

**The perceptions and practices of differentiated instruction of teachers who are also in
the position of subject coordinators in a school for gifted students in Kazakhstan**

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The perceptions and practices of differentiated instruction of teachers who are also in the position of subject coordinators in a school for gifted students in Kazakhstan

Abstract

The present qualitative research explored the perceptions and practices of teachers who are also in the position of subject coordinators in a school for gifted students in Kazakhstan. Differentiated instruction has become an important aspect of teaching practices in the setting of the selected educational site due to ongoing educational reforms. The research aimed to reveal perceptions of differentiated instruction along with teaching practices and implications of the role of leadership in its implementation. The case study research design was selected in order to obtain in-depth data in a particular school setting. Due to the selected research design, the data was triangulated by conducting semi-structured individual interviews, lesson observations, and document analysis.

The research revealed that participants have varied perceptions of differentiated instruction. Some teachers perceive it as a way to create learning opportunities by accommodating diverse learning needs, interests, and styles. And some teachers view it as an ability-based approach to meet the curriculum requirements as they draw upon limitations rather than opportunities that differentiated instruction creates for learning. Second, teaching practices are defined by teachers' understandings of differentiated instruction as well as their values. Third, there is a lack of collaboration which would promote practices of differentiated instruction due to mandatory top-down collaborative practices employed at the research site. Furthermore, the findings show that leadership plays an important role in implementing differentiated instruction as it defines attitudes and approaches to collaboration, professional development, and teaching practice.

The research findings may be used to inform school policies on differentiated instruction and to build a shared understanding of differentiation within an educational and organizational context of the research site. Also, it is recommended to enhance bottom-up teacher-initiated collaborative practices by encouraging and providing teachers with opportunities for self-learning, professional development as well as empowerment of their leadership skills.

**Қазақстандағы дарынды балаларға арналған мектептердің біріндегі пән
үйлестіруші қызметіндегі мұғалімдердің саралап оқыту бойынша түсініктері және
тәжірибелері**

Аңдатпа

Берілген сапалық зерттеудің мақсаты Қазақстандағы дарынды оқушыларға арналған мектептердің біріндегі пән үйлестіруші қызметіндегі мұғалімдердің саралап оқыту туралы түсінігін және тәжірибесін зерттеу болды.

Білім беру реформаларының енгізілуіне байланысты саралап оқыту әдісінің қолданылуы аталған білім беру мекемесіндегі педагогикалық тәжірибелердің маңызды бір аспектісіне айналды. Бұл зерттеу саралап оқыту бойынша қалыптасқан түсініктермен қатар, педагогикалық тәжірибе және саралап оқытуды дамытудағы көсбашылықтың рөлін анықтауға бағытталды. Кэйс-стади ситуациялық әдісі (ситуациялық анализ) белгілі бір білім беру мекемесіндегі деректерді терең зерттеу мақсатында таңдалынды. Деректерді триангуляциялау жартылай құрылымдалған жеке сұхбат жүргізу, сабақтарды бақылау және құжаттарды талдау арқылы жүзеге асырылды.

Зерттеудің нәтижесі бойынша, кейбір қатысушылар саралап оқытуды оқушының жеке қызығушылығын, қажеттіліктерін және оқу стилін ескере отырып білім беру мүмкіндіктерін ұйымдастыру деп қарастырса, басқалары оны білім беру бағдарламасының міндеттерін жүзеге асыру тәсілі ретінде түсінетіні анықталды. Бұл мұғалімдердің бір бөлігінің саралап оқытуды оқушының білім алуға жағдай жасау мүмкіндігі ретінде, ал ендігі бір бөлігінің саралап оқыту негізінде оқушылардың деңгейлеріне байланысты шектеулер жасау ретінде қолданатындығы жайлы айтады. Екіншіден, қатысушылардың саралап оқыту бойынша тәжірибелері олардың бұл ұғымды қалай түсінетіндігімен анықталады. Үшіншіден, мектепте саралап оқыту

тәжірибесін дамытуға бағытталған серіктестіктердің аз екендігі айқындалды. Сонымен қатар, саралап оқытуды жүзеге асыруда көсбасшылық үлкен рөл атқарады, себебі ол серіктестік пен өз бетімен оқудың стильдерін, кәсіби даму мен оқыту қызметтерінің дамыту ынтасын анықтайды

Зерттеудің нәтижесі мектептің саралап оқыту саясатын құру және сол білім беру мекемесі аясында саралап оқыту түсінігін қалыптастыру мақсатында қолданыла алады. Сонымен қатар, кәсіби серіктестік тәжірибесі мен мұғалімдердің бір-бірімен тәжірибе алмасуы, өз бетімен оқу, кәсіби даму, көсбасшылық дағдыларын дамыту үшін тиісті жағдайлар жасау ұсынылады.

Понимание и практика дифференцированного обучения учителей, которые также являются предметными координаторами в одной из школ для одарённых детей в Казахстане

Аннотация

Целью данного качественного исследования было изучение понимания и практики дифференцированного обучения учителей, которые также являются предметными координаторами в одной из школ для одаренных детей в Казахстане. Дифференцированное обучение стало важным аспектом педагогической практики в данной школе в рамках внедряемых образовательных реформ. Данное исследование направлено на изучение понимания дифференцированного обучения наряду с применяемой практикой, а также на изучение роли и влияния лидерства на развитие дифференцированного обучения. Метод кейс-стади (ситуационный анализ) был выбран для получения углубленных данных в конкретном образовательном учреждении. Триангуляция данных исследования была проведена с помощью полуструктурированных индивидуальных интервью, наблюдений за уроками и анализа документов.

Результаты исследования показали, что некоторые участники понимают дифференцированное обучение как способ создания возможностей для обучения учащихся с учётом их индивидуальных интересов, потребностей и стилей обучения в то время как другие рассматривают его как способ достижения требований учебной программы. Это говорит о том, что некоторые учителя применяют дифференцированное обучение как возможность создания условий для обучения учащихся, учитывая их образовательные потребности, а другие, дифференцируя по способностям и умениям учащихся, ограничивают эти возможности. Во-вторых,

практика дифференцированного обучения участников исследования во многом определяется их пониманием дифференциации. В-третьих, в школе существует нехватка неформального сотрудничества, направленного на развитие практики дифференцированного обучения. Кроме того, лидерство играет важную роль в реализации дифференцированного обучения, поскольку оно во многом определяет стили профессионального сотрудничества и самообучения, а также стремления к развитию и улучшению практики преподавания.

Результаты исследований могут быть использованы для создания школьной политики дифференцированного обучения и понимания дифференциации в контексте данной образовательной среды. Кроме того, рекомендуется создавать условия для практики профессионального сотрудничества и взаимодействия учителей, их инициатив к самообучению, профессионального развития, а также для расширения их лидерских навыков.

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Chapter 1: Introduction

1.1 Introduction

In the time of the shifting teaching paradigm from teacher-centered towards more student-centered approach, differentiated instruction has become one of the leading pedagogical approaches in addressing individual learning needs. As defined by Levine, differentiated instruction is a student-centered approach which puts individual learning needs and interests forward so that teachers can adapt their teaching styles to accommodate them (as cited in Stanford & Reeves, 2009).

The main three domains of the implementation of differentiated instruction, as Levy (2008) puts, lie in differentiation in content, process, and product as aligned with learning needs, styles, and strengths (p.162). Thus, differentiated instruction is a flexible approach towards adapting the subject matter, pacing of the individual performance, and various forms of presentation of acquired skills and subject knowledge. However, as research conducted by Moon, Tomlinson, and Callahan as well as Schumm and Vaughn showed, teachers do not use differentiated instruction drawing on their learners' needs as differentiation does not have any value to them and focusing on learners' interests and differences may cause problems in the classroom, especially when teachers have to follow rigid top-down standards (as cited in Dixon, Yssel, MacConnel & Hardin, 2014).

Another study conducted in American classrooms by Tomlinson (1995) also revealed a lack of differentiation due to teachers' deficit of the concept of differentiated instruction. Teachers tend to believe that they differentiate their instruction towards the diverse needs of their learners by making a few amendments and modification in their lesson plans.

It is evident that differentiated instruction addresses diversity of learning profiles, however, due to its value-grounded nature, misconceptions may arise among teachers leading them to poorer instructional accommodations of their learners' needs.

1.2 Statement of the problem

Research shows that teachers lack conceptual understanding of what differentiated instruction truly means. The deficit of understanding is caused by a number of factors. As discussed by Lortie, a lack of conceptual understanding originates from the traditional pre-service teacher training or self-perceived concepts of what classroom teaching should be like based on teachers lived experiences in the years of their own schooling (as cited in Tomlinson, 2016). Differentiated instruction is determined by the understandings of the concepts of inclusive education and its goals. As asserted by Lawrence-Brown, differentiated instruction helps to achieve the goals of inclusive education (as cited in Huebner, 2010). It is obvious that differentiated instruction serves the goals of inclusive education as both rest upon the principles of equity and social justice in education.

In the context of Kazakhstan, differentiated instruction practices might be impeded due to a lack of conceptual understanding of the principles of inclusive education. As Suleimenova (2015) stated in her article for "Open School", national journal for teachers, that inclusive education is still perceived by many people as institutionalized education. Therefore, as she proceeds, the terminology of "inclusive school", "inclusive classroom", or "inclusive kindergarten" is not acceptable in the Kazakhstani context as it distorts an understanding of the the goals of inclusive education and people perceive it as educational segregation. Furthermore, according to the Law on Education in Kazakhstan (2007), the diversity of learning needs is shown through only ten categories, including students with disabilities, orphans and socio-economically disadvantaged students. However, the prescribed list is too

narrow to define the concept of inclusive education as it excludes other vulnerable groups of students from the list despite the statement about equal access to education by all citizens. The Law shows that inclusive education is still perceived as segregated education for students with special needs. According to Ainscow (2005), inclusive education should cater for the differences of all learners without restrictions due to misunderstandings, which still exist in some countries. Ainscow (2005) proceeds that inclusive education calls for a social justice and it expands far beyond the boundaries of education and sends implications to democratic values of the countries.

Another impeding factor towards achieving goals of inclusive education in Kazakhstan is a deficit of resource support of underachieving students (OECD, 2015). The focus on higher-achieving students and promotion of so-called “Olympiad culture” in Kazakhstan highly resonates with “teaching to the test” approach when students are expected to win in the various subject contests in order to increase schools’ accountability and students’ achievement. As the result, this highly fostered “culture” leaves many academically challenged students unattended by teachers, who tend to focus their attention on the gifted in special areas students. According to Rouse and Lapham (2013), students from disadvantaged backgrounds, including low-achieving students, are viewed as troublemakers in achieving high accountable results in Kazakhstani schools. As put by MacKenna, Cacciattolo, and Vicars (2013) students are turned into “bearers of results” (p. 8) when teaching classroom practices are limited to teaching students to the test results. As a result, national education system breeds exclusionary practices among Kazakhstani teachers by putting pressures on them to teach students to conform to the requirements of standardized curriculum and assessment. Furthermore, many teachers lack a clear vision of educational inclusion and subsequently they misunderstand the value of differentiated instruction as inclusion and differentiation are two

sides of the same coin. The results of the teachers' national survey that was conducted in 2015 showed that teachers in Kazakhstan lack professional competence in order to create inclusive educational environment in their classes and they still hold stereotypes in relation to inclusive education (Yelisseyeva, 2015).

