of the repetitive cases emerging from the face-to-face and online EMI classroom interactions. Finally, the seventh section discussed and highlighted the validity and reliability of the CA research methodology, and the academic events carried out to validate the data-driven findings of the study with the reference to the existing CA literature. In the following chapter, the four different cases of the study will be closely introduced to represent the entire dataset and present how the lecturers and students collaboratively achieve target knowledge co-construction using translanguaging practices within face-to-face and online EMI university classrooms.

Chapter 4

Findings and Analysis

In this chapter, content knowledge co-construction processes will be presented with a particular focus on the participants' translanguaging practices in EMI university classrooms. The first section will present how a lecturer and students display the co-constructed content knowledge, and resolve the students' understanding problems using translanguaging in a face-to-face "Teaching Elementary School Mathematics" EMI course during the pre-pandemic times. The second section will further evidence the multimodal findings of the content knowledge co-construction processes using translanguaging across multiple phases of the online EMI teaching and learning environments during COVID-19 pandemic. In this section, four interconnected phases of the content knowledge construction including lecturer talk, pre-task phase, peer/group task in breakout room session, and sharing outputs of peer/group task in the main session will be introduced following the general structure of the interconnected knowledge building processes. This section will also show how the participants (lecturers and undergraduate students) display various translanguaging practices during the knowledge co-construction and display processes based on the focal learning objects in three different departments. In the following three subsections, three different cases will be closely examined to document the target knowledge co-construction using translanguaging across multiple phases of three field-specific online EMI courses. The first subsection will present how a lecturer and undergraduate students utilise translanguaging space in multiple phases of the EMI classroom to mark the procedural co-construction of content knowledge in the varying classroom episodes such as teacher-student interaction and peer interaction in "Turkish Educational System and School Management" online course in the department of Educational Sciences. Then, the second subsection will report the interactants' translanguaging practices during the content knowledge co-construction procedure various digital spaces of "Consumer Behavior" online EMI course in the department of Business

Administration. The third subsection will also focus on the target content knowledge co-construction through the students' translanguaging practices in the breakout room session, which is prompted by the lecturer in the main session of the "Developmental Psychology" online course in the department of Psychology. In the third section, a short summary of the findings and analysis will be given to conclude the chapter.

Translanguaging space in face-to-face EMI classrooms

As stated in the previous chapter, a part of the database (2-hour of video recordings) come from one face-to-face EMI courses collected as face-to-face data just before the teaching and learning activities switched from face-to-face to online due to the pandemic. In this section, a single case from Teaching Elementary School Mathematics at the department of Mathematics and Science Education is closely examined to demonstrate how the interactants resolve understanding problems regarding a focal learning object through multimodal and translingual turns in a face-to-face EMI classroom (Bozbıyık & Balaman, 2023). The single case analysis will show how the face-to-face data informed the scope of the current study and enabled analysing the online data with a greater level of scrutiny with reference to the actions specific to the technology-mediated pedagogical content at hand while also showing the role of the translanguaging practices in bridging the multiple activity phases as well as the knowledge co-construction processes in doing so.

In this face-to-face course, the lecturer (Lec1) taught the duodecimal system (i.e., counting on base twelve) in Mathematics using a written task sheet. In the focal context, Lec1 and undergraduate students invented a particular language for the base twelve while also using English (L2) and Turkish (L1) languages, and they named three specific numbers: 10 (te, pronounced as /ti:/), 11 (ee /i:/), and 12 (one dozen) as the base number. This particular invented language did not only result in understanding troubles on the course content, but also helped the participants manage the problematic parts in addition to other translanguaging resources.

The following long extract comes from the middle of the session during which Lec1 provides nine counting tasks on the base twelve. To better illustrate, when the number is thirteen (13), the answer is one dozen one ($12+1$), and this is written as 11 since the first “1” refers to one dozen, and the second “1” is the number to count in the handout. In Extract 1 below, Lec1 firstly initiates an understanding check following the question on the handout: “Which number do the students add to 14 (one dozen four= $12+4=16$) to reach two dozen (24)?”. The students need to tell “eight (8)” for two dozen (one dozen four= $12+4=16$ and $16+8=24$ =two dozen) as the mathematically preferred answer. However, it is followed by different dispreferred student responses, the students’ requests for clarification, and the participants deploy translanguaging practices to resolve the students’ understanding problems using their funds of knowledge about the focal content. The long extract will be presented in three different segments.

Extract 1.1 (Segment 1): one dozen four, 04_03_20_2nd_21-18

01 Lec1: do you understand my question?
 02 Ali: no[::
 03 Ece: n[o:
 04 Lec1: +so: we ha:ve+ (.) +one dozen fou:r
 lec1 +-----1-----+ +-----2----->
 1: turns to the board 2: shows her right hand
 05 Ali: tamam da
 okay but
 06 (1.4)+
 Lec1 ---->+
 07 Lec1: and we: want to make it two dozen
 08 Ali: yes
 09 Nur: °ye:s°
 10 Lec1: what number you have to add?
 11 Ali: Ω↑te:
 ece Ω---shows ‘8’ with her fingers-->
 12 +(1.1)+ +(0.5)+
 lec1 +---3---+ +---4---+
 3: turns to Ali 4: raises her eyebrows
 13 Ece: eight?Ω
 ece ----->Ω
 14 (1.6)
 15 Nur: nası +ya[:: ?+
 how is it so?
 16 Ali: [↑te:
 lec1 +---5---+
 5: points to Ece and smiles
 17 Ece: eight
 18 Nur: eight (.) mi?
 is it eight?
 19 Ece: Ωeve:t [on +altı sekiz daha yirmi dört işte

20 *yes sixteen plus eight is twenty-four well*
 Nur: [yir+mi iki oluyo: tsch
 it is twenty-two
 Ω-----turns and leans forward to Nur----> line 23
 ece +-----6----->
 lec1 6: writes the numbers on the board
 21 (1.8)+
 lec1: ---->+

In line 1, Lec1 initiates an understanding check question, which is followed by Ali's and Ece's "no" responses. Then, Lec1 elaborates and re-states her previous task-related question (what number you have to add?), and Ali and Nur demonstrate their active listenership (*yes*) (Sert, 2019). Subsequently, Ali provides a candidate response through the invented number (*te:*), and Ece displays her embodied translingual response by showing 'eight (8)' with her fingers. In line 12, Lec1 bodily orients to Ali during 1.1 seconds of silence, and raises her eyebrows (Kääntä, 2010) during 0.5 seconds of silence as an observable embodied indication for her dispreference about Ali's incorrect answer. Then, Ece produces her candidate answer verbally with turn-final rising intonation. After 1.6 seconds of silence, Nur initiates an elongated clarification request using a surprise marker (*ya*) in Turkish (*how is it so?*). When Ali repeats his previous response treated by Lec1 as a dispreferred answer, Lec1 shows her preference about Ece's answer through a pointing gesture (Melander, 2012) and by smiling (Sert & Jacknick, 2015) to her. However, Lec1 does not display any third turn preference and/or evaluation to students' contributions and their clarification requests. This may signal that Lec1 does not act as the knowledge provider but provides a translanguaging space for the other party's contribution (Tai & Wei, 2020). Following Ece's repetition of her previous response, Nur reformulates her previous request for clarification using Ece's previous turn with the addition of the Turkish question particle (*is it eight?*). In line 19, Ece displays peer involvement (Bozbıyık & Can Daşkın, 2022) to resolve her classmate's understanding problem by providing a type-conforming response to Nur's prior question (*yes*), and a detailed explanation about the mathematical operation behind her own answer (i.e., eight) in Turkish language. In an overlap with Ece's

previous turn, Nur delivers her own response resulting in the same operation, and deploys a disconfirmation marker (*tsch*). The first segment of Extract 1 closes with 1.8 seconds of silence during which Lec1 writes the numbers on the board.

Overall, the first segment showed that Lec1's understanding check question, and the elaboration on her question created an interactional space for increasing student participation. She also demonstrated her preference bodily rather than providing verbal confirmation, and this facilitated peer involvement, mutual understanding, and problem-solving procedures through a wide range of translanguaging practices including Turkish, invented language, and hybrid usage of English and Turkish. Thus, the participants (Lec1 and the undergraduate students) established and maintained the epistemic progressivity based on the target pedagogical and interactional activity during the content knowledge co-construction process. In doing so, it can be clearly seen that mutual understanding is prioritized over orienting to which language is used during the ongoing interaction. In addition, the first segment showed that Lec1 makes the question and the numbers visible by writing them on the board. In Extract 1.2, Lec1 invites the students to resolve the understanding trouble, which is followed by the students' displays of knowledge, and a claim of non-understanding within translingual turns.

Extract 1.2 (Segment 2): one dozen four, 04_03_20_2nd_21-18

22 Nil: [two dozen
 23 Lec1: [come on guysΩ
 ece ----->Ω
 24 Ali: [&hoca:m&]
 my lecturer
 25 Lec1: [&fou:r&]
 ali &-points to the board-&
 26 plus +eight i:s
 lec1 +----7----> 7: opens both hands
 27 (0.8)+
 lec1 ---->+
 28 Ali: tama:m
 okay
 29 Ece: tamam da
 okay but
 30 Lec1: it is +[not &fourtee:n+
 31 Ali: +[hu::h+
 ali &-nodding--> line 33
 lec1 +-----8-----+

8: raises her eyebrows and smiles

32 Ful: hu:h
 33 (0.7) &
 ali ----->&
 34 Lec1: it is one dozen fou:r
 35 Ful: huh hu:h
 36 Nur: [ama ↓hoca:m
 but my lecturer
 37 Lec1: [and you keep >adding<
 38 Nur: ben +[anlamadım
 i didn't understand
 39 Lec1: +[let's count
 lec1 +----9-----> line 40
 9: walks to the board

40 (1.4)
 41 Lec1: you have+ +one dozen fou:r+ i am gonna count
 lec1 ----->+ +-----10-----+
 10: writes '14' on the board

42 +by once+
 lec1 +--11--+
 11: shows '1' with her index finger
 ((22 lines omitted)) (Lec1 counts one by one and writes the numbers on the board.))

65 Lec1: one dozen fou:r you are reaching Δtwo dozenΔ
 ela Δ-nods her headΔ

66 + (1.6)
 lec1 +--14->
 14: moves her hands from right to left slowly
 67 is that any problem with+ that?
 lec1 ----->+

68 Ece: Ω&tsch&Ω 2515
 ece Ω-shakes her head-Ω
 ali &-shakes his head-&

69 Lec1: bi:- (.) şö:yle söyliyim oka:y
 let me say it like this oka:y

70 + (1.3)+
 lec1 +-15--+ 15: steps forward

At the beginning of the Segment 2, Lec1 produces an encouragement token (come on guys) (line 23) and initiates a designedly incomplete utterance (DIU; Koshik, 2002) (plus +eight i:s) by pointing to the board to elicit the students' complementary contribution from lines 25 to 27. However, Ali and Ece align with Lec1's DIU, and signal that it is not the main source of the understanding problem (tamam da/okay but). In what follows, Lec1 produces another hinting turn (Balaman, 2019) to elaborate the operation (it is not fourtee:n) (line 30), which enables Ali and Ful to display their understanding through elongated change of state tokens (Heritage, 1984). After 0.7 seconds of silence and Lec1's upgraded explanation (it is one dozen fou:r), and in overlap with Lec's ongoing utterance (line 37), Nur addresses Lec1 with a but-prefaced and a word-level translingual address term

(line 36), and demonstrates her claim of non-understanding (*ben anlamadım*) (line 38). This leads to Lec1's extended counting activity by coordinating verbal counting and writing the numbers on the board simultaneously between the lines 39 and 65 (see 22 lines omitted). After the omitted part, Lec1 initiates another understanding check question (*is that any problem with that?*) (line 67). Ece who is the student providing the preferred response displays her verbal and embodied "no problem" response (e.g., Skovholt et al., 2019) when Ali produces the same embodied orientation. However, the student who requested for clarification, and claimed her non-understanding (i.e., Nur) does not participate in the ongoing interaction. Then, Lec1 initiates to reformulate the ongoing mathematical operation within a translingual turn in line 69. In brief, the second segment of Extract 1 showed that the students involved in the ongoing conversation using acknowledgement tokens and/or in Turkish language whereas Lec1 continues to produce her turns in English in line with the English-only policy of the focal EMI university. Note that she only shifted her English-only utterances to Turkish to resolve Nur's understanding trouble with an alternative explanation. In the following segment, the participants collaboratively manage to resolve the understanding problem through multimodal and translingual practices.

Extract 1.3 (Segment 3): one dozen four, 04_03_20_2nd_21-18

71 Nur: hocam iki (.) iki ta:ne dozenda yirmi dört tane:
 my lecturer two (.) aren't there twenty-four things
 72 şey yok mu?
 in two dozen?
 73 Lec1: +ye::s+
 lec1 +---16---+ 16: nods her head
 74 Ece: Ωtama:mΩ
 okay
 ece Ω---2---Ω 2: turns to Nur
 75 Nur: er: na[sı:?
 how
 76 Lec1: [you: do:n't
 77 Nil: [βniye yirmi girmiyo o zaman?β
 then why isn't twenty in?
 nil β----points to the board----β
 78 Lec1: +don't see this
 lec1 +-----17-----> 17: walks backwards to the board
 79 Nur: [o zaman neden yirmide kaldık
 then why did we stop on twenty?
 80 Lec1: [a:s+ +fourteen+
 lec1 -----+ +---18---+
 18: circles 'fourteen' on the board

81 it is not fourteen
 82 Rem: ©hoca:m
 my lecturer
 rem ©--1--> line 85 1: raises his hand
 83 Ali: &o: (.) o- onun altı oluyo işte&
 it i- it is under it well
 ali &-----turns to Nur-----&
 84 Rem: †ben açıklıyım mi hoca:m?
 can i explain, my lecturer?
 85 Lec1: this is o:ne©
 rem -----©
 86 Rem: [©Ωbunların anlamadığı yeri anladım yaΩ©
 i understood the part they didn't understand
 87 Lec1: [+>give me<+ a second this is one dozen four
 rem ©-----turns to ali-----©
 lec1 +---19-----+ 19: shows her finger to rem
 88 Ece: Ωşe:y diyo: on dört tanede on altı yazdı
 well she says she wrote sixteen in fourteen
 ece Ω-----turns to Nur-----> line 91
 89 yani base tende on altı
 so it is sixteen on base ten
 90 Nur: hu::h
 91 Ece: base twelvede on dört anladın mıΩ
 fourteen on base twelve did you understand it
 ece -----Ω
 92 Lec: +oka:y there was one+
 lec1 +-----20-----+ 20: points to ali
 93 Rem: [©hu:h hocam©
 my lecturer
 rem ©-----2-----© 2: raises his hand
 94 Ali: [hocam base twelvede:
 my lecturer on base twelve
 nur €nodes by looking at Ece€
 95 Rem: Ωece açıkladıΩ yani on dört olması: yani
 ece explained it well it is fourteen well
 ece Ω----3-----Ω 3: shows her thumb to Nur
 96 ©on iki artı dört on altı normalde
 twelve plus four sixteen normally
 rem ©-----turns to Nur----->
 97 [on altı sekiz daha yirmi dört©
 sixteen plus eight twenty-eight
 rem -----©

At the beginning of the third segment, Nur requests for confirmation through a translingual yes/no question including the demonstration of her understanding through the combination of inventive and Turkish languages (lines 71, 72). After Lec1's and Ece's displays of alignment, Nur initiates another request for clarification (how?). Then Lec1 approaches to the board, and repeats her previous explanation in an overlap with Nil's request for clarification (line 77). While Lec1 continues to provide repetitive explanations, Nur initiates a clarification question by reformulating Nil's previous request and overlapping

with Lec1's ongoing explanations. Although Lec1 provides repetitive elaboration sequences based on the trouble source emerging from the duodecimal mathematical system until line 81, Nur and Nil do not demonstrate understanding, and Rem takes the turn through word-level translanguaging. After Ali's potential response to Nur's and Nil's clarification questions by displaying his own understanding, Rem requests for permission to explain the problematic content knowledge and displays understanding with a smiley tone of voice (lines 84, 86). As can be seen in the three segments of Extract 1, translingual peer involvement had an important role in eliciting different responses, but it could not help some students (Nur and Nil) resolve their understanding problems. In Segment 3, we can see the peers' explicit initiations to take the turns for resolving the understanding troubles. Furthermore, Rem requests for Lec1's confirmation in Turkish whereas Lec1 maintains to formulate her explanations in English language.

Lec1 explicitly takes the turn rather than giving it to Rem and Ali (>give me< a second), and she restates her previous explanations and highlights that the focal number is not fourteen, it is one dozen four on the duodecimal system in line 87. Subsequently, Ece self-selects herself to report explanations based on Lec1's previous elaborations (line 88). Following Nur's change-of-state token (hu: :h), Ece completes her reporting and initiates a turn-final understanding check. However, Ece's explanation is potentially more complicating because of combining base ten and twelve, and then Lec1 allocates the next turn to Rem with the pointing gesture directed to Ali. When Rem and Ali overlap with one another's explanation sequences, Nur orients to Ece, and produces nodding, which is followed by Ece's thumbs-up gesture in line 95. Rem also refers to Ece's previous reporting, and then provides his elaboration through other-repair for Ece's prior explanation (combining two systems, base 10 and 12). All in all, Ece's repair required explanatory turns, and Rem's reformulated explanation led to Nur's embodied demonstration of understanding at the end of Segment 3.

Overall, the undergraduate students participated in the management of understanding problems through translanguaging practices including Turkish, invented language, and the mixture of English and Turkish. However, Lec1 produced all her explanatory sequences in English except for one Turkish-inserted turn (line 69), and she did not impose the use of English for the students during the knowledge co-construction process. Thus, translanguaging creates an interactional bridge for all the participants to resolve the understanding troubles collaboratively, and to create a whole-class understanding in the face-to-face EMI classroom (e.g., Şahan & Rose, 2021; Tai, 2021b). While the central role that translanguaging plays in displays and co-construction of content knowledge became visible in the face-to-face classroom setting, to what extent such instances are trackable in subsequent EMI classroom activities remained unexplored due to the COVID-19 pandemic (see Chapter 3 for a detailed account). Relatedly and with this finding in mind, the role of translanguaging space in enabling content knowledge co-construction with reference to the technological affordances in online EMI settings and across multiple activity phases was further explored. In the following section, the multifaceted nature of content knowledge co-construction processes will be introduced in four connected phases of the digital spaces.

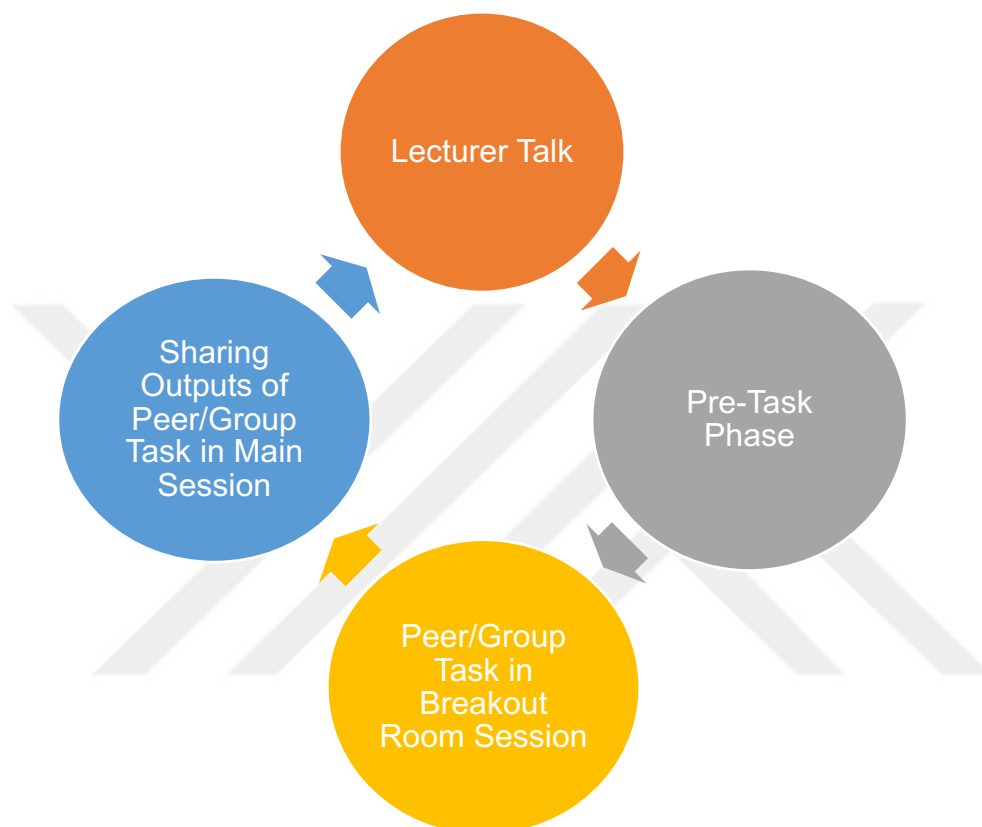
Translanguaging space across multiple activities in online EMI classrooms

During COVID-19 pandemic, synchronous EMI classroom interactions were largely carried out using the videoconferencing tool, Zoom in all the faculties of the focal university. In addition to the online lecture-based sessions, the lecturers from three different departments (Education Sciences, Business Administration, and Psychology) used asynchronously and synchronously shared digital materials before and during the sessions and integrated collaborative group task activities for content knowledge construction purposes during their online courses. Through the in-depth retrospective and prospective investigations using Multimodal CA, it was explored that translanguaging bridges the four

interconnected phases of online EMI classrooms and facilitates the content knowledge co-construction processes in due course (see Figure 1).

