

**Perceptions and Attitudes of Students towards Multilingual Practices in an EMI
STEM Classroom at Two Kazakhstani Universities**

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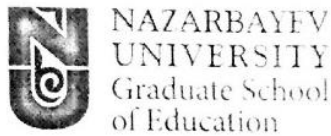
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Dear Kamila Aitzhanova,

This letter now confirms that your research project entitled: **“Perceptions and Attitudes of Students towards Multilingual Practices in an EMI STEM Classroom at Two Kazakhstani Universities”** has been approved by the Graduate School of Education Ethics Committee of Nazarbayev University.

You may proceed with contacting your preferred research site and commencing your participant recruitment strategy.

Yours sincerely

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Abstract

Perceptions and Attitudes of Students towards Multilingual Practices in an EMI

STEM Classroom at Two Kazakhstani Universities

Having emphasized higher education (HE) as a source for preparing internationally competitive human capital, Kazakhstan has internationalized its HE and introduced English as a medium of instruction (EMI) as part of its trilingual education policy, which implies providing tertiary education in Kazakh, Russian and English. This study aims at exploring undergraduate students' multilingual practices employed at one of the EMI science, technology, engineering and maths (STEM) course classrooms and their perceptions and attitudes towards them at two different universities in Kazakhstan. To understand the reasons behind their perceptions and attitudes, a qualitative interview-based case-study approach was employed to answer the following research questions that guided the study: 1. What is the language-in-education policy in Kazakhstan and why is it so? 2. What are the students' perceptions of multilingual practices in an EMI STEM and why? 3. What are the attitudes of students towards multilingual practices and why? To explore the central phenomenon, eight participants from biology majors were recruited from two Kazakhstani universities using a combination of homogenous, convenience and snowball sampling strategies. The findings of the study revealed that students held monolingual ideologies in both universities despite their actual practice of translanguaging (code-switching and translation) between languages for both formal and informal learning. Although university policies differ, students reported practicing the same multilingual practices due to such global processes as internationalization and globalization, as well as the national policy development and labor market requirements; but attitudes towards such practices vary depending on each individual's ideologies and beliefs about a language. Education stakeholders such as teachers and language policy makers may benefit from the

findings of this research in that these could enable them to adjust multilingual pedagogy and university language policies taking into account students' attitudes towards languages in teaching and learning in English-medium instruction courses.

Аңдатпа

Қазақстанның екі университетіндегі STEM сыныптарында ағылшын тілінде білім алатын студенттердің көптілді тәжірибелерге көзқарастары мен қабылдауы

Жоғары білімнің халықаралық деңгейде бәсекеге қабілетті адами капиталды дайындау көзі ретінде маңыздылығын атап көрсете отырып, Қазақстанда жоғары білім интернационалдандырылып, елімізде Үш тілді білім беру саясаты аясында ағылшын тілі оқыту құралы ретінде енгізіліп отыр. Ол қазақ, орыс және ағылшын тілдерінде білім беруді көздейді. Алайда, еліміздің ағылшын тілінде оқытатын университеттерінің студенттері іс жүзінде зерттелмеген. Сол себепті, осы зерттеу жұмысының мақсаты – Қазақстанның екі университетінде бакалавриат бағдарламасы бойынша STEM (яғни, ғылым, технология, инженерия және математика) курстарын ағылшын тілінде оқытын студенттердің көптілді тәжірибелерді пайдалануы, қабылдауы мен оларға деген көзқарасын анықтау болып табылады. Олардың негізінде жатқан себептерді түсіну үшін, зерттеу жұмысын бағыттаған келесі зерттеу сұрақтары қойылды: 1. Қазақстанның білім берудегі тіл саясаты қандай және оның себебі неде? 2. Студенттер ағылшынтілді білім беруде көптілді тәжірибелердің қолданылуын қалай қабылдайды және оның себептері неде? 3. Студенттердің көптілді тәжірибелерге деген көзқарасы қандай және неге? Бұл сұрақтарды зерттеу үшін екі университеттің биология мамандығынан сегіз қатысушы тандап алынды. Зерттеу нәтижелері студенттердің оқу үрдісінде ресми және бейресми оқыту үшін тілдер арасындағы транслингвизмнің (код ауыстыру және аударма) іс жүзіндегі тәжірибесіне қарамастан, екі университетте де студенттер монотілді идеологияларды ұстанатынын көрсетті. Университеттердің тілдік саясаттарындағы айырмашылықтарына қарамастан, студенттер

интернационализация және жаһандану сияқты глобальды процестерге, сондай-ақ ұлттық саясаттағы өзгерістер мен еңбек нарығының талаптарына байланысты бірдей көптілді практиканы пайдаланатынын хабарлады. Дегенмен, мұндай практикаларға деген көзқарастары әрбір студенттің өзіндік тіл туралы идеологиялары мен нанымдарына байланысты өзгеріп отырды. Тілдік саясатқа жауапты оқытушылар мен тұлғалар сияқты білім беру саласындағы мүдделі тараптар осы зерттеудің нәтижелерінен пайда табуы мүмкін, өйткені олар студенттердің ағылшынтілді курстарда білім алуы мен оқытуында тілдерге деген қатынасын ескере отырып, олардың көптілді педагогикасы мен университеттің тілдік саясатына тиісті түзетулерді енгізуге мүмкіндік береді. Сондай-ақ, Қазақстан Республикасында ағылшын тілінде оқытуды тиімді жоспарлау және енгізу үшін студенттер мен басқа да тұлғалар туралы көбірек зерттеулер жүргізілуі қажет.

Аннотация

Восприятие и отношение студентов к многоязычным практикам в СТЕМ

классах с английским языком обучения в двух казахстанских университетах

Подчеркивая важность высшего образования как источника подготовки конкурентоспособного на международном уровне человеческого капитала, высшее образование в Казахстане интернационализируется и английский язык внедряется как средство обучения в рамках трехязычной образовательной политики в стране, которая подразумевает предоставление образования на казахском, русском и английском языках. Однако студенты университетов с английским языком обучения в стране практически не изучены. Целью данного исследования является изучение многоязычных практик студентов бакалавриата, используемых на курсах СТЕМ (то есть науки, технологии, инженерии и математики), преподаваемые на английском языке, а также их восприятия и отношения к ним в двух университетах Казахстана. Чтобы понять причины, лежащие в их основе, были проведены качественные интервью со студентами, чтобы ответить на следующие вопросы, которыми руководствовалось исследование: 1. Какова языковая политика в образовании в Казахстане и почему? 2. Каково восприятие многоязычных практик в обучении науке на английском языке и почему? 3. Каково отношение студентов к многоязычным практикам и почему? Для изучения данного центрального явления исследования было набрано восемь участников с биологических специальностей из двух университетов. Результаты исследования показали, что студенты придерживаются мооязычных идеологий в обоих университетах, несмотря на их фактическую практику транслингвизма (переключения кода и перевода) между языками как для формального, так и для неформального обучения. Несмотря на различия в языковых политиках университетов, студенты сообщили, что используют

одни и те же многоязычные практики, которые связаны с такими глобальными процессами, как интернационализация и глобализация, а также с изменениями в национальной политике и требованиях рынка труда; но отношение к таким практикам варьируется в зависимости от идеологий и убеждений каждого студента о языке. Заинтересованные стороны в области образования, такие как преподаватели и лица, ответственные за языковую политику, могут извлечь выгоду из результатов этого исследования, поскольку они могут позволить им скорректировать многоязычную педагогику и языковую политику университета в соответствии с отношением студентов к языкам в преподавании и обучении на курсах обучения на английском языке. Так же необходимо проводить больше исследований о студентах и других лицах, вовлеченных в процесс обучения на английском языке для его эффективного планирования и внедрения в Республике Казахстан.

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Chapter 1: Introduction

The present chapter serves as a foundation to understanding of the rationale for the study by providing the necessary background, stating the research problem, identifying the purpose, and outlining the guiding research questions of the study. Moreover, the chapter covers the significance of the study and gives an overview of the study structure.

Background of the Study

English as a medium of instruction (EMI) in higher education institutions (HEIs) around the world has been gaining its popularity recently as part of the internationalization reform (Doiz, Lasagabaster & Sierra, 2013; Kaša & Mhamed, 2013; Soler-Carbonella, Saarinen & Kibbermann, 2017). EMI is defined by Macaro (2018) as the use of the English language in teaching of academic subjects in countries where population's first language (L1) is other than English. Additionally, where English is the medium of instruction (MOI) there is a frequent practice of the use of L1 inside the classroom, which is argued to make the learning of the content in L2 more comprehensible (Kirkpatrick, 2014). Thus, it is suggested that Kazakhstani students also engage in multilingual practices in their EMI courses.

The concept of translanguaging is central to this study as it denotes “dynamic multilingual practice” (Gu, 2014) and includes as well as goes beyond the practices of code-switching and translation (Garcia & Sylvan, 2011). These multilingual practices are used for meaning making by students drawing on their available resources (Canagarajah, 2011; Garcia, 2009; Garcia & Li Wei, 2014; Lewis, Jones & Baker, 2012).

Previous studies on multilingual practices pay particular attention to students' perceptions and attitudes towards the languages in EMI (Kim, Kweon, & Kim, 2017; Klapwijk & van der Walt, 2016; Teklesellassie & Boersma, 2018) as well as towards the

strategic pedagogical use of translanguaging in EMI classroom (Carstens, 2016; Rivera & Mazak, 2016). It was found that while some students in EMI consider multilingual practices to aid their learning and have favorable attitudes towards them, others hold monolingual ideologies about languages and believe that the use of L1 is rather an impediment in English-medium environment. Following Canagarajah (2011) there is a need for exploring students' views and attitudes towards multilingual practices, to then understand the possibilities of pedagogy in EMI. Moreover, the broader success of the language policy implementation is also influenced by attitudes of the community towards the languages (Baker, 1992). Hence, it is crucial to consider students' perceptions and attitudes towards multilingual practices in EMI programs of the country to be able to develop successful policies.

As for Kazakhstan, within the framework of trilingual education policy, the emphasis has been put on teaching science through the medium of the English language. The choice of the field of science, technology, engineering and mathematics (STEM) stems from what the First President of the country has addressed in his speech (Nazarbayev, 2007) that the language of science and other technological advances are related to the English language. Moreover, alongside the economic development, primary goal of the country is to raise a multilingual society, where Kazakh is the national language, Russian is the language of interethnic communication and English is the language of international communication.

Statement of Problem

There is a wide range on literature on English as a medium of instruction in higher education in the field of STEM internationally which documents the variety of multilingual practices that occur in a classroom. These practices are utilized by students and educators for meaning-making, clarification, explanation and other functions which

would enhance participation and effective communication in the classroom environment (Carstens, 2016; Lewis et al., 2012; Mazak & Herbas-Donoso, 2015). However, there is a lack of evidence on Kazakhstan though multilingualism in the country is present in education, especially taking into account the bilingualism of the majority of Kazakhstani society and recently implemented trilingual education policy. Moreover, as the lack of literature on English-medium education in the region suggests, Kazakhstan is the only country in the Central Asia which implements EMI in higher education, therefore researching multilingualism in higher education would provide a base for the region to design their language policies for EMI education. However, the Kazakhstani studies on the topic of language practices in EMI (Belova, 2017; Karabay, 2017; Ospanova, 2017) lack evidence on students' perceptions of multilingual practices in EMI STEM classroom and attitudes towards them.

In this study, undergraduate biology students' perceptions and attitudes towards multilingual practices that they engage themselves with in the English-medium STEM classrooms at two universities in Kazakhstan is regarded. The rationale for choosing two higher education institutions for this research is explained by the fact that their language policies differ. Thus, one university has English as a language of instruction throughout all departments and programs, whereas another university provides limited number of courses in English for those who enroll to polylingual groups of the cohort.

Therefore, there is a need for research to determine how students perceive multilingual practices used in their EMI STEM classrooms and how different are their attitudes depending on their universities' language policies. Moreover, for further success of the development of EMI in Kazakhstan to reach ambitious goals, such differences might be useful to take into account to properly organize teaching and learning processes at higher education level.

Purpose of the Study

The purpose of this study is to explore in-depth the students' perceptions of and attitudes towards multilingual practices in EMI STEM settings at two Kazakhstani universities with different language policies in the case of senior year undergraduate biology major students.

Research Questions

The following are the research questions that guide this study:

1. What is the language-in-education policy in Kazakhstan and why is it so?
2. What are the students' perceptions about multilingual practices in EMI STEM classrooms and why?
3. What are the attitudes of students towards multilingual practices and why?