The research of teachers' perceptions and experiences of differentiated instruction may contribute to building an understanding of the goals of inclusive education in Kazakhstan and thus, promote meaningful participation and academic achievement of all learners.

The practical rationale of the study which aims at exploring the perceptions and experiences of differentiated instruction of teachers who are also in position of subject coordinators has a number of reasons. First, the way teachers differentiate their classroom instruction will inform about their understanding of the diversity of learning needs in their classrooms. Second, the exploration of teachers' perceptions of differentiated instruction will potentially reveal teachers' understanding of the goals of inclusive education. Third, the research findings will be beneficial for the improvement of the differentiated practices employed at the research site. Lastly, the research findings will inform school policies in achieving goals of inclusive education.

In addition, this study would potentially contribute to the body of knowledge and teaching practices in the field of inclusive education in Kazakhstan as the best practices employed at the research site are transferred to mainstream schools. The research will be primarily beneficial for teachers in better understanding of the concept of differentiation and its underlying principles and values.

1.3 Purpose of the Study

The purpose of the study is to explore perceptions and practices of differentiated instruction of teachers who are also in the position of subject coordinators in a school for gifted students in Kazakhstan.

1.4 Research Questions:

Main questions:

1. How do teachers who are also in position of subject coordinators of Language Arts, Science, and Social Studies in a school for gifted students in Kazakhstan understand the concept of differentiation instruction?

2. How do the understandings of differentiated instruction shape their teaching practices to ensure meaningful participation and academic achievement of all students in the classroom?

Sub-questions:

1. How do teachers understand differentiated instruction?

2. How do teachers understand the learners' diversity in their classrooms?

3. How do teachers ensure differentiation of content, process, and learning products through various planning designs?

4. How do the school curricular documents as well as teachers' unit or lesson plans regulate and reflect the goals of differentiation?

5. How do teachers describe and apply their skills to differentiate their classroom instruction?

6. What approaches and strategies do teachers employ in order to differentiate their instruction?

7. What challenges do teachers have in implementing differentiated instruction?

8. How do teachers apply their leadership skills in creating a shared understanding of differentiated instruction?

In order to answer the research questions, a case study research design was selected to study the phenomenon at the research site. The case study design was a relevant approach in exploring the concept of differentiated instruction in a particular educational setting. It helped to validate the research findings by means of several research instruments.

1.5 Definitions of central concepts

Inclusive education is defined as "...a process of strengthening the capacity of the education system to reach out to all learners and can thus be understood as a key strategy to achieve EFA" (UNESCO, 2009, p.8). However, in the Law on Education of Kazakhstan there is no clear statement about inclusive education and the terminology is not defined. The terminology of special education is still used instead (Law on Education, 2007). Thus, the concept of inclusive education still needs to be defined in the educational context of Kazakhstan in alignment with the existing definitions provided by the leading experts in this field. It is important to note that the definition of inclusive education is created within political, social, and cultural contexts by pursuing the democratic goals of educational and social equity and justice. Furthermore, as Ainscow, Booth and Dyson (2006) claimed, educational inclusion is never complete process as there is always a room for improvement of the educational practices:

...inclusion is concerned with all children and young people in schools; it is focused on presence, participation and achievement; inclusion and exclusion are linked together such that inclusion involves the active combating of exclusion; and inclusion is seen as a never-ending process. Thus an inclusive school is one that is on the move, rather than one that has reached a perfect state. (p.25)

Furthermore, differentiated instruction is a value-grounded teaching approach, which helps teachers to achieve the goals of inclusive education by meeting the diverse learning needs in their classrooms. Although learning objectives for all learners are the same, the strategies and approaches employed to achieve those learning needs are different and respond to the diversity of learning interests, needs, and styles (Bray & McClaskey, 2012, p.2). In the context of the present research, differentiated instruction practices were revealed to reflect teachers' values and attitudes towards diversity of learners in their classrooms as well as their leadership skills in the way to perceive and approach compatibility of differentiated instruction with curriculum and assessment requirements.

Chapter 2. Literature Review

2.1 Introduction

This chapter will review existing theories and concepts on differentiated instruction as well as explore understandings of the concept by teachers along with teaching practices created by those understandings. It will also discuss challenges and barriers that teachers encounter in their daily inclusive teaching practices to meet the diverse needs of their learners by employing differentiated instruction. Another aspect that will be explored in the chapter is the role of teacher leadership positions in promoting differentiated practices in their school communities.

2.2 Theoretical and conceptual frameworks of differentiated instruction

Differentiated instruction has taken its fundamental basis from the sociocultural theory developed by Leo Vygotsky, Russian psychologist and a founder of socio-cultural theory in education (Subban, 2006). Vygotsky's socio-cultural theory highlights the importance of social environment and interaction in the process of learning and development. This holistic development is made possible when learners' diverse backgrounds are taken into account and fostered in the classroom. Flem, Moem, and Gudnundsdottir (2004) also discussed the relevance of sociocultural theory to inclusive practices as it helps to deepen understanding and address learners' social and cultural diverse backgrounds. Indeed, each individual learner represents a variety of social and cultural characteristics, such as culture, ethnicity, gender, and race, which are brought into the classroom and shared with others. These backgrounds are fostered by the nurturing environment and when communicated to peers they enrich the process of classroom socialization and learning as well (Flem, Moem, and Gudnundsdottir, 2004). According to the sociocultural theory of learning, the multiple backgrounds of learners are important factors to consider in the classroom where learners learn through interactions,

respect, and collaboration (Subban, 2006). Thus, socialization which is realized by inclusive education serves best the development of children, their improved communication skills and it promotes acceptance and respect for diversity beyond school communities. This can be explained by the social theory of learning as it is important for each and every learner to interact with peers and accept their differences in a collaborative classroom environment. When learners feel welcome and respected, the same attitudes will be shown by them towards other learners as well. Also it develops self-respect as learners accept their individual differences due to social acceptance and respect.

Furthermore, the theory proposed by Vygotsky (as cited in Subban, 2006) finds its reflection in inclusive teaching practices as it defines diversity of learners' backgrounds as an asset to differentiated teaching. The zone of proximal development connects the desired goals with an actual phase of learning by elaboration on the knowledge and experience that learners already have (Subban, 2006). The implications that the theory sends to inclusive education are evident as diversity is viewed as a contribution to learning with an urgency to be addressed. As asserted by Lawrence-Brown, differentiated instruction paves the way toward inclusive education as it makes it possible to tackle the needs of high achieving students as well as those who struggle due to disabilities and other barriers due to the acceptance and respect for learners' diverse backgrounds and differences (as cited in Huebner, 2010).

Other theories which created the grounds for differentiated instruction, as claimed by Santamaria (2009), are brain theory and Gardner's theory of multiple intelligences. As the author proceeds to assert by referring to Gardner and Kalbfleisch, the concept of diversity of learning profiles has much to do with brain theory and the ability of teachers to recognize the multiple gifted areas in those learning profiles is referred to the theory of multiple intelligences by Gardner (as cited in Santamaria, 2009). As elaborated by Hinton, Miyamoto,

and Della-Chiesa (2008), upon the propositions of brain theory, neuroscience helps educators to “delineate many possible developmental pathways to proficiency, enabling educators to differentiate instruction to accommodate a wider range of individual differences” (p.100).

It has become clear that differentiated instruction has been created by a number of theories. Each theory considered found a reflection in the establishment of the conceptual framework. Thus, as Tomlinson stated, the true way of differentiating teaching instruction is to put forward learners’ differences as strengths to guide their learning trajectories (as cited in Subban, 2006). This statement makes it clear that the role of the teacher is essential in promoting diversity in teaching and learning. Thus, it is important for teachers to understand and implement the principles of differentiation through respect for differences. Having outstanding expertise in the field, Tomlinson claims that differentiated instruction is not a set of strategies and methods with which to be equipped, it is more about a value-based approach towards teaching (as cited in Subban, 2006). Thus, according to her definition, differentiated instruction is grounded in the teaching philosophy and attitudes which define teaching choices whether to differentiate or not. As Tomlinson (2000) suggested, differentiated instruction does not provide any teaching guidance to teachers rather it is firmly embedded in what beliefs teachers hold when teaching in their classrooms. Those beliefs, according to Tomlinson (2000) stem from the understanding of teachers that learning should be built on learners’ prior knowledge and experience and take advantage of students’ varied strengths and inclinations. At this very point, differentiated instruction has an immediate relation to the principles of inclusive education as both draw upon the individual characteristics and differences of learners. This definition mirrors one by Hale et al. (2016), who assert that differentiated instruction serves the principles of inclusive education in this era of highly accountable curricular and assessments standards. This perspective resonates with Tomlinson and McTighe

(2006) who affirmed that differentiated instruction is compatible with rigorous assessment standards because it is still possible to maintain the same accountable results differentiating and thus promoting learning to meet those standards.

When Tomlinson was interviewed in 2013 by Wu from Murray State University in the USA, she put the purpose of differentiation in the following way: “So differentiation proposes that we teach not out of habit or teacher preference but in response to the students we serve” (Wu, 2013, p. 127-128). Consequently, differentiated instruction puts a learner first and the strategies that teachers develop originate primarily from the learner’s needs and interests.

One of the core principles of differentiated instruction is the principle of diversity. As claimed by Gamoran and Weinstein, the diversity of learning needs in the classroom requires teachers to be attentive and responsive to the differences specific to a particular classroom context (as cited in Tomlinson, et al, 2003).

Another expert in the field of differentiated education, VanTassel-Baska stated that efforts to fit all learners into the “same size” in curriculum and teaching design is to reject the existence or importance of differences as a part of learner identity (as cited in Dixon, Yssel, MacConnel & Hardin, 2014). The idea of embracing the differences is another leading principle for both differentiated instruction and inclusive education.

As teachers promote differentiation in their classrooms, they need to know that according to Tomlinson, differentiated instruction implies adaptations of content, process, and product (as cited in Corley, 2005). Content is referred to as subject-matter guided by school curricular documents which is viewed as a flexible tool be adjusted to the variety of learning profiles. The process involves wide-ranging approaches and strategies employed by teachers as they plan or actually teach to adapt the content to their learners’ needs. Learning products may vary from learner to learner and they reflect the areas of their interests and strengths. As

Corley (2005) elaborated, differentiation of content is realized through adaptations of the subject content towards each individual learner's needs and abilities. As Levy (2008) added, teachers differentiate their instruction without changing the content but accommodating student learning needs and building on their background knowledge. Differentiation of the learning process assumes the use of teaching strategies to accommodate those diverse learning styles (Levy, 2008). Use of classroom survey, as suggested by Levy (2008), can be helpful in creating student groupings to combine their various learning styles in solving classroom problems. Corley (2005) proposes the use of strategies to change learner groups in order to establish stronger bonds among learners and promote enriched classroom collaborations.