Figure 1

Multiple Phases of Online EMI Classroom Activities



During the first phase (lecturer talk), lecturers introduce focal contents of their online EMI lessons in two different ways: They sometimes explain course contents themselves using diverse resources such as YouTube videos or informative slides synchronously. On the other hand, they can share previously prepared PowerPoint slides at the university learning management systems in which lecturers and students can manage different tasks of their assigned courses online. These PowerPoint slides also include embedded recordings of lecturers' voices as voice-over, audio teaching materials. When the lecturers share such audio-visual teaching materials, they also introduce the focal content shortly at the beginning of the synchronous lesson. After the lecturers complete the introduction part of the focal contents, they explain what their students will do during breakout room sessions

based on diverse tasks such as preparing midterm exam questions and designing an advertisement based on the previously learned topic (pre-task phase). These tasks are mostly based on collaborative writing activities that should be conducted by more than one student. During the second phase (pre-task phase), the lecturers also respond to students' clarification questions based on the following tasks. Then, in the peer/group task phase, students attend to the groups in the breakout rooms (a video-mediated small-group meeting feature of the videoconferencing tool, Zoom) to accomplish their assigned tasks. After the students complete their collaborative peer/group tasks, they come back to the main session (video-mediated meeting with all students on the videoconferencing tool, Zoom) and share their task outputs with the lecturers and the other students, and the lecturers connect their task outputs with the target content knowledge in the main session (sharing outputs of peer/group task phase). The findings show that across these interconnected digital spaces (i.e., the main session with whole-class on Zoom and breakout rooms on Zoom) of the content knowledge construction process, the participants (lecturers and students) recurrently deploy translanguaging practices. In the following three subsections, three different cases will be closely examined to show how the interactants use translanguaging space during collaborative knowledge building process across four connected phases in different interactional episodes (i.e., lecturer talk, student to teacher interaction, peer interaction, and teacher to student interaction) of the digital spaces (i.e., the breakout room and main sessions) through various instances emerging from these three online EMI courses in three different ways.

The Case of Educational Sciences

The first case comes from the 'Turkish Educational System and School Management' course in the department of Educational Sciences in the fourth week of the semester. There are one lecturer (Lec2), one teaching assistant, and fifteen undergraduate students in the online class. Lec2 designed two weeks to teach the 'human relations approach' as an administrative theory, educational administrators, and participatory

leadership as the target learning object of the course. Prior to the online session, Lec2 shared voice-over PowerPoint slides asynchronously to present important features of the administrative theories with bullet points. She prepared four consecutive slides about human relations approach including explanations with the audio-recordings on these slides. In the following extracts showcasing the content knowledge co-construction process of the first case, the participants particularly refer to two of these slides (see Figures 2 and 3).

Figure 2 and 3

PowerPoint Slides on the Focal Course Content



Figure 4

Transcription of the Audio Recording over the Second Slide

01	Lec2: and the:n >you know like< whether there i:s e:r physical
02	or psychological characteristics (.) they a:re affecting
03	their wo:rk (.) .hhh u::r feeling of belongingness,
04	mora:le, effective management (.) tho:se make a difference
05	(.) in the organizations (.) and those <u>informa:l</u> (.) ↑work
06	grou:ps (0.3) meaning tha:t (.) as you are a (.) working in
07	a >you know< company: or e:r schoo:l (.) you build relations
08	informal work groups (.) and tha:t would .hh (.) defi:ne
09	o:r (0.9) affect you::r- performance as a teacher

In the first two slides of the human relations approach, Lec2 shares the main assumptions of the human relations approach, and the relevant characteristics of leadership

(e.g., *motivating, leading*) in the approach through the bullet points. Figure 4 comes from the audio recording over the second slide in which Lec2 introduces which characteristics affect teacher performance and how schools establish relations through informal work groups with reference to the content-specific terminology on the slide (e.g., *feeling of belongingness*-line 3). While introducing the target content knowledge asynchronously, she utilises interactional practices including positioning students as potential knower (i.e., *teacher*-line 9) (Heritage, 2012a), using ‘*you know*’, hesitation markers (line 3), and long silences (lines 6, 9). Therefore, Lec2 presents the target knowledge (i.e., features of leadership in the human relations approach) with the materials consisting visual and audio explanations. In brief, these slides are materialized one-way transfer of knowledge, which leaves room for identifying students’ knowledge co-construction that becomes visible in their video-mediated interactions and translanguaging practices across the multiple phases of the EMI course at hand.

Phase 1: Lecturer Talk. During the following two synchronous online classrooms (20 and 27 May), Lec2 initially revises and writes the significant points of the approach on the screen-shared word document, and provides answers to the students’ clarification questions on 20 May. Then, she designates two interrelated tasks about designing a school model (20 May) and a leader of the school regarding the human relations approach (27 May). Lec2 assigns these interconnected tasks to the same groups including the same students. In addition, Lec2 gives information about the procedural nature of the focal online EMI course by addressing the teaching assistant at the beginning of the first week. Extract 2 below explains how Lec2 conducts this course online, which shows her teaching practice during the first phase (lecturer talk).

Extract 2: *interaction_edu_phase1_20-05-21_11.56-12.20*

01 Lec2: u::r every week i have the voiceover powerpoints
 02 (.) they listen to it about the topic (.) ↑so i don't
 03 do ↑lecture (.) in the classe:s .hh (0.3)
 04 and i generally do:: u:r (.) ↑ask students to listen

05 to tho:se, do the readings (.) and put their
 06 forum u::r to u:r into forum area: (.) questions,
 07 comme:nts (0.3) >you kno:w< that they are curious
 08 abou:t (.) so tha:t we can do the in>↑teraction< u:r
 09 we can shape the interaction in this ↑one and a half hours

From lines 1 to 3, Lec2 explains that she shares voiceover Powerpoint slides, the students listened to the embedded audio recordings, and she does not produce extended lecturer talk. Subsequently, Lec2 introduces what she expects from the students before the synchronous course starts (i.e., listening to the audio recordings, reading the assigned articles, writing the questions and/or comments in the university online platform) (lines 4 to 6). Finally, she closes her procedural introduction of the online course structure with references to the students' curiosity, and the collaborative interaction shaping with the students during the synchronous session (we can shape the interaction in this ↑one and a half hours).

In brief, Lec2 introduced that she provided the informative course materials, opened an online interactional space for the students' discussion on the online platform, assigned reading and listening activities before the synchronous sessions, and they shaped the online classroom interaction process altogether by addressing the teaching assistant of the course. Therefore, this showed that the focal online course has a collaborative nature in the management of procedures including the classroom interaction.

After Lec2 revised the procedural organization of the online session, she highlighted the important features, and provided her response to the students' questions about the target content. The following extract from the first online session (20 May) demonstrates how Lec2 displays translanguaging to respond to a student's information-seeking question during the target content co-construction process. Before Extract 3 starts, Lec2 provided some explanations about educational administrators such as principals, teachers, and

parents at primary and secondary level, and started to talk about lecturers as administrators in higher education, which is followed by Eda's information-seeking question.

Extract 3: student_edu_phase 1_20-05-21_17.41-22.54

- 01 Eda: hoca:m (.) ↑can we say also student is the part of
my lecturer
- 02 (.) ↓i:t (0.3) maybe:
- 03 Lec2: sorry
- 04 Ali: [sesin bozuk geliyo:
your voice is broken
- 05 Eda: [i mean by requesting something?
- 06 (0.8)
- 07 Lec2: oka::y (0.3) u:r eda: you, you come >a little< la:te
 08 u:r sometimes so it creates u:r some confusion ↑but
 09 (.) ↑yes you can say students a:re part of eğitim yönetimi:
educational administration
- 10 (0.3) ↑ho:w? (.) and they are the ↑stakeholders (.) when we
 11 talk about (.) eğitim yönetimi: (.) we also have stakeholders
educational administration
- 12 +payda:\$ (0.3)+ in:: u:r odtü: language it's bileşe:n
stakeholder *metu* *component*
- lec2 +-----1-----+ 1: shows her thumb
- 13 ☞>fyou know likef< when you say bileşe:n (.) you
component
- ☞Ali posts "duru (student name) said the principal hocam (my lecturer)" on the chat box
- 14 >you know< +faculty membe::rs (.) talk about students
- lec2 +-----touches on her fingers----->
- 15 (.) talk about administrative st↑a:ff+ (0.5) u:r like
- lec2 -----+
- 16 öğrenci işleri: (0.4) u::r persone:l (.) daire başkanlığı:
registrar's office *department of personnel*
- 17 (.) everybody i::s (0.6) u:r ↑yes part of (.) the: organization

(.) and part of the yönetim (.) .hhh which means i should be
administration

also: >you know< if i am a very e:r participatory >you know
like u::r a leader if i have a participatory leadership that
means (.) +i need to ask my students (.) i need

lec2 +-----touches on her fingers---->

u:r ask my fa:(.)culty:+ (.) i need to ask the administrative

lec2 -----+

st↑aff when i am making decisions (.) i need their
input (.) in order to make accurate decisions (0.3) okay?
(0.6) so: (0.7) the: ↑yes +duru:+ the principle for su:re

lec2 +--2--- 2: nods her head

At the beginning of Extract 3, Eda initiates an insert-expansion (Schegloff, 2007) with a translingual address term (*hocam*) and asks whether they involve students in educational administration in higher education or not with an interrogative question (Heritage, 2012a) to elicit further content knowledge from Lec2, the epistemic authority of the online session (lines 1, 2). While displaying her knowledge from the previous part of the lesson, she mitigates her utterance with ‘maybe’ (Back, 2016; Weatherall, 2011) and provides a clarification about her information-seeking question (Duran & Sert, 2021) ([i mean by requesting something?]) (line 5). After Ali and Lec2 mention the hearing problem (lines 4, 7, 8), Lec2 initially provides a type-conforming response (Raymond, 2003) using word-level translanguaging with L1 translation of the educational administration. Then, Lec2 expands her elaboration with ‘how’ question and refers to ‘students’ as stakeholders (line 10). Subsequently, Lec2 continues to deploy further translanguaging practices using Turkish version of educational administration (*eğitim yönetimi*) and stakeholder (*paydaş*), and the focal university-specific jargon (*metu: odtü: language*) for the stakeholder (*component: bileşen*) (Wei, 2011, 2017). She also utters ‘you know’ to position the students more knowledgeable (lines 13, 14) (Herder et. al., 2022; Heritage, 2012b), and also mentions other stakeholders such as faculty members and administrative

staff within the translingual turn format. In line 13, one of the students (Ali) demonstrates a peer involvement (Can Daşkın & Bozbıyık, 2022) in a translingual written turn with reference to his classmate's previous display of knowledge (*duru said the principal hocam*) on the chat box. This shows that the students may display peer's and/or their own content knowledge using translanguaging at the spoken and written modes of interaction in the online focal EMI setting. From line 17 to 24, Lec2 connects the ongoing knowledge building sequence (educational administrators in higher education) with another learning object of the session (i.e., participatory leadership) in an extended lecturer turn. In addition, she gives an example with the student involvement to decision-making process as a requirement of participatory leadership in order to introduce the need for all the stakeholders' involvement. Thus, Lec2 refers to another target learning object on the slide (see Figure 2 and 4 above) in the human relations approach. Finally, Extract 3 closes with Lec2's understanding check questions, wait-time, and explicit confirmation to the written student contribution on the chat box.

In brief, Extract 3 demonstrated that the student's information-seeking question enabled the Lec2 to revisit and further detail the target content knowledge (i.e., student involvement as administrators, participatory leadership in the human relations approach) using the shared interactional repertoires (e.g., Bozbıyık & Balaman, 2023; Tai, 2023) within spoken and written translingual contributions (i.e., English, Turkish, and the focal university jargon) during the first phase (i.e., lecturer talk) of the online EMI educational science course. In what follows, I track how the co-constructed knowledge in the lecturer talk phase also procedurally unfolds in the subsequent phases after preliminary task instructions are delivered in the pre-task phase, which I now turn to.

Phase 2: Pre-Task Phase. As explained before, Lec2 touched upon the important features of the educational administration and leadership, responded to the students' information-seeking questions, and designed two connected tasks for two different synchronous sessions (20 and 27 May). Thus, the second online session directly starts with

her task explanations about the second task (designing a leadership). Extract 4 demonstrates how Lec2 provides a brief introduction about the following peer/group task using varying interactional practices.

Extract 4: group session_edu_phase 2_27-05-21_06.31-07.25

01 Lec2: so: we'lll (.) ↑do: (.) agai:n (0.6) quick (.) group sessions
 02 (.) .hh where you ca:n e:rm (.) talk about (.) e:r ↑what
 03 (.) educational leader (.) not just particular leader
 04 but education leader looks like (.) .hh er in terms of
 05 its definitio:n (.) and the:ne:r we're gonna: remember
 06 (.) ↑la:st week (.) we di:de:rm (.) the organizational,
 07 how organizations look (0.3).hhh e:r based on
 08 different administrative theories (.) and ↑toda::y i'm gonna
 09 ask you: (.) to a:dd an educational leader and (.) leadership
 10 e:r ↑a:spect to that e:r erm: to tha:t >you know< design
 11 let's say.hhh (0.3) so: ↑what does it look like (.)
 12 i:n scientificmanageme:nt (.) if school is ↑run by
 13 scientific management (.) ↑what the leader looks like (.)
 14 in that kind of a schoo:l (0.3) o:r leader e:r looks like
 15 in human >you know< u::r human (0.7) human resource (.)
 16 ↑aspe:cts (.) ↑what does leaders do in such (0.3) schoo:l
 17 (.) e:r so we're going to discuss tho:se

From lines 1 to 5, Lec2 announces that the students have another group activity in which they will particularly talk about educational leadership with an emphasis on 'educational' (line 3) but not on the leadership in general. Between the lines 5 and 8, Lec2 refers to the collaborative task activity (20 May) (how organizations look based on different administrative theories) thereby uttering 'we're gonna remember' (e.g., You, 2015). This signals that Lec2 ensures 'remembering the previous task' as a shared activity for both the students and her in the following task, and thus direct the students to the future peer/group activity in another digital space (i.e., the breakout room session).

Subsequently, Lec2 expresses that the students will add another dimension (i.e., educational leadership) to the previous task (i.e., designing a school model) in terms of the administrative theories, and positions the students knowledgeable about the focal topic using 'you know' (Heritage, 2012a) from lines 8 to 10. After she creates an imaginary situation (Tai & Wei, 2020) about the following task with 'let's say' (line 11), she exemplifies the interrelated tasks (school organization and its educational leader) based on the scientific management, and the human resources (i.e., the human relations approach) aspects as the administrative theories between the lines 11 and 16. Ultimately, the extended lecturer talk ends with her closing announcement that they will talk about those topics.

In sum, Extract 4 underlined that Lec2 prepared her students for the following peer/group activity using various multimodal practices including references to the previous classroom activity (e.g., Can Daşkın & Hatipoğlu, 2019; You, 2015), positioning the students knowledgeable (e.g., Herder et al., 2022; Heritage, 2012a), creating imaginary situation (e.g., Tai & Wei, 2020), and providing examples (e.g., Essien, 2021).

After Lec2 responded to the students' questions about the target learning objects (i.e., educational administration, administrative theories, and education leadership) and the assessment procedure of the course in Extract 3, she restated the task instructions in Extract 4 before she assigned the students to the breakout rooms. Extract 5 below shows how Lec2 gives instructions about the upcoming breakout room tasks using a previously prepared online Google document and by displaying the focal content knowledge.

Extract 5: human_resource_edu_phase2_27-05-21_61:57-64:20

01 Lec2: ↑so: (.) here's >what we're gonna do:< the:n (0.3) the
 02 second part of the: (.) the ↑ta:sk i:s (0.6) that i'm gonna
 03 ag↑a:in (.) put you: i:n u:r groups (.) let's see we have
 04 (0.7) we're going to have (.) ↑fi:ve (.) groups (0.8) a:nd
 05 the ↑la:st (.) remember ↑la:st week's u:r exercise (.) the
 06 activity we did (.) e::r the administrative theories (0.5) so
 07 📄↑no:w i want you:: (0.3) to talk about (0.3) u:r

Lec2 screenshares the online google doc
 08 and some of the characteristics of the
 -----scrolls up----->
 09 leaders ↓ in these institutions (.) ↑ what does (.) a leader

fig 5

- Group 1: **Scientific Management**
- Authoritarian school structure
 - One way of doing things in teaching / educational activities
 - Clear roles and responsibilities
 - Tell what to do & close supervision
 - Student achievement is the main outcome
 - Teachers' needs are ignored
 - Machine metaphor

fig 5: Lec2 selects "Group 1: (blurred student names) Scientific
 Management" on the online google doc
 10 in scientific management school (.) looks like? (0.4)
 11 ↑ what do they do: education leaders (.) okay? (0.5) ↑ what
 12 does (.) ur: education leadership: - leader in

fig 6

- Group 2: **Administrative Management**
- Focuses on the dynamics of the educational activity
 - Focus on the organizational coordination & control
 - Typical Turkish schools with definite bureaucracy
 - Teachers needs are still ignored & top-down approach

fig 6: Lec2 selects "Group 2: (blurred student names) -
 Administrative Management" on the online google doc
 13 administrative management ↑ heavily do: (.) in such school
 14 (0.5) okay?
 -- Lec2 scrolls down --
 ((17 lines were omitted)) ((Lec2 revises the characteristics of the post-behavioural
 science era.))
 33 so: i want you to think about (.) a leader (.) for each of
 34 these school type (0.3) > i'm gonna put < you: in group again
 35 (0.5) in the same groups (.) if that's okay with you:
 36 (2.4)
 37 u::r (.) let's see: (.) ↑ some of you will be two: some of you

38 will be the- three: (.) and that's fine (0.4) u:r and i want
 39 you:: (0.4) ↑yea:h (.) design a school (.) principal (0.3) now
 40 group one (0.4) is responsible for scientific management
 41 (.) group two: (.) room two: i mean (0.5)u::r is responsible
 for
 42 u::r the administrative management (0.4) three human resources
 43 (.) fou:r behavioural science era (.) and number
 44 +f↑i:ve (.) roo:m five+ (0.4) is going to be post behavioural
 lec2 +shows five with her hand+
 45 science era (0.4) oka:y? (0.7) let's say again ten:: (0.4)
 46 maybe seven minutes (0.4) let's say and then we'll be back
 47 Mete: all right

Figure 5 and 6

Screenshared Online Google Documents in Extract 5

Group 1: *Scientific Management*

- Authoritarian school structure
- One way of doing things in teaching / educational activities
- Clear roles and responsibilities
- Tell what to do & close supervision
- Student achievement is the main outcome
- Teachers' needs are ignored
- Machine metaphor

fig5

Group 2: *Administrative Management*

- Focuses on the dynamics of the educational activity
- Focus on the organizational coordination & control
- Typical Turkish schools with definite bureaucracy
- Teachers needs are still ignored & top-down approach

fig6

From line 1 to 4, Lec2 informs that the students will do the second part of the task, and she will assign them to five different groups. Then, she refers to the previous task about the school design using 'remember' (You, 2015) and reminds them that they worked on the administrative theories using the simple past tense (lines 5, 6) (Can Daşkın & Hatipoğlu, 2019). From line 7 to 33, Lec2 introduces what they will do in the discussion task thereby telling the questions and exemplifying three administrative theories (i.e., scientific management, administrative management, post-behavioural science era). In doing so, she screenshares the Google document including the bullet points emerged from the students' first task outputs (line 7), displays previously co-constructed content knowledge by

temporarily highlighting the names of the administrative theories (i.e., scientific management, administrative management) on the online mutually accessible resource (lines 9, 12). Therefore, Lec2 introduces the following task with references to the co-constructed knowledge including the students' own production and the lecturer's contributions. After Lec2 refers to the characteristics of the post-behavioural science era in 17 lines (omitted from the transcription), she explains the students will work in the same groups, assigns the administrative theories to the groups, and announces the time duration for the task, and the sequence closes with Mete's confirmation (lines 33-47).

Consequently, Extract 5 illustrated how Lec2 provided the necessary information and instructions about the breakout room task with references to the previously co-constructed content knowledge with the coordination of spoken and screen-shared written documents (e.g., Balaman & Sert, 2017a). The following extract will show the completion procedure of the assigned task based on the human relations approach through multimodal and translingual practices in the breakout room session.

Phase 3: Peer/Group Task in Breakout Room Session. During the third phase of the content knowledge co-construction process, the peers/groups work on the accomplishment of the assigned task. Extract 6 shows how peers (Derya and Seda) collaboratively manage co-construction of the task with references to the past learning, online materials, and online classroom interaction moments by using translanguaging space. The following extract comes from the third group discussing about the characteristics of the imagined school principal based on the human relations approach in the breakout room session of the videoconferencing tool, Zoom. Before Extract 6 starts, the students tried to remember the leader features in the human relations approach, and then searched for the PowerPoint slides (see Figure 2 and 3 above) provided by the lecturer two weeks ago. Extract 6 will be introduced in two segments.

Extract 6 (Segment 1): `slide_edu_phase 3_27_05_21_68.26-73.42`

01 Derya: buldum şeyi::

- 02 *i found it*
- 03 (2.3)
- 04 [sla:ytı]
- 05 *the slide*
- 06 Seda: [°tama:m°]
- 07 *okay*
- 08 (8.1)
- 09 Derya: nerde: (0.5) (inaudible voices)
- 10 *where is it*
- 11 (1.8)
- 12 ↑ha:: yani daha çok böyle: (.) şey::le alakalı
- 13 *hu:h well it's mostly related to: make*
- 14 (0.9) çalışanları::
- 15 *workers*
- 16 Seda: eve:t
- 17 *yes*
- 18 Derya: mutlu etme:k
- 19 *become happy*
- 20 (0.9)
- 21 Seda: they are principals (0.7) e::r (0.9) head of
- 22 (0.8) the department, teachers, pare:nts (0.8) guardians
- 23 and so o:n (0.7) hu::h (0.8)
- 24 Derya: hnm:: (.) ya ↑şey böyle: (.) motive ede:n
- 25 *well so motivating*
- 26 (1.1)
- 27 Seda: ev(.)e:t
- 28 *yes*
- 29 Derya: grup çalışmasına izin vere:n
- 30 *allowing group work*
- 31 (1.8)
- 32 Seda: ben geçen hafta demiştim ya: (0.3) hani: (0.5) organizing
- 33 *i said last week well*
- 34 (1.1) e:rm (.) ↑theatre:s

- 23 Derya: hnm:: [↑aynen
exactly
- 24 Seda: [işte::
well
- 25 Derya:ayne:n (.) onu da yazıyo hatta::
exactly even that too is written
- 26 (1.4)
- 27 informal work falan diye:
so on
- 28 (10.8)
- 29 ya:: yine: bi: (0.3) müdü:r (.) tasarlamak istese:k
well again we want to design a principal
- 30 (0.5) yine social skill (1.3) çok bi yani: (0.6) aşırı
again I mean very excessively
- 31 iyi olan birisi olması [gerekiyo:
s/he should be a person who has
- 32 Seda: [°e:vet°
yes
- 33 Derya: e:r empati kurabilen birisi
someone who can empathize
- 34 (0.7) & (0.8) & (6.2)
- seda &--1-& 1: nods her head
- ((27 lines omitted)) ((Seda and Derya talks about their own experiences with the principals.))
- 62 Derya: bak sana istersen slayttan kopyala yapıştır yapıyım
look if you want I will copy and paste from the slide
- 63 (0.3) human /rɪ'lo:ɪfɪ:- (.) /rɪ'leɪfɪn/ şeyini:
the thing
- 64 (1.5)
- 65 ne yazdığını [hocanın]
what the lecturer wrote
- 66 Seda: [°tama:m°]
okay



67 (1.5)

68 Derya: chatte:n
from the chat

69 (4.3) ((keyboard voices))

70 °(yazıyorum)°
i am writing

71 (9.2)


72 Seda:  the impact of physical conditions
 Seda reads the bullet points on the first slide of human
relations approach (see figure 2) (lines 72-77)

73 on workers' >perfo(r)<mance

74 (2.6) &(2.1)&
seda &--2-> line 92 2:looks at the left side of the screen

75 what workers like=dislike about their work environment




76 (2.1)

77 lighting experiment

78 (6.6)

79 [bunu nerde yazmış hoca:]
where did the lecturer write this

80 Derya:[ikinci daha böyle özellik]leriyle (.) alakalı:
the second one is more related to its characteristics



81  (1.3) 
 the message from lec to everyone: 3 minutes more
((12 lines of Seda and Derya's navigations of the slide omitted.))