Significance of the Study

The research on university students' perceptions of and attitudes towards multilingual practices, which take place in two Kazakhstani universities, may serve a foundation to understand the extent to which multilingual practices could be beneficial for learning in science classrooms and how English is implemented as a medium of instruction at HEIs in Kazakhstan. This particular study strives for adding to the literature on EMI higher education of Kazakhstan by learning about students' experiences with the language use within English-medium courses. Thus, the results of the study may be of importance for policy makers so that they take into consideration key stakeholders' voices when planning and developing the English-medium programs. Therefore, the results of the study may contribute to effective planning of the English-medium instruction at universities taking into account current teaching and learning practices. Moreover, educators involved in teaching STEM subjects through the medium of the English language might also benefit

from the results of this study, as it may point to strengths and weaknesses of the current pedagogy in EMI. Additionally, the current study sheds some light on students' reflections and views about the use of languages in the English-medium courses and fills in the gap in the research about multilingualism in the context of Kazakhstan. Besides, this research may serve as a foundation for future research on multilingualism in STEM in the context of Kazakhstan.

Structure of the Study

The first chapter provides an overview of the background information about the topic of the research, indicates the research problem and its purpose as well as considers the significance of the current study. The second chapter reviews relevant literature on the topic of the research. Specifically, existing multilingual practices are defined and explored from the wide range of contexts. Next, previous empirical studies are reviewed on the matter of perceptions and attitudes of students towards multilingual practices with the focus on English-medium scientific settings. The final section of the second chapter elaborates upon the context of Kazakhstan and reviews previous research on the language use and attitudes in the country. The third chapter outlines the methodology applied in the current study carefully describing the research design, research sampling and sites, data collection instruments and procedures, data analysis approach and ethical considerations. The following fourth chapter presents four main findings of the research that derive from the semi-structured interviews with participants: the actual multilingual practices in EMI STEM, students' perceptions of multilingual practices as a support and as a hindrance to learning, and attitudes towards multilingual practices of students. The fifth chapter discusses these findings in relation to literature summarized in the second chapter of this study. Conclusions, limitations, implications and recommendations for further research and practices are discussed in the final chapter.

Chapter 2: Literature Review

The chapter reviews the literature to contextualize and better understand the main concepts relevant to the current research on students' perceptions and attitudes towards multilingual practices in EMI STEM university classrooms. First, it is important to identify what multilingual practices occur in English-medium classrooms in different contexts around the world and in Kazakhstan, as well as their functions. Then, attention is given to previous studies that examined students' perceptions and attitudes on multilingual practices in the content classrooms taught in English. Finally, it is crucial to contextualize the research providing historical background of Kazakhstan and current language policy of the country.

Multilingual Practices in English-Medium Classroom

Traditionally it has been reported that English as a medium of instruction has been gaining its popularity as an asset of internationalization of higher education process which has spread widely in Europe and globally (Doiz, Lasagabaster & Sierra, 2013; Kaša & Mhamed, 2013; Soler-Carbonella, Saarinen & Kibbermann, 2017). The 'working definition' of EMI was provided by Macaro (as cited in Macaro, 2020) that it is "The use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language (L1) of the majority of the population is not English" (p. 263). Macaro, Curle, Pun, An and Dearden (2018) were the first to systematically review EMI in higher education, particularly with the focus on improvement of the language and learning of the content. Concerns were raised around several aspects of the EMI that authors needed to consider for their in-depth analysis of its current state: content teachers' and students' language proficiency, institutional English language support provision, variety of English used in teaching, and consequences of Englishization of education (Macaro et al., 2018). The review has demonstrated that there

is not only a lack of empirical studies on EMI in Kazakhstani context, but also that globally there is a need to investigate whether content is delivered effectively in English-instructed classrooms. Kirkpatrick (2014), similarly, discussed concerns about EMI in education, and noted that where English is the medium of instruction (MOI) there is a frequent practice of the use of L1 inside the classroom, which makes the learning of the content in L2 more comprehensible.

Recent evidence from literature suggests that in a multilingual society two or more languages are usually used simultaneously in education, however, may not be explicitly reflected in the language-in-education policy. In these contexts, students and educators both intentionally and unintentionally practice multilingualism through such linguistic practices as translanguaging, co-languaging, code-switching, code-meshing, translation from one language to another and other “languaging” (Li & Zhu, 2013) practices. These multilingual practices emerge from literature on languages within EMI content classrooms in multilingual environment of Ukraine (Goodman & Lyulkun, 2010), Hong Kong (Gu, 2014), South Africa (Klapwijk & Van der Walt, 2016; Makalela, 2016; Mbirimi-Hungwe, 2019), United Kingdom (Lewis, Jones & Baker, 2012; Li & Zhu, 2013), Ethiopia (Teklesellassie & Boersma, 2018), Puerto Rico (Rivera & Mazak, 2016; Mazak, Mendoza & Mangonéz, 2016; Rivera & Mazak, 2019), United Arab Emirates (Carroll & van der Hoven, 2016; Palfeyman & Al-Bataineh, 2018), India (Groff, 2016), Malaysia (Mokhtar, 2015), United States of America (Allard, 2017; Poza, 2018), Sweden (Karlsson, Larsson & Jakobsson, 2018; Kuteeva, 2019), Turkey (Eser & Dikilitas, 2017) and South Korea (Kim, Kweon & Kim, 2017).

In recent years, there has been an increasing amount of literature on the role of the first language in the English-medium classroom. These studies suggest that students’ L1 and their linguistic repertoires help them make meaning of the content provided in English,

understand conceptual knowledge and communicate their thoughts effectively (Allard, 2017; Blair, Haneda, & Bose, 2018; Carroll & van den Hoven, 2016; Caruso, 2018, Mazak & Herbas-Donoso, 2015). These and other scholars (Canagarajah, 2011; Creese & Blackledge, 2010; Garcia, 2009; Lewis, Jones & Baker, 2012, Makalela, 2016) refer to such multilingual practices as *translanguaging*. For the current thesis research, it is particularly important to take into account the notion of translanguaging as “a dynamic multilingual practice” (Gu, 2014) and that it includes as well as goes beyond above mentioned concepts of code-switching and translation. In addition, García and Sylvan (2011, p. 389) hold the view that the practice of translanguaging “differs from both of these simple practices in that it refers to the process in which bilingual students make sense and perform bilingually in the myriad ways of the classroom—reading, writing, taking notes, discussing, signing, and so on”. Moreover, these multilingual practices are used for meaning making by students drawing on their available resources (Canagarajah, 2011; Garcia, 2009; Garcia & Li Wei, 2014; Lewis, Jones & Baker, 2012). Baker (2011) discussed potential advantages of using translanguaging in the classroom among which is the fact that it promotes a deeper understanding of the subject matter and helps to improve a weaker language. However, there is still a debate about translanguaging being a different practice from code-switching and translation. Although translanguaging and code-switching definitions by Li Wei (2011) and Garcia (2009) have much overlap (Lewis et al., 2012), there is an ideology of language separation associated with code-switching, whereas translanguaging acknowledges flexibility in language use. Translation, in its turn, is similar to code-switching as it is also about language separation and the use of the stronger language to work with. Though translation also has similarities with what was defined as translanguaging, Lewis et al. (2012) claim that there is still much emphasis on one language development. However, later García and Li Wei (2014) define

translanguaging as “multiple discursive practices in which bilinguals engage in order to make sense of their bilingual worlds,” and mention that it is “the discursive norm in bilingual families and communities” (p. 23). Similarly, Sayer (2013) believes that it is better understood as label that describes bilingual discourse practices in which students and teachers engage. These definitions describe what multilingual practices central to the current research represent in a classroom.

Accordingly, in their paper Blair et al. (2018) take multilingual turn and argue for importance of shifting towards heteroglossic view of languages and thus to open the space for students to draw on their multilingualism. They showed that EMI is not limited to English-only instruction, but takes many different forms depending on individual teachers, learning environment and demographics. Thus, various meaning-making ways are employed by EMI participants, meanwhile English is still a language of instruction. Similarly, Allard (2017), in the study of secondary school context, found that translanguaging was the main and crucial discursive tool that both teachers and bilingual students utilized. Even though texts were in English and questions were asked in English too, students were allowed to give answers in their L1, Spanish. This hybrid linguistic practice's function was to allow access to content for students and make meaning of the knowledge. Moreover, the author claims that such multilingual practices increased participation rather than English-only policy would. This view was supported by Caruso (2018) who observed that multiple translingual practices that occurred in the university classroom showed that English was used as a MOI, but students referred to their first languages for discussion, explanation and meaning making. It was concluded that translanguaging was adopted by both teachers and students as a strategy to achieve better content understanding and co-construct knowledge (Caruso, 2018). Thus, students used key scientific terms in English while discussing in another language, used translation

across languages, and used their multilingual repertoire as a resource to negotiate meaning. Thus, the studies on translanguage in education mainly concentrated on the use of English and another language depending on the context (Creese & Blackledge, 2010; Lewis et al., 2012), however, studies on tertiary education are relatively few (Carstens, 2016; Carroll & Mazak, 2017; Mazak & Herbas-Donoso, 2015). Together, these studies outlined the use of translanguage as a pedagogical and learning strategy but there seems to be a lack of studies on students' perspectives on such a multilingual practice and their attitudes towards it. Therefore, the current thesis research aims to fill in the gap by exploring students' views and opinions.

Perceptions and Attitudes Towards Multilingual Practices in EMI

Though used interchangeably in the literature the concepts of perceptions and attitudes have a slight difference in the current research. Common to the field of psychology, perceptions may be associated with “feelings, beliefs, experiences, preferences, mental images, values, concepts, heuristics, stereotypes, and knowledge (amongst others)” (Lara Herrera, 2015, p. 109). Lara Herrera (2015) uses the definition of Da Silva that perception is “a physical and intellectual ability used in mental processes to recognize, interpret, and understand events” (p. 109). Such definition also suits the purpose of the current study about multilingual practices. Attitudes seem to be more complex, and come from psychology, too. Attitudes towards multilingual practices stem from one's positive or negative (Muthanna & Miao, 2015) and favorable or unfavorable reactions towards language (Lasagabaster & Sierra, 2009), and are defined as “any affective, cognitive, or conative index of evaluative reactions toward different languages or their speakers” (Kircher, 2016, p. 241). More specifically, attitudes explain patterns consistent to human behavior (Baker, as cited in Muthanna & Miao, 2015, p. 60). Thus, in the current research, the concept of attitudes is used to explore how students feel about the use of

multilingual practices in their EMI programs. Additionally, Lasagabaster (2002) identifies two types of attitudes, namely instrumental and integrative. Whereas the first type represents “utilitarian motives” (Lasagabaster, 2002, p. 1694) to achieving social goals or pass examinations, the integrative attitudes reflect one’s desire to be identified with a particular language and its culture. Such categorization is related mostly to languages, especially to the field of second language acquisition.

Nevertheless, much of the current literature on multilingual practices pays particular attention to students’ perceptions and attitudes towards the languages in EMI (Kim, Kweon, & Kim, 2017; Klapwijk & van der Walt, 2016; Teklesellassie & Boersma, 2018) as well as towards the strategic pedagogical use of students’ first language in EMI classroom (Carstens, 2016; Rivera & Mazak, 2016). Having identified the importance of attitudes towards languages, Baker (1992) noted that its results indicate “current community thoughts and beliefs, preferences and desires” (p. 9) and therefore influences the success of language policy implementation. Moreover, Canagarajah (2011) notes that in order to understand the possibilities for pedagogical success attitudes to translanguageing need to be studied, and students’ views in particular. Additionally, what literature suggests is that attitudes towards multilingual practices are influenced by ideologies people hold about languages (Gu, 2014; Kuteeva, 2019; Palfeyman & Al-Bataineh, 2018). Language ideologies are “cultural systems of ideas and feelings, norms and values, which informs the way people think about languages” (Horner & Weber, 2017, p. 16). In their book authors discuss closely some of interconnected ideologies of language hierarchy, standard language ideology (Milroy, 2001; Milroy & Milroy, 1999), the one nation - one language ideology (Piller, 2015), the mother tongue ideology, and ideology of language purism (Horner & Weber, 2008). As can be noticed, these ideologies view languages as separate entities, and complement each other. However, as noted by Kroskrity (2007) they are

crucial in understanding one's perceptions of language and discourse. Besides, translanguaging itself is an ideological concept, and it reflects the shift from diglossia to heteroglossia, from language separation to language integration, and from subtractive perception of bilingualism to additive (Lewis et al., 2012).

Studies that took quantitative approach in order to examine attitudes of students towards languages have revealed that the majority of students were in favor of the use of the first language in English-medium classrooms. Thus, the study of Teklesellassie and Boersma (2018) in Ethiopia investigated teachers' and freshman students' attitudes towards the use of local language (Amharic) in code-switching in EMI content-classroom at the university. Having collected data through a quantitative survey, authors found that both groups of participants were in favor of using Amharic in EMI. This practice also proved to enhance students' understanding of the content regardless of their language background and gender. Students of this study have shown positive attitudes towards attending classes where a teacher shifts from English to Amharic. Another reason to favor the use of local (home) languages in EMI was demonstrated in the Klapwijk & van der Walt's (2016) study of South African students, who attributed value to the maintenance of their languages in education where English is the medium of instruction. Similarly, South Korean students in the study of Kim, Kweon, and Kim (2017) reported to be lacking English proficiency and preferred their L1 to be used in explanation of complex materials and, in contrast to "English-plus multilingualism" model in Klapwijk and van der Walt's (2016) study, suggested to use English in addition to their first language. However, it is important to note that proficiency has not been clearly defined in the literature on EMI, therefore is referred to in general terms (Macaro et al., 2018).