For the differentiation of learning products, Tomlinson suggested that learners be given choices to demonstrate acquired knowledge and skills through various means and forms of presentation (as cited in Corley, 2005). Corley (2005) elaborated by indicating that differentiation of the learning product should relate to learners' personal interests and develop their critical thinking skills. This also goes back to the compatibility of differentiation and rigorous assessment standards as teachers may vary the ways they assess their learners without changing the content of what they assess (Tomlinson & McTighe, 2006).

In addition, Van Garderen and Whittaker (2006) in the review of the key concepts of differentiated instruction pointed out affect and learning environment as crucial factors in promoting differentiated instruction (p.14). The affective aspect of teaching focuses on what students think, how they feel and react to what is taught in the classroom. According to Van Garderen and Whittaker (2006), the environmental aspect of differentiated instruction highly resonates with universal design for learning in providing barrier-free access to the school environment as well as eliminating those barriers to accessing of quality education through curricula and assessments.

Other aspects that teachers should address in differentiating their classroom instructions according to Tomlinson include readiness which is considered when teachers plan their lessons taking into account learners' prior knowledge and backgrounds (as cited in Corley, 2005). Furthermore, consideration of learning interests, as proposed by Csikszentmihalyi, Maslow, and Sousa as well as Wolfe, help teachers to motivate learners and promote their learning (as cited in Corley, 2005).

Learning profiles is another aspect that should be taken into account when differentiating teaching as it has an immediate relation to the choices that learners are given to demonstrate their academic achievements through various means of presentation and pace of work (Corley, 2005). Regarding the use of learning profiles, Thousand et al. juxtaposed two fundamentally different approaches to planning for the learning process – Universal Design for Learning and Retrofitting (as cited in Stanford & Reeves, 2009). Universal Design for Learning represents planning to meet diverse learning profiles and to engage learners in a meaningful participation. Retrofitting practices focus on meeting the curriculum and assessment standards omitting learner interests and needs (Stanford & Reeves, 2009). The approach presumes modifications of the curriculum and planning so that they fit the standards. As Elliot noted, teachers tend to retrofit the existing environment and curriculum when they face challenges in teaching but the initial planning does not draw upon learning needs and that is when and why the difficulties with learner participation and achievement occur (as cited in Stanford & Reeves, 2009). This means that differentiation lies in the core of teaching philosophy and readiness to accommodate for various learning needs rather than serving the curriculum standards.

Issues that arise from teachers' existing curriculum and assessment retrofitting practices are caused by the lack of what Wiggins and McTighe (1998) called backward design

(p. 8). The issue is engendered by common teaching practices to initially plan drawing upon the curriculum and assessment standards rather than on a variety of learning profiles, interests, and readiness (Corley, 2005). Teachers tend to plan according to the standards without consideration of how the teaching content relates to their learners. When learners do not understand the relevance and do not see the connections of what is being taught in the classroom and the reality outside its walls, they fail to develop a profound knowledge and skills of the subject matter. As McTighe and Tomlinson (2006) suggest, the core principles of backward design lie in curriculum planning while differentiation relates to the needs of learners and approaches utilized by teachers.

Differentiated instruction has many overlapping characteristics with other pedagogical approaches to teaching. Bray and McClaskey (2013) attempted to draw a distinctive line between personalization, individualization, and differentiated instruction. According to their definition, differentiation puts teacher as the main decision-maker in selecting the resources and the strategies to deliver the subject content to a group of learners while personalization revolves around each individual learner and transforms them into decision-makers on how to lead their learning, use relevant resources and monitor achievements. Individualization is contrasted to differentiation by being a learner-centered approach which aims at accommodating individual learning needs and monitoring individual achievements (Bray & McClaskey, 2013). Therefore, differentiated instruction is a pedagogical approach which helps teachers to work in diverse classroom settings where teacher is the one who is responsible for adjusting the teaching material to the needs of learners and thus leading them to achievements. Differentiation differs from individualization by the leading role of teacher in accommodating the individual learning needs and the principle of diversity in the classroom. The starting point for the decision-making process in differentiated approach to teaching is an understanding of

each learner's individuality and readiness to cater for the diversity of needs. It becomes clear that one of the leading aspects of differentiated instruction is the development of students' socialization and collaboration through addressing each individual within their diverse communities.

2.3 Teacher understandings and practices of differentiated instruction

Teachers are one of the main stakeholders in the educational process. Thus, teaching practices grounded in their understandings and perceptions of differentiated instruction need to be studied in order to identify the best approaches to promote differentiated teaching as well as the factors which might impede those improved practices. Moreover, the study of differentiation in teaching practices will reveal implications that it sends to inclusive education as both speak to same educational values and goals.

It is important to explore understandings of differentiation among teachers described in research in order to more thoroughly understand pedagogical decisions that teachers make and approaches they use in their daily teaching practices. The results of the studies conducted in culturally different school settings show that differentiated instruction is predetermined by teachers' beliefs and values of diversity and differences to be fostered through a careful planning and teaching. For instance, according to the findings of the recent large-scale research (Suprayogi, Valcke & Godwin, 2017) conducted among 604 teachers in Indonesian accredited schools, the implementation of differentiated instruction is challenging due to the varied teachers' self-efficacy conceptualizations and beliefs in constructivist ideas which are defined by a number of other factors, such as teaching experience, school environment, and qualifications (Suprayogi, Valcke & Godwin, 2017). Thus, teachers' professional self-image and value-grounded perception of differentiated instruction are significant for its implementation since differentiated instruction practices need to be empowered by teaching

autonomy over the curriculum and assessment as well as the “driving” philosophies enrooted in personal values and beliefs. As Tomlinson and Imbeau (2010) claimed, teachers’ personal values and beliefs shape their teaching practices and help them to create differentiated classrooms. Fullan and Reeves argued that the effective outcomes of the actions that teachers daily perform in their classrooms shape their values and beliefs which further determine their pedagogical choices (as cited in Tomlinson & Imbeau, 2010). Furthermore, as Tomlinson and Imbeau (2010) proposed, contemporary classrooms are places which should reflect an inevitably diverse world outside school settings where people have different backgrounds.

The role of teacher mindset and its influence on teaching philosophy in shaping relevant attitudes and differentiated practices was found to be important in the research study conducted in 3353 Belgian schools which aimed to measure teachers’ perceptions of differentiated instruction by utilizing questionnaire instrument (Coubergs, Struyven, Vanthournout & Engels, 2017). The growth teacher mindset as opposed to one that is fixed, as suggested by Dweck, assists teachers to easily adapt to a variety of learning styles, thus ensuring meaningful participation and achievement of learners (as cited in Coubergs, Struyven, Vanthournout & Engels, 2017).

Teaching autonomy is another factor to be considered in determining teachers’ self-efficacy in differentiated instruction. Thus, the results of the research in 65 Belgian primary schools among novice teachers revealed that teachers’ autonomy plays a significant role in promoting effective differentiated practices (De Neve, Devos & Tuytens, 2015). The research observations also showed that mentoring school programs could facilitate beginning teachers’ professional self-efficacy in differentiated instruction (De Neve, Devos & Tuytens, 2015). Though, the research was conducted among novice teachers, there is no doubt that school-wide collaboration practices as well as all teachers’ autonomy in developing the unit plans and

adjusting the curricula to the learning needs will prove to be effective in promoting better differentiated practices (Tomlinson & Imbeau, 2010; Suprayogi, Valcke & Godwin, 2017). However, as it was argued by Friend (2000) collaboration has become a “buzz word” in many professional communities and not everyone perceives and practices collaboration in an effective way. Mandatory school collaborative practices do not create settings for meaningful interactions defined by common professional goals, knowledge, skills, and practices (Friend, 2000).

The perspective presented by Nicolae (2014) concerning teaching practices in Romanian schools showed that there is a common practice to “teach to the middle” (p.428). In other words, differentiation is not occurring because as put by Tomlinson and McTighe (2006), teachers consider differentiation to be happening when they assign tasks of different complexity to higher achieving students and their counterparts and the same situation occurs with the number of assignments. Nicolae (2014) also stated that only 20% of students in Romanian classrooms receive instruction which is appropriate to their needs. The danger that teaching to the average level imposes is evident and this might be an unintentional practice, as suggested by Nicolae (2014). However, it is made clear that the lack of differentiation in the classrooms needs to be addressed. Nicolae (2014) highlighted the role of differentiated instruction to “...to fill the gap between teaching and learning” (p.430) as teachers need to increase their professionalism by learning various teaching strategies and effective ways of their classroom utilization, such as “learning centers and stations, orbital studies, tiered activities, learning contracts, independent studies, choice boards, group investigations, problem-based learning, etc. and their positive effects on student achievement” (p.429). This perspective resonates with that of Norwich (1994) who claimed that differentiation should draw upon the premise that learners’ differences serve to be opportunities rather than

boundaries for learning. He proceeds by arguing the fact that differentiation is perceived by many teachers as limitations for learners' meaningful participation and achievement and refers to Hart "Differentiation is regarded as a part of problem, not a part of solution" (as cited in Norwich, 1994, p. 291).

In the interview with Wu (2013), Tomlinson suggested to use small groups for working on different assignments and projects. Keeping groups small, according to Tomlinson, is a helpful strategy to address the needs of individual students who might have questions or challenges.

Differentiation is widely employed by teachers in Content and Language Integrated Learning (CLIL). As mixed research study in Finnish schools shows (Roiha, 2014), language is perceived as an issue in differentiated teaching as students struggle in content acquisition when instructed in another language. Another qualitative study (Raskala, 2014) conducted among Finnish teachers on exploring their differentiated practices in CLIL education, revealed that teachers face challenges connected with shortage of time that differentiation in CLIL classes require at the stage of lesson planning as well as lack of authentic language resources. Furthermore, Meyer (2010) highlighted the importance of creating relevant methodologies to address various learning needs as well as understanding of those needs and enabling learners to build meanings in different languages rather than learn the content as it is frequently practiced in CLIL classes.

Overall, it is clear that teaching practices and strategies are defined by teacher understanding of the importance of differentiated instruction and the values which ground the differentiated approach. The practices employed by teachers at classroom level are facilitated by the practices of mentoring, professional collaboration, and teacher autonomy over

curriculum and assessment. All in all, they aim to empower and increase teachers' perceived self-efficacy.

2.4 Challenges and barriers in implementing differentiated instruction

In the previous section, varied approaches to promote differentiated instruction were considered. However, as research shows, there are many challenges that teachers encounter in implementing differentiated practices. Therefore, this section will focus on existing research in relation to challenges and barriers in the implementation of differentiated instruction which mostly take place at school level as differentiated instruction is defined by the educational and cultural contexts of educational settings.