At the beginning of the first segment of Extract 6, Derya announces that she found the slide, displays change of state token ($\uparrow_{ha} :$) (Heritage, 1984, also see Kurhila, 2006) and states her knowledge about making workers happy (lines 8, 11) in translingual turns. Having confirmed her peer's previous utterances (lines 3, 10), Seda reads an explanation about the educational administrators possibly from an individual screen-based resource (e.g., web page) and completes her turn with another change of state token (from lines 13

to 15) in English. Thus, the peers manage to find the related content with their ongoing tasks as the knowledge seekers (Heritage, 2012a), and they remember the past learning through the online epistemic resources (i.e., lecturer slides and internet). Following this, Derya initially displays her derivative knowledge (*motivating*) (Pomerantz, 1980) coming from the lecturer slide (see Figure 2 above) (lines 16, 19). Then, Seda provides her own contribution (*organizing theatre*) through past reference in a translingual turn, and Derya displays alignment with Seda's previous utterance, and links this to the content knowledge on the slide (*informal work*) (lines 23, 25, 27). Thus, their references (past reference and reference to the PowerPoint slide) are produced through demonstrations of the target content knowledge in translingual turns, and this creates a translanguaging space for collaborative work rather than only reading the slides (Markee, 2008). After 10.8 seconds of silence, Derya re-topicalizes the targeted task (*designing a principal*) by stating that a principal should have excessively good social skills (30, 31) in translingual turns. After Seda's overlapped alignment, Derya provides another proposal based on the previous task output of the human relations approach produced in the prior online session (20 May) (*someone who can empathize*). This mutual exchange allows the participants to display their content knowledge through references to the previous teaching and learning moments and their own experiences with the principals as students (omitted from the extract) as well as the voice-over informative slides. Subsequently, Derya refers to the informative slide through another translanguaging practice, and shares it with her peer as a knowledge provider (Heritage, 2012a) on the chat box drawing on the technological affordances of the synchronous EMI session. Derya's multimodal action directs Seda to read other related content knowledge on the first slide of the human relation approach (Figure 3). In line 79 and 80, Derya explains her preference on the second slide based on the characteristics of the approach while Seda checks the other information. Then, Lec2 posts a message about time extension (3 more minutes) to complete the assigned task which becomes visible to both participants due to the breakout room feature of the videoconferencing tool, Zoom. The

following segment will show the peers align with one another through references to various sources in translingual turn.

Extract 6 (Segment 2): slide_edu_phase 3_27_05_21_68.26-73.42

- 94 Derya: sondan bi önceki (.) ba:k şu: (.) [şu cümlelerin biri:
before the last one (.) look that one of that sentence
- 95 Seda: [şey işte:
well that
- 96 Derya: dire:k ftek başına heheh (0.4) direk [ceva:p hu:h
directly by itself directly the response
- 97 Seda: [↑hu:h
- 98 ben de onu diyorum (0.8) e:r  motivating, leading
i am saying that too
 Seda reads the bullet point on
the second human relation approach slide (lines 98-100)
- 99 (0.6) participate (0.8) decision making (0.3)
- 100 effective communication| (1.0) organizing
- 101 (0.9) er:m activities
- 102 Derya: °huh hu::h°
- 103 (2.3)
- 104 Seda: e:r connection with (.) &↑parents
seda &---3--->
3: looking at the top right corner
- 105 (4.1) &
seda -----&
- 106 müdür (.) ilgileniyo (.) eve:t
the principal cares about yes
- 107 (3.5)
- 108 ailelerle hep müdü:r (.) müdür&ler konuşu:r
the principal (.) principals always talk with families
- seda &-----4-----> line 112
4: looks down and frowns her eyebrows
- 109 Derya: ayıne:n [öyle

exactly

110 Seda: [o yüzden human resources (0.9) en çok da aileler için
so are at mostly for the families

111 (0.6) önemli bence (0.8)
important i think

112 Derya: bi önceki işte::&
well the previous one

seda -----&

113 Seda: [hnm hnm

114 Derya:[bugra ile olan tartışmada da dedim ya hani:
during the discussion with bugra as i said too well

115 %şey (.) bunda da aynı heralde:
well it is the same here i guess

116 (1.2)

117 işte:: parent'ı da: (.) öğrenciyi de:
well both parent and student

118 Seda: huh hu:h

119 Derya: öğretmeni de biraraya getirmesi gerekiyo &bi şekilde&
s/he needs to bring together teacher too in some way

seda &----1-----&

120 Seda: †social skills

121 Derya: °ayne:n°
exactly

Derya directs her peer to the slides from the last week (line 94) and refers to one of these items as the potential task outcome (directly the response) (line 96). From lines 97 to 104, Seda reads the fourth bullet point on the slide, waits for 1.0 second, and then displays her content knowledge with the additions of “organizing activities” and “connection with parents” within her translingual turns. After 4.1 seconds of silence, Seda expands the content of the last item, and mentions that the principal cares about the families thereby establishing a connection between families and human resources, and so

displays her knowledge about the assigned task as well as evaluating the content critically (106 to 111). Derya explicitly confirms her peer's displayed knowledge (line 109), retroactively refers to the previous conversation with another classmate (bugra) during the previous peer activity in the breakout room session (20 May) (lines 112, 114), and then she expresses that the principal should bring parent, student, and teacher together in her translingual turns (lines 115 to 119). Note that "students" was regarded as one of the stakeholders in the educational administration in Phase 1 when Lec2 responded another student's information-seeking question. This marks that Lec2's knowledge building of the target knowledge using translanguaging space shaped the students' task engagement and task accomplishment. After Seda confirms her peer's contribution verbally and with nodding headshake, she also connects it with one of the important characteristics of the leadership (*↑social skills*), which is followed by Derya's confirmation (line 121).

In sum, Extract 6 showed that the student participants used translanguaging space to display their knowledge, and accomplished the task with references to the shared past learning, objects (i.e., slides), content terminology, events (previous conversations), and using chat box. The extract also presented that Lec2's translingual content knowledge provision and the informative slides in Phase 1 help the peers to display their funds of knowledge and complete the assigned task in the breakout room session.

Phase 4: Sharing Outputs of Peer/Group Task Phase. During the last phase of the content knowledge co-construction process, the lecturers elicit the task outputs from different group members, revise the target content knowledge with the connection of the task outputs, and respond to the students' questions. The participants left from the Zoom breakout room sessions, and came back to the Zoom main session of the online Turkish Educational System and School Management course. Extract 7 shows how our focal group members display their collaborative task output in the breakout room session, and how Lec2 revises the target content knowledge in relation with the focal group output in translingual turns.

Extract 7: participatory_edu_phase 4_27-05-21_86.35-88.21

01 Lec2: group ↑three:
 02 (2.7)
 03 Seda: hocam (.) e::r (0.3) we talk about:t (0.4) e:r
my lecturer
 04 ↑how important (.) e::r good communication
 05 📖skills (.) +and empathize with (0.5)+ teachers and
 lec2 +-----1-----+ 1: nods her head
 📖Lec2 writes "-School principal Good communication and empathy" on the online google doc (lines 5-10)
 06 Lec2: +huh hu::h+
 lec2 +---1-----+
 07 Seda: u:r ↑sey e:r emphatize with parents (.) and students
well
 08 (0.3) ↑also teachers
 09 Lec2: huh hu::h (.) ↑very goo:d (0.4) u::r school principals a:nd
 10 ↑here now we (.) we expect them to be- attend (.)
 11 +people's emotions (.) people motivation ↑ri:ght (.) we
 lec2 +-----moves her hands-----> line
 14
 12 expect them (.) to:: have good communication(.) empathy so that
 13 they understand the other's positio:ns (.) so they can ↑he:lp
 14 (.) u:r in the educational processe::s+ (.) very goo:d
 lec2 -----+
 15 (1.8) + 📖 (1.1) 📖
 📖Lec2 writes "with" between principal and good on the
 online google doc
 16 Derya: hoc[a::m
my lecturer
 17 Lec2: [↑othe:rs
 18 Derya: also: e::r 📖when (0.4) e:r they a:re📖 (.) making
 📖Lec2 writes "skills" next to empathy on the doc
 19 a decision they+ e::r

20 (1.8)

21 take opinions of other people like participative u:r

Lec2 writes "collaborative" on the online doc
(lines 21-23)

22 Lec2: participatory [decision making

23 Derya: [i don't remember]

24 (.) the: (.) fte:rm [ehehf

25 Lec2: [>huh hu:h>]

26 (0.5)

27 [↑participatory decision making

28 Derya: [decision making

29 Lec2: +very [good+

lec2 +----1-----+

30 Derya: [yea:h

31 (2.0)

Lec2 writes "& participatory" next to collaborative on the
online google doc (lines 31-32)

32 Lec2: very good (0.4) these are also (.) ↑remembe:r

33 human resource theory (.) ↑was about a grou:p

34 se:nse (.) was about +creating+ group sense

lec2 +----3----+ 3: opens her hands

35 >that we are doing together this< (.) this

36 +teaching and learning+ busine:ss .hh

lec2 +-----4-----+ 4: shows her hands

37 +>and that (0.5) creating+ collaborative

lec2 +-----5-----+ 5: moves her hands

38 u:r environment (0.3) +with teachers and students+

lec2 +-----4-----+



39 .hh also +participatory+ decision making is (.) ↑crucia:l


Lec2 writes
"decision making" next to
participatory on the online doc (lines 39-40)

40 (0.3)↑if (.) you feel as a worker included in the decision

41 making then (.) you will be (.) mo:re +motivated+ (0.4) to work

lec2 +-----4-----+


42 your jo:b (0.4) so the school principle  i:s(.) also motivating
 Lec2 writes "motivating"
 stakeholders" on the online doc (lines 42-44)

Group 3 : Human Resources - 

- School principal with good communication and empathy skills
- Collaborative & participatory decision making
- Motivating stakeholders

fig 7

43 (0.5) ↑teachers (0.7) students a::nd let's say +stakeholders+
 lec2 +-----7-----+ 7: moves her head

44 (1.8) 

45 anything else (.) you wanted to a:dd?


46 (1.9) & (2.2) &

seda &--1--& 1: shakes her head

47 Lec2: e::r ↑let's see >behavioral science era:<

Figure 7

Screenshared Online Google Document in Extract 7

Group 3 : Human Resources - 

- School principal with good communication and empathy skills
- Collaborative & participatory decision making
- Motivating stakeholders

Extract 7 begins with Lec2's turn allocation to the third (focal) group, and Seda takes the turn with a translingual address term (*hocam*), and reports their collaborative task output based on the importance of communication skills, and empathizing with teacher, student, and parent (lines 3 to 8). In doing so, she demonstrates their co-constructed knowledge

during the joint activity session (Jakonen & Morton, 2015) in the breakout room and the activities in the previous sessions of the focal EMI course. Lec2 takes revised notes from Seda's utterances on the screenshared online Google document (see line 42). From lines 9 to 15, Lec2 firstly confirms and provides explicit positive assessment (EPA) (Waring, 2008), and reformulates Seda's contribution with an extended lecturer turn by referring to the collaborative task output (*good communication, empathy*), her previous statements in the previous week (*people's emotions, motivation, helping each other*), and repeats her EPA (*very goo:d*) when Lec2 completes to type Seda's contribution on the shared document. Subsequently, Derya takes the turn through a translingual address term in an overlap with Lec2's request for further contribution. After Seda's reporting based on good communication skills and empathy, Derya topicalizes 'decision making', waits for 1.8 seconds, and provides exemplification (Bozbiyik & Morton, 2023a) with another target content knowledge through hesitation marker (*participa:(.)tive e::r*), and indicates trouble through the display of non-remembering about the previously learnt knowledge (*I don't remember*) with a smiley voice and laughter (lines 23, 24). Then, Lec2 resolves the problematic terminology through an embedded repair (*participatory decision making*). From lines 32 to 40, Lec2 also initiates another EPA, extends the group's collaborative output with references to the past learning with 'remember' (You, 2015), Seda's contribution (*collaborative environment with teachers and students*), and her previous explanations (e.g., *creating group sense*) (Can Daşkın & Hatipoğlu, 2019). She also exemplifies the participatory leadership by linking to the information on the slides (feeling as a worker, Figure 3; motivation, Figure 2), and her previous elaboration sequence (stakeholders, see Extract 3). In addition, Lec2 types the students' content relevant contribution and her extended explanations to recirculate the target content on the screenshared document (e.g., Nguyen et al., 2022). Therefore, Lec2's multi-activity practices may reach more than one addressee, thus for whole class understanding (Schwab, 2011). Finally, this extract closes with Lec2's request for further contributions,

Seda's embodied "no" response with a shaking head, and Lec2's turn allocation to the next group with another administrative theory (lines 45 to 47).

In conclusion, Extract 7 showed how the group members displayed their co-constructed knowledge of the assigned task in translingual reporting turns, and how Lec2 elicited, and elaborated their task outputs through verbal, embodied, and multi-activity relevant translingual turns by relating to the content terminology, and references to the different phases of the online EMI classroom. Overall, the previous extracts based on the case of the educational science documented that the interactants (i.e., Lec2 and the students) built the target content knowledge, and displayed the co-constructed content knowledge through references to the previous learning events and digital materials within translingual turns including English, Turkish, and the university jargon across the multiple phases of the online EMI classroom. In the following section, another case will present how participants use translanguaging space to demonstrate their content knowledge, and accomplish the assigned task in the breakout room session, and to indicate the procedural organization of the collaborative knowledge construction process across the multiple phases.

The Case of Business Administration

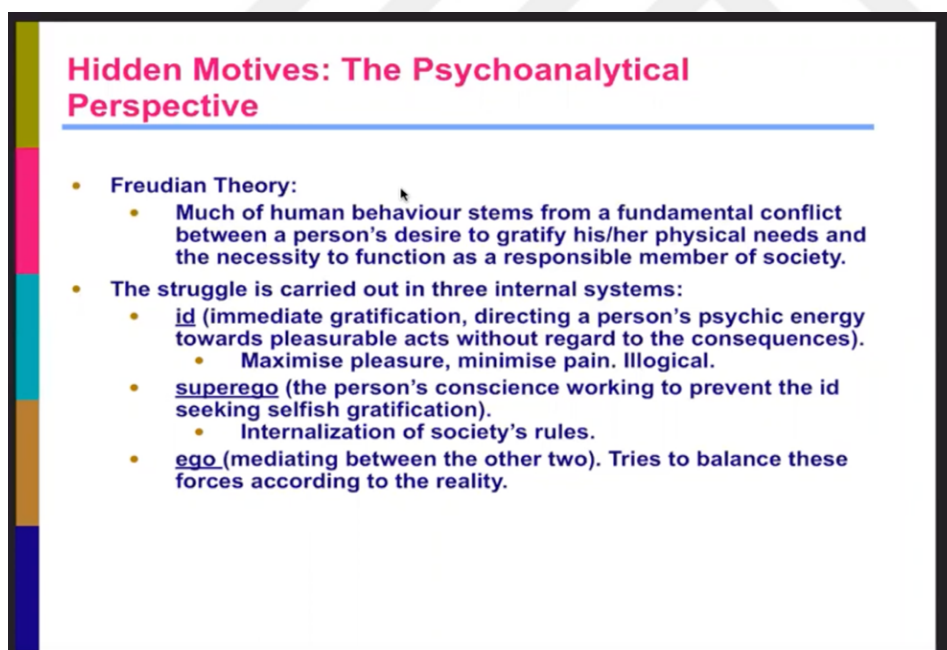
The second case from the focal online EMI courses database from the fifth week of Consumer Behavior course at the department of Business Administration. The participants are one EMI lecturer having more than 15-year teaching experience in Türkiye, England, and Denmark, and 15 undergraduate students on the third or fourth grades in their bachelor's degrees. The lecturer (Lec3) mostly organized two one-hour online meetings on two different days for each week, and also used real and/or online materials (e.g., PowerPoint slides, pictures, papers). The main topic of the fifth week is the psychological perspective on consumer motivation, and Lec3 focused on Freudian Psychoanalytic Theory. Similar to the first case, Lec3 uploaded the informative PowerPoint slides to the

online learning management system of the focal university around 1 week ago, and she screenshared these slides during the synchronous online session.

Phase 1: Lecturer Talk. During the first phase of target content knowledge co-construction process of Freudian psychoanalytic perspective (lecturer talk), Lec3 screenshared the following slide including basic features of three internal systems of Freudian Theory (i.e., id, ego, and superego) (Figure 8), and directly asks the students to exemplify these elements rather than providing extended lecturer explanations. Then, she connects their exemplifications with the target content knowledge. Extract 8 below highlights how the participants co-construct the target content knowledge in response to the students' requests for clarification through different interactional practices.

Figure 8

Screenshared Slide about the Freudian Psychoanalytic Theory



Extract 8: ego_business_phase 1_15-04-21_29.37-32.12

```
01 Ekim:      % (0.5) ho↑ca:%m
               my lecturer
    ekim      %-----1-----%      1: raises her hand up and down
02           (0.5)
03 Lec3:      huh hu:h
04 Ekim:      so:: (0.3) e:r (0.5) er putting(.) er garbage separately: is
05           (0.5) like +super (0.4) e:r ego: ex↑ample
    lec3      +-----1-----> line 8 1:nodding
```

06 Lec3: mo:re (.) +↑yes super ego (.) yeah+
 lec3 +-----rolls her hand-----+

07 Ekim: oka:y

08 Lec3: yeah (0.7)+
 lec3 -----+

09 (1.1) o↑ka:y thank you very much (1.2) so:[: se-]
 10 Mete: [↑hoca:m]
my lecturer

11 Lec3: [ha:h] (0.4) [canim
what my dear

12 Mete: [e:r] [ekim's example +i:s(.) er i think (.) the e:go
 lec3 +-----2-----> line 19
 2: comes closer to the screen and looks down

13 example (.) be↑cau:se=
 14 Lec3: =↑which [o:ne
 15 Mete: [e:r whe-
 16 Lec3: sorry
 17 Mete: er ekim's: example (.) the putting garbage in er separately:
 18 (0.6)
 19 Lec3: [is] (.) ego:??+
 lec3 -----+

20 Mete: [e:r] i think it is [e:go
 21 Lec3: [+↑yea:h+
 lec3 +--1---+

22 Mete: [because
 23 Lec3: [it is e:go in this-(.) ↑that's why i'm saying
 24 +mo:re towards+ superego
 lec3 +-----3-----+ 3: moves towards her hands to the right side

25 Mete: hnm::

26 Lec3: +yeah+
 lec3 +--1-+

27 Mete: °oka:y°

28 Lec3: it is +kind of (.) there is of course a balance the:re+
 lec3 +-----brings her hands in line-----+

29 Mete: huh [huh
 30 Lec3: [+but it is more towards (0.3) e::r+ (.) super ego:
 lec3 +-----3-----+

31 Mete: yes (.) because i consume (0.6) a lot of (.) garbage (.) i
 32 e::r co- er consume a lot of things (.) .hhh a:nd produce a
 33 lot of garbage +and i: (.) want to .hh (.) e:r re::- (.)e:r+
 lec3 +-----1-----+

34 ur hu:: what (.) what was the word? (0.4) re:- (0.4)
 35 >recycling it<
 36 Lec3: recycle (.) huh huh
 37 Mete: u:r i think recycling is (.) ↑balancing (0.3) somethi:ng
 38 (1.5)
 39 Lec3: e:r recycling y- oka:y (.) +e:r(h)+ on the other hand
 lec3 +---4-+ 4: looks up

40 when you do recycling (.) you spend some ↑effort
 41 (0.4) to [separa:te the:m
 42 Mete: [↑yea:h
 43 Lec3: e:r put them in the (.) different e::rm (.) ↑bins
 44 so it is an effort (.) you may not do that and you may
 45 +just throw them away+ (0.5) so
 lec3 +-----5-----+ 5: moves her hand up to down quickly

46 if +you ↑just throw+ them away it would be
 lec3 +-----6-----+ 6: moves her palm back

47 eg:o (0.4) but if you spend some effort (.) and e:r (.) put
 48 them in different boxes [e::r
 49 Mete: [huh hu:h

50 Lec3: categorize them (0.3) then it is kind of (.)becau:se for the
 51 sake of society, sake of environment (.) for these
 52 +↑swig (.) values+ then it is kind of (0.4) mo:re
 lec3 +-----7-----+ 7: points to her head, shakes her head
 53 towards super ego
 ((7 lines omitted.)) ((Lec mentions the internet connection problem.))
 61 oka:y(.)so it's kind of mo:re>to the super ego< side becau:se
 62 .hhh you may n↑o:t do it (.) you may >just throw it away<
 63 (1.6)
 64 Mete: i understand that [okay
 65 Lec3: [hnm::+
 lec3 +---1---+
 66 (0.4) ↑but it's there's (.) +definitely there is ego+
 lec3 +-----1-----+
 67 [it's it's like
 68 Mete: [huh huh:h
 69 Lec3: it's kind of (.) of course balanced
 70 (0.5)
 71 Mete: °oka:y°
 72 Lec3: +hnm hnm:+
 lec3 +----1----+
 73 (0.8)
 74 Ekim: thank you [hoca:m
my lecturer
 75 Lec3: [okay thank you:

Prior to the extract above, three different students gave examples to each element of the psychoanalytic perspective, and Extract 8 starts with Ekim's word-level translingual address term (*hocam*) with her embodied action, and Lec3's go ahead token (*huh huh*). In line 4 and 5, Ekim shares her potential super ego example (i.e., putting garbage separately), and then Lec3 responds it with 'more' to compare the super ego with ego and id, repeats and confirms it with verbal and embodied actions (nodding) (line 6). After Ekim and Lec3 initiate the closing of the sequence through confirmation tokens (*okay, yeah*), and thanking, Mete engages in peer involvement moments with a translingual address term (e.g., Bozbiyık & Balaman, 2023; Duran & Sert, 2021) in an overlap. Then, Lec3's verbal and embodied orientation to Mete as a next speaker overlaps with Mete's challenging of the displayed content knowledge (*Ekim's example is the ego example*) (lines 11, 12). Subsequently, Lec3 requests for clarification about which example is the ego one (line 14, 15), and Mete partially elaborates his previous turn with reference to 'putting garbage separately', which is completed with Lec3's retelling Mete's opposing demonstration of knowledge as a declarative question (*is (.) ego:?*) (Raymond, 2010). Then, Mete repeats, and downgrades his display of the content knowledge using a hesitation marker and an

evidential marker (*I think*), and initiate to provide an account for his counter argument about the focal learning object. In an overlapping way with Mete's previous turns, Lec3 confirms that the focal example is the ego, but restates that it is closer to superego with an emphasis on '*more*' (lines 23, 24). Following Mete's mitigated minimal acknowledgement tokens (lines 25, 27, 29), Lec3 connects the focal example (i.e., putting garbage separately) with verbal and embodied '*balance*' explanation as one of the ego characteristics, shown in the screenshared informative slide (see Figure 8 above) as well as upgrading her expertise explanation with '*of course*', and then she repeats her previous explanation about being closer to the super ego (lines 28-30).