Another perspective on the use of languages in EMI courses was revealed in the qualitative study of two UAE university students' attitudes towards English and Arabic

(Palfeyman & Al-Bataineh, 2018). Unlike previously mentioned studies, this one took a closer look at students' language uses. It was found that the student who used Arabic in her daily communication in the family, which influenced her attitudes towards the use of Arabic in EMI, seemed to value Arabic for cognitive and proficiency reasons, in which she believed comprehension was deeper and it was possible to express oneself fully.

Interestingly, in the Ukrainian context, students preferred using Russian when they lack vocabulary while learning, faced difficulty in understanding, during discussions, and before or after the break time, whereas Ukrainian was rarely used for pedagogical purposes in the classroom (Tarnopolsky & Goodman, 2014). In contrast to Blair et al. (2018), Palfeyman and Al-Bataineh (2018) have demonstrated that, despite the common practice of translanguaging, the student held monoglossic view of languages, thus, was against such multilingual practice as she considered it a disrespect towards the languages. In the earlier study on the UAE context from the viewpoint of interviewed experienced stakeholders, Carroll and van den Hoven (2016) found that even though professors in EMI were expected to teach in English, they were not monitored. Therefore, participants confirmed that Arabic professors were using Arabic in their lessons and explained that the use of L1 is the way to ensure students' comprehension rather than using English.

However, similarly as documented by Creese and Blackledge (2010), using Arabic was perceived as a shame or guilt by teachers, but was believed to make students 'happy' and help learn quicker, which in turn would guarantee them positive and high evaluations by students at the end of the content-course. Even though teachers are not central to the current thesis research, these views open space for interpretation of attitudes towards the languages in EMI.

Translanguaging as a multilingual practice was widely utilized by students in English-medium content courses and was generally perceived as a resource (Hult &

Hornberger, 2016; Ruiz, 1984) as was shown above. However, there are also views that the use of the first language hinders learning for students and is not acceptable in the science classroom, therefore, viewed as problem (Ruiz, 1984) in the English-medium classroom. Such contrasting views were held by the students in Africa in the study of Carstens (2016), which revealed that despite the majority of students agreed that it assisted the understanding of the conceptual knowledge, made possible to better express their own conceptual understanding, improved their proficiency and confidence in using the English language, others held views that there is still a lack of specialized vocabulary in L1. Moreover, Carstens (2016) found that translanguaging was not accepted for science classrooms since English was considered as the language of scientific communication. In contrast, Mazak and Herbas-Donoso (2015) explained that the professor in their study used translanguaging as a tool to enhance students understanding of scientific concepts through the medium of L1 because “understanding science often requires understanding a set of interconnected concepts that demands specific vocabulary in order to comprehend these interrelationships” (p.708). Interestingly, Puerto Rican students in Rivera and Mazak’s (2016) study reveal that although students were accepting of translanguaging of their professor in the classroom, some of the respondents were certain that this was unprofessional. Such a view could be explained by personal ideologies students hold. Thus, in another qualitatively approached study, Gu (2014) looked at how language ideologies of students influence students’ linguistic behavior and attitudes in a university in Hong Kong. It was found that Chinese students expressed their concerns regarding the alternation between English and Cantonese of their peers claiming that language purity of English should be kept, code-switching practice is inappropriate in English classroom and it’s detrimental to their English language proficiency. Another mainland Chinese participant claimed that Cantonese-English code-switching is caused by historical heritage

of Hong Kong and expressed monoglossic ideology of language separation. Moreover, code-switching using English was considered as pretentious and a sign of showing off, as well as a loss of Hong Kong identity (Gu, 2014). In the same vein, another ideology was found in the study on Swedish EMI students whose conceptualizations of English in their studies “show that translingual practices are compatible with standard language ideologies”, because they considered British English, taught to them in school, to be more appropriate and formal, especially academically-wise (Kuteeva, 2019, p. 298). Therefore, it can be concluded that perceptions and attitudes towards multilingual practices in English as medium of instruction courses may be influenced by language ideologies students hold.

Language Use and Language Attitudes in Kazakhstan

In order to understand how languages are used in the Republic of Kazakhstan it is first important to get familiarized with the context. Therefore, this section aims to give an overview of the history of Kazakhstan, which led to the spread of certain languages and oppression of others before and after gaining its independence, and of policies that shape society’s linguistic repertoires, the linguistic landscape as well as languages in education. Moreover, current educational reform is also presented in this section for the purpose of contextualizing the central phenomenon of this study, i.e. multilingual practices in EMI education.

The Republic of Kazakhstan is situated in Central Asia, shares borders with 5 countries such as Russia, China, Kyrgyzstan, Uzbekistan and Turkmenistan and is one of the former Soviet Socialist Republics. The Soviet Union past in Kazakhstan now is reflected in a diversity of languages spoken in the country. One of the main studies conducted on the language use and attitudes among Kazakhstani population was the research of Smagulova in 2008, which also gives a careful insight of language policy development in the country. Due to Russification policy of the USSR which started in

1938 (Smagulova, 2008), a significant majority of local Kazakh population was unable to communicate in Kazakh (Kuzhabekova, as cited in Kuzhabekova, 2019). During that period, majority of schools and educational institutions with Kazakh medium instruction were closed, which made the population shift to Russian-taught education with Soviet identity and values. This led to the fact that Kazakhstan's linguistic situation is one of the complex ones since in the very beginning of the independent history the Russian language was widely spoken by the majority of ethnic Kazakhs (Kuzhabekova, 2019). This was caused not only due to the mentioned policy of the spread of the Russian language, but also because of the mobilization of labors to work on the "virgin lands" (*tselina*) of the Kazakhstan as part of the industrialization processes. Moreover, under the Stalin's authoritarian regime, some nations were sentenced to be sent to the lands of Kazakhstan. These events have shaped today's linguistic situation of the country, where apart from Russian population there are Germans, Koreans, Poles and others (Smagulova, 2008).

After gaining its independence in 1991, it was noted that Kazakhstan has been attempting to revitalize Kazakh language which was later called as "kazakhization" process (Fierman, 2006; Smagulova, 2008). Being identified as a sole state language of Kazakhstan (Constitution of the Republic of Kazakhstan, Article 4), the Kazakh language proficiency became required for governmental positions. Moreover, all the paperwork in the state workplaces had been transferred to Kazakh language, which was challenging due to the population's lack of literacy skills in Kazakh (Smagulova, 2008). To improve the situation, such measures as standardization and corpus planning, and an active promotion of Kazakh language in media were taken by the government. Despite the active promotion of Kazakh, the Russian language still remains *de facto* and *de jure* an official language of the country. Education in Kazakhstan has been provided in two main languages of instruction namely Kazakh and Russian, and some children are receiving secondary

education in Uzbek, Uyghur, Tajik, Ukrainian, German, Turkish and Tatar. In higher education, however, any department was divided into Kazakh-medium and Russian-medium only (Smagulova, 2008). Additionally, English-medium instruction has been introduced in the course of internationalization of higher education (Knight, 2013) through signage to the Bologna Declaration (MoES, 2010) and promotion of English as the language of international communication within the course of Trilingual Education development (MoES, 2015). As regards the trilingual policy, Mehisto, Kambatyrova and Nurseitova (2014) note that Kazakh, Russian and English are “presented from a monoglossic perspective, as three separate entities” (p. 172). It also should be noted that since the country’s independence, special attention is given to the development and spread of English at the state level in education, as evidenced by the legal documents (laws “On Education” and “On languages in the Republic of Kazakhstan”, the “State Program on the Development and Functioning of Languages in Kazakhstan for 2011-2020”, the “State Program for Development of Education of the Republic of Kazakhstan for 2011-2020”) (Akynova, Zharkynbekova & Agmanova, 2014, p. 229). Such an emphasis on the development of languages separately implies that monolingual approach has been taken by policy implementors in education. At the same time, the 2011-2020 State Program on the Development and Functioning of Languages in Kazakhstan (2011) acknowledges the need to preserve the languages of ethnic groups that live in Kazakhstan. However, they are not further given attention in trilingual policy since it promotes the development of Kazakh, Russian and English.

As for the previous studies on the central phenomenon of this research, there is an evidenced lack of literature specifically on this topic. However, to date there have been various studies that approached the issue from the perspective of the use of languages among youth (Akynova et al., 2014; Belova, 2017; Kuzhabekova, 2019), attitudes towards

languages in the country (Smagulova, 2008), and students' perceptions and practices with code-switching in EMI program (Ospanova, 2017).

Findings of these studies suggest that although Kazakh and Russian languages are used often simultaneously in everyday speech, there is still a division in their use between different domains. Thus, Kazakh is reported to be used predominantly in families (Kuzhabekova, 2019) though it was observed to gain its prestige a decade earlier in other domains (Smagulova, 2008). It was concluded by Smagulova (2008) that population's general ideology about languages shift to multilingualism and they recognize the need for promotion of English and Kazakh equally with Russian. However, today the question of Kazakh proficiency is still relevant. Kuzhabekova (2019) raised her concern about the development of trilingual education because if there is a lack of Kazakh-speaking teachers that can teach through the medium of English, students in Kazakh-medium sector would be disadvantaged in learning the content matter due to possible miscomprehension.

Nevertheless, university students in Kazakh cohort studying in English negatively perceive the use of Kazakh, though sometimes rely on code-switching for meaning-making, explanation and clarification (Ospanova, 2017). Another reason indicated in the literature was the fact that there is a lack of equivalents of some words therefore they can be inserted in English in the Kazakh (Akynova et al., 2014). However, it is acknowledged that English-medium instruction can be seen as a threat to the development and the status of the local languages, i.e. Kazakh (Seitzhanova, Plokhikh, Baiburiev, & Antonina Tsaregorodtseva, 2015). Such a tendency to use certain languages in certain domains is termed as 'lifestyle diglossia' Saxena (2014). The related notion of 'critical diglossia' is one of the ways to regard language policy and planning of a country and a diglossic relationship between official languages and English in Kazakhstan. Thus, from the context of Kazakhstan and from further findings discussed in the Chapters Four and Five, it is

evident that Kazakh, Russian and English are generally claimed to be used separately:

Kazakh – in families, Russian – in the society, English – for education.

Chapter 3: Methodology

This chapter provides a methodological basis for this research project which aims to explore perceptions and attitudes of students towards multilingual practices in science, technology, engineering and mathematics settings where English is a medium of instruction (EMI STEM) at two universities in Kazakhstan. The research questions that lead this study are as follows:

1. What is the language-in-education policy in Kazakhstan and why is it so?
2. What are the students' perceptions about multilingual practices in EMI STEM classrooms and why?
3. What are the attitudes of students towards multilingual practices and why?

Research Design

To answer these questions, qualitative research design was chosen to gain an insight into multilingual language use in EMI STEM and explore students' perceptions and attitudes towards their practices. According to Creswell (2014), this type of design helps to explore the central phenomenon and develop a detailed understanding of it (p. 30), and it complements the purpose of the current research. This understanding comes from a small number of participants so that their views are carefully regarded and analyzed. The central phenomenon in this research is multilingual practices of students that need exploration through qualitative research design since they differ from individual to individual and from setting to setting (considering the two universities in this research).

The study follows a case-study approach which, as defined in Cohen, Manion & Morrison (2017, p.376), is characterised by an in-depth study of one setting and it has many contextual levels from local to national, moreover, it “requires more than one tool for data collection and many sources of evidence” (Cohen et al., 2017, p. 376). Thus, this thesis research investigates the central phenomenon in-depth through interviews with a

small number of participants and reviews literature and policy documents for evidence, so that to help readers understand the relationship between the abstract principles and existing practices (Yin, as cited in Cohen et al., 2017). It might help to inform policy makers (Bassey, as cited in Cohen et al., 2017) about existing practices within STEM education with English as a medium of instruction, which has been introduced in Kazakhstan for over a decade now.

Thus, this study employs a case study approach to allow the investigation of the perceptions and attitudes of the students towards the central phenomenon. To date various studies have utilized surveys and observations, in addition to interviews. Since the scope of the current research and time provided for it have been limited, document analyses and interviews were used as the main tools for collecting data.