Mandatory top-down collaborative practices at school as considered in the previous section is found to be an impeding factor towards creating shared understandings of the practices that teachers employ and building stronger professional communities through which it is possible to implement innovative teaching approaches, including differentiation.

Furthermore, the challenges faced by teachers in their differentiated practices is caused by so called "audit culture" as revealed by the research findings of the case study conducted in schools in Queensland. (Mills et al., 2014, p.18) The culture of high educational accountability is reported to create barriers to teaching practices as their practices of differentiated instruction came from top down and was a compulsory pedagogical approach to be undertaken (Mills et al., 2014). Though, as reported by Mills et al. (2014) the surveillance of school practices brought about some positive changes such as the actual implementation of approaches which serve as a just educational process. Moreover, teachers noted that less rigid top down pressures brought about improved practices (Mills et al., 2014). This also showcases the necessity of giving teachers autonomy over curriculum planning and selection of strategies (De Neve, Devos & Tuytens, 2015). As it was revealed in the Australian case study, the attitudes of

school administration to challenges that individual students face in the process of learning were regarded as problems caused by their personal backgrounds and therefore, which need to be considered outside the social and educational setting of the school (Mills et al., 2014).

However, this approach has an exclusionary character as it detaches learners' personal, social, and cultural backgrounds from the educational context. The dangers that the administrative imperatives on the implementation of differentiated instruction might pose, as stated by Mills et al. (2014), is creating an air of successful implementation of the strategy due to the mandatory nature of the school reform with a lack of understanding of the purpose of the approach.

McTighe and Brown (2005) claimed that rigorous accountable school systems in the US do not pose obstacles for the implementation of differentiated instruction as is believed. Educational accountability and differentiation reflect realities of contemporary life. The curriculum and assessment standards project the long-term targets while differentiated instruction addresses the immediate learning needs, thus paving the way towards high-stakes goals. As believed by McTighe and Brown (2005), the core of the question is what teachers believe and their professional commitment to accommodate the needs of their learners.

The assumption that differentiation and standardized tests are incompatible was tested in the study conducted in Alpine rural schools. According to the results of the study, students whose instruction was differentiated did not show low results in the state tests (Smit & Humpert, 2012). However, the findings implied that differentiated instruction should be aligned with authentic formative assessments rather than standardized tests. This finding resonates with the perspective presented by McTighe and Brown (2005) as they discussed the importance of meaningful learning and including authentic tasks and scenarios into standardized tests.

Overall, the reviewed literature revealed various perspectives on differentiated instruction as well as challenges in the process of its implementation. These findings highly resonate with the Kazakhstani educational context as they tackle the issues of high-stakes accountability standards, lack of conceptual understanding and professional training as well as top down policies and reforms.

2.5 The role of leadership in promoting differentiated instruction

In order to understand the role of leadership in promoting the principles of differentiated instruction at school, it is important to understand what is truly meant by leadership and what implications it sends to inclusive education and differentiated approaches to teaching. Thus, relevant literature relating to different leadership models and practices will be reviewed in this section.

The concept of leadership in education is complex to explore due to its varied understandings. Leadership is still perceived by many as formal positions of school administrators, governors, and officials. However, the paradigm shift in the Kazakhstani context of education raises a need to reconsider understandings of leadership in the time of ongoing multiple reforms and changes. Precey (2011) argues that leadership in inclusive education deals both with managerial skills and value-driven impetus of leaders. Furthermore, Leithwood, Day, Sammons, Harris, and Hopkins claim that a leadership role of teachers is highly important in implementing inclusive education (as cited in Precey, 2011). Teachers as leaders are powerful tools for disseminating the principles of inclusive education as they have to work in a rapidly changing educational environments.

Shields (2010) proposes three models of educational leadership– transactional, transformative, and transformational (as cited in Precey, 2011, p. 38-39). The transactional model is the least relevant to the principles of inclusive education as it has to do with

authoritarian, mandatory, and military-like leadership style. The other two models, according to Shields (2010), speak to inclusive education as both tend to create an empowering and vision-driven reformative movement. However, transformative leadership model speaks more to building inclusive environment as it calls for social equality and justice in case educational site is challenged with those issues.

The constructivist approach to leadership which highly resonates with constructivist approach to learning was proposed by Lambert (2003). Lambert (2003) argues that only individuals themselves can identify their leadership styles in the way learners construct meaning of the encountered reality and make connections between learning material and the world outside the school setting. The author also proposes the terminology of “leadership capacity” and “learning community” which define the willingness of teachers to meaningfully and actively participate in the process of their school communities’ reforming and improving (Lambert, 2003, p. 425). This approach resonates with the role of each individual teacher in establishing inclusive school environment as it shifts the traditional understanding of leadership role from a formal position-based model to an active participation of each individual in the process of school transformation.

The role of educational leadership in creating inclusionary and differentiated practices at school is determined primarily by teachers’ moral impetus and it is deeply grounded in their values and beliefs in social equality and equity. MacRuairc, Ottesen, and Precey (2013) pointed out the central role of leadership in establishing an inclusive society, justifying it by the fact that inclusionary practices tend to step outside the premises of a school community and call for social justice far beyond its walls.

The implications that leadership sends to the role of individual teachers are evident. The understanding of leadership has shifted from a formal position to everyday teaching

practices. Teachers are central figures in realizing the principles of just, inclusive, and differentiated teaching practices in their classrooms and far beyond the classroom settings. Further, their leading role in setting positive changes at school is essential.

2.6 Conclusion

The review of the literature helped to reveal the conceptual understandings of differentiated instruction as well as practices and challenges of international teachers. Differentiation is a value-based approach to teaching which is determined by teachers' personal attitudes to learners' diversity and differences. Though differentiation overlaps in many ways with personalized and individualized teaching approaches, it differs by its socially-oriented nature. Individualization puts individual learner's needs as the starting point whereas differentiation is still a group-oriented teaching approach which seeks to eliminate barriers caused by multiple ability levels or challenges in content area.

Another finding refers to the compatibility of a standardized testing system and differentiated instruction as the latter enables a teacher to vary the content, the ways of delivering the teaching material, and the learning outcomes may also differ from one individual learner to another according to the learner's intellectual ability and readiness. This speaks deeply to the context of the Kazakhstani testing system. Another aspect that was explored through the lenses of differentiation and inclusive education, as both resonate in many ways, is the role leadership plays in promoting differentiated practices more deeply and widely at school.

Chapter 3. Methodology

3.1 Introduction

Methodology section provides a rationale behind the choices made in relation to the general research approach, design and instruments as aligned to research question and purpose of the study to uncover teachers' perceptions and experiences of differentiated instruction in a school for gifted students in Kazakhstan.

3.2. Research Design

The qualitative approach was used in order to explore teachers' perceptions and experiences of differentiated instruction as it helps to find out "value depth of meaning and people's subjective experiences and their meaning making processes" (Leavy, 2017, p.124).

In order to obtain an in-depth data in a particular school setting, taking under the scrutiny pertinent characteristics and conditions of the research site, the case study research design is found applicable to the nature of the research (Zainal, 2007). According to Feagin et al. case study research design is triangulated in order to obtain the results which are, as described by Denzin, characterized by "convergence, inconsistency and contradiction" (as cited in Cronin, 2014). Thus, triangulation helps to validate the research results by enabling the researcher to better understand and explain the explored issue (Cronin, 2014).

Triangulation can be realized in multiple ways and it is based on various premises. Following Denzin's definition, triangulation is "the combination of methodologies in the study of the same phenomenon" (as cited in Cronin, 2014, p.26). As Cronin (2014) further discussed this premise "it is the combination of at least two or more theoretical perspectives, methodological approaches, data sources, investigators or data analysis methods" (p.26). In the case of the present research, data triangulation was used.

3.3 Research Site

One school for gifted students in Kazakhstan was selected as the research site. The choice of the site was determined by a few reasons. The first reason was that the researcher was employed as a teacher at the research site and it was easier to approach school principal and research participants by working in one community with them. Another reason was that the school had set the improvement of teaching practices on differentiated instruction as the priority for professional development in the light of ongoing Council of International Schools accreditation process and that fact was reflected in the subject-related curricular documents as well as in professional development programs aimed at improving teachers' differentiated instruction practices. Last, but not least reason for the research site selection was that it participated in many ongoing educational reforms and innovative pedagogical approaches and consequently it was assumed that it was open to research studies which may contribute to the improvement of teaching practices and promoting inclusive educational setting.

3.4 Research Participants

For the selection of the research study participants, the method of purposive sampling was used. This type of nonprobability sampling ensures a judgmental position of the researcher in the process of criteria-based participants' selection (Ary, Jacobs, Sorensen & Walker, 2013, p.169). As stated by Patton, purposive sampling helps to find the most eligible research participants as the data provided by them will be the most relevant to the research question (as cited in Leavy, 2017). The choice of participants serves the central premise for the research as Morse and Patton asserted "the better the participants are positioned in relation to the topic, the richer the data will be" (as cited in Leavy, 2017, p.79).

The eligibility of the selected sample was defined by the fact that they actually teach the subjects they coordinate, so they possess expertise in both subject coordination and in

teaching practice. Thus, five program coordinators were selected purposefully in order to obtain the data richer in expertise in coordinating the process of programs' implementation by school teachers through planning and teaching. The eligibility of the selected sample was also defined by the fact that they actually teach the subjects they coordinate, so they possess expertise in both subject coordination as well in teaching practice.

The sample involved five school coordinators in the fields of Language Arts, Sciences, and Social Studies who also taught those subjects. The choice was determined by the scope of science and humanitarian subjects that the selected participants teach and coordinate. Another reason for the choice of Social Studies and Sciences is premised by the fact that those subjects are instructed in Kazakh regardless students' language track according to school trilingual policy. Due to this fact, teachers were expected to have more experience in differentiated instruction as language might serve a barrier to some students' meaningful participation and academic achievement. Hence, the selected sample helped to consider the issue from the perspectives of teachers who teach and coordinate the subject programs by leading other teachers towards implementation of curricula defined by students' participation and achievement as well as by addressing the issues which might arise from planning and teaching. The collected data from the selected sample helped to take insights into the research participants understanding of differentiation as well as their teaching and leadership practices. Also, the interview was conducted with one administration staff member who is involved in the professional development programs' coordination for teachers at the research site. The choice of the research participant was determined by the necessity to collect richer data about the differentiated practices employed by school teachers and challenges that they have. The administration staff member is regularly involved in the attestation procedures which include monthly lesson observations. Therefore, it was important to interview a member of the school

administration in order to explore the data provided by the person who sees a broader picture of the differentiated practices employed by school teachers.

The table below presents information about research participants. The pseudonyms are assigned to each participant due to ethical considerations. They will be used further in the paper in order to keep the identities of research participants protected.