Between the lines 31 and 35, Mete firstly acknowledges Lec3's prior explanation (*yes*), and then elaborates the action of producing garbage within long self-initiated self-repair sequences, and completes his explicit self-directed word search (*what was the word?*) (Brouwer, 2003; Koshik & Seo 2012) with '*recycling*'. After Lec3's other-repair on '*recycle*' (line 36), Mete makes a connection between recycling and balancing, which shows that he elaborates his peer's example as an outside knowledge to display his epistemic stance about the target content (i.e., inside) knowledge (Bozbiyik & Morton, 2023a; Tai, & Wei, 2020) with a reference to the digitally provided content information (balance on the informative slide). In line 39, Lec3 initially repeats the instance (i.e., recycling), does a thinking face (Goodwin & Goodwin, 1986), looks up (Markee & Kunitz, 2013), and starts her explanation with '*on the other hand*' which means that she will produce opposing opinions about Mete's previous extended explanations. From lines 40 to 48, Lec3 provides detailed information about the process of recycling thereby differentiating '*throwing away the garbage*' and '*putting them into the different boxes*', and highlighting the efforts spent for recycling while Mete produces listenership tokens (lines 42, 49) (Sert, 2019). Subsequently, she connects '*putting them separately, categorizing them*' with '*society, and environment*' as another feature of the target content knowledge marked in the screenshared slide. She also transitions from verbal and embodied '*swig*

values' explanations to the reasons why it is more super ego (Bozbiyik & Morton, 2022a). After Lec3 and the students talked about the internet connection problem (omitted part), she revisits her previous explanation about being closer to the super ego, and offers a falsifying account on throwing away. After 1.6 seconds of silence, Mete displays understanding (Koole, 2010) about the target content knowledge (line 64). Thus, Lec3's extended explanations enable Mete to change his epistemic position from less to more knowledgeable about the difference between ego and super ego. In lines 66, 67, 69, Lec3 turns back to Mete's previous display of knowledge about ego and balancing, and produces an explicit confirmation (*definitely, of course*). Finally, Extract 8 closes with Lec3's and Mete's alignment and thanking sequences (lines 71, 75).

In sum, Extract 8 showed how a student (Mete) produced opposing displays of the target content knowledge in response to his peer's exemplification and Lec3's follow-up explanations. In doing so, Mete did not only downgrade his claims of the content knowledge through hesitation markers and an evidential marker (i.e., *I think*) (Back, 2016), but also epistemically challenged Lec3's responses with reference to the content information on the screenshared slide in his translingual turns. Extract 8 also highlighted that Lec3 managed the student's understanding problem about the target content knowledge, and helped him change his epistemic stance from less to more knowledgeable (e.g., Jakonen & Morton, 2015) using different interactional practices such as connecting with different target content features (e.g., *balance, society*), and through detailed information provision as an epistemic authority (Heritage, 2013) in the online EMI session. The extract above also demonstrated that the participants only displayed word-level translanguaging for addressing the other parties in talk in interaction. In what follows, we will see how translanguaging comes into play to bridge the multiple activity phases in the focal setting.

Phase 2: Pre-Task Phase. As introduced in the earlier part, Lec3 divided 2-hour online session into two parts, and they had 2 online sessions every Tuesday and Thursday for an hour. She did not only complete to elicit the students' exemplifications based on the

id, ego, and super ego, but also responded to their clarification questions at the end of the first 1-hour online course (Phase 1). Then, she starts the second part of the online course with a short summary of the elements of the psychoanalytic perspective, and gives instructions to the students about their collaborative group task in the breakout room session. Extract 9 presents how Lec3 introduces the task assignment, and organize the peer/group activity through varying practices during the pre-task phase.

Extract 9: pudding_business_phase 2_20-04-21_00.00-01.50

01 Lec3: e:r the ones that are referring to super ego:
 02 + (0.3) are the ones (.) e:r+ ↑bank advertisements (0.5) so:
 lec3 +-----looks up-----+
 03 er it's kind of (.) arguing that the ↑ba:nk
 04 >you know like< (.) zanaat bankası (.) o:r aşı bankası
 bank **bank**
 05 (.) it's alwa:ys with you: (.) helping you: (.) so:
 06 (0.3) these types of, kind of (.) help (0.4) e:r support
 07 (0.6) e:r the caregiving to others (0.3) appropriate kind
 08 of u:r ↑beh:- er the individual citizen (.) those notions are
 09 (0.4) if they are given in the advertisement su- super ego:
 10 (0.3) and +the balance bo:th (.) if- both of them are balanced+
 lec3 +-----moves and aligns both hands-----+
 11 (0.4) ↑the:n (.) it is e:go (0.3) so: a:fter
 12 +i form the breakout rooms+ (0.6) you:r task
 lec3 +-----1-----+
 13 1: draws a square with her hands on the air
 (1.5)
 14 is to br↑ainstorm

Lec3 scrolls down from figure 9 to 10 on the screenshared word file

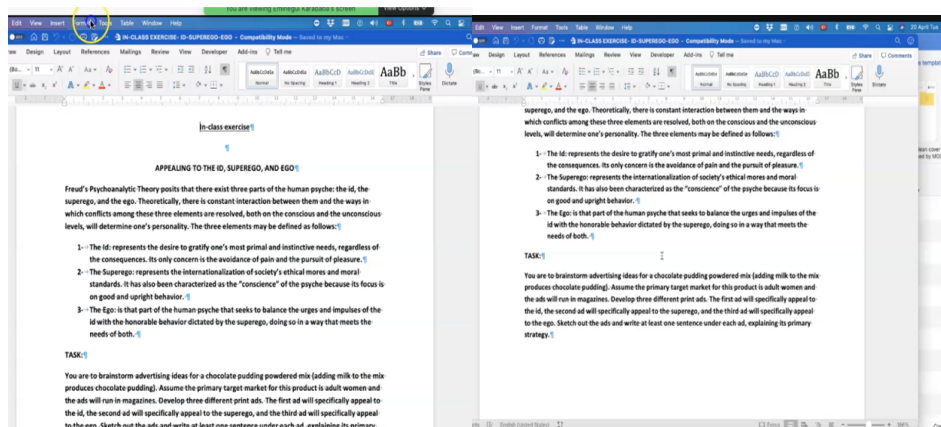


Fig 9

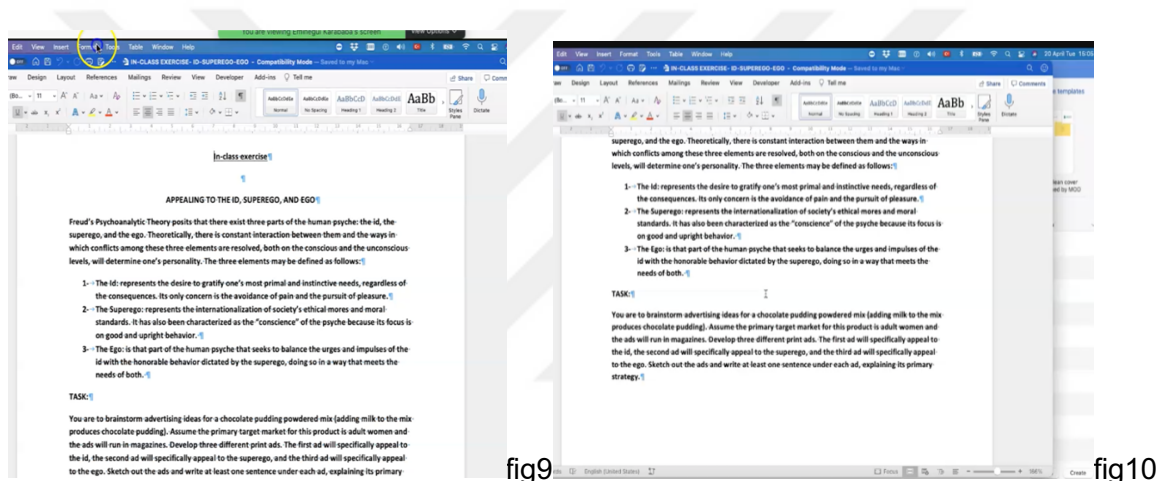
Fig 10

15 (.) +three advertisements (.) oka:y? and these will be
 lec3 +-----shows three with her fingers----->
 16 (.) ↑chocolate pudding powdered mix (.) advertisements (.) oka:y?+
 lec3 +-----+
 17 so >you basically add milk to the mix< (.) and make a chocolate
 18 (0.3) e:r pudding (0.6) that is the produ:ct (0.4) e:r and
 19 the target market of ↑you:rs i:s adult >woman< (0.8) a:nd

20 the advertisements will run (.) in magazines (.) so: the-
 21 they will be print ads: they are not e:r (0.7) video
 22 (0.6) you all need to develop +three different
 23 +threedifferent advertisements(0.4)with three different appeals+
 lec3 +-----shows three with her fingers-----+
 24 (0.3) one (0.8) will appeal to the id (0.3) the other one will
 25 appeal to the:(.) e:r superego (0.4) and the third one will appeal
 26 to the e:go (0.4) so you can +sketch out (.) the: advertisement+
 lec3 +-----rolls her hands-----+
 +
 27 (0.7)and write (0.4)one sentence(.) under the each advertisement
 28 (0.4) and explain (0.3) +the strategy behind it+ oka:y?
 lec3 +---points to her head---+
 29 (0.5) so that is (.) what you're responsible to do:

Figures 9 and 10

Screenshared Online Google Documents in Extract 9



Before Extract 9 begins, Lec3 screenshares an informative Word document including the main characteristics of the id, ego, and the super ego, and the task information (Figure 9). After she shares an example based on the id, Lec3 has a thinking face and looks up (Markee & Kunitz, 2013) while searching for an instance for the super ego (line 1), and then mentions the bank advertisement as the super ego example (line 2, 3). After she involves the students in the ongoing interaction through 'you know like', she exemplifies the banks with both state (zanaat bankası) and private banks (aş bankası) in Türkiye within translingual turns (Turkish and English) (Bozbiyık & Morton, 2023a) to promote the students' understanding with the familiar bank examples in their own country (Tai & Wei, 2020) (line 4). Between the lines 5 and 9, she makes a connection between the bank advertisement and the help, support, individual citizen, which are related to the society

norms, and thus the super ego to clarify the target content knowledge (Tai & Wei, 2020). In lines 10 and 11, Lec3 refers to 'balance' from the previously screenshared classroom material (see Figure 8) and brings her hands in the same line as she did during the first phase (see Extract 8) in order to introduce the ego as one of the main psychoanalytic perspectives. Note that she makes a reference to the prior materials, verbal, and embodied explanations rather than focusing on the short bullet points in the screenshared word document. This may signal that she wants to remind the students the previously co-constructed content knowledge to use them as well as the information on the worksheet during the breakout room session. From lines 12 to 15, Lec3 announces that the students will brainstorm about three advertisements in the breakout rooms thereby scrolling down the task information part (Figure 10) in the screenshared word document. Then, she explained the product (chocolate pudding powdered mix) with the formula about how to prepare it (lines 16, 17). Subsequently, she provides additional content information to the consumer group (i.e., adult women), and the publication place (i.e., printed magazine), which plays a significant role in marketing and business administration from lines 19 to 21. Thus, it can be claimed that the designed task is based on the professional knowledge in their prospective business careers. In addition, Lec3 elaborates the assigned task with the reminders about three advertisements for three appeals (i.e., id, ego, and super ego) (from lines 22 to 26). Finally, she explains that they will outline an advertisement, write explanatory statements, and the strategy behind their own designs, and completes the pre-task information provision sequence.

In sum, Extract 9 represented that Lec3 assigned the peer/group activity based on the previously co-constructed knowledge to design their own advertisements using exemplifications using translanguaging space, reference to the shared document and the conversations during Phase 1, screenshared informative word document. Overall, Lec3 utilised translanguaging space to address the students and provide local examples

(Bozbiyık & Morton, 2023a). The following extract will present varying translanguaging practices of the students in the third phase of the collaborative knowledge construction.

Phase 3: Peer/Group Task in Breakout Room Session. Extract 10 is from the eleventh minute of the breakout room session in which three different students (Ece, Sema, and Utku) design three different advertisements regarding the appeals of the Freudian Psychoanalysis Theory (i.e., id, super ego, ego) in the scope of the Consumer Behavior course. During the group activity session, Ece is sketching out the advertisement, writing the slogans and explanatory statements on the paper while they discuss about their collaborative task output in the multi-activity setting (Mondada & Svinhufvud, 2016). Before the beginning of Extract 10, the group members completed to prepare two advertisements based on the id and super ego. The extract below shows how the students display their co-constructed content knowledge within diversified translanguaging turns to accomplish the assigned task in the breakout room session.

Extract 10 (Segment 1): fit_business_phase3_20-04-21_11.22-16.45

- 01 Ece: %üçüncü neydi:? üçüncü:% %dengelemeye çalışıyo:%
what was the third one? the third one trying to balance
 ece %-----1-----% %-----2-----%
 1: looks down and writes/draws
 2: moves her right hand in line and looks at the screen
- 02 (.) %hem (0.6) /ıd/ını: (.) hem de:% (.) super egosunu:
both the id and the superego
 ece %-----1-----%
- 03 (0.3) ↑sema: sen bi şey demiştin (.) neydi:?
you said something what was it?
- 04 (.) fit kalma fala:n filan (.) bu:
staying fit or something like that (.)this
- 05 (2.7)
 06 [↑girer mi:??]
is this included?
- 07 Sema: [o: biraz da] buna (.) ↓girmiyo galiba:
that a little bit it is not included in this probably
- 08 Ece: %girmiyo mu:??
isn't it included?
 ece %-----3-----% 3: looks down and moves her head back
- 09 (0.6)
 10 Sema: yo:k
no
- 11 Ece: hani şey gibi: [he:m-
well it's something like both
- 12 Sema: [super egoda: (inaudible voices) deði:l
it's not (inaudible voices) in the super ego
- 13 Utku: hani [hem ↑kendi:ni düşünüyö:
well s/he is thinking about himself/herself

- 14 Sema: [sen söyle: (.) ben dinliyorum seni:
you say I am listening to you
- 15 Utku: [hem tadı güzel olsun hem fit kalıyım diyo:
s/he says it tastes good and s/he stays fit
- 16 Ece: [%ha:: ş:-%
hu:h
ece %----4---% 4: raises her eyebrows and open her mouth
- 17 Utku: %ama [bi tarafta:n%
but on the one hand
- 18 Ece: [ayne:n
exactly
ece %-----5-----% 5: points to the screen
- 19 Utku: bi tarafta:n (.) ↓şeyi düşünüyo:
on the one hand s/he thinks about the thing
(1.2)
- 21 Ece: yani he:m (0.4) id'ime hita:p etsin yani
well both it appeals to my id I mean
- 22 tadı güzel olsun *açlık maçlı:k*
it tastes good hunger something like that
utku *----nods-----*
- 23 (.) hem de: ama toplum standartlarıdı:r şudu:r hani:
and but it was society standards that well
- 24 (.) böyle: çok kilolu ya da sağlıksız olmuyi:m
like I won't be overweight or unhealthy
- 25 .hhh (.) %ikisini birleştirip% hani he:m
combining two of them well both
ece %-----6-----%
6: combines index fingers in the same line
- 26 (0.3) sağlıklı: hem de::
healthy and
- 27 %(1.8)%
ece %--7--> 7: puts her fingers on her head
- 28 tatlıyı bastıran% (.) gibi: (.) ikisini dengeleyen
like which suppresses sweet: (.) like which balances
ece -----%
- 29 %gibi (.) olmaz mı:??
two of them wouldn't it be?
- ece %-----8-----% 8: moves her head back
- 30 (0.8)
- 31 Sema: yani benim gördüğüm reklamda: (.) egonun °altına yazmı::ş°
well in the ad I saw it is written under the ego
- 32 Ece: hnm::
- 33 Sema: ben yanlış [anlamadıysa:m
if I don't misunderstand
- 34 Utku: [biz (.) zaten egodan bahsediyoruz şu anda
we are talking about the ego now
- 35 super [egodan deği:l]
not the superego
- 36 Ece: [↑hu:h >aynen aynen<
huh exactly exactly
- 37 egodan (.) aynen egodan bahsediyoruz
about the ego exactly we are talking about the ego
- 38 Sema: ğegodan dimi:?
about the ego right?
- 39 Utku: huh huh
- 40 Sema: tama:m dinlemiyomuşum o zama:nf
- 41 Ece: evet egodan bahsediyoruz (.) ikisini dengelemiş gibi:
yes we are talking about the ego. as if balancing the two
- 42 Sema: fha::hf
- 43 Ece: aynı senin ilk başta [söylediğin gibi ya:
just like you said at the beginning

44 Sema: [fayne::n
exactly

45 Ece: 🖥️>a:: onbeş dakamız varmış<
whoa we have fifteen minutes
 🖥️notification from Lec3 on the screen "you have 15 mins"

46 %tamam öyle yapalım mı o zama:n? (0.5) e:rm üçüncüye de
okay let's do that then right? for the third one

ece %-----1----->
 47 fi:t diyelim (.) fit ve güze:l (0.4) fit ve:: (.) tatlı:%
let's say fit fit and beautiful fit and sweet
 ece -----%

48 Sema: eve:t
yes

49 Ece: tama:m
okay

50 Sema: °less kilo [more pleasure° (.) ayne:n
exactly

51 Ece: [fşimdi (.) fresmini mi çizce:m?
now will I draw its picture?

52 Sema: &°tamam°&
okay
 sema &--nods-&

((45 lines omitted in which they discuss about the potential slogan for the ego advertisement.))

Extract 10 starts with Ece's request for information, and answers her own question (Bozbıyık & Morton, 2022a) by displaying her knowledge through verbal and embodied reference to 'balance' between the id and the super ego within her translingual turns (lines 1, 2). Then, she refers to her peer's (Sema) prior explanation (lines 3, 4), and initiates a positive and negative polarity questions about if staying fit is related to the ego (lines 6, 8). Sema firstly provides a mitigated 'no' response using 'a little bit' and 'probably' with falling intonation (7), and then directly utter 'no' (10), and claims that staying fit can be related to the super ego (12). By overlapping with Sema's display of listenership (Sert, 2019), Utku involves in the ongoing conversation, and elaborates 'the balance' with staying fit example with reference to thinking him/herself and good taste of the pudding (lines 13, 15). This marks that the students do not only read and learn the target content knowledge through the informative slides and the lecturer talk/classroom interaction in the main session, but also revisit the target knowledge (i.e., balance) on their own examples (outside knowledge) through displays of translanguaging (Tai & Wei, 2020, 2021a).

Subsequently, Utku's translingual peer involvement response to Ece's request for clarification (e.g., Bozbiyık & Can Daşkın, 2022) about whether staying fit is an ego example leads the change of state token (Heritage, 1984; Kurhila, 2006), and display of explicit alignment produced by Ece in an overlapping fashion (lines 16, 18). After 1.2 seconds of silence, Ece firstly connects the content knowledge (i.e., id) with good taste and hunger, and then society standards with being healthy to introduce the balancing/combining two of them (id and super ego) using different interactional resources such as putting her fingers in the same line for explaining the balance within translingual turns including the hybrid usage of English, and Turkish from lines 21 to 28. After she demonstrates her epistemic knowledge about the target content knowledge and Utku nods his head in these extended translingual sequences, she requests for confirmation with negative polarity yes/no questions (Raymond, 2010) to see her peers' alignments with her translanguaging (line 29). After 0.8 seconds of wait-time, Sema refers to the previously mentioned advertisement based on the ego as an epistemic resource, but she displays her understanding trouble, which is resolved by Utku's and Ece's overlapping repair sequences on the ongoing topic (i.e., the ego). In line 41, Ece retells that they are talking about ego, and displays her content knowledge with reference to the balance introduced in the PowerPoint slide (*as if balancing the two*), and Seda's previous explanations at the beginning of the breakout room session (*just like you said at the beginning*), which is followed by Seda's change of state token (42), and explicit alignment (*exactly*) (44). Therefore, Ece and Utku manage their peer's understanding problem about the ongoing content through translanguaging practices (Bozbiyık & Balaman, 2023). After Lec3 sends a message to all the breakout room sessions about time limit, Ece requests for her peers' confirmation about writing 'fit and beautiful, fit and sweet' for the third one (i.e., ego) in lines 46 and 47. After Ece and Seda shows alignment oriented to the task, Seda produces a potential slogan with *sotto voce* (*°less kilo [more pleasure°*), Ece initiates to draw its picture as the following step of the assigned task, and they discuss about the slogan in the 45 lines omitted from the extract.