Research Site

There are two sites chosen for this case study research, i.e. two higher education institutions in Kazakhstan. They were chosen on the basis of the similarity that they had which is the provision of biology courses in EMI. However, the difference, which constitutes the basis for comparison, is that the University 1 is entirely taught through the medium of English, whereas the University 2 is multilingual in terms that it has cohorts instructed in Kazakh, Russian and English. A few groups that choose to study in EMI are called “multilingual (polylingual) groups”.

The University 1 is by definition a multilingual higher education institution that offers courses in English as well as requires all instruction, assignments and final projects to be entirely in English. Teaching faculty at this site is also multilingual, usually coming from abroad.

The University 2 offers courses in various majors in Kazakh, Russian and English depending on the cohort that students chose in the beginning of their studies, since the

curriculum at this HEI is fixed particular to a year and a semester of studies. As my experience as a student at this university demonstrated, the faculty is usually local and has been provided special trainings in order to be able to teach in English, particularly science subjects. Those who implement EMI in their courses receive additional 30% to their regular salary ("Педагогам будут начислять зарплату по новым коэффициентам с 1 июня", 2019). There is a small number of multilingual groups within each university faculty (major), because the main languages of instruction are Kazakh and Russian.

The choice of these two universities as research sites is justified by the fact that they both have biology major courses taught in English and are both familiar to the researcher. Moreover, these two contexts represent the implementation of EMI policy to different extents, such as one being an EMI university and the other having EMI groups. Analysis of how EMI is realised in different institutional contexts will give more in-depth understanding of its condition in Kazakhstan and implications for further development. However, the number of universities was limited due to the scope of the research and a short period of time assigned for data collection for the current thesis research.

Sampling

The target participants for this study are senior year biology major students of undergraduate (bachelor) programs at two universities in Kazakhstan. Only one subject from STEM was chosen due to limited scope of the research and time constraints as well as the purpose of in-depth exploration of the case. Participants were recruited through a combination of homogenous, convenience and snowball purposeful samplings. In purposeful sampling individuals and sites are selected intentionally to better explore the central phenomenon (Creswell, 2014, p.228). Criteria for selecting the subjects were as follows: bilingual senior year students studying biology in English. Since the researcher is

familiar with these universities, participants were contacted through acquaintances at these HEIs and were invited for 20-30 minute interviews. Further, participants were asked to recommend other respondents that suit the requirements for this study (Creswell, 2014, p.231). Hence, the combination of various samplings was utilized to recruit participants. Initially, to ensure the diversity and gender balance, two male and two female students from each university were invited, yet, the final examinations period and then winter break schedule overlapped with data collection, hence the number of male participants who was available and agreed to participate was only one. Thus, overall seven female and one male participants were interviewed.

Having received contact details from students who were also participants of this research, other students were sent an invitation along with the consent forms in three languages so that they could familiarize themselves with the research details as well as consider the invitation based on their willingness and availability.

Table 1 Participants

Participant (pseudonym)	University	Languages spoken			
		At home	With friends	In the classroom	Other
Aida	University 1	Kazakh, Russian	Russian, Kazakh	English	German
Maira	University 1	Russian	Russian, Kazakh	English	
Miras	University 1	Kazakh, Russian	Russian, Kazakh	English	
Dariya	University 1	Kazakh, Russian	Russian, Kazakh	English	
Samal	University 2	Kazakh, Russian	Russian, Kazakh	English, Kazakh	French
Elmira	University 2	Kazakh, Russian	Russian, Kazakh	English, Kazakh	French
Zhanel	University 2	Kazakh, Russian	Russian, Kazakh	English, Kazakh	
Nurila	University 2	Kazakh, Russian	Russian, Kazakh	English, Kazakh	

All participants' names have been replaced with pseudonyms.

Data Collection Instruments

For the purpose of this research and efficiency of its approach, i.e. case study, analysis of documents in the form of a review of other studies and in-depth interviews with students were the main tools for collecting data. Major set of data was collected through semi-structured one-to-one interviews with recruited participants.

To answer the first research question, which asks what language-in-education policy is in Kazakhstan and why, this study employed the method of thorough document review and resources on the Kazakhstani context explaining its background, main reforms concerning language in education and current state of the policies. These were outlined in the section of Literature Review chapter, and are vital for the analysis and understanding of other two research questions.

The second and the third research questions were explored through in-depth interviews with a limited number of participants. A small sample was chosen because one-to-one interviews are time-consuming and, at the same time, because they permit participant elaborate on their answers (Creswell, 2014). The interview questions emerged based on literature review on perceptions and attitudes of students towards multilingual language use such as translanguaging, code-switching and translation. They were grouped according to topics they cover in order to reveal a) language repertoires of participants and language use practices in their studies, and b) their perceptions of such practices and attitudes towards them.

The interviewees were asked open-ended questions so that they can best reflect and voice their experiences and views (Creswell, 2014, p.240). Some of the reviewed literature related to the perceptions and attitudes towards languages also employed this type of data collection tool in order to “solicit” participants views and so that they “could provide more information” (Mbirimi-Hungwe, 2019, p.19). As explained by Gu (2014), in-depth

interview approach is adopted “to ensure developmental understanding of the year four students’ experiences in the university through their retrospective accounts” (p. 314) and they “offer particular representation or account of an individual’s views or opinions” (Byrne, 2004, p. 182).

Data Collection Procedures

Having developed the Interview Protocol (Appendix A) with the help of literature review, interview questions were piloted among fellow researchers of the cohort, and have been shaped after revision and feedback. Only after this stage, students were contacted via Whatsapp application. First, acquaintances of the researcher at two universities were contacted and were asked whether they and their fellow biology students, who fit into the characteristics of the research sample, would like to participate in this study. Once others agreed to share their telephone number, they were sent Consent Forms in 3 languages (Appendix B) and a short informal welcoming explanatory message by the researcher herself. Provided consent is obtained, interview date, time and venue were negotiated.

On the day of the interview two copies of a consent form in preferred language were signed by the participant, one of which was given back for an interviewee to keep. Moreover, preferred language of an interview was also identified, however participants were assured to feel free to use any language to answer the questions during the interview. Before the start, an assent to record the whole duration of the interview was also obtained, then the interview took place. Interviews were 15 to 25 minutes long which allowed participants to give sufficient answers and share their perceptions and attitudes towards the central phenomenon of the research. Each interview started off with general questions on linguistic repertoires of students and their language use in their studies according to pre-prepared interview protocol. Furthermore, additional questions were asked from participants depending on their experiences and perceptions, such probes were noted in the

interview protocol since they were semi-structured interviews which by definition allow “to acquire unique, non-standardized, personalized” (Cohen et al., 2017, p.509) view of participants towards the main object of the research, i.e. multilingual practices. In the end, participants were thanked for their time, and, in the case of face-to-face interviews were given a cinnamon roll as a small treat.

One of the main challenges faced in the course of data collection for this research was the fact that the schedule overlapped with final examinations period due to which some of the respondents moved their dates forward and winter break which made the researcher to conduct some of the interviews via WhatsApp audio call because participants left to their hometowns. Regardless, interview quality was not affected and followed the same ethical procedures.

Data Analysis Approach

Once collected, interview data was transcribed through otranscribe.com free online software. Each interview was thoroughly re-listened to make sure nothing was missed out during the transcription process. Transcribed data (Appendix C) was read through a couple of times and coded manually according to emerging topics such as existing multilingual practices of students, reasons for them to occur, perceptions of them by students and attitudes towards these practices. The last two codes contain answers to research questions number two and three. Moreover, since the researcher experienced studying at both university sites of this study and is a part of the multilingual Kazakhstani society, the triangulation between document analysis, interview data and researcher’s limited observations was applied to data analysis for a more comprehensive understanding of the central phenomenon.

Ethical Considerations

Prior to commencing the study ethical clearance was sought from the Nazarbayev University Graduate School of Education Research Committee that considered it as the research that poses no more than minimal risk to its participants and the sites. In addition, the required special CITI (Collaborative Institutional Training Initiative) training on the ethics in this type of research was completed and its main considerations were taken into account. Thus, potential risks and benefits for the interviewees and the sites they represent were identified. After the revision of the Committee and its approval with minor changes, data collection was carried out depending on the availability of participants in December-January period.

Although the study was indicated to have minimal potential risks, the researcher tried to maintain it throughout the whole process. One of such risks could have been of psychological nature, since participants had to reflect on their practices and express their opinions about their educational process in relation to the central phenomenon of this study. To prevent this, questions were carefully formulated and piloted with two fellow researchers before proceeding to data collection. During the interviews, questions were clarified and discussed with the participants if it was necessary. Moreover, to prevent possible frustration, anxiety or stress, participants were given the right to choose a language they were comfortable with and translanguage during the interview since the researcher is proficient in Kazakh, Russian and English, too.

To protect participants' anonymity pseudonyms were used instead of their real names and university names were constituted by the numbers 1 and 2 in the writing of the thesis. To provide confidentiality, interviews were appointed in different days. For this reason, as well, all recorded interviews were renamed to pseudonyms of participants and all information that might reveal their personality and place of study and other disclosed

names were substituted in the transcripts with pseudonyms, too. These recordings are stored on a personal laptop of the researcher which is protected by the password known only to her. They will be stored there for 3 years as required by the Research Committee of NUGSE. All collected data was treated as strictly confidential and during the whole process of thesis research at all stages was accessed only by the researcher.

Also, to inform the participants about the research, risks and benefits for them and ensure rights protection, they were given the consent to read before the interview in Kazakh, Russian and English. The participation in the study was completely voluntary and respondents had the right to withdraw at any stage. Signed consent forms are also stored in hard copies at the participant's personal desk.

Conclusion

This chapter provided the methodological basis of the study on perceptions and attitudes of students towards multilingual practices with explanation and justification of the qualitative research design and a case study approach chosen to answer the research questions posed. Moreover, the chapter described the sampling for recruitment of participants which was the combination of homogeneous, convenience and snowball purposeful samplings. Also, data collection tools were justified as well according to the purpose of the study and were explained to be semi-structured interviews and thorough document analysis. As for data collection procedures, the chapter provides detailed description of the process, indicating the faced challenges and how they were tackled. Towards the end, ethical considerations of the study were identified mentioning possible risks to participants and the ways of minimizing them by the researcher.

Chapter 4: Findings

The in-depth interviews with participants from senior year biology classrooms taught through the medium of the English language at two Kazakhstani universities were conducted for the purpose of exploring students' perceptions and attitudes on the use of multilingual practices in the science, technology, engineering and mathematics (STEM) academic setting with English as the medium of instruction and whether they differ on the basis of university language policies at two universities in Kazakhstan. To answer the second and the third research questions data was collected from the total of eight participants, four from each university. Gender imbalance of interviewees has occurred due to such reasons as tight working schedule, final examinations and the winter break of students, there were one male and three female participants from the University 1 and four female students from the University 2. Nevertheless, the data collected from the sample gives the researcher an opportunity to explore in-depth the following research questions:

1. What is the language-in-education policy in Kazakhstan and why is it so?
2. What are the students' perceptions about multilingual practices in EMI STEM classrooms and why?
3. What are the attitudes of students towards multilingual practices and why?

The findings that answer the first research question have been outlined in the previous chapter as part of the document analysis that help to further analyze and interpret other findings on students' perceptions and attitudes in the next Discussion chapter. Nevertheless, to sum up, current language-in-education policy in Kazakhstan includes Kazakh and Russian languages as medium of instruction in secondary education and as language subjects, too, as well as gives an opportunity for minority population of the country to receive school instruction in their mother tongue (Uzbek, Tatar, Uyghur,

Ukrainian, Tajik, German, Turkish). However, high-stakes examinations (Unified National Testing) in the country remain available in Kazakh and Russian languages only. Higher education is offered in two official languages of the republic, too, yet English has been implemented as the language of instruction at universities throughout the country for the last decade. The main factors of English-medium education seem to be the economic development of the country and internationalization of higher education. Findings from interviews with participants suggest that in the University 1 students are aware of the language policy of their university which is solely English-medium. In the University 2, however, it was reported that the policy about language is implicit, especially concerning the English-instructed polylingual groups, because students were taking some of the course examinations in Kazakh, even though learned in English.

Current chapter also contains findings from research questions number two and three relevant to the aim of this study. Immediately after having been conducted, eight interviews were transcribed with the use of oTranscribe online software and were manually coded according to topics covered in the research questions mentioned above and put together according to emerging themes such as Multilingual practices that occur in EMI STEM classrooms, Perceptions of multilingual practices, and Attitudes towards multilingual practices. This chapter aims to provide an overview of findings that have emerged in this research at two Kazakhstani universities on the phenomenon of multilingual practices in EMI STEM classroom.

Disclaimer: All participant chose English language for their interviews but felt free to use other languages too, therefore sentence structures and grammar are kept as original utterances.

Multilingual practices that occur in the EMI STEM classroom

The interview data collected from eight senior year biology students suggest that there are two common multilingual practices that occur in the STEM academic setting where English is the medium of instruction, traditionally recognizable as code-switching and translation.