Table 1

Participants

Participant Code	Discipline
Arman	Science 1
Marina	Science 2
Aizhan	Science 3
Talgat	Social Studies
Svetlana	Language Arts
Zarina	Administration staff member

Source: created by the author

3.5 Research Instruments

In order to collect rich qualitative data, three methods of data collection were used. Namely, semi-structured interviews, lesson observations, and document analysis were conducted in order to explore main research questions and triangulate the obtained data.

1. Semi-structured individual interviews

The semi-structured interview (see Interview Protocol in Appendix A) is characterized by the flexibility of the design and enables the researcher to respond to the live discourse by redirecting the course of the interview and adjusting questions to a particular situation setting

(Ary, Jacobs, Sorensen & Walker, 2013, p.466). Participants were asked open-ended questions which helped to reveal their perspectives without imposing any pressure from the interviewer (Creswell, 2014, p.240).

Thus, the method of interview was helpful to explore the perspectives of the respondents in-depth as there was a possibility to expand each question into further investigation of personal and professional experiences. The questions were thoroughly designed in order to provide the respondents with possibility to reflect on their experiences, critically evaluate their practices, or receive a food for thought while the process of interviewing and give their immediate emotional response which might reveal their thinking and understanding of the explored phenomenon. The interview questions included demographic questions in order to understand the different backgrounds of the interview participants. Then the participants were asked questions which appeared from the literature review on their understandings of differentiated instruction, the teaching practices shaped by those understandings in differentiated teaching, the challenges that they face in the process of planning and teaching as well as the role of their leadership position in differentiated teaching.

2. Lesson observations

Another method that was applied was lesson observation. One of the most common characteristics of observation as a research method, as stated by Baker (2006) is that it allows to explore people and their behaviors in authentic conditions, including workplaces. During lesson observation, descriptive and reflective field notes were taken in order to be able to further describe the processes and reflect on the findings (Creswell, 2014). The descriptive and reflective notes taken “on the spot” helped to build a bigger picture of the observed lessons and draw upon the immediate reflections in order to make a meaning of the whole process. Thus, the strategies used at the lessons by the research participants were descriptively recorded

as well the ways that they employed in order to address the needs of individual learners in the classroom. The reflective notes included the researcher's thoughts and comments on the strategies and approaches used at the lessons. The data collected from lesson observation helped to triangulate the interview and document analysis data as it revealed real life teaching practices.

3. Document analysis

Another method which helped to validate the results obtained from interviews and lesson observations was document analysis which specifically focused on teachers' unit and lesson plans as aligned with Subject Programs and Course Plans in order to find out how coordinators who are also practicing teachers apply their skills of differentiated instruction to outline subject content so that it meets their learners' needs. Furthermore, the document analysis was made in order to see if school curricular documents define differentiated instruction and provide teachers with sufficient guidance and support in differentiation. The choice of the document analysis method can be supported by Corbin and Strauss as well as Rapley, who claimed that it is a tool to extract the meanings and develop knowledge and understandings of the printed or electronic documents (as cited in Bowen, 2009). The subject curricular documents, including lesson plans, Subject Programs and Course Plans were freely accessible in the school's server as there is a general practice employed at the research site to share all curricular materials via server. The study of the pertinent to different subjects' documents in relation to the research participants' teaching practices was helpful in building a bigger picture of the teaching practices held by school teachers and the approaches employed by them to meet the diverse learning needs and interests.

3.6 Procedures

All procedures were conducted according to the requirements and standards of the empirical research. Once the ethical approval to conduct a research was received from Nazarbayev University, the school principal was notified about the purpose of the research and provided with information about the significance and potential benefits for the school community. The reason for addressing primarily school administrators was defined by their function of “gatekeeper” of the educational organization (Creswell, 2014, p.233).

Once approval to conduct the research on the school premises was received from the school principal, school subject coordinators were approached via electronic letters sent to their corporate mails, explaining the purpose of the research and the potential benefits for their teaching practices. Upon receiving an agreement to participate, the research participants were invited to a meeting to talk face to face in case they had any questions. During those meetings they were asked to carefully examine and sign an informed consent form.

1. Semi-structured individual interviews

Next step was to schedule the time and locations for interviews during face to face meetings with participants since interview was the first research instrument applied to collect the qualitative data. The time and interview venue was chosen according to the convenience of the research participants one week prior to interview. The research participants were notified about time and locations scheduled for the interview one day before via email. It was important for a researcher to demonstrate consideration of the participants’ needs and conveniences by the readiness to reschedule the interviews in case respondents request for.

2. Lesson observations

The schedule for lesson observations was developed with the research participants after individual interviews according to the time comfortable for them. The researcher answered questions that the participants asked about the purpose and duration of lesson observations.

3. Document analysis

Document analysis of lesson plans and other subject curricular documents were collected from the school server. Then the documents were carefully studied in order to spot information on supporting and guiding teachers in differentiated instruction.

3.7 Data Collection

The qualitative data was collected by triangulated research methods: interview, observation, and data analysis. In order to ensure a rigorous process of data collection and further validate the research findings, it was necessary to design an interview protocol with interview questions and instructions (Creswell, 2014, p.247). The same protocol was required to be developed for conducting lesson observations and document analysis.

1. Semi-structured individual interviews

Interviews consisted of a number of open-ended questions. As suggested by Creswell (2014), first few questions should help researchers to “relax the interviewees and motivate them to talk” (p.247). Therefore, the beginning part of the interviews included demographic questions which were brief and easy to answer. According to Creswell (2014), “the core questions” help to find answers to the main research question (p. 248). In addition, the researcher could ask questions to clarify the ideas or further develop them but asking too many additional questions might cause bias to the obtained data as there was a danger to move side tracked from what the respondent actually intended to say to what the researcher expected to hear (Creswell, 2014). Thus, it was important for the researcher to ask questions in a logically coherent manner in order to avoid confusion and bias in the responses of the research participants.

The interviews lasted for about an hour considering the number of questions and semi-structured nature of the instrument. The data was recorded on the tape upon receiving a

permission from the interview participants. Keeping notes throughout interviews was important in order to grasp the complexities of participants' perceptions and attitudes on the spot. Keeping reflective notebooks was a convenient way to accumulate the ideas for a further analysis and reflection in addition to the recorded data in the qualitative research.

2. Lesson observations

All five research participants were selected for the lesson observations. The observation protocol was developed in order to ensure that all field notes will be kept strictly organized (Creswell, 2014). In particular, an observational protocol helped to “to record a chronology of the events, a detailed portrait of an individual or individuals, a picture or map of the setting, or verbatim quotes of individuals” (Creswell, 2014, p. 249). The research findings from the observation were then analyzed and categorized according to the emerged themes (Creswell, 2014). It was important to reflect on the notes immediately after observed lessons in order to make additional notes which further were analyzed.

3. Document analysis

The document analysis instrument included examination of lesson plans, Subject Programs, and Course Plans of five different subjects. The document analysis as defined by Creswell (2014) is “A valuable source of information in qualitative research” (p.245). In order to get access to the pertinent to subject documents, the permission from the research participants was not required as all the documents were freely accessible in the school server. The subject documents were carefully examined for “accuracy, completeness, and usefulness in answering the research questions” (Creswell, 2014, p. 245).

3.8 Data Analysis

The qualitative research design enabled researcher to analyze the collected data through own personal lenses. According to Creswell (2014, p.32), in order to analyze data, it is

important to take a deep insight into understanding of the ideas and find their interrelations and be aware of personal prejudice which may affect an interpretation of the research (Creswell, 2014, p. 32). Thus, it was important to consider the research findings in an unbiased way, detaching personal perspectives from the research results' interpretation. The triangulation of the research methods as premised by the case study research design helped to strengthen the validity of the research findings.

The process of data analysis started with conducting interviews. The interview research instrument required researcher to be constantly engaged in the reflection during the process of data collection by asking probing questions and responding to the changing moods or emotional reactions of the respondents. The researcher was constantly involved into a reflective meaning-making process.

Once the interview data was collected, it was transcribed and coded to reveal common themes, mismatches, or inconsistencies in responses. This process also included the researcher's decision-making in terms of the data which was the most or least relevant to the research questions (Creswell, p.2014, p. 267). In order to organize the ideas into common patterns, In Vivo and descriptive coding strategies were applied for data analysis (Saldana, 2015). In order to make a coding process comfortable, the transcripts were printed and hand coded. The following themes appeared in the process of a careful study and analysis of the interview data: differentiation by learning needs and interests, differentiation by abilities, differentiation of the content, differentiation of the process, differentiation of the learning product, lack of collaboration, lack of professional support, lack of encouragement, lack of time, formal collaborative practices. The analysis of the collected data using the interview instrument helped to establish a bigger picture of the explored phenomenon, relate the research

findings back to the literature review as well as provide grounds for researcher's meaning-making process and identifying limitations of the research (Creswell, 2014).

The observational data was also transcribed and coded according to the emerged themes. The descriptive and reflective notes taken during the observational process were helpful to make meanings of the collected data and establish connections with the data collected from individual interviews.

The documents were carefully examined in order to identify support and guidance provided to the research participants in differentiation. The number and quality of resources was studied to reveal the programs' requirements and suggestions in terms of differentiated instruction.

3.9 Ethical Considerations

First of all, an approval from the review board of Nazarbayev University (Creswell, 2014, p.232-233) was received by providing a detailed description of the procedures and ethical considerations of the research as well as potential benefits that the research may bring to the research site. This procedure was strictly required as the nature of any empirical research involves people and their lived experiences.

It highly important for the researcher to protect the rights of the participants and keep them informed about the procedures of research. The participants took part in the research on a voluntarily basis. They were first approached via corporate mail by sending a letter which informed them about the research purpose and asked their permission to take part in the research. The research participants were asked to study carefully and sign the consent form which included the purpose of the study and its potential benefits for the research site as well as for the participants' professional development. The participants were also informed in the

provided consent form about their rights to withdraw anytime they wished even after signing it.

Before the interview, the participants were notified that they might not answer the questions which they felt uncomfortable with. The permission to record the data was received from the participants.

The research ethics also addressed confidentiality of the research data and anonymity of the research participants' identities. The data was kept password protected on the researcher's personal laptop. The names of the research participants were kept anonymous in order to protect them from any risks which may potentially be posed on them. The research participants were given pseudonyms in the present research. Their names were not recorded in the interview transcripts, only pseudonyms were used. Also, the participants learned from the researcher that their identities would be known only to the researcher. The research participants were also informed both in the consent form and verbatim that their responses would be used only for the research purposes and, in case they wished, they could check how their responses were interpreted. Also research participants were informed that interview recordings as well as all the notes taken during interviews and lesson observations would be discarded as soon as the data was analyzed.

3.10 Conclusion

The nature of the case study research design helped the researcher to take insights into perceptions of differentiated instruction along with teaching practices. Furthermore, an analysis of the curricular documents helped to learn about the curriculum requirements, the strategies and approaches suggested in the documents that speak to differentiated instruction, including teaching resources. It was important to ensure the ethics of the research in the way

the research participants were approached, informed, and treated as well as in the way the data was collected, stored, and analyzed.