Extract 10 (Segment 2): fit_business_phase3_20-04-21_11.22-16.45

98 Utku: açıklayıcı bi şey yazmamızı istiyo sanırım hoca ya:
the lecturer wants us to write something explanatory
I guess well

99 Ece: hu::h (0.3) açıklayıcı mı?:?
is it explanatory?

100 Utku: %ben öyle anladım
I understood so

ece %-----1-----> line 101

101 (2.2)%

ece -----%

102 Ece: tama:m
okay

103 Utku: [/aktivəti/ tipi dese:n]
if you say activity type

104 Ece: [%ne yazalı:m?]
what will we write?

ece %-----1----->

105 Utku: hem primary aktiviteni% (.) aktiviteni belirte:n (.)
both like write a sentence indicating your primary activity

106 bi cümle yazın gibi: %primary stratejini belirten bi cümle
like a sentence expressing your primary strategy

107 gibi: şsanki:
it seems like

108 (2.3)

109 Sema: o zama::n şöyle bi şey diyebiliriz
then we can say something like that

110 no conflict between (.) and e::r

111 Ece: hu::h% %evet aynen%
yes exactly

ece %--nods her head and looks at the screen

112 Sema: morality and instincts gibi bi şey yani böyle:
it is something like morality and instincts

113 (2.3)

114 Utku: e::r şe:y ödün vermek ne demekti:?
well what does it mean to compromise

115 (1.0)

116 Ece: compromise (.) °mıydı:??°
was it compromise?

117 Utku: hu:h you don't have to %compromise between
 ece %-----1----->

118 your taste *a::nd e::r social bi şeyle:r*
 utku *---shakes his head slowly---*

119 Ece: e::r

120 Utku: >social no:rm< (.) *°falan di:cem şimdi°*
I will say something like now
 utku *looks at the right side*

121 Sema: social norm olabilir aynen (.) ↑soci:ety's no:rm
it can be social norm exactly

122 (0.8)

123 Utku: *hu:h*

utku *--1--* 1: looks down

124 (2.1)%

ece %-1-->

125 Ece: +ya:: (.) aynen (.) öyle diyeli:m
exactly let's say so

126 (4.9)%

ece -----%

127 tam metni böyle chatimiz varsa chate yazsanıza

let's write the complete text on the chat if we have the

chat

128 ben yazıyım o zama:n
 I will write then

129 Utku: ben *yazıyoru::m
 I am writing

 utku *-----2-----> 2: clicking voices from Utku's screen

130 (1.3)

131 Sema: °tamam sen ya:z°*
 okay you write

 utku -----*

In line 98, Utku deploys a retrospective orientation of his knowledge (Jakonen & Morton, 2015) about what Lec3 expects as another related task (i.e., writing something explanatory) using downgrading evidential marker (*I guess so*) (Kärkkäinen, 2003). Then, Ece requests for clarification about if it is explanatory, and her peer (Utku) displays his understanding (Koole, 2010), followed by the 2.2 seconds of silence during which Ece is looking down and writing/drawing, and shows her alignment (*okay*). Subsequently, when Ece initiates a wh- question about what they will write as an explanation, Utku initiates his translingual elaboration sequences including English content terminology with a reference to Lec3's task instructions based on the primary activity and/or primary strategy during the Phase 2 and a mitigated evidential marker in Turkish (*it seems like*), and waits for 2.3 seconds from lines 105 to 108. Then, Sema produces her own potential explanation using 'between instinct and morale' marked in the screenshared Word document including the important information and task instructions in Phase 2 when Ece displays her elongated change of state token, and explicit confirmation to her peer's suggestion (line 111). Following this, Utku initiates a translingual word search, and Ece completes her peer's search (Duran et al., 2022) through a candidate response using yes/no question (*was it compromise?*). Then, Utku displays his possible explanation for their ego advertisement design through references to other retrospective knowledge (i.e., between taste and social norm), and repeating Ece's candidate answer (i.e., compromise) in translingual turns. Sema particularly displays her alignment with 'social norm', produces an explicit confirmation, and then initiate a peer repair with 'society's norm', which is followed by Utku's change of state token. In line 125, Ece initially confirms the peer-repaired explanation for their ego

advertisement as the participant actively involving in the epistemic search sequences (ESSs) (Jakonen & Morton, 2015) and doing task-relevant writing/drawing simultaneously. Then, she requests for writing the explanation on the chat box from her peers, and Utku announces that he is writing by vocalizing his writing process which is not observable for the other parties (*I am writing*) (Balaman & Pekarek Doehler, 2021). Extract 10 closes with Seda's nomination for the writing task to her peer (Utku).

In brief, Extract 10 highlighted that the group members accomplished to design the ego advertisement by displaying the co-constructed content knowledge through translanguaging practices as well as references to the retrospective knowledge emerging from the classroom interaction in Phase 1 and 2 as well as the shared written documents (PowerPoint slides and task information sheet) (e.g., Balaman & Sert, 2017a; Goodwin, 2013). Therefore, translanguaging enabled the group members to actively engage in the task completion process by showing their funds of knowledge through the use of all the shared linguistic and semiotic resources (e.g., Pun & Tai, 2021; Wei, 2018).

Phase 4: Sharing Outputs of Peer/Group Task Phase. Extract 11 represents how one of the focal group members (Ece) shares their task output based on the ego advertisement, and how Lec3 connects the task output with the target content knowledge in talk-in-interaction. Before Extract 11 begins, two different groups shared their advertisements related to the three psychoanalytic elements (i.e., id, ego, super ego).

Extract 11: ego_business_phase4_20-04-21_33.47-35.08

01 Lec3: any othe:r (0.9) e:r examples
 02 Ece: hocam we would like to share (.) group eight
 my lecturer
 03 Lec3: group ei:ght (.) okay ece:
 04 Ece: ↑yes: u:r can i: (.) screen share?
 05 Lec3: of course you ca:n (.) let me give you
 06 (1.1)
 07 +e::r (0.9) the host (.)+ co-host e:r
 lec3 +-----1-----+ 1: leans forwards to the screen
 08 (1.5) rights (.) so ↑no:w you're a co-host ↓you can share
 09 Ece: oka::y
 10 🖥️(1.1)🖥️ ((Ece screenshares Figure 11 on the screen))



fig 11

11 can you see the screen?
 12 Lec3: ↑yes:
 13 (1.0)
 14 Ece: e:r hocam we did this (.) for ego:
 my lecturer
 15 Lec3: [>huh hu:h<]
 16 Ece: [a:nd] it's er it's say "you don't have (.) to
 17 compromise between taste and society's nor:(m)s" (.)
 18 society's norms here in u:r being fit (.) and being
 19 healthy: [that's why]
 20 Lec3: [+huh huh+]
 lec3 +-nods--+
 21 Ece: it's no sugar but also it's e:r (0.5) it gives pleasure
 22 (.) because it is pudding so: (.) it says "no sugar yes happiness"
 23 Lec3: +huh hu:h+
 lec3 +--nods--+
 24 Ece: [this is e:go]
 25 Lec3: [so: you are] kind of (.) e::r +balancing the two+
 lec3 +-----2-----+
 2: brings her hands in line
 26 Ece: ↑ye:s we are balancing [the ↓two:]
 27 Lec3: [she is]
 28 getting the taste (.) enjoying this kind of pleasu:re (.) but
 29 on the other hand (.) she is obeying the norms of the society
 30 with th- +her disciplined body+
 lec3 +-touches on her body--+
 31 (1.3)
 32 Ece: ↑ye:s
 33 Lec3: yes okay (0.3) goo:d great (.) fand this thing doesn't have
 34 suga:r (.) but it is tasty hu:h? [eheh heh]
 35 Ece: [£↑ye:s£]
 36 Lec3: £eheh (alri:ght) (.) oka:yf

Figure 11

Screenshared Task Output in Extract 11



Extract 11 starts with Lec3's search for participants from other groups in line 1. Then, Ece takes the turn using a word-level translingual address term (*hocam*), and states that they want to share their task output as the group eight, and the Lec3 nominates the next turn to Ece on the behalf of the group eight. From lines 4 to 12, Ece screenshares their task output right after Lec3 assigns her as co-host, checks if they see their design or not, which is followed by Lec3's confirmation. After 1.0 seconds of silence, Ece deploys another translingual address term, and shows the screenshared task output as the ego advertisement (see Figure 11). Ece firstly reads their explanatory statement that collaboratively emerged during the breakout room session. Then, she also links 'being fit and healthy' which is another potential task design in Phase 3 to their slogan 'no sugar yes happiness' through account provision in lines 21 and 22. After her repetitive nodding actions, Lec3 overlaps with Ece's turn-final explanation ([*this is e:go*]), and then makes a connection between the task output of the eighth group and the target content knowledge (i.e., ego) with a retrospective orientation to co-constructed knowledge (*balancing the two*) through embodied actions (e.g., bringing her hands in line). In line 26, Ece confirms and repeats Lec3's reference to the balancing the two as another target content knowledge. Between lines 27 and 30, Lec3 initially refers to the woman on the screenshared task output, and elaborates getting the taste based on 'id', and obeying the society norms related to 'super ego' on the woman body using '*on the other hand*'. After 1.3 seconds of silence, and Ece's display of alignment, Lec confirms the task output, produces an explicit positive assessment (*good great*) (Waring, 2008), reformulates the slogan of their ego advertisement, and finalizes her turn with a request for confirmation and laughter in an overlap with Ece's alignment in line 35. Lastly, the extract closes with Lec3's laughter and confirmation.

In sum, Extract 11 presented that one of the focal group members (Ece) delivered their co-constructed task output with references to their collaborative brainstorming activity on the screenshared accessible epistemic resource (e.g., Balaman & Sert, 2017a; Goodwin,

2013). The previous extract also showed that Lec3 connected and elaborated the focal group's task output with the target content knowledge. All in all, the extracts of the Consumer Behavior case highlighted that the students displayed their co-constructed content knowledge using translanguaging emerging from their shared interactional repertoires and mainly became observable in their breakout room interactions. Therefore, translanguaging enabled identifying the procedural co-construction of the target content knowledge during the breakout room in way to find the common ground across the interrelated phases of online teaching and learning spaces. In the following section, the third case will present the collaborative knowledge construction process through translanguaging practices (mainly in the breakout room session) in the online Psychology course.

The Case of Psychology

The last case of the current dissertation comes from Developmental Psychology which is a compulsory course at the Department of Psychology in the focal EMI university. The main topic is emotional development of children and comes from the fifth week of the course. The focal case, which is based on the related learning objects (Markee, 2008) including three different child types (easy, difficult, and slow to warm up), their temperament, and potential parental attitudes in terms of the child types and their temperament. There are one lecturer (Lec4), one teaching assistant, and 80 (eighty) undergraduate psychology students (three of them are international students) in the online EMI classroom. Lec4 shared the informative PowerPoint slides with the students on the online learning management platform of the university almost 1 week ago.

Phase 1: Lecturer Talk. During the first phase (i.e., lecturer talk) of the synchronous session, she only revisits the significant points of the target content, answers the students' questions, and provides further information with other multimodal resources such as YouTube.

Figure 12

Screenshared Slide about Child Types

Emotion Development

Thomas & Chess (1956)

- **Easy child (40%):** regular routines, generally positive mood, adapts well to change
- **Difficult child (10%):** irregular routines, negative/intense reactions, doesn't adapt well to change
- **Slow to warm up child (15%):** inactive, mild reactivity & negativity, adjusts slowly to change
- **Unassigned (35%):** unique temperament style

Before Extract 12 starts, Lec4 introduced different classifications of the children (e.g., easy, slow to warm up, difficult, unassigned or extrovert-introvert), transitioned from the child types to their temperament, and gave examples about changing children temperament based on the society reactions to anger in different cultures including North America and Asia. Extract 12 below comes from the long lecturer turn in which she introduces further information after the informative slide was provided with relevant target knowledge in it.

Extract 12: goodness of fit_psyhco_phase1_15-04-21_45.46.8-46.48

01 Lec4: so temperament (0.5) is ↑mo:stly (0.3) related to: (.)

02 ↑not only the genetic basis (.) but the

03 +goodness (.) of ↑fi:t+ (0.3) which means

lec4 +-----1-----+

1: moves her index and middle fingers to show quotation mark

04 basically: the ↑genetic (0.3) makeu:p (.) plus

05 the enviro:nmental input (.) so: (0.3)

06 ↑what kind of a parenting (0.4) are you:

07 exposed to (.) oka:y? and also what kind

08 of a cultural con|te:xt (.) are you bo:rn into (.)
 09 (0.3) so this is the: (0.3) mixture of the: (0.3)
 10 e:r nature and nurture (0.3) and especially for
 11 child rea:ring (.) e:r we say that the most important
 12 thi:ng i:s the goodness of fit between the
 13 main caregiver (.) and the child (0.6) so: it does not
 14 necessarily mea:n that (.) for example (.) >|extroverts<
 15 are the best and you know (.) introverts a:re (.) in those
 16 terms like inferior or something (.) >|definitely< no:t
 17 the- these are just different types .hhh and they
 18 are |best manifested e:r with the +>fitting<+ (0.3)
 lec4 +---2-----+
 2: folds her hands
 19 parenting (0.9) e::r techni:ques and behavio:rs

At the beginning, Lec4 provides the main message of the previous examples about the changing children temperament. In doing so, she refers to another target content knowledge 'goodness of fit' through its definition and embodied emphasis on the term (moving her hands like a quotation marker) from lines 1 to 5. Then, Lec4 initiates two questions which are related to parenting and cultural context (lines 6, 7, 8). Subsequently, she identifies the targeted term with reference to other important emotional development types (i.e., nature and nurture) (lines 9, 10). She also highlights the significance of the goodness of fit between the main caregiver (e.g., mother, father) and the child to determine what kind of child s/he is (lines 11, 13). In line 14, Lec4 initiates an exemplification indicator (for example) (Hyland, 2007), and refers to the discussion about which one is the best between two different child types (i.e., extrovert and introvert) (lines 14, 15, 16). Finally, she completes her extended explanations about goodness of fit with an emphasis on the parenting styles.

After ten minutes during which she provided further exemplification about goodness of fit based on the nature and nurture perspectives, she screenshared a YouTube video

named 'Navigating Your Child's Temperament' which explains children's temperament styles and parental attitudes regarding different child kinds with the analytic findings of the previous studies (<https://www.youtube.com/watch?v=D-icWG1J2ME>).

Figure 13

The Transcription of the Focal YouTube Video Part

```

01  it's important to consider the †match (.) between a parent and a child's
02  temperament (0.3) .hh we call this (.) the goodness of fit (.) the
03  compatibility between one's temperament (0.3) the circumstance (.) and
04  their environment (0.4) which can be a person or a place (0.8) a child
05  who is over stimulated by noise and activity: (.) might have a hard time
06  getting to sleep on a family trip packed into a cabin with a dozen family
07  members (0.5) an easy grandparent might harshly judge a slow to warm up
08  grandchild (.) for not showing immediate excitement (.) about their
09  surprise visit (1.2) a child with a ton of energy and need for physical
10  activity (0.6) might have a hard time with a parent who tends to move
11  more slowly and need down time (0.8) big differences between people in
12  (.) †any relationship can cause differences (.) and expectations from
13  each other (.) and can lead to tension (0.8) but even similarities and
14  temperament can pose challenges for the grown-ups and their kiddos (0.3)
15  since temperament has a strong genetic component (.) it is pretty common
16  for a spirited parent to have a spirited child (.) .hhh an easy parent
17  to have an easy child (0.3) you get the idea (0.4) regardless of their
18  own basic temperament parents can choose to match their child's needs
19  by adjusting to their child's temperament and being more mindful of
20  their own (.) there is no right temperament (.) the words easy and
21  difficult have positive and negative connotations which can be
22  misleading

```

As stated earlier, Lec4 screenshared the YouTube video to revisit the concept of goodness of fit and varying perspective on the child types, and their temperament. The video did not only provide different exemplifications about the relationship between the children, and their parents and grandparents (from lines 4 to 13), but also focused on the strong genetic component (e.g., spirited (difficult) parents can have a spirited child) (lines 15, 16, 17). The video also mentions that there is not any correct temperament based on the child types between the lines 20 and 22.

Overall, Extract 12 demonstrated that Lec4 constructed the learning objects (i.e., the child types, temperament, goodness of fit) through various practices including providing definition and exemplification (e.g., Bozbiyik & Morton, 2023a; Gülich, 2003) and screenshared semiotic resources (i.e., informative slides and YouTube video) (e.g., Jakonen, 2015; Melander, 2012) to reach the pedagogical targets (e.g., Tai, 2021b). Thus, Lec4 displayed the first-hand knowledge (Pomerantz, 1980) about the target content knowledge on the evidence-based sequences as an epistemic authority in the online EMI classroom as well as using the external epistemic resources (Enfield, 2011). In the second phase below, Lec4 will provide instructions about the assigned task based on the target content knowledge, and promote the translangual practices in the breakout room sessions.

Phase 2: Pre-Task Phase. Extract 13 demonstrates how Lec4 organizes the collaborative group activity based on the target content knowledge and explaining the main task instructions that encompasses the interrelated course topics (child types, temperament, goodness of fit, and parental attitudes).

Extract 13: activity_psycho_phase 2_61.38-65.13

01 Lec4: e:r so let's do a class activity okay we haven't do:ne
 02 (.) e::r so far (0.3) so:: i'll send you: (0.3) to
 03 the: breakout rooms oka:y? as a grou:p (.) buse
 04 can you please u:r prepare a google docs (.) a::nd
 05 send it to the chat (.) so that [everyone
 06 Buse: [huh hu:h
 07 Lec4: everyone can see it *e::r*
 buse *--1-* . 1: nods her head
 08 just u:r write the participant na:mes (.) o:kay?
 09 and then uh just add another block (.) e::r and
 10 that blo:ck u:r would be the u:r goodness of fit (.)
 11 the name of it e::r .hhh no::w i want you (0.7)
 12 i'll give you ten minutes (.) o:kay? (0.5) .hhh
 13 i want you to choose (0.8) e:r either of the three
 14 categories (.) just according to the basic categories .hh

15 either an easy chi:ld (0.5) a: er slow to warm up chi:ld (.)
 16 o:r a difficult chi:ld (.) .hh a:nd i want you to write
 17 (.) ↑what would be: ur in different situations the best
 18 ↑fitting .hh u:r parental (.) attitudes or behaviors that
 19 would ↑fit (.) to that ki:nd (.) of a temperament
 20 (0.5) oka:y? .hhh e::r i will give you e:r
 21 >ten to fifteen< minutes

 ((41 lines omitted.)) ((Lec gives an example to explain the task.))
 22 Lec4: >↑i want< something simple (.) and it could be in turkish or
 23 english (.) that's totally fine o:kay?
 24 Irem: [huh huh okay
 25 Lec4: [no:w i- (0.4) yeah (.) no problem i'm sending you to
 your
 26 uh roo::ms no:w (1.0) o:kay (0.5) go ↑ahead

At the beginning, Lec4 informs the students about a task in the breakout rooms with a request for confirmation (lines 1,3), and then requests for the teaching assistant's help to prepare the online Google document (lines 4 and 5). After Buse's confirmation to Lec4's help request, Lec4 introduces the required columns including the participant names, and goodness of fit from lines 8 to 11. In the following part, Lec4 initially states that the students will select one of the basic children categories with the follow-up elaboration (i.e., *easy*, *difficult*, *slow to warm up child*) with their peers, and discuss what would be the best fitting parental attitudes/behaviours to that kind of a specific temperament within breakout rooms, and gives ten to fifteen minutes to the students in the breakout room sessions between the lines 12 and 21. In the following omitted 41 lines, Lec4 also provides an example about 'slow to warm up children' and their parental attitudes about participating in birthday parties with these children. Buse completes preparing the online Google document with the table, and shares it with the students on the chat box. Then, in line 22 and 23, Lec4 states that she expects something simple, and facilitates the emergence of a translanguaging space through 'the use of two languages' (Turkish and English in this case)

(it could be in turkish or english) (Baker, 2011, p. 288). Therefore, this indicates that Lec4 encourages the use of all the shared linguistic repertoires (i.e., translanguaging) to promote their understanding and task accomplishment (Şahan & Rose, 2021; Wei, 2018). After İrem's minimal confirmation in response to Lec4's request (*right*), Lec4 finalizes the pre-task phase thereby sending all the students to eleven breakout rooms randomly.

Consequently, Extract 13 demonstrated that Lec4 produced an extended instruction-giving episode through elaboration of the assigned task, references to the target content knowledge (e.g., the child types), exemplification. Remarkably, she established a translingual language policy rather than imposing English-only policy in the focal EMI psychology course, which impacted the students' task-based interaction in the breakout rooms and observably facilitated the co-construction of the target content knowledge across the multiple phases of the online EMI classroom.

Phase 3: Peer/Group Task in Breakout Room Session. Extract 14 comes from one of the eleven breakout sessions chosen randomly during the 60th minute of the online session. There are three students, but only two of them (Nur and Nese) actively discuss and complete the assigned task by selecting the 'easy child'. Prior to Extract 14, Nur and Nese brainstormed about the features of the easy children and the potential parental attitudes and temperament shortly.