First, it is important to note, that research participants reported to use Kazakh, Russian and English languages in their repertoire almost with the same pattern and within the same domain. Thus, students claimed that Kazakh language is their first language (seven interviewees) and they use it in communication with their family members at home. Interestingly, one of the participants (Samal, University 2) related the use of predominantly Kazakh language to the fact that she comes from the southern region of Kazakhstan. In contrast, another participant (Miras, University 1) shared that since he comes from the Northern Kazakhstan, mainly Russian language is spoken at home. While using Kazakh at home, students also reported to use Russian equally at home and with peers and friends, usually code-mixing. English is maintained as a language of their studies, therefore reported to be used within university. As a result, students from the University 1 claimed to code-switch between these three languages in their daily communication with peers as well. A likely explanation of this could be the fact, that compared to the University 2 students, they study in English throughout all years of undergraduate degree and all courses offered by their programs.

As for educational setting, the most common multilingual practice (MP) in the contexts of two universities that participants were mainly referring to is the code-switching defined as an alternation between the languages: switching from one language to another in speech (Baker, 2011). Provided that the majority of students were of Kazakh origin and

claimed to have Kazakh as their first language, they were all proficient in three languages, namely Kazakh, Russian and English, to a various extent.

Extract 1 *“Sometimes we speak some occasional words [in Russian]”*
 (Maira, University 1)

Extract 2 *“We do code-switching” (Dariya, University 1)*

Extract 3 *“It is not like whole sentence, just one word... When cannot*
 remember the word in English, we speak and tell it in Kazakh”
 (Samal, University 2)

Extract 4 *“When I speak, I cannot use one only language because it's hard*
 for me that is why I mix 3 languages” (Nurila, University 2)

Extract 5 *“We speak in 3 language during our class” (Zhanel, University 2)*

As can be seen from quotes above, regardless of the university and implicit course language policy, almost all students explicitly report drawing on their first language or languages when learning in the EMI STEM classroom. Code-switching usually occurs not only in the classroom, but also outside of it in an informal conversation between students and in an interaction of students with professors. The significant difference in the use of code-switching practice at two sites is that the University 1 students mainly reported this multilingual practice to take place outside of the academic classroom in informal discussions among peers or with a professor who is also proficient in Kazakh or Russian, whereas the University 2 students mentioned how they switch to Kazakh (possibly because

of the general university language policy) or Russian during classroom discussions with professors:

Extract 6 *“We do not have any rules such as ‘Do not speak in Russian or in Kazakh’” (Samal, University 2).*

Extract 7 *“We are only allowed to talk in English, even if the professor is native Kazakh speaker” (Aida, University 1).*

Another common practice claimed to be used by the students was translation from English to Kazakh or Russian and vice versa in the learning process in the classroom as well as in the preparation for the class. Such cases include the following cases:

Extract 8 *“Maybe in the classroom when we do not know the translation of the Russian word to the English word and then I ask something about ‘what is illumination?’ or other words and they [peers] translate it for me.” (Maira, University 1)*

Extract 9 *“Sometimes when we have some new words, new scientific words, we just translate it” (Nurila, University 2)*

Interestingly, students from the University 1 shared that speaking languages other than English in the formal classroom is “disrespectful” towards the professor who is not proficient in Kazakh or Russian languages (Maira, Miras). Usually, these practices occur occasionally but for a number of reasons discussed by participants. When reporting their multilingual practices in the classroom students also expressed their concerns about how

and why they happen to use certain multilingual practices in the learning process and how they perceive these practices in EMI STEM environment, which appear to be another finding of this thesis research.

Students' perceptions of multilingual practices in EMI STEM

The interview data collected from eight students of two Kazakhstani universities has revealed a variety of perceptions about multilingual practices in STEM biology setting where English is a medium of instruction. Data on this matter was coded and categorized according to the emerging pattern that they fall into. Thus, there are two kinds of perceptions that students had about the central phenomenon of this research, i.e. multilingual practices, namely regarded them as a support in the learning process or a hindrance in the context of EMI STEM education.

Multilingual practices as a support to learning

A vast majority of respondents reported to perceive EMI academic setting as an opportunity for enhancement and improvement of English language skills through studying science in this language. Code-switching in this scenario is viewed as a tool for explanation and facilitation of the process for those students who are lacking skills in order to be fluent in a language (as noted by Samal, University 2), therefore code-switching practice is viewed as “normal”.

Extract *“We speak in Russian when we cannot fully convey our opinion”*

10 *(Samal, University 2)*

Extract *“We used our first language because we do not have enough*
 11 *vocabulary to explain everything we want [in English]” (Samal,*
 University 2)

Therefore, the lack of vocabulary and limited language proficiency are one of the reasons the University 2 students perceive to be using multilingual practices. Although practiced rarely in the University 1, its students mostly tend to perceive multilingual practices as a support in their learning process in communication with their peers.

Extract *“Explaining some concepts that, for instance, we did not understand*
 12 *during the lecture, we combine all the languages that we have”*
 (Aida, University 1)

Maira from University 1 referred to Russian as her “mother-tongue” which she perceives better and therefore would prefer to have code-switching in EMI for explanation of the course content:

Extract *“I understand well [in Russian]. When I do not understand*
 13 *something, I am asking questions from the professors. However, for*
 me personally when the things are told in Russian it is more easier
 for me to understand than in any other language, because it is my
 mother tongue and therefore I perceive it better” (Maira, University
 1).

Similarly, Miras from University 1 mentioned that during the office hours with his professors he prefers to use the Russian language, if possible, because he considers it to

easier to explain things in Russian. The same view was shared by his university fellow who indicated that:

Extract
14 *“If we see that if the professor is Russian speaker or Kazakh speaker, and we have some difficulties in explaining some our questions when we cannot understand our questions, we just desperately ask some words in Russian ... There are cases when they cannot understand our words, so we just translate a word in Russian. And then we just continue asking in English” (Aida, University 1).*

In contrast, being able to use languages other than English, namely Kazakh or Russian, it is believed to bring confidence to students, and they are more engaged with their learning, particularly at the University 2 (Samal, Elmira). Students claimed that because they are aware of the fact that their professor is a bilingual speaker, therefore could understand, and since there are “no strict rules” (Nurila, University 2), the discussion would continue and grade points would not be lowered or there would not be any punishment for such a practice: *“It gives me confidence because you do not think deeply about how to explain it to your teacher because you know that she knows Kazakh and you can use it” (Samal, University 2) [Extract 15].* Moreover, content comprehension by students was claimed to be important:

Extract
16 *“I do not think that it would affect to my scores, because when we explain something and if we use one word in Kazakh it will not affect because she understood that sometimes we cannot speak English fluently. When you have a really good explanation, it will not affect” (Samal, University 2)*

Besides English language development and confidence, multilingual practices in EMI were perceived as beneficial from the biological aspect of human beings:

Extract
17 *“I think it has benefits, because somebody said to me that people who speak in many languages, who switches between the languages is, how to say, they are less likely to have brain diseases like Alzheimer's and connected with mind” (Elmira, University 2).*

Thus, students from both research sites seemed to perceive the benefits of multilingual practices related to their self-image, comprehension, communication and self-expression. Nevertheless, there was a difference in perception of students towards the use of code-switching depending on the user. If languages were mixed by students who are lacking vocabulary, for instance, it was claimed to be tolerated by peers and professors, proficient in Kazakh or Russian to some extent. However, if code-switching was used by a professor in EMI classroom, it was perceived as a sign of poor professionalism, as claimed by the University 2 students.

Multilingual practices as a hindrance to learning

The University 2 students who studied some of the biology courses in English in a polylingual group perceived multilingual practices to be rather a problem and hindrance to learning process than a resource. In comparison, University 2 students were more resistant to accepting multilingual practices in their learning process, regarding EMI classroom as the only opportunity to practice English language and expecting the same to be provided to them:

Extract *“All in all, we took this subject in English and it has to go [be*
 18 *taught] in English” (Samal, University 2)*

Interestingly, one of the University 1 students also expressed the view that Russian or Kazakh languages are not appropriate for EMI STEM setting:

Extract *“But speaking Kazakh or Russian during the classroom is not okay*
 19 *because you will not accept the English information and there will be*
 some barrier between your information and your mind maybe, and it
 is better to listen and speak and read and write in English” (Miras,
 University 1).

One of the participants from the University 2 has indicated the fact that students chose Kazakh language on the examination because they were given a choice and considered it as not useful referring to the fact that their group is “polylingual” and the main outcome of it should be the ability to use English in their profession and be proficient enough in a language. Therefore, the choice of Kazakh was seen as a threat to reaching the main goal. The following excerpt from the interview demonstrates how respondent perceived being able to use the L1 in the oral examination at one of the biology courses:

Extract *Elmira: Our professor, she gives us the choice in Kazakh or in*
 20 *English, so we can choose Kazakh or English. I think that it is not*
 correct, because it is the English group, how we can talk in Kazakh?
 Interviewer: Do most of the people choose to speak in Kazakh?

Elmira: Yes. I think it is not so useful because after university I can say that I used to study in a poly-language group, but if I cannot describe one theme or case in English that we used to study in Kazakh in our English group, I think it is not so good. (Elmira, University 2).

Similarly, there were views of other students that also come from the University 2 and share the perception that multilingual practices utilized by both teachers and students hinder English language proficiency. Among them, one student expressed her concern that given the fact that teachers were not proficient enough in English and used it to a varying extent in the classrooms, *“a lot of students they just lose their interest in English and even in this, in biotechnology” (Samal, University 2) [Extract 21]*, therefore multilingual practices were believed to hinder not only the language proficiency but also the motivation to learn the subject of the major and the overall interest in the specialization.

Another concern of University 2 students was the fact that the use of Kazakh or Russian was unacceptable since the professor is well-paid for teaching in English and therefore must be proficient in English good enough to not code-switch (four students from University 2). What was strikingly interesting is the fact that the University 2 students, in comparison, mostly shared their monolingual perceptions about multilingual practices in their learning process in EMI biology classes, thus viewed EMI as English-only instruction.

Attitudes towards multilingual practices

Even though participants accepted multilingual practices or actually practiced them in daily conversations, the majority of respondents had negative attitudes towards them in their studies. Surprisingly, one of participants expressed the negative attitudes raising

concerns about the use of Kazakh language in the country and its impact on his cultural identity:

Extract
22 *“For me it is okay to mix Kazakh with Russian in my home and at school, so... But culturally I think it is not good. It will affect on our motherland, because I don't know Kazakh so much as I should, and it will be better only teaching two languages I think, Kazakh and English, not Russian, ‘cause actually I do not like that we always speak in Russian, Russification, yes. but I cannot do something with that” (Miras, University 1).*

Another participant from University 2 acknowledged to be “not proud” of her inability to speak one language only when expressing herself and reported the fact that it is hard for her to sometimes remember the appropriate word translations in a language needed:

Extract
23 *“I think it is easier to mix with them, because sometimes I forgot the meaning or the name of some of words in English or in Russian, and I know that only in Kazakh one or kind these things happen. When I speak, I cannot use one only language because it is hard for me. That is why I mix 3 languages, but I am not proud of it.” (Nurila, University 2)*

Such attitudes possibly underpinned by “language purity” ideologies were also common. In the same vein, students claimed to not prefer using code-switching practices, as, for example, Dariya from University 1 puts it:

Extract *“If you are good in one language it is preferable and it is beautiful to*
 24 *speak in one language fluently and without code-switching” (Dariya,*
 University 1).

She also claimed that code-switching was perceived by her friends outside of the University 1 community as sign of showing off, therefore this disapproval by the society made the respondent feel that code-switching was “a bad habit” and pressured her to speak one language only:

Extract *“When I use code-switching in Russian with English and sometimes*
 25 *with Kazakh, they think that I am just showing off but it's just a habit,*
 a bad habit. It is better to use one language at its fullest” (Dariya,
 University 1).