Chapter 4. Findings

4.1 Introduction

The research findings on the perceptions and experiences of differentiated instruction by subject coordinators who are also practicing teachers in one school for gifted students in Kazakhstan are presented in this chapter. The purpose of the study was to explore how teachers-coordinators understand differentiation and how those perceptions shape their teaching and leadership practices at school through conducting semi-structured interviews, lesson observations, and document analysis.

The qualitative research design of the study allowed in-depth exploration of the questions concerning the research participants' understandings of differentiated instruction, their employed practices, the role of their leadership positions in ensuring differentiation through collaborative practices as well as the challenges that they face in teaching and subject programs' coordination.

The chapter is divided into three main sections. The first section addresses the research question concerning understandings of differentiated instruction. The teaching practices of research participants through the data obtained from interviews, lesson observations as well as subject-related documents in differentiated instruction are described in section two. The next section addresses the challenges in implementing differentiated instruction as well as the role of leadership position in addressing those challenges and improving differentiated teaching practices at the research site.

4.2 Perceptions of differentiated instruction

The first set of questions concerned participants' perceptions of differentiated instruction and the role of values in shaping those understandings. Overall, participants

perceive differentiated instruction as use of teaching strategies and approaches as tailored to individual needs, interests, and abilities of their learners.

4.2.1 Individual learning needs, interests, and styles

Almost all participants connected differentiation with their learners' individual interests and needs. For example, Talgat talked about the significance for teachers to observe the change in students' behaviors and considering those changes as they reflect their interests and preferences that evolve over time. He said that as students become older through one academic year, teacher should reconsider the employed teaching strategies and select those which address their changed preferences and needs. Arman also discussed the importance of selecting appropriate teaching resources as the way of differentiation. He said that it is a way to motivate students when learning resources are relevant to his students' interests.

Svetlana and Aizhan also related differentiation to recognizing their students' learning needs. As Aizhan said: "I believe that all students are unique. It is teacher's responsibility to recognize what students need and engage them into lessons".

Marina said that differentiation is primarily concerned with her students' interests, their various learning styles. She highlighted the importance of providing her students with multiple forms of presentation which fit their learning styles. The following quote shows her opinion: "Students like to learn in the way which best fits their learning styles, for example, some students are good presenters, some of them are good writers, or speakers. Some really like to draw or act out their responses".

4.2.2 Individual learning abilities

In the responses given by Arman and Aizhan, the focus on differentiation by ability was put. As Arman said, it is important to recognize his students' abilities and develop multi-

level tasks in line with them. As he said, differentiation means tailoring teaching to low, middle, and high levels of students' capacities. The same opinion was expressed by Aizhan, as she connected differentiation with recognizing students' multiple abilities. However, in the response given by Svetlana, resentment against labeling students by their abilities was expressed as she said: "Differentiation is exactly not dividing students into groups by levels like "here we have the strongest students, here we have the weakest students". As Svetlana proceeded about the uselessness of ability-based approach to differentiation, she said that she had noticed a tendency among her students to select more complex tasks whenever they are given a chance to choose at her lesson. Also she mentioned that her personal teaching philosophy contradicts dividing students by ability in class or making it visible to other students as it might humiliate them.

According to the opinion presented by Zarina, a majority of teachers perceive differentiation through the lenses of ability-based teaching and therefore limit their differentiated teaching practices to developing multi-level tasks without primarily considering what they need instead of what they are able to do. She added that the ability-based approach which is mainly used by school teachers restricts learning potentials as students are merely assigned multi-level tasks instead of being engaged into lesson through other various strategies. Also, as she said, most teachers perceive differentiation as a time-consuming, complicated process which requires much time for planning. However, as Zarina proceeded, it can be even implemented through the use of simple verbs:

...for example, when I say to students "Observe how the reaction between zinc and Hydrochloric acid occurs" it means that through the use of verb "observe" I give students possibility to observe. If I ask them the following question "Describe what you see" I can learn from the students' responses a lot of information, for example that not everyone can describe it.

The follow-up question to Zarina concerned the reasons why teachers mainly limit their understandings of differentiation to tasks of varied levels of complexity as assigned to “stronger” and “weaker” students. In the response, she pointed out the fact that despite the vast body of contemporary literature on differentiated instruction, there is no unanimous understanding of what it is and nobody would ever say exactly how to differentiate because teachers are all different and their students are different and, therefore, it is up to individual teachers to create conditions for their learners’ academic success. This can be done if teachers, as put by Zarina, “ever ponder about having successful lessons where they can observe and analyze individual students’ achievements and progress”.

Also, Zarina mentioned the Soviet past as one of the factors which impacted on the formation of teachers’ ability-based understanding of differentiation:

Why does it happen? Well...this is from our history. In Soviet school, we have been usually given cards like ABC. A is easy, B is medium, C is difficult. This is our past and it still lingers. Some teachers, for example, might say that A is difficult level and C is easy. Everyone differentiates in different way.

This opinion suggests that teachers at the research site need training to build an accurate concept of differentiated instruction. However, Zarina also mentioned the fact that teachers still think that there are right or wrong ways of differentiation as they still expect someone to teach them how to do it: “You will never find the right answer for how teachers should differentiate. And that is why the understandings on differentiation vary”.

From the data presented in this section, the conclusion can be made that the varied attitudes towards differentiation at the research site are mainly shaped by teachers’ personal attitudes to teaching as either the field for creating opportunities for their students or for following straightforward directions due to the lack of vision of what differentiation is.

4.2.3 The impact of personal values

The role of teachers' personal values and beliefs is claimed to be essential in differentiated teaching by leading experts in the field. Therefore, it was important for the current research to learn about participants' values and beliefs that impact their teaching practices. All of the participants emphasized the importance of their personal values in determining the pedagogies employed in their classrooms in order to promote respectful, supportive and open attitudes in class.

4.2.3.1 Respect and support

Arman spoke about the importance of ensuring a respectful atmosphere in the classroom which helps teacher to organize group and pair work: "Students help each other, for example stronger students provide support to their struggling peers and this a value that I foster in my classroom through collaboration". He also exemplified the use of mother language as another highly fostered value in his classroom. He said that students at times like to mix Russian, English, and Kazakh languages which is not acceptable in their classes as they are instructed in the Kazakh language. As Arman explained, this situation mainly happens due to the trilingual policy which is being implemented at the research site. Students tend to switch from one language to another when they have difficulties in speaking.

Marina and Talgat also talked about fostering respect through classroom communication as they believe it to be important to build a comfortable atmosphere at lessons. Marina believes that it is essential to demonstrate respect to learners through consideration of their opinions, concerns, or preferences in selecting teaching material, resources, and assessment forms. She put it in the following way:

...checking on students' responses in the classroom is not important for me. What is important instead is supporting them in every possible way. It is important for me to be a trustworthy person for my students. I try to show my respect to their personalities

when I speak to them. Students always feel when their personalities are respected by teachers.

4.2.3.2 Respect for differences

Respect for students' differences is a value which was communicated by Svetlana as essential in her classroom. Svetlana believes that when differentiation takes place in the class, it is important for a teacher to be considerate of students' differences and feelings as well. She believes that differentiation should, as figuratively expressed by her, "be behind the scenes". She emphasized the importance of "inconspicuous" differentiation when it is based on their abilities, as she believes that it might hurt or negatively affect them:

... For example, I hate dividing students into "good" and "bad", "strong" and "weak". That's why I never make those groups. I try not to ... I try to make my differentiation invisible. For example, if someone needs support I'll give this support, but without emphasizing in front of the whole class. "Look at this girl, she is weak, that's why I am helping her". I try not to do so. Maybe, my value is that ... I try to value the personality, ... the differences in people. Differences are good, it is not like a problem. That is why I don't think that differentiation should be so clearly observed in a lesson. All students are different and teachers should respect those differences. Marina also highlighted the importance of fostering students' differences in learning as

she said:

I believe that teachers should value students' differences because all students are unique. I have different students in my class and I think that it is my responsibility to find engaging ways of meeting those differences.

4.2.3.3 Honesty

Another less emerged theme was honest attitudes of teachers and students. Aizhan stressed the importance of being open with students when engaged in class discussions or debates on controversial topics as it usually happens in her lessons. As she explained, students appreciate when teachers are honest in expressing their minds, especially, when the discussion concerns sensitive political and social topics. Furthermore, students respond in the same open way as they: "feel that everyone can express freely their opinions and they will be appreciated

for being honest". As she proceeded, openness in class helps to establish an atmosphere when students can express freely their minds and it is a way for her to learn more about her students.

Therefore, the values that influence differentiated teaching practices as shown by the data, involve respect and honesty demonstrated by teachers and students in the classroom communication. Furthermore, from the response provided by Svetlana and Marina, the value for differences in classroom has emerged which is essential in differentiated teaching.

4.3 Teaching practices

A number of questions concerned teaching approaches and strategies employed by the participants in order to differentiate content, process, and learning outcomes for their students. The participants were also probed with questions concerning the ways to identify the needs of their students, planning and lesson conducting stages in their practices as teachers and subject coordinators.

4.3.1 Differentiation of content

One of the most frequently used way of differentiation, as shown by the data obtained from interviews, lesson observation, and document analysis (lesson and unit plans) is differentiation of content. Most of the participants mentioned differentiation of learning resources as a strategy to accommodate their students' various learning capacities. For example, Arman uses tasks of varied complexity especially in classes with students from the Science and Humanities tracks. The following quote best shows his approach:

Well, I have students in my classes from different subject tracks and I believe that it is important to consider their backgrounds. I cannot assign difficult tasks and expect high results from students who are majoring in different subject tracks because the students have different abilities. I with my colleagues develop multi-level tasks during lesson planning sessions.

During lesson observation, it was also evident that teacher mainly focuses on differentiation of learning material as students were given cards with tasks which varied in

complexity. This type of differentiation was also recorded in the lesson plan as differentiation by task.

Marina also uses resources with varied content drawing on students' reflections and feedback on her lessons. She said that it is a good way to find out about her students' needs and interests:

Backward Design that I use for planning my lessons focuses on student's reflection and feedback. Therefore, it gives opportunity for me to find out what my students really need. Then I use UbD for the unit planning and assessment in the end of each unit. Aizhan talked about the ways to identify a content for differentiation by means of surveys conducted by school psychologist in revealing students' interests, hobbies, and preferences. However, as she noted, this kind of assistance is helpful only in the beginning of the academic year as it is important to observe students daily and it is mainly teacher's responsibility to uncover what students really need. The assistance of school psychologists to improve the differentiated practices at school was also mentioned in the interview with Zarina. She mentioned the fact that surveying students in order to identify their motivational types is widely used at school, however, it does not provide teachers with meaningful data on what students really need at lessons. In order to improve the situation at school, it was suggested by her to add questions which will help teachers to learn about the needs and interests of their students that change over time and surveys should be conducted on a regular basis, not only once in academic year. The opinion expressed by Zarina resonates with that of Talgat, who also emphasized the necessity for teachers to consider learning needs as pertinent to students' age and bear in mind that those learning interests may change over time as they become older. The following excerpt from the interview demonstrates the questions proposed by her in order to improve surveys that school psychologists conduct each academic year:

... Well, what I did then was that I suggested our school psychologists to include five questions such as "How would you like to work in the class?" with the following

response options like “pair work” or “individual” etc. Also, “What does a teacher need to do in order to help you to succeed at lesson?” or like “What help do you expect to receive from teacher?”