Extract 14: parenting_style_psycho_phase 3_15-04-21_60.16-62.35

01 Nur: bi de ben şeyi anlamıyorum (.) zaten bizi:m (0.9) e::r çocuğa:
well i also don't understand anyway our (0.8) e::r to child
 02 (.) >hani< parenting style'ımız da çocuğun easy mi: (0.4) hard
well our parenting style is something that affects: is
 03 mı: er difficult mı olduğunu .hh(0.4)etkileyen bi şey ya:(.)hani:
a child easy (0.4) hard e:r difficult well
 04 (1.2)
 05 Nese: %hu:[::h%
 nese %-nods--%
 06 Nur: [etkile:e:r büyük ihtimalle diye tahmin ediyoru:m

it affects most probably i guess

07 o yüzde:n (0.3) emin değilim sanki şey gibi: (0.3) innate

so i am not sure it seems like it is something coming

08 gelen bi şeymiş bu: (0.4)iyi:(.) ya da işte: (0.3)iyi demiyim de:

innate good or well i don't say good

09 (0.4) böyle easy ya da difficult olmak innate gelen bi şeymiş ve:

so being easy or difficult was something coming innate and

10 (0.8) e:r bunun üzerine parenting style'larımızı:

then our parenting styles

11 Nese: °huh [huh°

12 Nur: [er şe:y şekillendirmeliymişiz gibi: >ama sanki bizim parental

well it's like we should form but it seems our parental

13 style'larımız< ↑da o çocuğu öyle yapıyo gibi ↓de °aynı zamanda°

styles also do that child like that at the same time

14 (0.6)

15 Nese: [yani:

well

16 Nur: [>görüp-<

seeing-

17 Nese: fne kadarı na:turedan (.) ne kadarı nurturedan geliyor

we don't know how much are coming from nature how much from nurture

18 bilmiyoruz (.) tam onunla ilgili bi soru gibi:f

completely it is the question related to that

19 Nur: °hnm:°

20 Nese: şey gibi(.) dimi:? (0.4) yani:(.)çocuk öyle doğdu ama: fsen onun

it is like (.) isn't it? (0.4) well child was born it's like

21 nature'ını hiç mi etkileyemezsin gibi geliyo di: mi insana: .hh

that but you never affect his/her nature, do you

22 eheh hehf (0.8)

23 Nur: ben biraz internetten bakıyorum bu arada çok: (.) guides'a

i am looking from the internet a bit by the way (.) i am not

24 attend edebilen bir insan olmadığım içi:n (0.7) eh:::

the person who attends the guides too much

25 (5.7)

26 Nese: yani na:tu- (.) daha çok %genetikle ilgili açıklıyolar (.) bunu

well they mostly explain with genetics (.) this

nese %-----looks up-----

>

27 temperament'ı: (0.4) ama: (.) mesela: (.) zaten easygoing%

but (.) for example (.) anyway being born

nese -----%

28 bi ailede easygoing bi a- (.) çocuğun doğması daha olası ya:

an easygoing child in an easygoing family is more probable

29 [o yüzden

so

30 Nur: [ha tama:m

huh okay

31 Nese: genellikle anne ile çocuğun (0.8) parenting style'ı ile

generally it was like that the parenting style of mother

32 temperament'ı birbiriyle uyumlu oluyo:(.)-muş (.) genellikle

and child and temperament are conformed with one another generally

33 (1.5)

34 [o yüzde:n

so

35 Nur: [ben bunu bilmiyodum ya: aklıma bi şey geldi unutmadan söyliyim

i didn't know this I thought of something, let me tell you

before I forget

36 çok özür dilerim (0.4) şey yazabiliriz ya: bi de mesela bu:

I'm so sorry we can write something like this, for example

37 (0.8)bu: easygoing childlar e:r çok fazla care'e ihtiyaç

these easygoing children look like they do- don't need

38 duyuyomu- duymuyomuş gibi gözüküyo ya:(0.4)hani: ha zaten

a lot of care- well s/he doesn't cry anyway

39 ağlamıyo: (.) ha: zaten çok bi şey yapmıyo: ama yine de onları:

anyway s/he doesn't do too many things but still this shouldn't

- 40 (0.3) ignore etmemize sebep olmamalı bu:
cause to ignore them
- 41 Nese: hnm::: %huh huh (.) huh hu:h% (0.6) easygoing child (.)
 %----nods her head---%
- 42 zate:n easy diyola:r daha e- şey yapıyosu:n (0.7) daha
has been already easy you don't do anymore they are more
- 43 rahat çocuklar bunlar daha az zorluk çıkartan çocukla:r (.)
relaxed children
- 44 % (1.2) %
 nese %--1--% 1: leans forwards to the screen
- 45 [ama bu:::
but this
- 46 Nur: [↑ya ama bu: (.) yani şey işte ignore etmemize sebep olmasın
but this well won't let us to ignore
- 47 o anlamda diyorum hani: (.) çok da umursamaz anneler
I mean this well we shouldn't be too careless
- 48 olmamalıyız yine de:
mothers anyway

At the beginning, Nur displays her non-understanding while also demonstrating her knowledge about the impact of parenting styles on the child type within translingual turns including different versions of the English content terminology (*hard, difficult*) as well as hybrid usage of English words with native language (i.e., Turkish) lexical additions (e.g., Jakonen et al., 2018). Following 1.2 seconds of silence, and Nese's partially overlapping tokens, Nur firstly mitigates her epistemic claim through evidential markers (*I guess*) and displays of uncertainty (Hauser, 2018) (lines 6, 7), provides account for another perspective with references to 'innateness' based on the reasons of becoming an easy or difficult child (lines 7, 8, 9), and then re-states her previous challenging demonstration of the content knowledge (*our parental styles also do that child like that at the same time*) with a smiley voice (Sert & Jacknick, 2015). After her mitigated turn-initial misalignment (*well*), Nese retrospectively orients to the target content knowledge based

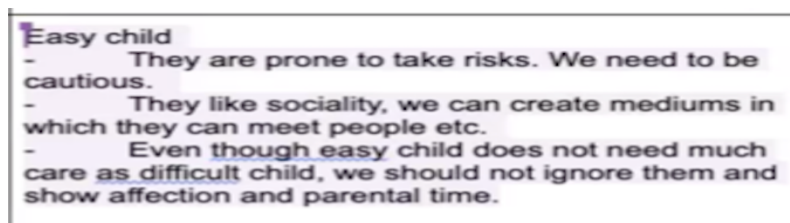
on another relevant terminology produced by Lec4 (*nature and nurture issue*) (Phase 1) and the question asked by Lec4 as an assigned task (Phase 2) (lines 17, 18). In addition to using content terminology, she also provides daily life translingual explanations (Tai & Wei, 2020) about the potential effect of the parenting style on the child types using tag questions with a smiley voice and laughter from lines 20 to 23. However, Nur does not orient to her peer's request for confirmation through tag questions, and states that she is searching on the internet as a person not following the guide within translingual turns (lines 23, 24). After 5.7 seconds of silence, Nese continues to elaborate the nature with references to the information on the lecturer talk and Youtube video that explains the nature with the genetic basis. She also exemplifies the nature with easy-going parents and higher possibility of having easy-going children (*an easy-going child in an easy-going family is more probable*) by referring to the research findings on the YouTube video. When Nur orients to close the sequence through short acknowledgement token (*huh okay*) in an overlap (line 30), Nese displays another retrospective orientation to the content knowledge based on the lecturer's talk about the fit between the child parenting style of mother (the main caregiver in Extract 12) and his/her temperament in terms of general results of the studies. Therefore, Nese displays her epistemic knowledge based on the explanations in lecturer talk and the online material (YouTube) through hybrid usage of translingual resources to provide detailed clarification in response to her peer's demonstration of non-understanding (e.g., Jakonen et al., 2018; Pun & Tai, 2021). In line 35, Nur states her previous insufficient knowledge which marks that Nese's detailed translingual elaboration can help Nur change her epistemic status on the ongoing discussion. Then, Nur re-topicalizes the focal discussion on the easy-going children by mentioning their need for care, and expresses that we should not ignore them through some proposed behaviours such as no crying from lines 36 to 40. Subsequently, Nese demonstrates her alignment, and then introduces that easy children are more relaxed children, and do not cause many problems in her content knowledge demonstration sequence. Finally, Extract 14 closes with Nur's overlapping restatement that we should not ignore our easy children as their parents.

In brief, Extract 14 demonstrated that the peers display their co-constructed content knowledge to resolve one another's insufficient knowledge and non-understanding problems and also developed their assigned task collaboratively with references to the retrospective content knowledge from the lecturer talk and the online resource during Phase 1 and 2 within translingual sequences including hybrid usage of Turkish and English words and expressions following Lec4's encouragement for using translanguaging space in the breakout room sessions.

After Nur and Nese wrote the easy children's temperament and the potential behaviours of their parents in seven minutes (see Figure 14 below), they completed the breakout room session through their interactions introduced in Extract 15 in which Nur introduces that she will ask about the impact of parenting style on determining the child types to Lec4 even though her peer (Nese) has provided the response emerging from the lecturer talk and the online material including the research findings in the previous extract.

Figure 14

Task Output during Phase 3



Extract 15: question_psycho_phase 3_15-04-22_69.19-69.48

01 Nur: ↑ama ben hocaya şu soruyu sormak istiyorum ya: .hh
but i want to ask that question to the lecturer

02 (0.3) gerçekten e:rm (0.3) hani:
really e:r well

03 (1.7)

04 fparental stylelarımız onları easy: (.) difficult mı
do our parental styles make them easy or difficult

05 yapıyo (.) yoksa: easy difficult oluyolar da mı
or do they become easy or difficult and so

06 biz parenting stylemızı ona göre değiştiriyoruz
 we are changing our parenting style accordingly
the notification “all breakout rooms will close in 58 seconds
notification” is on the screen

07 (0.6)

08 Nese: hu::h eve:t bence de mantıklı bi soru:(0.3) yani: şey (.) ne
 yes i also think that it is a sensible question (0.3) well

09 kadarı nu::- nurture ne kadar nature sorusu fher zaman [mantıklı
 the question of how much nurture-how much nature is always
 sensible

10 Nur:

[°fa: evet°
er yes

11 Nese: psikoloji sorularında .hhh eh hehe
 in psychology questions

12 Nur: neyse çok teşekkür ederimf
 anyway thank you so much

From line 1 to 6, Nur mentions that she plans to ask her previous question about the parenting effect to Lec4 as an epistemic authority (Heritage, 2013) by providing two alternatives within hybrid translingual turns involving English, Turkish, and English terminology with Turkish lexical additions (e.g., *parental stylelarımız*). Then, Nese assesses the question as a reasonable one, repeats her previous display of knowledge based on the nature and nurture. By overlapping with Nur's confirmation, Nese generalizes her peer's potential question initiation related to the psychology field with a smiley voice. Ultimately, Extract 15 closes with Nur's thanking, and they come back to the main session.

Consequently, the extract above showed that Nur announced her request for Lec4's response to her question about the previous problematic topic as an epistemic authority through hybrid translanguaging practices which marks the end of the Phase 3.

Phase 4: Sharing Outputs of Peer/Group Task Phase. Extract 16 demonstrates how Nur (one of the focal group members) delivers their collaboratively produced task output, and how Lec4 orients to and responds to Nur's request for clarification. Before the

last extract starts, Lec4 elicited the task outputs of two volunteer groups without checking their written work on the online Google document.

Extract 16: parenting_psycho_phase4_15-04-21_84.49-86.42

01 Lec4: maybe: a third group and the last one and then we'll continue
 02 (0.9) anyone else (.) who wants to share their groups? (0.8)
 03 Nur: hoca:m
 my lecturer
 04 Lec4: yeah [[↑]yeah
 05 Nur: [we also (0.5) talked about easy ch children
 06 Lec4: [↑]goo:d
 07 Nur: e:r (.) we thought that (.) like e:r they (.) they look like
 08 they [↑]don't need care (.) but we should all also like (.)
 e:r
 09 show them affection and parental ca:re (.) and parental ti:me
 10 even though (.) they feel like e:rm .hh they can be neglected
 11 we we should also show them affection (.) because every child
 12 needs affection even though they don't seem like(.)they don't
 13 (.) they need it oh
 14 Lec4: o::kay i got +what you are sa:ying+ of course it's the
 lec4 +-----1-----+ 1: turns to right side
 15 parental warmth(0.3) e::r >dimension that you talk about:t<
 16 (.) of course all children +need tha:t [definitely
 lec4 +-----2----->
 2: nods her head
 17 Nur: [&hnm::&
 nur &--1--&
 1: nods her head
 18 Lec4: that kind of [(things)+
 lec4 +-----+
 19 Nur: [e:r also:
 20 when we are doing the class activity (.) i'm sorry:
 21 Lec4: [yea:h
 22 Nur: [when we are doing the class activity we: (.) i came up

23 &with this questio:n (0.4) like u:r do the:se chi:ld&
nur &-----looks down-----&

24 (0.4) u:r& bo:rn (.) with like the:se (about) the:se e:r
25 (0.4) characteristics [of hard o:r

26 Lec4: [characteristics

27 Nur: feasy o:r +parental [parenting

28 Lec4: [+fyea:h+

lec4 +--2--+

29 Nur: styles [affect] the:

30 Lec4: [+yea:hf+]

lec4 +---2---

31 Nur: thi:s &i'm not su:re about thi:s&
nur &----shakes her head-----&

32 Lec4: no no: u:r v:- ↑very good question bo:th u::r maybe
33 let's begin with the second o:ne (.) that your question
34 .hhh (.) u:r of course there is genetic predisposition
35 we *see it from the ↑twin studies* as well (.) so:
eda *----- nods her head-----*

36 there is a genetic make-up abou:t *being an ↑extraovert or e:r*
eda *-----nods her head-----*

37 introvert (.) .hhh especially the new advancements
38 (.) for example that we didn't ha:ve in the nineteen *eighties*
eda *--nods--*

39 (.) no:w we have it and we know tha:t there are genetic ↑markers
40 ↑not only o:ne (.)but a couple of them (.) actually: (.) oka:y?
41 which directly actually u:rm you know ha:- is manifested (.) of
42 course through the interaction with *the enviromental inpu:t* .hh
eda *-----nods her head----

43 (0.3) u:r but there is *a genetic predisposition for tha:t* ↑bu:t
eda *-----nods her head-----*

44 of course it's all abou:t the *nature nurture things* so: basicly
eda *----nods her head----

45 that's a:ll we are talking about you kno:w goodness of fit

Lec4 announces that she will elicit the last task output from the third group, and requests for another volunteer in lines 1 and 2. Subsequently, Nur bids for the turn through word-level translingual address term, and introduces their group selection on the child types: easy child. After Lec3's positive assessment (*↑good*), Nur topicalizes their collaborative task output with reference to their shared document in the breakout room session (*we thought*), target content knowledge shown in the third bullet point in their written task output (see Figure 14) (e.g., *parental affection, affection, parental time*) by highlighting easy children's need for the parental affection from lines 7 to 13. In what follows, Lec4 displays her verbal and embodied (i.e., nodding) alignment with the group output, and reformulates the target content terminology (*parental warmth dimension*). In lines 19 and 20, Nur overlaps with Lec4's ongoing explanation to extend using 'also', and with reference to their online class activity in the breakout room session and apologizes for the interruption. Following Lec4's go-ahead token, Nur re-topicalizes her extension prompt thereby shifting from 'we' to 'I', and initiates a yes/no question about whether parenting affects the child types or children are born with the specific characteristics of the child types. Then, she demonstrates her uncertainty by shaking head (Sert & Walsh, 2013) with smiley voice (*&fi'm not su:re about this&*) in line 31. Subsequently, Lec4 firstly provides repetitive 'no' response, and an explicit positive assessment (EPA) (Waring, 2008) oriented to Nur's question (line 32), refers to the genetic predisposition based on the twin studies which were explained in the Youtube Video (see Figure 13 in Phase 1). Then, she connects this knowledge with the genetic makeup on becoming extrovert or introvert as other child types in Psychology. She also provides examples based on the recent research findings about the genetic markers using 'we know' (Herder et al., 2022) to show the shared knowledge due to the research results, and request for confirmation (*okay*). After this, she positions the students knowledgeable about the interaction with the environmental input, and then makes another connection with 'nature

and nurture' which was referred to by Nese in Phase 3 (and also in Phase 1), and goodness of fit explained by Lec4 in Phase 1 to respond to Nur's question.

In sum, Extract 16 showed that Nur delivered their collaborative task output based on their written online work, and their discussion in the breakout room session, and also her request for clarification within translingual turns. The extract also presented that Lec4 displayed her alignment with their collaborative task output, and answered Nur's clarification question through various practices such as references to other interrelated target content knowledge and positioning the students knowledgeable as a knowledge provider (e.g., Tai & Wei, 2020) in the online EMI course. Overall, the extracts from the case of the department of psychology also presented that the participants demonstrated their knowledge using various practices such as using YouTube video, references to the different past learning. The extracts also showed that the students utilised translanguaging space including hybrid usage of translingual turns, which was clearly enhanced by Lec4 for the small group activity. In the breakout room session Then, translanguaging space helped the students complete the content knowledge building process collaboratively across the multiple phases of online EMI digital spaces.

Summary of the Chapter

This chapter presented the micro-analytic findings of the study in two main sections. In the first section, the data coming from face-to-face classrooms was closely examined with a long extract to show how the students displayed translingual peer involvement to resolve one another's understanding troubles, and how Lec1 provided a translanguaging space to co-construct the target knowledge using the shared linguistic repertoires including English, Turkish, and an inventive language in the face-to-face EMI course at the department of Mathematics and Science Education. The second section of this chapter presented with three sections based on the particular cases of three different departments including Educational Sciences, Business Administration, and Psychology to document how

translanguaging space was used to mark the procedural unfolding of the target content knowledge co-construction process across four interconnected phases (i.e., lecturer talk, pre-task, peer/group task in breakout room session, sharing outputs of peer/group task phase). During the first phase of three focal cases, the lecturers provided asynchronous informative PowerPoint slides and displayed target content knowledge using different interactional resources such as embodied explanations, usage of Youtube video. In this phase, while the first subsection (Educational Sciences) showed the hybrid usage of English, Turkish, and particular university jargon during the collaborative content knowledge construction process, the second and third subsections presented that the participants produced only word-level translanguaging address term. During the pre-task phase (Phase 2), the lecturers delivered the assigned peer/group tasks through a wide range of practices such as exemplification, positioning the students knowledgeable, and mutually visible instruction provision with four extracts. In the second phase, the third subsection indicated that Lec4 promoted use of translanguaging space to do peer/group activity in the breakout room sessions. In the third phase (Phase 3: Peer/Group Task in Breakout Room Session), the students displayed their co-constructed content knowledge within translingual turns during task accomplishment process in the breakout room sessions. Finally, during the fourth phase, the students introduced their collaboratively co-constructed task output, initiated their requests for clarification based on the target content, and how the lecturers connected the students' task outputs with the target content knowledge. Therefore, three different cases demonstrated how translanguaging space was carried out to mark the interconnected organization of the content knowledge co-construction procedure. In the following chapter, the micro-analytic findings of this study will be revisited, and discussed with the existing literature in the field, and the potential implications will be provided for further studies in addition to pedagogical implementations of the research findings of the study.

Chapter 5

Discussion and Conclusion

In the final chapter of the dissertation, the findings of the study will be discussed in addition to pedagogical and research implication provisions in three subsections. The first section will present the main analytic results of the study in line with the research questions and the existing literature on English Medium Instruction, collaborative knowledge construction, and translanguaging. In the second subsection, pedagogical and research implications will be provided with a particular focus on classroom interaction in EMI. Finally, the chapter will be completed with the concluding remarks of the study in the third subsection.

Discussing the Findings of the Study: Content Knowledge Co-Construction and Translanguaging

This study explored the content knowledge co-construction process that shapes around translanguaging in EMI classrooms by documenting one face-to-face and three online courses from the four EMI departments at a Turkish state university. In this section, firstly the findings coming from the face-to-face data firstly will be highlighted with the particular role of translanguaging on the management of understanding troubles in the EMI classroom. Then, the detailed examination of the online EMI classrooms will be presented where translanguaging space was utilised by the participants to indicate the procedural co-construction of target content knowledge across the multiple phases of the three online EMI courses.

First of all, the data from the Mathematics and Science Education allowed us to display how the participants (Lec1 and undergraduate students) employed a wide range of translanguaging practices to resolve understanding problems during collaborative content knowledge building process in the face-to-face EMI classroom with three segments of one long extract (Extracts 1.1, 1.2, 1.3). In the face-to-face EMI classroom interaction, the

interactants created an inventive language in which they referred to the specific numbers (i.e., 10, 11, 12) with their mathematical terminology (i.e., *te*, *ee*, *dozen*), and utilised them as one of the shared linguistic resources with English and Turkish to avoid understanding troubles based on the mathematical terminology within their translingual turns (Bozbiyık & Balaman, 2023). In this case, Lec1 initiated an elaboration question about the target knowledge, and understanding check questions to confirm the students' understandings about the target content, and helped them demonstrate their knowledge during the knowledge building process (Koole, 2010). Subsequently, some students provided incorrect responses, and displayed their non-understandings and/or insufficient knowledge through their own knowledge claims (Sert, 2011; Sert & Walsh, 2013). During these interactional problem-solving sequences, the peers oriented to one another by demonstrating their content knowledge (Kääntä, 2014) through verbal and embodied explanations, and thus collaboratively changed their classmates' epistemic status from less to more knowledgeable (Heritage, 2012a; Heritage, 2013). Despite her knowledge provider role as the holder of epistemic authority in the whole-class face-to-face interaction (e.g., Solem, 2016), Lec1 oriented to the correct response with embodied actions (e.g., pointing, smiling), and visualized the problem-solving process on the board to reach more than one addressee, for the whole-class understanding (Schwab, 2011). The findings showed that Lec1 produced her interactional practices in English apart from one Turkish-inserted turn (Extract 1.2), but she did not enforce the students to use English during the ongoing knowledge building procedure (Bozbiyık & Balaman, 2023). In line with the previous studies in the face-to-face EMI classroom studies (Şahan & Rose, 2021; Tai & Wei, 2020, 2021a), she provided translanguaging space for peer involvement to unpack each other's knowledge gaps, and exchange the epistemic asymmetry using all the shared repertoires within translingual turns (English, Turkish, inventive language). Therefore, translanguaging promoted active student involvement to deal with understanding problems during the collaborative knowledge building process in the face-to-face EMI classroom in the department of Mathematics and Science Education.

In addition to the exploration of the translanguaging practices through the face-to-face data, the micro-analytic findings of this study mainly showed that the participants (the lecturers and the undergraduate students) deployed translanguaging space for the purposes of the collaborative content knowledge construction through a wide range of interactional practices and the technological affordances across the interconnected classroom activity phases in online EMI classroom sessions. The results demonstrated that translanguaging space was implemented during the collaborative content knowledge building process across the multiple activity phases in three different EMI courses.

Using multimodal CA, the retrospective and prospective investigation of the study showed that the EMI lecturers shared the informative PowerPoint slides (e.g., Figure 2, 3) previously prepared with particular foci on their target content learning objects (Markee, 2008) at the university learning management system around one week ago. While the lecturers in the department of Educational Sciences (Lec2) and the department of Psychology (Lec4) added the audio recordings including their explanations (Figure 4) over the slides, Lec3 used the screen-shared slides through lecturer talk (Figure 8). Therefore, the lecturers provided technology enhanced course materials on the online platform to enable the students to have target content before their synchronous courses started, and supported EMI students' learning with technological affordances (e.g., Kerestecioğlu & Bayyurt, 2018).