In contrast to such a negative attitude, Maira who was from the same university shared that the use of multilingual practices involving English is “fancy”. She reported the following:

Extract *“I usually use English, because it looks more fancier I would say*
 26 *[laughing] to use English words and English explanations to explain*
 some words, and also it probably contributes to your vocabulary and
 the fanciness of this language” (Maira, University 1)

Speaking of attitudes expressed by University 2 students, the most significant appeared to be the negative one towards the use of other languages within multilingual practices, especially inside the classroom. Students viewed languages other than English as problem, questioning the use of Kazakh as:

Extract *“It is the English group, how we can talk in Kazakh” (Elmira,*
27 *University 2)*

Extract *“Students, they do not like when our teacher use Kazakh or Russian”*
28 *(Samal, University 2)*

Extract *“All in all, we took this subject in English and it has to go [be*
29 *instructed] in English fully” (Samal, University 2).*

The reason to do that, as reported by participants from University 2, was a limited number of disciplines where English was the medium of instruction and students would like to benefit from it as much as possible, therefore English was given a priority:

Extract *“I do not think this is necessary to discuss in our languages because*
30 *we do not have all our classes taught in English. All of our other*
classes taught in Kazakh or Russian, but some of them, maximum 3
subjects per semester, are taught in English. So that is why, I think,
as much as we can we have to speak English in English speaking
classes because we do not have many opportunities in other classes.
That is why we do not need to discuss in our languages but give
priority to English only” (Zhanel, University 2)

Moreover, English was regarded as not only a language of instruction but was also given priority as “a language of science” and as a tool to successfully pass examinations to foreign universities:

Extract *“Because I always presume that English is the language of science,*
31 *that is why it is anyway is better to teach science in English”*
(Zhanel, University 2)

Extract *“I think it will help if I passed exams for European universities”*

32 *(Samal, University 2).*

Another very significant attitude which was only common for University 2 students was that they regarded the use of multilingual practices, i.e. the use of Kazakh language in EMI classes, as poor professionalism of a professor. Thus, students seemed to be very unfavorable of code-switching in the classroom by the professor, even though they accepted their own lack of language proficiency in English and allowed themselves to use Kazakh to express themselves:

Extract 33

“From our point of view, it looks like if she is teacher, she has to know how to teach even if it is in English. If she prepares for her class, she would know this in English [laughing]” (Samal, University 2).

From the preceding and following excerpts from the interviews, it can be sensed that a teacher (professor) has to know English and has to obey the perceived “English-only” EMI policy of the polylingual classes at University 2:

Extract *Interviewer: What do you feel about your teacher using your first*
34 *language in the classroom?*

Samal: That is not right, because because of her students will also start speaking in Kazakh

Interviewer: Do you mean that if the class is in English then all should speak in English?

Samal: You know what, because of our groups, because of multilingual groups, their salaries are higher than others. (Samal, University 2)

Therefore, a possible factor of negative attitudes towards multilingual perceptions at the University 2 might be the fact that teachers are paid more to provide students English-medium instruction as they expect it.

One more striking view was shared by Maira from the University 1, who revealed her concern about English-medium biology education in the context of Kazakhstan. She assumed that perhaps knowledge of the subject obtained through the medium of English-only might be a disadvantage when it comes to working in the field. She explained that knowing medical terms, for instance, in English could cause misunderstandings in communication with patients at hospitals. Moreover, she suggested to have a university course on communication with local patients in the Kazakh language, since “*the general language in this country [Kazakhstan] is Kazakh*” [Extract 35]. Nonetheless, such a view could be interpreted as influenced by language separation ideology.

Conclusion

Thus, the following findings from two universities of Kazakhstan regarding the multilingual practices have been identified from data collected on this research topic:

Finding 1. Code-switching and translation as multilingual practices occurred often in the learning process at both sites. The difference was that at University 1 they took place in more informal circumstances as in discussions among peers, whereas at University 2 students and teachers were engaged in multilingual communication.

Finding 2. Students from both universities shared their views that multilingual practices usually help them understand scientific concepts better and make meaning of the subject matter. Thus, multilingual practices were perceived as a support in their learning in EMI STEM.

Finding 3. However, students from University 2 were more critical about their multilingual practices, especially concerning their English language learning experience, which they believed was hindered by mixing the languages.

Finding 4. Interestingly, both university students shared their either neutral or negative attitudes towards the use of multilingual practices which are possibly shaped by their beliefs about languages being separate entities. This and other findings will be discussed in the following Discussion chapter.

Chapter 5: Discussion

Introduction

The findings of this research have been presented in the preceding chapter based on the qualitative data from eight semi-structured interviews with biology students from two Kazakhstani universities that provide courses with English-medium instruction. The present chapter focuses on the discussion of these findings in relation to previous studies and literature on the topic. The purpose of this study was to explore the perceptions and attitudes of students towards multilingual practices in EMI STEM settings at two Kazakhstani universities. Therefore, the leading questions of this research were as follows:

1. What is the language-in-education policy in Kazakhstan and why is it so?
2. What are the students' perceptions about multilingual practices in EMI STEM classrooms and why?
3. What are the attitudes of students towards multilingual practices and why?

Finding 1. Multilingual practices in EMI STEM

Students from both universities reported to be using multilingual practices with the languages from their repertoires, namely Kazakh, Russian and English in EMI STEM learning environment in order to make meaning and communicate ideas and knowledge about the science and beyond. Multilingual practices included the use of scientific terminology in English while discussion, peer-interaction, asking for word translation, telling jokes, and talking to professors in L1, which were also found in the studies of Caruso (2018), Kuteeva (2019), and Mazak and Herbas-Donoso (2015). These were mostly referred to as translanguaging in the literature. As seen from the Literature Review chapter, translanguaging is “a dynamic multilingual practice” (Gu, 2014), and it both includes and goes beyond the above-mentioned concepts of code-switching and translation as well as code-meshing and other language alternations. As argued by Garcia and Sylvan

(2011), the term includes code-switching and translation, but differs from them because “it refers to the process in which bilingual students make sense and perform bilingually in the myriad ways of the classroom — reading, writing, taking notes, discussing, signing, and so on” (p. 389). These multilingual practices were used for meaning-making by students drawing on their available resources (Canagarajah, 2011; Garcia, 2009; Garcia & Li Wei, 2014; Lewis, Jones & Baker, 2012).

Since generalizability of findings from this research is not possible due to the limited sample, these results therefore need to be interpreted and compared to the findings of previous works with caution. Findings of the current research seem to be consistent with what was found in EMI content classrooms in various contexts that were reviewed in the previous Literature Review chapter (Allard, 2017; Carroll & van den Hoven, 2016; Carstens, 2016; Caruso, 2018; Mazak & Herbas-Donoso, 2015). As was noted by Kirkpatrick (2014), where English is the medium of instruction, there is a frequent use of L1 inside the classroom, which makes the learning content in L2 more comprehensible. Therefore, practices applied by University 1 and University 2 students in the context of Kazakhstan, where English is widely spoken nor a language of wider communication, include the use of the first languages of students, which are Kazakh and Russian. Similarly, in the Portuguese university context, which did not have explicit language policy but used English as a lingua franca in providing courses, students used key scientific terms in English while discussing in another language, translation across languages, and their multilingual repertoire as a resource to negotiate meaning. Likewise, Blair et al. (2018) showed that EMI is not limited to English-only instruction, but takes many different forms depending on individual teachers, learning environments, and demographics. Thus, various ways of meaning-making are employed by EMI participants; meanwhile English is still a language of instruction. However, in the Kazakhstani context,

we can see from what students reported that they use more than one language in their discussions with peers and in communication with professors. As for classroom interaction in L1, which was emphasized by University 2 students (Extracts 3-6, Findings chapter), it can be explained by the fact that both teachers and students share the same first languages and is classified by Wang (2016) as an interpersonal strategy used by students for content discussion in different languages.

There are several possible explanations for such multilingual practices in EMI in Kazakhstan. First of all, as noted in the previous chapter, Kazakhstan is officially a bilingual country with Kazakh functioning as the national and Russian as the official language of the country. Secondly, such a constitutional statement is, in fact, a result of the chain of historical events (see Literature Review chapter). Therefore, given that the population is proficient in both Kazakh and Russian, it is common to use these languages in any domain (Kuzhabekova, 2019; Smagulova, 2008). Moreover, as students reported to use predominantly Kazakh in families, Russian – in communication with peers and English – in education, such language use in different domains might be referred to as “lifestyle diglossia” (Saxena, 2014). Another explanation for the frequent use of multilingual practices in University 2 is related to the university language policy, which is not explicit in addition to the fact that courses with English as a medium of instruction are provided in certain departments and, as University 2 students indicated, “on demand.” Therefore, these findings might indicate a lack of appropriate EMI pedagogy and teaching personnel, which also leads to the conclusion that there is possibly an urgency for consistent professional development training regarding EMI.

Finding 2. Multilingual practices as support to learning

Both universities' students shared their views that multilingual practices usually help them better understand scientific concepts and make meaning of the subject matter. Thus, multilingual practices were perceived as a support in their learning in EMI STEM.

Findings of the current study point out the view of multilingual practices as a tool to make meaning out of the scientific concepts and complex ideas in English. Such findings confirm the advantage of translanguaging in education, which is the promotion of a deeper and fuller understanding of the subject matter (Baker, 2011). Although translanguaging in the literature is discussed from the perspective of teaching pedagogy in a multilingual classroom, advantages were also observed by the participants of this study. The view of students about the use of the first languages in EMI as a resource is consistent with the study by Cartens (2016), where the majority of students responded that translanguaging helped them to better understand complex concepts, as well as express their own conceptual understanding. Additionally, students reported that translanguaging facilitates "confidence building," which is similar to what some of the participants from the current study mentioned, that is, that they were confident when they knew they could switch (Extract 14). Carstens' (2016) argument that translanguaging created a safe space for meaning making within a community of L1 speakers resonates with the fact that the University 2 students of the current research felt comfortable with switching to Kazakh (Extract 16) or the University 1 students with asking each other for word translations (Extract 14). Moreover, students of Carstens' (2016) and Eser and Dikilitas' (2017) studies also shared their English language development progress, among which are English vocabulary expansion and improved confidence in using English.

The findings also corroborate with the conclusions of Caruso (2018), that both teachers and students adopted translanguaging to achieve better content understanding and

co-construct knowledge. Thus, students used key scientific terms in English while having discussion in another language, used translation across languages, and used their multilingual repertoire as a resource, as well as to negotiate meaning. Likewise, findings of this study about students' comfort with self-expression in their "mother tongue" (Extract 13) and confidence in mixing the language in explanations (Extract 16) are in agreement with Mazak and Herbas-Donoso's (2015) findings which showed that students' self-image is more positive when they are aware that they can refer to their first languages as a resource. Moreover, Miras (University 1) noted the ease of explaining and understanding scientific concepts with local professors proficient in their common L1 (Extract 14). Accordingly, Mazak and Herbas-Donoso (2015) explain that the professors in their study use translanguaging as a tool to enhance students' understanding of scientific concepts through the medium of L1 because "understanding science often requires understanding a set of interconnected concepts that demands specific vocabulary in order to comprehend these interrelationships" (p.708).

Although previous studies focused on translanguaging as a pedagogical tool and strategy and its benefits (Baker, 2011; Canagarajah, 2011; Garcia and Li Wei, 2014; Lewis et al., 2012; Rivera & Mazak, 2016), participants of the current research have also identified the potential benefits of translanguaging for themselves. However, almost no evidence of strategic translanguaging was detected, especially on the side of the educators in this study. In contrast, some students held views that such multilingual language practices hinder their EMI experiences and proficiency level in either language.

Finding 3. Multilingual practices as hindrance to learning

However, students from University 2 were more critical about their multilingual practices, especially concerning their English language learning experiences, which they believed was hindered by mixing the languages. The similar perception was found in the

study of Ospanova (2017) where participants viewed code-switching to hinder their English language proficiency development.

One of the reasons for students to be unaccepting of multilingual practices inside the EMI classrooms is, as reported by some of the students in this study, the fact that they do not have the opportunity for English language development outside of the academic setting, especially University 2 students who have very few courses per semester with English as a medium of instruction. Such a view of their first languages as a problem (Ruiz, 1984) mirrors the findings of the previous studies that have examined the effect of translanguaging (code-switching and translation) on content acquisition in EMI classrooms, such as Allard (2017), for instance. In her study, some students expressed their concerns about the teacher's translanguaging practice considering it to be a hindrance to their English language development. Moreover, students claimed that they would learn science effectively in English-only instruction which resonates with what was claimed by students of this research (Extract 19).

Some students from Carstens' (2016) research mentioned that it is not beneficial to translanguage and that it even complicated their understanding, which is explained by the African students in her study, as well as Kazakhstani students, by the fact that there is a lack of specialized scientific vocabulary in L1. In addition, one University 2 student of the current research referred to English as a language of science, which accords to concerns of African students that "because English is the language of scientific communication, it is not beneficial to use the vernacular for academic communication" (Carstens, 2016, p. 215).

Another possible explanation for such unfavorable perceptions of multilingual practices is that there is a common misconception about bi/plurilingual speakers being confused because of the two or more languages, and hence, a strong ideology of language separation. Moreover, as seen in the previous Findings chapter, Extract 18 indicates that

students from University 2 hold high expectations about their lecturers' English language proficiency in EMI courses. Thus, when their expectations are not met in the classroom, this might also hinder their interest and motivation in the content subject itself (Extract 21).

Finding 4. Attitudes towards multilingual practices

In this research, students' attitudes towards intentional and unintentional linguistic practices utilized by students in their studies were regarded. This section of the current chapter is deemed to be crucial in understanding students' attitudes towards multilingual practices in EMI STEM at two universities in Kazakhstan. As noted in the literature review chapter, humans express their attitudes towards an object through some degree of favor or disfavor (Eagly & Chaiken, as cited in Muthanna & Miao, 2015) and include components related to thoughts and beliefs, as well as feelings and events in the particular circumstances (Baker, 1992). Therefore, attitudes expressed by the participants of the current research will be explained, taking into account all possible factors.