According to Zarina’s opinion, lessons conducted by school teachers generally lack, what was expressed by her as, “wow” effect due to the lack of teachers’ awareness of their students’ needs. The following quote shows her opinion:

Teachers tend to plan and conduct their lessons in a formalized and routine way. Students lose motivation because they feel that teachers do not care about their interests. Teachers need to talk with students in informal manner, individually. Teachers should know about their students’ needs, what interests them or important for them in their subjects. This information would serve a good content for their lessons then.

From the data obtained from Talgat’s social studies lesson observation, it can be stated that teacher mostly focuses on differentiation of resources as students work on authentic and adapted textual materials in Kazakh as his subject is instructed in the Kazakh language due to the school trilingual policy. He said that teachers in his department have to adapt texts to lower and higher levels of language proficiency as some students find it difficult to understand the authentic materials. As Talgat said:

Differentiation by language mostly takes place in our classrooms because there are many students who struggle with Kazakh language and we have to adapt resources to our students’ abilities. They may use dictionaries but it is time-consuming. However, the participants who mainly associate differentiation with ability-based

teaching also mentioned in their responses the importance of considering students’ interests and their multiple intelligences in developing tasks. For example, Arman said:

Developing multiple level tasks is compulsory in planning a lesson. Also, we can develop tasks which draw on the students’ interests, or considering the multiple ways in which they perceive the teaching material best. For example, one students might have a good visual perception, another one might be an audial learner, another student might prefer written form of work as opposed to the one who prefers oral explanation. Some students need more life-related examples in order to understand the teaching material. One method that is applied might work differently for students. Therefore, it is important to consider all this.

As it can be observed from the responses provided by Arman and Talgat, who highlighted the importance of ability-based teaching, there is a contradiction concerning differentiation in the way they understand and apply their understandings in a team-planning and teaching process. The development of multiple level tasks is given a primary importance when working together with their colleagues and in ensuring that differentiation takes place at lessons conducted by all teachers of the department. However, participants understand that multiple intelligences and students' interest and preferences should be considered when planning and teaching. Also, as Arman discussed, ability-based tasks provide scaffolding to learners to move from easier to harder tasks. It becomes evident that even though participants understand that differentiation can be based on students' interests and their learning styles, the focus is primarily given to differentiation by ability at the stage of lesson planning. This might indicate the lack of understanding of what differentiation is and how teaching can be differentiated towards various learning needs. Also, another reason for focusing on students' problem zones and weaknesses rather than providing them multiple ways of achieving the same objectives can be lack of collaboration among teachers as they do not devote time and effort to address the issues that might arise in differentiation. The common practices of developing multiple ability tasks serve as "quick fix" strategies rather than well-designed approaches to address various learning needs, interests, and styles.

4.3.2 Differentiation of process

Mostly, the participants mentioned group and pair work as effective strategies of process differentiation. For example, Arman uses the strategy of pair work in order to have stronger students revise the learning material and for weaker students to learn from peers in a way which is more effective. He stressed the importance of peer teaching as it provides

opportunity for stronger students to retain more information as said that “students retain 90% of information when they explain it to someone else”. Furthermore, the role of a teacher in the classroom where students work in pairs as active participants was defined by him as facilitating. During lesson observation, students in Arman’s class worked in pairs on different tasks where stronger students assisted weaker students on task achievement.

Talgat said that differentiation is best applied and organized when students work in small groups and teacher may observe how different students perform different roles and achieve the same learning goals. He said that differentiation in the CLIL classes can be realized in the way teacher develops tasks and questions to accommodate the multiple language abilities of students:

Differentiation is provided in the language tasks are developed for different students with different language abilities in Kazakh. For example, one students may have a good command of Kazakh language, however he may lack subject knowledge. But another student may be very good at subject matter but may have weak language skills. So, here when differentiation takes place, the language of instruction should vary in each individual case. Also it is important that this differentiation is not evident, it happens when teacher asks questions and sets individual tasks to students with different language abilities.

His opinion resonated with that of Svetlana when he said that differentiation should not be evident to students by giving them tasks of different levels of complexity. But it should be inconspicuous as teachers organize students’ group work or ask them multiple level question in whole class discussions. However, Svetlana highlighted the fact that it works better with junior students and one strategy that she uses is giving multi-level tasks by telling her students that they can choose easier or harder tasks. And the striking thing about this strategy, as Svetlana described in her response, is that her students almost always choose the task of higher complexity. As Svetlana explained this fact “They do not want to admit that they are weak”. Also, she described the use of “Scribe” strategy for assigning different roles to students in group discussions in order to facilitate their writing and speaking skills as well as to engage

less active students. Another strategy that is employed by her to engage students who have challenges in spoken language is rehearsing the answer so that they can gain confidence and revise for some learning material with teacher. During the lesson that was pre-stage to a drama presentation in Svetlana's class, students were engaged into individual draft writing and peer-checking. The students in her lesson were given opportunity to revise their drafts after peer feedback, also teacher suggested to incorporate character development or elements of narrative composition into their drafts. The scaffolding strategy that was realized through peer checking and occasional teacher's direct instruction to students who needed support during the lesson was a way to accommodate the students' needs in the learning process.

In Marina's response, the use of Understanding by Design (UbD) planning framework was described and justified as being an effective tool for helping students to make meanings and connections of the learning materials along process. Also, she said that UbD is a helpful planning strategy to establish cross curricula links and organize performance-based learning in her lessons. The lesson that was observed in Marina's class was the stage of projects' completion as students worked on their portfolio management and authentic learning scenario presentations which were differentiated according to students' preferences: electronic presentations, posters, writing logs. The differentiation of the process as well as learning product was demonstrated during the lesson as each individual student was given an opportunity to present different learning outcomes depending on their interests. Also, another UbD strategy that was demonstrated during her lesson was a mini discussion of the unit's essential questions that were posed in the beginning of the unit. As Marina said, essential questions, which are set at the beginning of the unit, are helpful in creating real life connections and showing students the relevance of what they learn in class to the world outside.

Conversely, Aizhan pointed out the fact that unit planning is challenging due to a lack of time, though, she considers it to be a helpful strategy. She said that teachers at her department plan according to learning objectives and put a greater emphasis on skill development as guided by the subject and course programs. Also, she mentioned the fact that her subject is taught in Kazakh according to the school's trilingual policy and she finds CLIL strategies to be helpful in supporting students with a weaker command of Kazakh language. The strategies that she mentioned included peer-teaching, group work and use of graphic organizers for language structuring. During the lesson observed in Aizhan's class, the "Six thinking hats" strategy was applied in order to develop students' critical thinking skills as the teacher targeted the development of students' argumentative speech and use of evidence to support claims. Despite the fact that the strategy was not described in the lesson plan as differentiation, it was a way to differentiate learning process in her class as students presented their arguments from different perspectives and worked first in groups which also allowed the teacher to scaffold learning through peer-assisted learning.

4.3.3 Differentiation of learning outcomes

Differentiation of learning product is less used strategy by the research participants. Marina pointed out the importance of understanding her students' interests, their various learning styles in providing them with opportunities to present their learning outcomes in different ways, including posters, electronic slides, essay, oral presentations, writing journals. During lesson observation, the students in her class worked on creating different forms of presentations, including posters, electronic presentation, and writing logs as individually selected by them. The rubrics for assessment and various forms of project presentation were shown in the lesson plan and students were given worksheets with task and assessment

criteria. The unit plan also included rubrics for multiple means of presentation as well as strategies for content and process differentiation.

During lesson observation in Svetlana's class, students were also given a chance to make an analysis of either character development or story composition as a final product. The tasks and assessment rubrics were developed and handed out to students at the beginning of the unit. As Svetlana stressed in the interview: "It is important to give students a chance to choose in order to learn more about their interests and let them show the best they can do at the lessons".

The document analysis of curricular documents, which included subject programs and course plans, showed that teachers are provided with insufficient guidance and support in terms of content, process, and learning product differentiation. The number of resources is quite limited and only general recommendations concerning the organization of group, pair, and individual work are given in the documents. This finding showcases the importance of teachers' autonomous work on improving differentiation of their subject curricula content, organization of the learning process, and differentiation of learning outcomes.

Overall, the data obtained from interviews, lesson observations, and document analysis showed that research participants apply strategies and approaches of differentiated instruction at their lessons. Though, some of the observed strategies at their lessons were not exemplified as differentiation in most of the participants' interview responses and also were not reflected in their lesson plans. This finding indicates an unconscious use of strategies to meet the needs of learners without conscious reflection upon the pedagogical choices that they make. As Zarina said, teachers have so-called "pedagogical intuition" in differentiated instruction which signifies a lack of theoretical knowledge in the field of differentiated instruction and more professional guidance in this area needs to be provided. Another finding shows that most of

the participants use ability-based approach to differentiation in their team-planning practices which mainly focuses on the development of multi-level tasks assigned to “stronger” and “weaker” students.

4.4 Challenges in differentiated instruction

One of the research questions was about challenges that the research participants encounter in their differentiated practices at school. The questions also concerned the role of their leadership position as subject coordinators and also the role of school administration in tackling those issues. The responses revealed the following challenges and concerns: (1) lack of time; (2) lack of collaborative practices at school; (3) formalized collaborative practices; (4) lack of professional development; (5) lack of encouragement. Further, each of the challenges will be described with illustrations from the interviews.

4.4.1 Lack of time

The responses of Aizhan and Talgat showed the importance of having time free from other teachers’ daily commitments in order to be able to plan for better differentiation and engage themselves in self-learning. In order to exemplify this concern, Aizhan said that she realizes that UbD is an effective planning model, however, this way of planning requires time and due to the lack of time she has to plan according to learning objectives lesson by lesson. Also she mentioned the fact that she has five different grades of Kazakh- and Russian-track students which is also time-consuming in terms of planning and preparation.

In the response provided by Svetlana, it was also evident that teachers need time for improving their practices through research and reflection:

Teachers lack time as they have lots of professional commitments and there is no time left for self-learning and just to have a professional talk with colleagues, or go to the library and read relevant literature... Well, teachers need time for doing research, for a meaningful research, no matter primary or secondary, but surely time should be

allocated for teachers' self-development, but teachers always have so many commitments at school. Rushing through a day with busy schedules prevents teachers sometimes from reflections, immediate reflections that our teaching practices require...