The informative material provision also helped the lecturers design a more interactional online classroom atmosphere through collaborative knowledge building activities (e.g., Extract 2). Thus, the findings showed that the lecturers summarized the important features of the target content knowledge, provided explanatory responses to the students' information-seeking questions, and displayed further information about the target content knowledge using online resources such as a YouTube video (Figure 13) during the first phase (lecturer talk) of the collaborative content knowledge construction process. In the current study, the extracts from the first phases of the cases of the Educational Sciences

(see Extract 3) and Consumer Behavior (see Extract 8) demonstrated how Lec2 and Lec3 responded to the students' information-seeking questions during the first phase. In both cases, the students firstly prefaced their turn-taking attempts through a turn-initial translingual practice with 'hocam' which is an honorific expression used for the lecturers at the higher education level in Türkiye, and also for the other people regarded as intellectual interactants for the ongoing speakers in the specific university jargon. Then, they contextualized their requests for elaboration and clarification through displays of their funds of knowledge with interrogative and declarative questions (Raymond, 2010) to unveil their knowledge gaps, and alternate the epistemic asymmetry during the ongoing interaction (Solem, 2016, Kääntä, 2014). Similar to the other studies in the literature (e.g., Heritage & Raymond, 2005; Melander, 2012; Raymond & Heritage, 2006), the students mitigated their displays of content knowledge using the evidential (e.g., I think) and hedging markers (e.g., maybe) (e.g., Back, 2016; Weatherall, 2011), clarification provision (Duran & Sert, 2021), reference to the digitally provided knowledge shown in the slide (e.g., balance in Figure 8), the previous conversational episodes in the classroom interaction (Can Daşkın & Hatipoğlu, 2019), and their peer's exemplification as the outside knowledge (Bozbiyık & Morton, 2022a; Tai & Wei, 2020) during their information-seeking sequences. While responding to the student's question in the case from the department of Educational Sciences (Extract 3), Lec2 produced a type-conforming response (Raymond, 2003, 2010), positioned the students knowledgeable using 'you know' (Heritage, 2012a, 2012b), and provided further elaborations within translingual turns including English, Turkish, and the specific university jargon (referred as METU language in Extract 3) (Wei, 2011, 2018) as well as the written translingual peer involvement on the chat box. Therefore, this study showed that not only the students but also the lecturer utilised translanguaging space to deal with the students' questions during the collaborative content knowledge construction process in the online Turkish Educational System and School Management course.

The findings of the second case from the Business Administration (Extract 8), Lec3 also connected the ongoing discussion about ego and super ego with the example of 'putting garbage separately' with the target content knowledge (i.e., balance) marked in the screenshared slide as well as embodied actions (balancing her hands in line) (Sert & Walsh, 2013). During the first phase (i.e., lecturer talk) of the third case from the online Psychology course (Extract 12), Lec4 constructed the target content knowledge through definition and exemplification provisions (Bozbiyik & Morton, 2023a; Gülich, 2003) as well as the screenshared digital resources (Figure 12, 13). Therefore, the findings presented that all three lecturers displayed target knowledge, and changed the students' epistemic status from less to more knowledgeable using different interactional resources as the epistemic authority having the first-hand knowledge (Pomerantz, 1980) during the first phase (lecturer phase) of the online classroom events. In addition, it can be clearly seen that Lec2 produced her elaboration sequences using all the shared linguistic repertoires including English, Turkish, and the university jargon in the Educational Sciences. This can also be related to the context of the course (i.e., Turkish Educational System and School Management) in which the students learnt the specific terminology, and historical events based on the Turkish educational history, system, and the school management.

After the lecturers completed the introduction part of the focal contents, they created an interactional space for the students to collaborate (Mondada, 2009) with their peers in the breakout rooms (Phase 3). In Phase 2, they explained what the undergraduate students would do with their peers/group members during the pre-task phase (pre-task phase), and thus they provided prompts for the students to alleviate the students' understandings about the follow-up content-related assigned tasks (Fitzgibbons et al., 2021). The four different extracts of the second phase documented that all the lecturers referred to the different sources (i.e., Extracts 4, 5, 9, & 13) of the target content knowledge such as the digitally and/or screen shared informative slides, and the previous classroom conversations in Phase 1 to remind the students the previously learnt content knowledge using 'remember'

and the simple past tense in alignment with the prior studies in classroom interaction (Can Daşkın & Hatipoğlu, 2019; You, 2015) as well as positioning the students knowledgeable (Heritage, 2012a, 2012b). Moreover, the results from the first and the second case also illustrated that Lec2 (Extract 5) and Lec3 (Extract 9) coordinated the spoken and screen-shared written documents (e.g., Figure 9, 10) (e.g., Reher & Pinilla, 2022) for the collective epistemic progression by benefiting from the technological affordances during the online knowledge co-construction process (e.g., Balaman & Sert, 2017a; Goodwin, 2013; Melander, 2012; Tai & Wei, 2021c). In addition, they exemplified the assigned tasks and the previously provided information and task outputs through various practices (Essien, 2021).

In the first case from Educational Sciences (See Extract 4 and 5), Lec2 talked about a few administrative theories such as scientific management by highlighting the students' previous task outputs based on the theories in the shared screen (Badem-Korkmaz & Balaman, 2022) (see Figure 5, 6), using imaginary and inclusive language through 'let's say' and 'we' (e.g., Tai & Wei, 2020). In the online Consumer Behavior course, Lec3 brought the outside knowledge (i.e., bank advertisements) through the Turkish local bank exemplifications (zanaat bankası, aş bankası) to explain the inside knowledge (i.e., super ego) within translingual turns (e.g., Tai & Wei, 2020). The finding is in line with the results of the recent study of Bozbiyık and Morton (2023a) investigating screen recordings of the online EMI courses, and revealed that local exemplifications in translingual turns can promote students' understandings about the abstract content knowledge in EMI classrooms. Unlike the cases of the Educational Sciences and the Business Administration fields, the findings of the third case (i.e., Psychology) showed how Lec4 encouraged the undergraduate students to carry out their assigned task through translanguaging including Turkish and English, and thus translanguaging was established as the practiced language policy (Bonacina & Gafaranga, 2011) during the collaborative content knowledge construction procedure in the breakout room sessions (see Extract 13). Then, the students

adopted the policy of translanguaging space including multilingual and multimodal resources during their small group learning and task completion activities (e.g., Tai & Wei, 2021a) in the online Developmental Psychology course.

Overall, during the first and second phases (lecturer talk and pre-task), the results indicated that only Lec2 utilised translanguaging space through English, Turkish, and the specific university jargon for the purposes of the collaborative content knowledge construction procedure in line with the pedagogical content of the Turkish Educational System and School Management online course, which allowed the participants to transfer and display the target knowledge across the multiple phases of the EMI classroom events. While Lec3 only produced the word-level Turkish local exemplification in a translingual turn without marking the translanguaging space in Phase 2 of the Consumer Behavior Course, Lec4 explicitly promoted it by using the translanguaging space for the collaborative small group activity in the breakout room sessions as the peer/group interaction mode in the collaborative knowledge building in the Developmental Psychology online course. The findings showed that the undergraduate students utilised translanguaging space during their task-based online classroom activity in the breakout room session although the lecturers displayed various approaches to translingual practices.

During the third phase (peer/group task in breakout room session), the findings showed that the students displayed their co-constructed knowledge, and completed the target content-related peer/group task in three different departments (Educational Sciences, Business Administration, Psychology). While the students discussed about the educational characteristics of an educational leader based on the human relations approach in the Turkish Educational System and School Management course, three undergraduate students designed a pudding advertisement with its slogan, sketch, and explanation by considering the features of ego in the Consumer Behavior course. Also, the peers selected easy child, and talked about their particular temperaments based on the characteristics of easy children and their parental attitudes in the Developmental Psychology course. In the

breakout room sessions, all the assigned tasks were collaboratively conducted within translingual turns including Turkish, English, and the hybrid usage of English and Turkish. In this process, the students searched for the necessary content information for their task outputs as the knowledge seekers within translingual epistemic search sequences (ESSs) (Jakonen & Morton, 2015), and they displayed their funds of knowledge right after they changed their positions to the knowledge providers (Heritage, 2012a, 2012b). Similar to the students' contributions in the Educational Sciences (Extract 3) and the Business Administration (Extract 8) in Phase 1, the peers initiated interrogative and/or declarative questions to control one another's epistemic status, and keep the epistemic balance between the different parties, and downgraded their displays of co-constructed content knowledge using evidential markers (e.g., I guess so) (Hauser, 2018; Kärkkäinen, 2003).

During the epistemic progression of the knowledge exchange (Balaman & Sert, 2017a; Gardner, 2007) in translingual turns, they retrospectively made references to various resources including the digitally provided slides and online sources such as Internet (Extract 6), the research results in the YouTube video (Extract 14), peer and/or lecturer instructions and statements (Extract 6, 10) in Phase 1 and 2 as well as using the chat box for the collaborative content knowledge building. Furthermore, online shared written documents play a significant role in the collaborative knowledge construction process (Figures 9, 10, 14) (Jakonen, 2015). Therefore, the students deployed translingual practices to change the knowledge asymmetry, manage each other's non-understanding and/or insufficient knowledge (Extract 14), help one another's word search (Extract 10) (Duran et al., 2022), and thus accomplish the assigned task through translingual practices such as using the hybrid usage of English terminology with Turkish lexical additions (Jakonen et al., 2018) in the breakout room sessions. Therefore, translanguaging space enabled the students to actively participate in the collaborative peer interaction, build more enjoyable and relaxed learning atmosphere (Pun & Tai, 2021; Tai & Wei, 2021b; Wei, 2018). In addition, using translanguaging space also enhanced the progressive unfolding of the collaborative

knowledge construction, which marked learning in moment-by-moment social interaction across the multiple phases of the online conversational activities (Jakonen & Morton, 2015; Markee, 2008).

The findings of the study also presented that the participants shared their collaborative task outputs right after they came back from the breakout room sessions to the main sessions during the last phase (sharing outputs of peer/group task phase). Similar to the undergraduate students' practices in Phase 1, the undergraduate students initially deployed translingual address term (i.e., *hocam*) to take the next turn for the voluntary reporting of their co-constructed task outputs as the online joint activity session (Extract 7, 11, 16) in addition to the student's filler (*şey*) in the translingual turn in Extract 7. They introduced their task output with references to their collaborative task completion activity through more inclusive language (e.g., using 'we thought'), reference to their collaborative task output (Figure 14) in Extract 16 in the Developmental Psychology course, and/or screen sharing their co-constructive design (Figure 11 in Extract 11 in the Consumer Behavior course) (Goodwin, 2013). In the fourth phase of the Educational Sciences case, Lec2 also wrote the students' collaborative task outputs through her reformulated statements on the mutually accessible online Google document (Figure 7) due to the technological affordances (Balaman & Sert, 2017b; Nguyen et al., 2022; Tai & Wei, 2021c) as well as references to the previously co-constructed content knowledge (see the first subsection of the second part in the chapter 4). In addition, the students collaboratively completed the target content-related assigned tasks through translanguaging practices in Phase 3, and transferred the co-constructed task outputs using word-level translanguaging, but mostly in English in Phase 4. This finding signals that the students utilized their translanguaging practices based on the shared linguistic repertoires without any indicators of the interactional troubles such as hesitation markers, long silences, and overlaps in a natural way during content knowledge construction process. Therefore, the participants' multilingual deployments do not result from their lack of competence in English, and so the

results of the study highlight the translanguaging rather than code switching with the ideology of the language separation (e.g., Canagarajah, 2011; Lewis et al., 2012).

The collaboratively designed informative document was also shared on the university teaching and learning management system, and thus the students could reach the accessible outputs of the co-constructed content knowledge in line with the whole-class understanding approach in the educational settings (Schwab, 2011). In addition to the management of a student's non-remembering troubles in the Educational Sciences course, one of the group members in the Psychology also displayed her uncertainty (Sert & Walsh, 2013) by mitigating her challenging question through smiley voice (Sert & Jacknick, 2015) in the main session of the Developmental Psychology course, which can be an interactional space for Lec4 to provide further clarification during the target knowledge co-construction process. Thus, Lec4 produced her explanatory statements with references to the previously provided content knowledge such as the results of the twin studies in the YouTube video (see Figure 13) using 'we know' which demonstrated the shared newfound content knowledge. This result is aligned with Herder et al. (2022)'s findings showing that producing 'we know' can indicate the changing epistemic asymmetry from less to more knowledgeable on the shared learning object. Furthermore, the knowledge co-construction across the multiple phases can also be evidenced with the repetitive embodied actions of the participants. To illustrate, Lec3 and the undergraduate students produced the same embodied action (i.e., balancing their hands in line) to introduce the content terminology 'balance' across all the phases of the online classroom activities, which can signal the change on the participants' epistemic status, and thus learning of the co-constructed target knowledge in minute-by-minute online classroom interaction. Finally, all three EMI lecturers displayed explicit positive assessment (Waring, 2008) following the students' reporting, and questioning sequences to encourage increasing student involvement during the content knowledge building procedure in the online EMI classrooms.

In the teacher-fronted face-to-face classrooms, teachers/lecturers mostly initiate questions to show students' epistemic status and co-construct knowledge on the pedagogical tasks (e.g., Koole, 2010; Sert, 2013). However, the findings of the study underlined that the lecturers designed the collaborative knowledge construction process more through the coordination of the mutually accessible spoken and written resources and the small group task-based activity due to technological affordances of the online education (e.g., Nguyen et al., 2022) across the multiple phases in the main and breakout room Zoom sessions. All in all, the first online case of this study showed that Lec2 produced translingual practices including English, Turkish, and the specific university jargon while responding the student's question to create more dynamic classroom interaction, and to co-construct the target content knowledge in Phase 1, and this promoted using the translanguaging space across the following interconnected phases, especially in the breakout room session in the Turkish Educational System and School Management course. The second online case of the study also illustrated that translanguaging space was used by the students to deploy their funds of content knowledge, and to accomplish the assigned task in the breakout room session (Phase 3) in addition to Lec3's local exemplification in translingual turn during the pre-task phase, which facilitated the trackable procedure of the collaborative content knowledge construction. Finally, the third online case from the Developmental Psychology course demonstrated that Lec4 explicitly promoted translingual practices for the task accomplishment activity in the breakout room session, and established the dynamic practiced language policy (Bonacina & Gafaranga, 2011). Therefore, the students preferred their own translingual practices in the particular online classroom event (Probyn, 2019) regardless of which named language was used by the lecturer (e.g., Muguraza et al., 2020), which provides equity in knowledge co-construction (Tai & Wei, 2021a). On the other hand, in the Developmental Psychology course, there were four international students who possibly had no linguistic background in the Turkish language, and thus frequent usage of translingual practices might have led to interactional and pedagogical problems, and inequality (e.g., Kuteeva, 2020) especially in the focal university having 100% English-only

language policy. Thus, lecturers and students need to utilise the shared linguistic and interaction repertoires for mutual understanding and collaborative content knowledge building process (Bozbiyik & Morton, 2023a). In brief, the findings of the study presented that translanguaging space embraced all the online accessible multilingual and multimodal resources rather than imposing monolingualism (Jakonen et al., 2018) in the online EMI classrooms in three different departments, and the co-construction of the target content knowledge was accomplished by varying displays of target content knowledge transferred and connected across multiple phases of the online EMI classroom activities. The skilful implementation of translanguaging space enhanced active student involvement and the collaborative content knowledge building based on the learning objects tracking over time across the multiple phases.

From a broader perspective on classroom interaction, the analytic findings of this study not only documented epistemic, multilingual, and multimodal resources, but also showed what the EMI lecturers and undergraduate students need in order to collaboratively construct the target content knowledge, and to increase active student engagement, which can be the key for content learning within face-to-face and online EMI classrooms. As stated in the previous parts, the participants utilised different interactional resources such as references to past learnings, and mitigating their epistemic status within translingual turns for the purposes of collaborative content knowledge construction including resolving students' understanding troubles, displaying target content knowledge, and accomplishing the target content-related assigned tasks as the whole and/or small group classroom interactions. Thus, these findings of the study marked how the participants demonstrated their Classroom Interactional Competence (CIC) for content teaching and learning purposes through the emic approach of CA (e.g., Sert, 2015; Wong & Waring, 2010). Although the existing literature on CIC has been mostly focusing on the teachers'/lecturers' CIC and their CIC development (Balaman, 2023a), this study explored how the students demonstrated their co-constructed knowledge through CIC practices with the purposes of peer

involvement and task accomplishment in the EMI settings. In addition, the present study indicated that the participants demonstrated their CIC practices with a particular focus on content knowledge including content-related terminology, examples, course materials, and invented language in translingual turns during knowledge building process across the interrelated episodes of the EMI classrooms. Therefore, this study also reported the students' content learning and the collaborative knowledge construction process through CIC in a trackable way across multiple classroom spaces over time (e.g., Hellerman, 2008, 2011; Pekarek Doehler, 2010; Sahlström, 2011). This may signal that the participants collaboratively develop their CIC in line with the context-specific purposes of content teaching and learning in EMI university classrooms.

Contributions to EMI Literature and Implications for Further Studies and Pedagogical Training

In the recent years, the increasing trends on internationalization and colonization history have led alleged criticism on neo-colonization emerging with political power in EMI and the exaggerating positive sides such as job opportunities (e.g., Wei & Garcia, 2022). However, the prestigious impact of EMI still plays a significant role at socio-economic and educational levels especially in the countries and regions having a colonization history such as Hong Kong and Taiwan (Lo & Macaro, 2015). When compared to these contexts, Türkiye is not open to such colonial influences politically, educationally, and ideologically, and thus the theoretical perspective and the activist-political perspective of EMI implementations were not examined in this study. However, the decolonizing perspective of translanguaging may not be only based on the colonization history of the inner and expanding circle countries (Kachru, 1992). It is also associated with the political ideology of different language labels such as native, foreign, and heritage languages, which can signal the political position of translanguaging regarding nationalistic, and minoritized values (Garcia, 2019; Wei, 2022).

In terms of the different dimensions of the translanguaging (i.e., theoretical, practical, analytical), the current dissertation contributes to the existing EMI literature through the analytical and practical findings of translanguaging (Wei, 2022). Through the multimodal CA research methodology (analytical), this study explored the practical usage of translanguaging including the intact linguistic repertoires within the classroom activities (practical). Therefore, the bottom-up research perspective of multimodal CA enabled us to explore interactional and pedagogical practices, and see whether the top-down language policy (i.e., 100% English-only) was employed in synchronous online EMI classrooms. In addition to the face-to-face data findings on resolving understanding troubles during the collaborative knowledge building, the study documented how the participants (the lecturers and undergraduate students) co-constructed the target content knowledge through translanguaging across the multiple phases of the online classroom activities. In addition, the findings of the study can contribute to raise our understandings about the dynamic deployment of translanguaging during collaborative content knowledge building procedure. In comparison to the suggestions about the decolonizing role of translanguaging (e.g., Garcia, 2019), this study may not play a significant role in developing our critical awareness about the ideologies of the language separation and the culture of the minoritized communities due to the context-specific constraints regarding Türkiye as the country context, and the participants in the four context-specific teaching and learning environments.

As introduced in the earlier chapters, the existing literature of EMI has been mostly based on the stakeholders' (mainly lecturers and students) perceptions and attitudes towards EMI implementation. In addition, some EMI pioneers (Macaro et al., 2018) have highlighted the significance and scarcity of the EMI classroom interaction and content learning, and Conversation Analysts have started to work on the dynamic interactional organization of the face-to-face EMI classrooms at the secondary (e.g., Tai & Wei, 2021a) and tertiary (e.g., Duran & Sert, 2021) levels. However, exploring online EMI classrooms

was an under-researched context in the EMI higher education institutions. In this regard, the current study documented the co-construction of the target content knowledge, and displays of the students' epistemic funds of knowledge using translanguaging practices across multiple classroom activities in online EMI classrooms, and thus trackability of the target content knowledge building was explored in moment-by-moment interaction across the multi-party online EMI teaching and learning spaces. Therefore, the study contributes to the EMI classroom interaction literature by documenting the multiple phases of the collaborative knowledge building process across the digital spaces including the main and breakout room Zoom sessions, which became methodologically possible due to the analytic tools of multimodal CA enabling tracking of action formation across multiple temporalities (e.g., Hellerman, 2011; Pekarek Doehler, 2010). Therefore, the ways how the target content knowledge were collaboratively constructed were explored by tracking the content knowledge based on the content-related terminology, previous classroom actions, virtual course materials across the interconnected phases within the main and the breakout room sessions. Although the recent studies on online classroom interactions have only suggested the breakout room sessions for teachers to increase the students engagement (e.g., Chandler, 2016; Fitzgibbons et al., 2021), the current study documented how the students carried out the assigned small-group activities that provided opportunities to display their epistemic knowledge, and produce their own collaborative task outputs based on the target content in the specific EMI contexts. This guided me as the researcher of this study to explore the trackability of the target content knowledge co-construction, and to document the architecture of online EMI classroom interaction through the emic and data-driven perspective of the multimodal CA.

This study also demonstrated that the participants deployed translanguaging practices during the knowledge construction procedure without imposing an English-only rule in the EMI setting. In this study, using diverse usages of language alternation has been conceptualized through the term of translanguaging rather than using code-switching. As

stated in the earlier sections, code-switching is mainly associated with the language separation and the differences between the named languages as well as the indicator of the lack of linguistic and interactional competence in target languages (English in EMI settings). From a social-interactional research perspective, the micro analytic findings of this study reported that the participants deployed diverse translanguaging practices and benefitted from their linguistic repertoires rather than not becoming competent enough to use English for content teaching and learning purposes. The trackable demonstrations of the co-constructed content knowledge can be seen as interactional evidence for their use of shared linguistic repertoires across the interrelated online classroom episodes in EMI classrooms. To illustrate, the undergraduate students demonstrated their co-constructed content knowledge, and produced the collaborative task outputs within translingual turns in the breakout room sessions in Phase 3 (peer/group task in breakout room session), and they shared their content related task outputs in English without any interactional troubles such as long silences and hesitation markers in Phase 4 while displaying student initiatives in Phase 1 (lecturer talk). Thus, the effective deployment of various language alternation practices across multiple phases of the EMI classrooms did not negatively influence on the meaning making and content knowledge building processes in talk-in-interaction, and the lecturers did not insist on using English-only in line with the prescribed language policy. In sum, the participants' practices and the interactional evidence emerging from the next-turn-proof-procedure in the particular EMI contexts justified the preference of using translanguaging as the term of language alternation in the current study.

In this study, using translanguaging in an EMI setting content knowledge construction and meaning making can also indicated that the content was prioritized over language in comparison with L2 and/or CLIL classrooms. Even though EMI can develop the students' English proficiency levels with a focus on communication skills and subject specific terminology, language teaching is not one of the main purposes of the EMI implementations, and the EMI lecturers do not see language teaching as their own

responsibilities while teaching their field-specific contexts in EMI settings (e.g., Bozbiyik & Uysal, 2022; Dearden & Macaro, 2016; Deignan & Morton, 2022). Therefore, the findings of the study also revealed that the lecturers provided interactional space for the students to use translanguaging as well as their own translingual turns, and they did not specifically emphasize to teach language components and skills in English thereby prioritizing content teaching and learning as long as the collaborative meaning making was accomplished, and target content knowledge construction were established and maintained in talk-in-interaction. In brief, the micro analytic findings of the study based on managing to deal with the translanguaging practices and thus creating interactional opportunities based on the content teaching especially in online EMI settings can be disseminated as effective EMI classroom practices at the local and global EMI teaching and learning environments. Therefore, EMI lecturers can integrate the management practices of translanguaging into the meaning making and content teaching processes within their own EMI classrooms. For example, they can also encourage translanguaging practices, which can increase the students' involvement regardless of the declared language policy, and facilitate the collaborative content knowledge building processes in EMI classrooms.