Firstly, it is crucial to note that the findings of the current research confirm what was found in the studies by Rivera and Mazak (2016), Goodman and Lyulkun (2010), Gu (2014), and Palfeyman and Al-Bataineh (2018) regarding the attitudes towards the use of the first language and overall translanguaging pedagogy in the content classroom instructed through the medium of English. Although perceived as a resource for meaning making and clarification in the learning process, multilingual practices were evaluated by the students as "a bad habit" (Extract 25), which impedes the purity of one language and denotes a lack of language proficiency (Extract 24). Therefore, it is possible to assume that behind students' perceptions and attitudes towards multilingual practices there are certain ideologies about languages, such as one mentioned above.

The view of Kazakh as a problem in the science classrooms of University 2 might be influenced by the view that “English is the language of science” (Extract 31) and by what Kircher (2016, p. 241) considers as “status and solidarity,” which refers to the fact that certain languages are associated with the home and the family, while others convey social importance and are necessary for professional mobility. Since English in this context holds importance for the future careers of University 2 students and Kazakh is reported to be used with family members, then students expect a course to be conducted in English to support their goals. However, another view that was problematized by Maira from University 2 about working in the field with knowledge obtained English could be supported with the argument of Macaro (2020) about the role and purposes of languages in EMI. On the example of medical education, he asserts that it should be ensured that students understood the content, therefore teachers are responsible for delivering the content in comprehensible way and “providing them with linguistic access to medical journals and to medical research; ensuring that they also know the L1 terminology and explanations of that terminology for the non-specialists they will encounter in their practice” (Macaro, 2020, p. 264).

It is difficult to explain these findings, but they may also relate to the students’ ideologies, which were influenced by external processes. According to the “multi-layered analysis” of Black (as cited in Saxena, 2009), discourses about the languages reflect attitudes which, in turn, are shaped by the broader policy and ideologies. Similarly to the Bruneian context analyzed by Saxena (2009), Kazakhstani students have the ideology of Kazakhization which requires maintenance of the Kazakh language (Kuzhabekova, 2019; Smagulova 2008) on the one hand, and internationalization of higher education policy on the other, both of which are a part of the broader trilingual education policy in Kazakhstan. Accordingly, Miras from University 1 was concerned about the use of Russian language,

which he believed hinders culturally, and Elmira and Samal from University 2 expressed their concerns about the unnecessary of speaking Kazakh in the English taught group. In addition, the “critical diglossic” relationship (Saxena, 2014) between Kazakh and Russian *and* English (my emphasis in italics) is influenced by other processes such as globalization, which put English in a favorable position, especially by the young Kazakhstani population and is perceived as a success in the global competition (Kuzhabekova, 2019, Smagulova, 2008). Interestingly, in Klapwijk and van der Walt’s (2016) study, most of the respondents perceived English as the most important language in the South African educational context, as well as generally worldwide, thus, also being aware of the linguistic capital it affords. However, in response to the question about the preferred languages of instruction, students turned out to be in favor of Home Language plus English instruction, thus valuing the maintenance of their own languages in the education.

The findings of the study by Gu (2014) resonate with what some students of the current research expressed towards the use of L1 in English-medium classes. Chinese students in his study expressed their concerns regarding the alternation between English and Cantonese by their peers, claiming that the language purity of English should be kept, code-switching practice is inappropriate in English classrooms, and it is detrimental to their English language proficiency. Another mainland Chinese participant claimed that Cantonese-English code-switching is caused by the historical heritage of Hong Kong (which is similar to what Miras from University 1 assumed about Russian (Extract 22)). Thus, this participant also expressed monoglossic ideology. Similar to female respondents from the University 1, one of the respondents of Gu’s (2014) research shared that mixing the languages is convenient in expressing oneself in communication, though it is also considered as pretentious, boastful, and a loss of Hong Kong identity. Therefore,

ideologies seem to shape students' attitudes towards the use of languages while engaging in multilingual practices in EMI environments.

Conclusion

The purpose of this chapter was to discuss the main findings relevant to the study. In accordance with literature, findings demonstrated that students were commonly practicing multilingual practices in their EMI STEM classrooms for both academic and non-academic reasons. Especially taking into account that their teachers is proficient in their common L1, Kazakh, students felt confident and comfortable drawing on their multilingualism in the learning process. These findings resonate with literature that has revealed similar positive self-image perceptions. Moreover, students perceived that multilingual practices assist their learning in EMI and thus provides them an opportunity to use L1 for meaning-making, clarification and effective self-explanation. However, there were also views that multilingual practices hinder English-medium learning process, because students from the University 2 students were certain that EMI is the only opportunity for them to improve the English language proficiency. As for the attitudes that students expressed towards multilingual language use in their classrooms, they were found to be predominantly negative. This is explained in the literature to be influenced by the ideologies of individuals as well as by the national language policy and external factors such as internationalization. Though Kazakhstan aims to have multilingual education, it can be suggested that education stakeholders interpret it differently. Therefore, there is a need for explicit language policies in education which would be informed by the research on language use and attitudes in Kazakhstani education institutions.

Chapter 6: Conclusion

The previous chapter discussed major findings that have immediate relevance to the purpose of the current qualitative case-study research on perceptions and attitudes of students towards multilingual practices in EMI STEM classrooms at two universities in Kazakhstan. This chapter presents conclusions drawn from the findings of the research, limitations of the study, and implications and recommendations for further research.

This research was guided by the following research questions:

- 1) What is the language-in-education policy of Kazakhstan and why is it?
- 2) What are the students' perceptions of multilingual practices in EMI STEM and why?
- 3) What are the attitudes of students towards these multilingual practices and why?

The study aimed to explore students' multilingual practices and the reasons behind their perceptions and attitudes towards multilingual practices in EMI STEM classrooms. Based on the framework for analysis of Black (!?), the major findings are summarized and presented in the following section.

Main Conclusions of the Study

The first conclusion of the study revealed that language-in-education policy in Kazakhstan is shaped by the government's aim of being a multilingual and competitive nation in the world economic arena. The current "Trilingual education policy" is shaped by the country's USSR past, current language revitalization (Kazakhization) movement and the worldwide globalization processes as well as by the internationalization of higher education process in particular. However, it could be noticed that "Trilingual education policy" is still vague and interpreted differently by education stakeholders at secondary and higher education levels.

The second conclusion of the study is related to the students' perceptions of multilingual practices in EMI STEM classrooms at two universities of Kazakhstan. On the one hand, students viewed such occasional practices as a support to their learning in the EMI biology courses. They claimed to use their first language(s) in combination with English for a number of functions such as meaning-making, effective communication in the classroom, during discussions with peers and for better comprehension of the content matter. On the other hand, findings indicate that students also perceived that multilingual practices hinder the process of learning the science in English. Thus, it was revealed that EMI is regarded as an opportunity for the English language development and is expected to be solely in English. Such perceptions were discussed to be influenced by the aspirations of the country to have a population that speaks Kazakh, Russian and English languages, and by economic goals of having a competitive human capital on an international arena (NUGSE, 2014).

The third conclusion of the study is related to the attitudes that students expressed towards multilingual practices in their learning environment. Although claimed to be commonly used by the vast majority of students, attitudes towards multilingual practices were rather negative. Such attitudes were possibly explained through language ideologies held by research participants. Thus, it was found that monoglossic ideologies of language separation, language purity and mother tongue ideologies were influencing how students feel about the use of multilingual practices in EMI STEM. Such ideologies, in their turn, could possibly derive from students' beliefs about languages that were shaped by the history of Kazakhstan before and after gaining its independence (Russification and Kazakhization policies).

Limitations and Further Implications

One of the main limitations of the current research is certainly its limited scope. Given that the time is limited, a small sample of eight people from one of the STEM disciplines was interviewed at only two university sites in the Republic of Kazakhstan. The uniqueness of study participants and higher education institutions chosen in this study cannot represent perceptions and attitudes of all STEM students in EMI courses throughout the country, therefore the results of such a case-study cannot be generalized. This fact implies that there is a need for further research that involves more diverse samples and sites.

Moreover, perceptions and attitudes that the chosen sample of urban bilingual biology senior year students hold might be different from students from rural regions, initial years of studies or other STEM subjects taught in English-medium. Therefore, there might be such a bias, which could be reduced in further research through selection of a more diverse participants sample to explore. What is more, other education stakeholders' views could be also researched for a more complete view of multilingual practices in EMI university classrooms.

Additionally, perceptions and attitudes could also be measured quantitatively through surveys and questionnaires with a bigger population to capture more views on the central phenomenon, which was problematic in the current study due to a limited scope of the research. Therefore, further studies could use questionnaires developed in the previous literature on the topic (see Baker, 1992).

Finally, responses in the interviews might be not articulate, clear or honest, as well as might be “filtered” (Creswell, 2014) by the interviewer. Therefore, there is a need to conduct more interviews and develop more specific questions to ask participants to gain

accurate insight in perceptions and attitudes of students towards multilingual practice in EMI STEM classrooms and what particularly shapes them.

Recommendations

On the basis of findings and conclusions of the current research, the following recommendations for such education stakeholders as educational language policy makers, institutions of higher education and educators in EMI could be suggested.

Educational language policy makers need to make language policies more explicit explaining the use of languages in EMI STEM settings of higher education in particular. Moreover, bottom-up dynamics should also be allowed. Therefore, policy makers could take into account students' (and teachers') views on EMI and how languages are perceived and actually used in practice, which were explored by researchers. Thus, there needs to be tight connection between policy makers' decisions and research. In this way, for instance, based on this study, University 2 language policy should include polylingual groups and be shaped taking into consideration their negative attitudes towards the extensive use of the first language in English-delivered classrooms.

Universities, too, play a crucial role in developing quality EMI STEM education, and therefore, could take institutional measures. Based on findings at the University 2 site, higher education institutions that provide EMI content courses could provide educators with professional development trainings on pedagogy of English-medium instruction and the use of translanguaging as a pedagogical strategy in classrooms. Moreover, there is a need to improve lecturers' language proficiency in English, which could also be fulfilled by the institution.

Lastly, it could be recommended for educators to consider the views and goals of students in EMI STEM settings. As was noted by the University 2 students, EMI teachers' salaries have been increased, therefore it is expected not only by the government, but also

by the students to receive English-instructed content. However, educators should also pay attention to students needs and possible issues with comprehension of the scientific content in English and be adjusted accordingly.

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Appendix A: Interview Protocol

Time of interview:

Date:

Place:

Interviewer:

Interviewee:

Thank you very much for agreeing to participate in this interview. The interview will take about 30 minutes, you will be asked questions concerning the use of languages in your repertoire in the EMI STEM academic setting. You may elaborate on your answers and talk about what you think might be useful to understand how languages are used in your studies.

Linguistic repertoires:

1. What languages do you speak and which of them is your first language?
2. Which of them do you speak at home/ with friends/ with professors?
3. What was your language of instruction before coming to study in English?
4. What is your major and what are the subjects at your major that you study in English?
5. Why did you choose to study *biology* in English?

Perceptions:

6. Are you allowed to use your first language along with English in the classroom? If yes, how? If not, why?
7. In what cases do you usually use languages other than English? Why does it happen?
8. Why do you think you sometimes/never/rarely use languages other than English in the classroom?
9. Do you prefer to use your first language in discussions/ explanation of concepts and other classroom activities that are conducted in English?
10. Do you feel you understand better when you are allowed/ not allowed to use your *first* language? If yes, how? If not, why? IF YES: Could you please give examples of concepts or classroom situations when you use your L1?
11. Does it affect your English language learning? In what ways?
12. What do you think the reasons for your teacher to use/ not use the first language are?

Attitudes:

13. What do you feel about being able to use/ not to use your first language in the classroom?
14. What do you feel about your teacher using/not using your first language in the classroom?
15. If you happen to use your first language, what do you think the impression of others might be (peers, professors)?

16. Do you personally accept this kind of language alternations/ switching between languages?
 17. How do you perceive this language alternation process? Positive? Negative? Why?
 18. Do you think you and your groupmates benefit from switching between the languages? Why?
 19. Do you feel more confident in speaking English or your first language during the lessons taught in English?
 20. Would you like to use your L1 more often in your EMI classroom to communicate with peers?
 21. Would you prefer to use your L1 to communicate with the professor?
- Thank you very much! That was my last question. Is there anything you would like to add?

If I have any additional questions about your answers, can I please contact you later?