In EMI implementations, 'one-size-fits-all' approach is problematized on the grounds of the diversification of the content-based pedagogical goals, and the target classroom practices in different disciplines (Airey et al., 2017). Moreover, the majority of the EMI studies are single case studies dealing with one EMI setting in one study due to the belief that each discipline has their own peculiar discourses, which results in the inadequacy of the multi-site (i.e., multiple cases) studies. Against this background, another contribution of this study to the EMI classroom research is the analysis of three different online EMI classrooms in three departments (i.e., Educational Sciences, Business Administration, and Psychology), and unpacking three implementations of the translanguaging space and its role in leading to the procedural co-construction of the target content knowledge through reiterative interactional and pedagogical practices across the interconnected online EMI

classroom activities. The findings of this dissertation emerging from the collaborative knowledge building processes using translanguaging in three online EMI classrooms partially align with Doiz and Lasagabaster's (2022) study that reported that questioning practices did not diversify in terms of the discipline-specific discourse within history, economics, and engineering EMI departments. However, this study provided further contribution to content knowledge building and the students' learning processes over time in online EMI classrooms through overlapping and context-specific micro analytic findings. Therefore, the analytic findings of this study can meet the needs of the discipline- and context-specific nature of the EMI classrooms in line with their internalization and globalization goals (Dafouz & Smit, 2020).

The necessity of identifying 'teachable' pedagogical resources (Creese & Blackledge, 2010, p.113) and tackling the methodological concerns for training and professional development for university lecturers are important concerns in the field of EMI teacher training (Lasagabaster, 2022; O'Dowd, 2018). In addition, EMI researchers emphasize the requirement of EMI-specific teacher training at the local and global levels (e.g., Doiz et al., 2011). In this regard, the results of the current study can provide data-led and evidence-based implications through context-specific exploration of the collaborative content knowledge construction using translanguaging in three different online EMI classroom settings. To illustrate, local exemplification provision using translanguaging (e.g., university jargon and local bank names in Turkish as well as English) can be specialized and recontextualized EMI teaching and learning practices, and can be integrated into data-led, evidence-based teacher training frameworks (Balaman, 2023a, 2023b; Walsh & Mann, 2015). As another illustration, the EMI lecturers can observe how they can organize more student-oriented online EMI classroom environments by creating small-group activities, assigning the target content-related tasks, providing interactional space to deploy translanguaging practices in the breakout room sessions, and eliciting the students' collaborative content-related task outputs during the collaborative content knowledge

building procedures in online EMI university classrooms. Thus, EMI lecturers can realise the significance of the EMI classroom interaction through the classroom evidence emerging from the EMI data, and see the developmental evidence to collaborative content knowledge building through translanguaging, and the trackable process of the students' content learning across the interconnected online classroom episodes. In addition, such EMI data-driven teacher training programs can allow the lecturers to develop their CIC, and so continuing professional development (e.g., Bozbıyık et al., 2021; Sert, 2019).

Farrell (2020) also suggest more holistic approach through bottom-up professional training using reflective practice for EMI lecturers. The five stages (i.e., philosophy, principle, theory, practice, beyond practice) of Farrell's approach allow us to unveil varying dimensions of EMI education and training. First of all, EMI lecturers can discover their teacher agency as the stakeholder in the middle of EMI teaching and learning during the first stage (i.e., philosophy). While principle is based on the unexplored lecturer beliefs about EMI implementations at the second stage, theory is interested in lecturers' choices about which theory and skills they need to teach at the third stage. In the practice stage, EMI lecturers should have reflection activities in which they write their self-reports about their teaching practices, and the effects of the previous stages (i.e., philosophy, principle, theory) in their practices. At the final stage, they have critical perspectives by regarding the socio-political and moral dimensions beyond their practices in the classrooms.

In the recent years, different fully-funded projects have aimed to embrace the dimensions of the bottom-up approach for EMI lecturer training and professional development at different educational levels of various country contexts such as Spain and Türkiye (Morton, 2019; Işık-Güler et al., 2021). For example, Morton (2019) has been analysing the video recordings of the postgraduate classroom interaction and the semi-structured interviews with the focus on knowledge construction and classroom interaction in EMI classrooms at the Spanish universities, and working on the video enhanced EMI lecturer framework through video-observation, reflection, and dialogue, using the Video

Enhanced Observation (VEO) app for four years. As one of the first implementations of the project output, the data-driven findings of Bozbıyık and Morton (2023a) investigating exemplification practices in different EMI classrooms were used as the practical activity in the scope of the Plan Doing project (Llinares & Mendikoetxea, 2020) which is the EMI teacher training program at Universidad Autónoma de Madrid. Furthermore, Işık-Güler et al. (2021) has been investigating good classroom practices of EMI lecturers, their viewpoints about their own teaching practices as well as students' and lecturers' attitudes towards at different undergraduate programs in four EMI universities in Türkiye, and developing accessible online education modules regarding diverse EMI contexts through micro and macro level understanding. In brief, the recent fully-funded projects on EMI lecturer training and professional development have facilitated the increasing integrations of the micro-analytic findings of EMI classroom interaction into the continuing professional development of EMI lecturers. Therefore, such micro analytic resources emerging from various EMI university classrooms can be used for developing the EMI lecturers' CIC to design more collaborative content knowledge building processes, and to increase student involvement within different country- and field-specific contexts. For example, METU, the focal EMI university in this dissertation, has a specific lecturer training program in order to help the new EMI lecturers adapt to the university atmosphere (<https://agep.metu.edu.tr/tr/agep-hakkinda>). However, this training program does not have any modules including informative seminars about the content teaching and learning in EMI university classrooms, and thus the findings of this study and the prospective results of the fully-funded EMI classroom interaction projects can be integrated into these kinds of the university specific training programs. The EMI lecturers can diversify data-driven, evidence-based findings in terms of their needs based on the specific classrooms, participants, disciplines, and country contexts (e.g., Waring, 2019). In brief, the findings of this dissertation show the pedagogical merit in EMI lecturers' organization of content teaching procedures using various digital spaces and pedagogical events by fully harnessing the technological affordances of online learning environments and creating a pedagogically

sound translanguaging space. Thus, the findings of the study can be implemented in the EMI lecturer training process that can be designed for early career EMI lecturers and experienced EMI lecturers in different ways in terms of their previous teaching and research experiences. Also, these data-driven EMI training programs should be focused on content teaching and learning processes through interactional and pedagogical practices rather than showing how the EMI lecturers speak and write in English. Furthermore, the micro analytic findings of the study can provide data-driven, evidence-based implications emerging from the EMI classroom interaction at METU as one of the most prestigious EMI universities in Türkiye to the universities having smaller capacities and different EMI implementations (e.g., %70, %30 EMI courses), and planning to start new EMI programs.

Finally, this study has some limitations that can be improved in further studies. Firstly, the database of the study included 2 hours of face-to-face data and 16 hours of screen recordings of online EMI classroom data. Also, the data came from four EMI departments (i.e., Mathematics and Science Education, Educational Sciences, Business Administration, and Psychology) at a state EMI university in Türkiye. In further studies, researchers can collect larger data from various disciplines in more than one university in other country contexts in order to investigate both the face-to-face and online EMI classroom interaction through more diversified data. In addition, only one breakout room session could have been recorded by the researcher in each EMI course, and so other researchers can have access to richer data from the breakout room sessions. Therefore, they can explore the collaborative content knowledge construction process from a broader perspective. Moreover, the findings of this study can encourage other researchers to investigate the dynamic usage of the coordinated organization of the spoken, written, and accessible materials in online talk-in-interaction procedure for further studies in the EMI field. Finally, researchers can carry out video stimulated recall sessions with EMI lecturers and students in order to reach a reflective understanding of the actual EMI implementations.

In brief, the current study provided significant pedagogical and methodological implications for the exploration of the online EMI classroom interaction.

Conclusion

This chapter revisited the micro-analytic findings of the current study in line with the research questions and the previous studies based on the knowledge construction and epistemics, translanguaging, and EMI research fields, and offered micro-analytic implications for further studies and pedagogical implementations. In the first section, the collaborative content knowledge co-construction using translanguaging across the multiple phases of the online EMI classrooms was revised and discussed with the existing literature. In the second section, the contributions of the study were highlighted with references to the analytic and pedagogical strengths, and several implications were provided for further studies by indicating the limitations of the study. Overall, the current dissertation explored the target knowledge co-construction procedure through translanguaging across the multiple phases of the online EMI classrooms and managed to break new grounds that can pave the way for future research and practice in the field.

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APPENDIX-A: Gönüllü Katılım Formu

“Eğitim Dili İngilizce olan Üniversitelerde Çevrimiçi Sınıf Uygulamalarına Yakın Bir Bakış” başlıklı bu çalışmanın amacı çevrimiçi sınıf içi etkileşimin öğrenme ve öğretme uygulamalarını ve bu sınıf içi anlara yönelik öğretmenlerin yönelimlerini araştırmayı hedeflemektedir. Gönüllü olarak katılacağınız bu çalışmada katıldığınız ders esnasında elde edilecek çevrimiçi video kayıtların ve görüşmelerin kayıtları yazıya çevrilecek ve katılımcıların isimleri ve kimlikleri gizli tutulacaktır. Video kayıtlarında ‘bulanıklaştırma (İng. Blur)’ tekniği kullanılacak ve kişiler kayıtlarda sadece gölgeler şeklinde görülecektir. Sınıf içi iletişimin dinamiklerini ve dilbilimsel öğelerini ortaya koyabilmek bu çalışmanın en büyük amacıdır. Kişiler ile ilgili bilgiler kesinlikle kayıt altında tutulmayacaktır. Örneğin, çevriyazı yapılırken katılımcıların isimleri yerine takma adlar kullanılacaktır. Kayıtlar tamamen gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir ve elde edilecek bilgiler bilimsel yayınlarda kullanılacaktır.

Çalışmadan ayrılmak isteyen katılımcıların ses ve video kayıtları araştırmaya dâhil edilmeyecektir. Çalışma süresince herhangi bir nedenden dolayı rahatsızlık hisseden katılımcılara her türlü yardım ve destek sağlanacaktır. İstedığınız an araştırmadan ayrılma hakkı tarafınıza tanınacaktır. Çalışmayla ilgili sorularınız olursa lütfen hiç çekinmeden sorunuz. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için merveboz@metu.edu.tr adresine mail atabilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum.

Tarih:

Katılımcı Adı Soyadı:

Bölüm/Sınıf:

Adres:

Tel:

E-mail:

İmza:

APPENDIX-B: Consent Form

The purpose of this study entitled " A Closer Look at Online Classroom Practices in EMI Universities in Turkey" is to explore teaching and learning practices of online classroom interaction and the lecturers' orientations to these classroom practices. In this study, which you will participate voluntarily, video recordings of online classroom interaction and interview sessions will be transcribed and participant names and identities will be kept confidential. In the video recordings, "blurring" technique will be used and participants will only be shown in the form of shadows. Displaying interaction dynamics and linguistic elements is the most significant aim of the present study. Personal Information about people will never be recorded. For example, pseudonyms will be used instead of the names of the participants when transcribing the data. Audio and video recordings will be kept strictly confidential and will only be analysed by the researchers of this study. The information to be obtained will be used in scientific publications.

The audio and video recordings of the participants who want to leave the study will not be included in the present study. Participants who feel uncomfortable for any reason during the study will be provided with all kinds of help and support. You will also be given the right to leave the research at any time. If you have any questions about the study, please do not hesitate to ask. Thank you in advance for participating in this study. You can send an e-mail to merveboz@metu.edu.tr for more information about the current study.

I voluntarily participate in this study. I accept the use of the information that I have provided in scientific publications.

Date:

Participant Name Surname:

Department/Grade:

Phone:

E-mail:

Signature:

APPENDIX-C: Jefferson Transcription Conventions

[brackets]	overlapped speech.
(0.5)	pause in tenths of a second.
(.)	micropause of less than two tenths of a second
=	contiguity between the speech of one speaker or of two different speakers.
.	intonation descent.
?	intonation ascent.
,	continuous intonation.
? ,	intonation ascent, stronger than a comma and less strong than the question mark.
:	sound elongation.
-	self-interruption.
<u>underlined</u>	accent or emphasis of volume.
CAPITALS	strong emphasis.
°	low voice speech immediately after the signal.
°words°	low voice excerpt.
word:	uninflected intonation descent.
word:	uninflected intonation ascent.
↑	sharp ascent in intonation, stronger than the underlined colon.
↓	sharp descent in intonation, stronger than the colon preceded by underline.
>words<	compressed or accelerated speech.
<words>	slowing of speech.
<words	accelerated beginning.
Hhh	audible aspirations.
(h)	aspirations during the speech.
.hhh	audible inspiration.
(())	analyst's comments.
(words)	doubtful transcription.
()	impossible transcription.
...	non-measured pause
"word"	reported speech, reconstruction of a dialogue

Conventions developed by Gail Jefferson and published in Sacks, Schegloff and Jefferson (1974), the last two symbols were suggested by Schiffrin (1987) and Tannen (1989).

APPENDIX-D: Mondada (2018) Multimodal Transcription Conventions

* *	Gestures and descriptions of embodied actions are delimited between
+ +	two identical symbols (one symbol per participant)
Δ Δ	and are synchronized with corresponding stretches of talk.
*--->	The action described continues across subsequent lines
--->*	until the same symbol is reached.
>>	The action described begins before the excerpt's beginning.
--->>	The action described continues after the excerpt's end.
.....	Action's preparation.
----	Action's apex is reached and maintained.
,,,,,	Action's retraction.
ric	Participant doing the embodied action is identified when (s)he is not the speaker.
fig	The exact moment at which a screen shot has been taken
#	is indicated with a specific symbol showing its position within the turn at talk.

APPENDIX-E: Ethical Approval by the METU Human Research Ethics Committee

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER



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16 HAZİRAN 2020

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof.Dr. Yasemin BAYYURT, Doç.Dr. Hale Işık GÜLER ve Arş.Gör. Merve BOZBIYIK

"Eğitim Dili İngilizce Olan Üniversitelerde, Güncel Dil ve İçerik İhtiyaçlarının Analizi Yoluyla Türkiye Bağlamı İçin Öğretim Elemanlarına Yönelik Yeni Bir Hizmet İçi Eğitim Modeli Geliştirilmesi" başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve 169 ODTU 2020 protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Prof.Dr. Mine MISIRLISOY

Başkan

Prof. Dr. Tolga CAN

Üye

Dr. Öğr. Üyesi Ali Emre TURGUT

Üye

Dr. Öğr. Üyesi Müge GÜNDÜZ

Üye

Doç.Dr. Pınar KAYGAN

Üye

Dr. Öğr. Üyesi Şerife SEVİNÇ

Üye

Dr. Öğr. Üyesi Süreyya Özcan KABASAKAL

Üye

APPENDIX-F: Ethical Approval by the Hacettepe University Ethics Boards and Commissions



T.C. HACETTEPE ÜNİVERSİTESİ REKTÖRLÜĞÜ Rektörlük

Sayı : E-35853172-300-00001949817
Konu : Merve BOZBIYIK (Etik Komisyon İzni)

3.01.2022

EĞİTİM BİLİMLERİ ENSTİTÜSÜ MÜDÜRLÜĞÜNE

İlgi: 10.12.2021 tarihli ve E-51944218-300-00001913120 sayılı yazınız.

Enstitünüz Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Doktora programı öğrencilerinden **Merve BOZBIYIK**'ın **Doç. Dr. Ufuk BALAMAN** ile **Doç. Dr. Hale Işık GÜLER** danışmanlığında yürüttüğü **“Eğitim Dili İngilizce Olan Üniversitelerde Çevrim İçi Sınıf Uygulamalarına Yakın Bir Bakış (A Closer Look at Online Classroom Practices in Emi Universities in Turkey)”** başlıklı tez çalışması Üniversitemiz Senatosu Etik Komisyonunun **28 Aralık 2021** tarihinde yapmış olduğu toplantıda incelenmiş olup, etik açıdan uygun bulunmuştur.

Bilgilerinizi ve gereğini rica ederim.

Prof. Dr. Vural GÖKMEN
Rektör Yardımcısı

Bu belge güvenli elektronik imza ile imzalanmıştır.

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APPENDIX-G: Declaration of Ethical Conduct

I hereby declare that...

- I have prepared this thesis in accordance with the thesis writing guidelines of the Graduate School of Educational Sciences of Hacettepe University;
- all information and documents in the thesis/dissertation have been obtained in accordance with academic regulations;
- all audio visual and written information and results have been presented in compliance with scientific and ethical standards;
- in case of using other people's work, related studies have been cited in accordance with scientific and ethical standards;
- all cited studies have been fully and decently referenced and included in the list of References;
- I did not do any distortion and/or manipulation on the data set,
- and **NO** part of this work was presented as a part of any other thesis study at this or any other university.

(22) /(05)/23

(Signature)

Merve BOZBIYIK

APPENDIX-H: Thesis/Dissertation Originality Report

22/05/2023

HACETTEPE UNIVERSITY

Graduate School of Educational Sciences

To The Department of Foreign Language Education

Thesis Title: DISPLAYS OF CO-CONSTRUCTED CONTENT KNOWLEDGE USING TRANSLANGUAGING IN EMI UNIVERSITY CLASSROOMS

The whole thesis that includes the *title page, introduction, main chapters, conclusions and bibliography section* is checked by using **Turnitin** plagiarism detection software take into the consideration requested filtering options. According to the originality report obtained data are as below.

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I declare that I have carefully read Hacettepe University Graduate School of Educational Sciences Guidelines for Obtaining and Using Thesis Originality Reports; that according to the maximum similarity index values specified in the Guidelines, my thesis does not include any form of plagiarism; that in any future detection of possible infringement of the regulations I accept all legal responsibility; and that all the information I have provided is correct to the best of my knowledge.

I respectfully submit this for approval.

Name Last name: Merve BOZBIYIK

Student No.: N19140568

Department: Foreign Language Education

Program: English Language Education

Status: ☐ Masters ☒ Ph.D. ☐ Integrated Ph.D.

Signature

ADVISOR APPROVAL

APPROVED

Assoc. Prof. Dr. Ufuk BALAMAN

APPENDIX-I: Yayınlama ve Fikrî Mülkiyet Hakları Beyanı

Enstitü tarafından onaylanan lisansüstü tezimin/raporumun tamamını veya herhangi bir kısmını, basılı (kâğıt) ve elektronik formatta arşivleme ve aşağıda verilen koşullarla kullanıma açma iznini Hacettepe Üniversitesine verdiğimi bildiririm. Bu izinle Üniversiteye verilen kullanım hakları dışındaki tüm fikri mülkiyet haklarım bend kalacak, tezimin tamamının ya da bir bölümünün gelecekteki çalışmalarda (makale, kitap, lisans ve patent vb.) kullanım hakları bana ait olacaktır.

Tezin kendi orijinal çalışmam olduğunu, başkalarının haklarını ihlal etmediğimi ve tezimin tek yetkili sahibi olduğumu beyan ve taahhüt ederim. Tezimde yer alan telif hakkı bulunan ve sahiplerinden yazılı izin alınarak kullanılması zorunlu metinlerin yazılı izin alınarak kullandığımı ve istenildiğinde suretlerini Üniversiteye teslim etmeyi taahhüt ederim.

Yükseköğretim Kurulu tarafından yayınlanan "Lisansüstü Tezlerin Elektronik Ortamda Toplanması, Düzenlenmesi ve Erişime Açılmasına İlişkin Yönerge" kapsamında tezim aşağıda belirtilen koşullar haricince YÖK Ulusal Tez Merkezi / H.Ü. Kütüphaneleri Açık Erişim Sisteminde erişime açılır.

- Enstitü/ Fakülte yönetim kurulu kararı ile tezimin erişime açılması mezuniyet tarihinden itibaren 2 yıl ertelenmiştir. ⁽¹⁾
- Enstitü/Fakülte yönetim kurulunun gerekçeli kararı ile tezimin erişime açılması mezuniyet tarihinden itibaren ... ay ertelenmiştir. ⁽²⁾
- Tezimle ilgili gizlilik kararı verilmiştir. ⁽³⁾

22/05/2023

Merve BOZBIYIK

"Lisansüstü Tezlerin Elektronik Ortamda Toplanması, Düzenlenmesi ve Erişime Açılmasına İlişkin Yönerge"

- (1) Madde 6. 1. Lisansüstü teze ilgili patent başvurusu yapılması veya patent alma sürecinin devam etmesi durumunda, tez danışmanının önerisi ve enstitü anabilim dalının uygun görüşü üzerine enstitü veya fakülte yönetim kurulu iki yıl süre ile tezin erişime açılmasının ertelenmesine karar verebilir.
- (2) Madde 6.2. Yeni teknik, materyal ve metodların kullanıldığı, henüz makaleye dönüşmemiş veya patent gibi yöntemlerle korunmamış ve internetten paylaşılması durumunda 3. şahıslara veya kurumlara haksız kazanç; imkânı oluşturabilecek bilgi ve bulguları içeren tezler hakkında tez danışmanının önerisi ve enstitü anabilim dalının uygun görüşü üzerine enstitü veya fakülte yönetim kurulunun gerekçeli kararı ile altı ayı aşmamak üzere tezin erişime açılması engellenebilir.
- (3) Madde 7. 1. Ulusal çıkarları veya güvenliği ilgilendiren, emniyet, istihbarat, savunma ve güvenlik, sağlık vb. konulara ilişkin lisansüstü tezlerle ilgili gizlilik kararı, tezin yapıldığı kurum tarafından verilir*. Kurum ve kuruluşlarla yapılan işbirliği protokolü çerçevesinde hazırlanan lisansüstü tezlere ilişkin gizlilik kararı ise, ilgili kurum ve kuruluşun önerisi ile enstitü veya fakültenin uygun görüşü üzerine üniversite yönetim kurulu tarafından verilir. Gizlilik kararı verilen tezler Yükseköğretim Kuruluna bildirilir.

Madde 7.2. Gizlilik kararı verilen tezler gizlilik süresince enstitü veya fakülte tarafından gizlilik kuralları çerçevesinde muhafaza edilir, gizlilik kararının kaldırılması halinde Tez Otomasyon Sistemine yüklenir

*Tez danışmanının önerisi ve enstitü anabilim dalının uygun görüşü üzerine enstitü veya fakülte yönetim kurulu tarafından karar verilir.