Appendix B: Consent Forms

INFORMED CONSENT FORM

Perceptions and attitudes of students towards multilingual practices in an EMI STEM classroom at two Kazakhstani universities

DESCRIPTION: You are invited to participate in a research study on multilingual practices in science classroom where English is a medium of instruction. The main purpose of this study is to explore university students' perception of and attitudes towards these linguistic practices. You participate in a face-to-face interview which consists of 10-15 questions. If you agree when asked before the interview commencement, your answers will be audio-recorded. Your name and the name of the university will be substituted by pseudonyms in all stages of the study and in all documents, including field notes, electronic files and the final report for thesis. All the electronic data for the study will be stored in the researcher's computer secured by the password known only to the researcher for the next 3 years.

TIME INVOLVEMENT: Your participation will take approximately 30-40 minutes.

RISKS AND BENEFITS: The risks associated with this study are minimal. There might be questions you may not want to answer. If so, those questions can be omitted. Your teachers and the departments' staff will get no information related to your participation. The benefits which may reasonably be expected to result from this study are: you will have an opportunity to speak about your experiences with learning subjects instructed in the English language. You may learn about what it means to be a part of research and you will get the results of this study. In addition, considerations about ways of implementing English medium instruction at universities can be made based on the findings of this study, which may be a basis for future research on multilingualism in the context of Kazakhstan. Your decision whether or not to participate in this study will not affect your grades at university.

PARTICIPANT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. The alternative is not to participate. You have the right to refuse to answer particular questions. The results of this research study may be presented at scientific or professional meetings or published in scientific journals.

CONTACT INFORMATION:

Questions: If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact the Master's Thesis Supervisor for this student work, Professor Mukul Saxena, mukul.saxena@nu.edu.kz

Independent Contact: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the NUGSE Research Committee to speak to someone independent of the research team at +7 7172 709359. You can also write an email to the NUGSE Research Committee at gse_researchcommittee@nu.edu.kz

Please sign this consent form if you agree to participate in this study.

- I have carefully read the information provided;
- I have been given full information regarding the purpose and procedures of the study;
- I understand how the data collected will be used, and that any confidential information will be seen only by the researchers and will not be revealed to anyone else;
- I understand that I am free to withdraw from the study at any time without giving a reason;
- With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Signature: _____ Date: _____

The extra copy of this signed and dated consent form is for you to keep.

ЗЕРТТЕУ ЖҰМЫСЫ КЕЛІСІМІНІҢ АҚПАРАТТЫҚ ФОРМАСЫ

Университет студенттерінің ағылшын тілінде оқытылатын ғылыми сабақтағы көптілдікті қолдану тәжірибесінің қабылдауы және қолдануға деген көзқарастары

СИПАТТАМА: Сіз университет студенттерінің ағылшын тілінде оқытылатын ғылыми сабақтағы көптілдікті қолдану тәжірибесінің қалай қабылдайтынғы және қолдануға деген көзқарастарын зерттеуге бағытталған зерттеу жұмысына қатысуға шақырылып отырсыз. Сізге зерттеу жұмысының мақсатына байланысты 10-15 сұрақтардан тұратын сұхбатта қатысу ұсынылады. Сіз ризалық көрсетсеңіз, сұхбат диктофон арқылы жазылады. Сіздің жеке бас мәліметтеріңізді жасыру мақсатында мен Сіздің атыңызды және Сіздің білім алатын жоғары оқу орныңыздың атын диссертацияны жазу үдерісі бойы қолданылатын лақап атпен ауыстырамын және әр ықтимал ақпарат диссертациядан жойылатын болады. Мен сұхбаттан және қадағалаудан алынған ескертпе жазбалардың түпнұсқалары мен электрондық көшірмелерін құпия жерде сақтауға уәде беремін. Сұхбат диктофон арқылы жазылса, мен дыбыс жазбаларды тек менің қолжетімділігім бар және құпиясөзбен қорғалған дербес компьютерімде сақтаймын. Жазбалар компьютерімде үш жыл бойы сақталады.

ӨТКІЗІЛЕТІН УАҚЫТЫ: Сіздің қатысуыңыз шамамен 30-40 минут уақытыңызды алады.

ЗЕРТТЕУ ЖҰМЫСЫН АҚАТЫСУДЫҢ ҚАУІПТЕРІ МЕН ПАЙДАСЫ:

Зерттеу жұмысына қатысудың қауіптері өте аз. Сұхбатта Сіз жауап беруіңіз келмейтін сұрақтар болуы мүмкін. Олай болса, мен сондай сұрақтарды қалдырамын. Сіздің зерттеуге қатысуыңызға байланысты ақпарат оқытушыларға да, кафедрадағы басқа қызметкерлерге де қолжетімсіз. Зерттеу жұмысына қатысуыңыздың келесідей пайдасы болуы мүмкін: Сіздің ағылшын тілінде оқуыңызға байланысты тәжірибеңізбен бөлісу. Сіз зерттеуге қатысу дегенін білуіңіз мүмкін және зерттеудің нәтижелері Сізге қолжетімді болады. Одан басқа, осы зерттеудің нәтижелері бойынша ағылшын тілі арқылы білім алуды университет деңгейінде жүзеге асырудың тәсілдерін қарастыруға болады. Осы зерттеу жұмысы көптілдік Қазақстанда одан әрі зерттелуіне негізін салуы мүмкін. Зерттеу жұмысына қатысуға келісім беруіңіз немесе бас тартуыңыз Сіздің университеттегі бағаларыңызға еш әсерін тигізбейді.

ҚАТЫСУШЫ ҚҰҚЫҚТАРЫ: Егер Сіз берілген формамен танысып, зерттеу жұмысына қатысуға шешім қабылдасаңыз, Сіздің қатысуыңыз ерікті түрде екенін хабарлаймыз. Сонымен қатар, қалаған уақытта айыппұл төлемей және сіздің әлеуметтік жеңілдіктеріңізге еш кесірін тигізбей зерттеу жұмысына қатысу туралы келісіміңізді кері қайтаруға немесе тоқтатуға құқығыңыз бар. Зерттеу жұмысына мүлдем қатыспауыңызға да толық құқығыңыз бар. Сондай-ақ, қандай да бір сұрақтарға жауап бермеуіңізге де әбден болады. Бұл зерттеу жұмысының нәтижелері академиялық немесе кәсіби мақсаттарда баспаға ұсынылуы немесе шығарылуы мүмкін.

БАЙЛАНЫС АҚПАРАТЫ:

Сұрақтарыңыз: Егер жүргізіліп отырған зерттеу жұмысының процесі, қауіп мен артықшылықтары туралы сұрағыңыз немесе шағымыңыз болса, келесі байланыс

құралдары арқылы зерттеушінің ғылыми жетекшісі Профессор Мукул Саксенаға хабарласуыңызға болады: mukul.saxena@nu.edu.kz.

Дербес байланыс ақпараттары: Егер берілген зерттеу жұмысының жүргізілуімен қанағаттанбасаңыз немесе сұрақтарыңызбен шағымдарыңыз болса, Назарбаев Университеті Жоғары Білім беру мектебінің Зерттеу Комитетімен көрсетілген байланыс құралдары арқылы хабарласуыңызға болады: +77172 70 93 59, электрондық пошта gse_researchcommittee@nu.edu.kz.

Зерттеу жұмысына қатысуға келісіміңізді берсеңіз, берілген формаға қол қоюыңызды сұраймыз.

- Мен берілген формамен мұқият таныстым;
- Маған зерттеу жұмысының мақсаты мен оның процедурасы жайында толық ақпарат берілді;
- Жинақталған ақпарат пен құпия мәліметтерге тек зерттеушінің өзіне қолжетімді және мәлім болатынын толық түсінемін;
- Мен кез келген уақытта ешқандай түсініктемесіз зерттеу жұмысына қатысудан бас тартуыма болатынын түсінемін;
- Мен жоғарыда аталып өткен ақпаратты саналы түрде қабылдап, осы зерттеу жұмысына қатысуға өз келісімімді беремін.

Қолы: _____ Күні: _____

Зерттеу жұмысы келесемінің ақпараттық формасына қол және күні қойылған көшірмесі Сізде қалады.

ФОРМА ИНФОРМИРОВАННОГО СОГЛАСИЯ

Как студенты двух университетов Казахстана воспринимают и относятся к полиязычным практикам на STEM уроке с английским языком обучения

ОПИСАНИЕ: Вы приглашены принять участие в исследовании по практикам использования языка на уроке биологии с английским языком обучения. Главная цель заключается в исследовании восприятия и отношения студентов университета к полиязычным практикам (использование языков). Вам будет предложено принять участие в индивидуальном интервью, состоящее из 10-15 вопросов. С Вашего соглашения интервью будет записано на диктофон. Ваше имя и название университета будут заменены псевдонимами на всех этапах исследования, в том числе в записях с наблюдений, в электронных файлах и конечных отчетах результатов, в целях сохранения Вашей анонимности. Все электронные файлы будут храниться на персональном компьютере исследователя, защищенные паролем, в течение следующих трех лет.

ВРЕМЯ УЧАСТИЯ: Ваше участие потребует около 30-40 минут.

РИСКИ И ПРЕИМУЩЕСТВА: Риски, связанные с исследованием минимальны. Если Вы не захотите отвечать на тот или иной вопрос по какой-то причине, этот вопрос будет пропущен. Ваши учителя и администрация университета не будут иметь доступ к полученной от Вас информации. В качестве ожидаемых преимуществ в результате исследования можно рассматривать возможность поделиться Вашим опытом обучения на английском языке. Вы можете узнать, что значит быть частью исследования, и Вам будут предоставлены результаты данной работы. Кроме того, на основании результатов данного исследования можно будет рассмотреть способы реализации обучения посредством английского языка в университетах. Также, данное исследование может послужить основой для дальнейшего изучения полиязычия в контексте Казахстана. Ваше решение о согласии либо отказе в участии никаким образом не повлияет на Ваши оценки в университете.

ПРАВА УЧАСТНИКОВ: Если Вы прочитали данную форму и решили принять участие в данном исследовании, Вы должны понимать, что Ваше участие является добровольным и что у Вас есть право отозвать свое согласие или прекратить участие в любое время без штрафных санкций и без потери социального пакета, который Вам предоставляли. В качестве альтернативы можно не участвовать в исследовании. Также Вы имеете право не отвечать на какие-либо вопросы. Результаты данного исследования могут быть представлены или опубликованы в научных или профессиональных целях.

КОНТАКТНАЯ ИНФОРМАЦИЯ:

Вопросы: Если у Вас есть вопросы, замечания или жалобы по поводу данного исследования, процедуры его проведения, рисков и преимуществ, Вы можете связаться с руководителем магистерского тезиса исследователя: Профессор Мукул Саксена, mukul.saxena@nu.edu.kz.

Независимые контакты: Если Вы не удовлетворены проведением данного исследования, если у Вас возникли какие-либо проблемы, жалобы или вопросы, Вы можете связаться с Комитетом Исследований Высшей Школы Образования

Назарбаев Университета, отправив письмо на электронный адрес gse_researchcommittee@nu.edu.kz.

Пожалуйста, подпишите данную форму, если Вы согласны участвовать в исследовании.

- Я внимательно изучил представленную информацию;
- Мне предоставили полную информацию о целях и процедуре исследования;
- Я понимаю, как будут использованы собранные данные, и что доступ к любой конфиденциальной информации будет иметь только исследователь;
- Я понимаю, что вправе в любой момент отказаться от участия в данном исследовании без объяснения причин;
- С полным осознанием всего вышеизложенного я согласен принять участие в исследовании по собственной воле.

Подпись: _____

Дата: _____

Копия подписанной и продатированной формы информированного согласия остается у Вас.

Appendix C: Interview Transcript Sample

Interviewer: If you happen to use your first language, what do you think the impression of others might be, impression of peers, professors?

Aida: If I speak to the professor in my native language, you mean? like the whole question, the whole sentence will be in English? oh I didn't think about it but...

Int: maybe you have witnessed some impressions or reactions?

Aida: Yes, they would be very strange. For instance, let's imagine that we're having a lecture or we're having some discussion and everybody speaks in English, right.. and then suddenly I start to speak in my native language, for instance, in Russian or Kazakh, right. I guess everybody will just stop speaking and look at me and they will just stare at me like "are you stupid?", "are you a fool?", "we're speaking here in English and why are you saying your question in your language?", "we also can ask but we're not doing it, we're just asking in a language we're allowed". So, professor will be confused like "what's happening, why she's asking me in a language that I maybe I don't know or maybe I know but not allowed". It would be strange. And I guess that's why people don't ask in their native languages because they already know the reaction would not be positive.

Int: But do you personally accept this kind of language alternations/ switching between languages?

Aida: Right, I accept because I am actually practicing it, it's inevitable.

Int: Thank you. Do you think you and your group mates benefit from switching between languages, like this?

Aida: From the biological perspective, yes. Because your brain becomes more flexible, and your neuronal cells become more active when you're like "oh I should speak in Russian, now we should speak in Kazakh and now we should speak in English", so switching from one language to another... they are doing a really hard work.