4.4.2 Lack of collaborative practices

Another challenge that teachers experience in improving differentiated teaching, according to Talgat's opinion, is caused by the lack of school strategic planning in the process of improving differentiation at school. He expressed the need for creating a shared understanding of differentiation among all school teachers and, as he believes, the role of school administration is essential in the monitoring of the school's advancement in differentiated instruction:

Well, it is the duty of the school administration to ensure that all teachers have a common vision of differentiation and identify the problem zones that teachers may have in their teaching practices. Administration should help teachers to fix those problems and fill in the gaps of knowledge by organizing workshops on how to improve differentiated teaching. Well, I can't say that our school administration is not working on this... it is, however, I wish they worked more in this direction. Talgat's response showcases the role of the school administration in fostering

collaboration which is based on common understanding and shared vision of differentiated instruction.

Svetlana highlighted the importance of creating stronger collaboration among teachers across all school departments through mini presentations that can be delivered at weekly school-wide meetings. She considers the format of oral mini-presentation that would take about ten minutes to be an effective way to share best practices and efficient strategies, involving all teachers at general meetings. This strategy would not require additional time to attend.

Marina also considers the role of lesson observation practices to be an effective strategy to increase teachers' professionalism and improve their pedagogy. As she said, the

practice of lesson observation is well-established in other schools and it allows sharing of best practices and the opportunity to develop professionally. As Marina expressed her concern, such practice is not organized at the research site and neither is team-planning. Teachers do not pay due attention to co-planning practice due to either lacking a sense of responsibility and work organization skills or being overconfident in their professionalism.

Moreover, the document analysis also showed a lack of differentiation in the school standard curricular documents. This finding signifies the importance of improving team-planning practices at school in order to collaboratively plan the subject programs according to the local educational context and diverse learning needs.

4.4.3 Formalized collaborative practices

According to the responses given by Marina, the team planning practice is formally established at the school, however, the practice has a formalized top down character. This makes team-planning a formal procedure which is being slighted by teachers for various reasons, including those already mentioned by her. To her mind, the challenges that teachers encounter are caused by the resistance to change which is determined by the mandatory formal team-planning practices and indifferent attitudes of some department teachers to team planning. Therefore, the conclusion can be made that formal behaviors created by school top-down rigid collaborative practices are the primary cause of the issues that arise in the process of attempting to strengthen collaborative teaching practices at school.

Svetlana also mentioned the fact that professional development workshops and seminars at school on differentiated instruction are conducted in a quite formalized way with specialists from the department for teachers' professional development in Astana. All teachers are required to participate and those specialists come from quite different educational setting

and may not know the peculiarities and challenges of the local educational context. As she thinks that this practice is not effective as teachers need to work constantly and collaboratively towards improvement of their practices. Talgat in his response about the ways to improve collaboration at the research site, also talked about the importance of building a shared concept of differentiated instruction by encouraging teachers, not forcing them. Otherwise, as he mentioned, it will turn into a formal procedure that teachers will not do.

Furthermore, formalized attitudes of the research participants to their leadership role as subject coordinators can be another reason of the lack of conceptual understanding of differentiation. For example, Aizhan and Talgat said that their primary goal as coordinators is to ensure that teachers have a common understanding of the content and objectives of the subject programs. This may be connected with their role of program developers as they collaborate with other school teachers in order to improve the subject programs and ensure that local teachers plan and conduct their lessons according to common standards.

Most interview participants highlighted the importance of supporting their colleagues, especially, novice and inexperienced teachers in subject program implementation. This finding is best illustrated in the responses of Aizhan and Arman:

There are many questions that I discuss with my colleagues, especially, novice teachers in order to make sure that they plan and conduct their lessons according to the program's requirements and their students are engaged into their lessons. We discuss the following questions during lesson planning sessions: What resources would they use in order to realize this learning objective at the lesson? What learning objectives would they select for the lesson? Will those resources help them to develop their students' abilities? Will students like them? (Aizhan)

My task, as a coordinator to make sure that teachers understand the requirements of the program and they can reflect them in their lessons. During lesson planning, I explain the standards, especially to novice teachers, share resources, or together select the resources as we together develop plans. (Arman)

The data illustrates the importance for the research participants to ensure that teachers, especially novice teachers can select the relevant resources in order to meet the requirements of the program.

Talgat said that the subject he coordinates has many special features and his role of a coordinator is to guide his colleagues towards proper understanding of the program: “Some teachers may have a wrong perception of the program and my responsibility is to explain the program’s features and requirements to them”

Talgat also discussed the fact that being a coordinator requires him, as it was literally put by him, “to correct” the responses of the learners and assist other teachers to identify those problem areas: “Differentiation is about correcting. When I see that teachers or students have a wrong understanding of the program, subject, learning objectives, I try to correct them and explain the requirements”.

As it can be spotted in Talgat’s response, so-called correctional approach in helping teachers to improve strategies of differentiation refers to the research participant’s personal perception of his leadership position in ensuring that things are made right in relation to the program understanding and implementation which is also a formalized way of perceiving leadership.

In contrast, the opinion expressed by Marina demonstrates the opposite attitude to team-planning practice in order to strengthen teachers’ autonomy over curriculum and improve their practices:

UbD planning requires collaboration among teachers in order to develop a shared vision of the subject program from Grade 7 to Grade 12 and identify together the cross curriculum links because it is important to sit together and identify the spiral development of the program, deepening and widening subject content in order to start planning backwards, not in a formal way as most teachers tend to do. We need to develop a holistic understanding of the program and start planning so that our students

can learn meaningful things, they can see a bigger picture of their learning, not just moving from one topic to another without seeing the connections between them. Moreover, Svetlana and Marina stressed the role of self-learning in teachers'

professional development. This was evident from the following quotes:

As a coordinator I think my main responsibility is to ensure that teachers are educated in this area. That they know what differentiation is and how it works, that they are familiar with differentiated strategies and for this there are different approaches. We do have co-planning. I try to coordinate it as much as I can. We discuss the program from time to time when I try to coordinate it. I try to share what I know, what I can do, I try to encourage people to do research in this area. I know that some teachers are doing research into differentiation. That's all I think I am doing. (Svetlana)

Teachers need self-education, they need to read, to learn more about teaching not only from seminars and workshops, but from books they read, from collaboration with their colleagues, international colleagues. Teachers can do Action Research, Lesson study, they can research their practices. Everything depends on their willingness to learn. As a coordinator, I try to encourage as much as I can. I can't push them, but I try to show by my personal example, for example, I always share good resources with my colleagues through school server. (Marina)

This opinion clearly shows the fact that school coordinators, who officially lead the process of program coordination and its implementation into daily teaching practices, serve a powerful tool in fostering the process of teachers' development and self-learning in the area of differentiated instruction. Instead of communicating the standards and requirements of the program, the way that teachers can be encouraged by subject coordinators to learn about various teaching strategies and explore their own practice in order to identify their strengths and weaknesses as well as various needs of their learners is a way of leading the change which is not imposed from the outside mandatory powers but which comes from within and has an empowering effect on teachers. However, this perspective was expressed only by Marina and Svetlana as opposed to the opinion that three other participants shared about the importance of curricular standards accountability. This contrast in opinions can be explained by different perceptions of leadership as well as experiences of self-learning and professional development, including team planning and team teaching.

4.4.4 Lack of professional development

Lack of professional collaboration was spotted in the responses provided by Aizhan as she discussed her expectations from school administration in order to improve differentiated instruction. As she said, she does expect any professional support from school administration as she has been disappointed by the quality of seminars that had been conducted at school on differentiated instruction. In her opinion, the reason for that is the current level of teachers' professional development as they have outgrown what school administration has to offer them in order to improve their teaching practices. She expressed that in the following way: "School administration cannot suggest anything which might be practice-based and really useful for teachers in terms of differentiated instruction as we have a much higher level of professional development than they think we do".

Also, she said that she would like to "have a lecturer who would conduct an action research and would show how differentiation works in the classroom". This response can be related to that provided by Zarina, who pointed out that teachers at school have the biased expectations and attitudes to professional development sessions that school administration organizes for them:

Everything depends on teachers' disposition towards professional development seminars which we organize at school. For example, if they perceive seminars on differentiation as the way to show them what is the right way of differentiation or teach them how to do it right, they will never work for them. It all depends on how one may approach it... Teachers should not perceive what is presented at all those professional development sessions literally as the only right way to differentiate. There is no right or wrong way. It is up to every individual teacher to decide for themselves how to differentiate their teaching as they all have completely different learning needs in their classrooms. It is a matter of information synthesis.

It becomes evident from the responses provided by Aizhan, as teacher and coordinator, and Zarina, as administration member, that there is a conflict between the expectations of teachers and school administration of how professional development in regard to differentiated

teaching should happen. It becomes evident that teachers need accommodation from school administration in order to clarify their vision of what differentiation is, how it is perceived by school community, and how it should be implemented at the research site. The perspective presented by the school administration member presents the very nature of differentiation as it a matter of personal pedagogical choice and value. Moreover, the response provided by Aizhan, as a practicing teacher and a subject coordinator, indicates a lack of autonomous action research practices which is an independent inquiry-based approach to professional development to improve one's understanding and practice of differentiated instruction.

4.4.5 Lack of teachers' encouragement

Another theme that emerged from the response provided by Svetlana is encouragement from school administration as teachers who can share some of their best strategies of differentiation need to be spotted and encouraged:

They should encourage people, they should provide opportunities for educational and professional development, they should find best practices and provide opportunities for sharing. For example, they could say "Well, we have observed the lessons of English department and for example this teacher is great at differentiating. Let's ask her to share her best practices", and that teacher could have 10 minutes in a general meeting to speak about her differentiated practice. Or could do a demo lesson for others.

It is evident that some teachers need moral support support in improving their teaching practices. This finding also speaks to the necessity to strengthen informal collaborative practices at the research site as teachers can be encouraged to improve their practices and share best they can do only through bottom-up, teacher-initiated collaboration. These improved practices will not put pressure and additional workload on teachers but will motivate and empower them. Another way of sharing effective strategies, as suggested by Svetlana, is a format of demonstration lessons.

Marina also talked about a lack of encouragement in professional self-development at school. For example, this is well expressed in the following quote:

Teachers need to be encouraged to self-study, to do new things and not to be afraid of making mistakes. But teachers do not try new approaches in their teaching because they are afraid, maybe, or because they get comfortable with older ones... I think the role of school administration is to encourage teachers to be innovative, to develop, not to stay the same.

It is evident from the data that teachers need moral support from school administration in order to improve their teaching practices. Furthermore, teachers need recognition of their best practices in promoting new approaches at the research site. Teachers need to be empowered and motivated to improve and share.

4.5 Conclusion

The chapter presented the main findings collected from interviews with research participants, lesson observations, and document analysis of different level curricular documents. In regard to the set of questions about understandings of differentiated instruction, it was revealed that some participants perceive it as a way to engage students in the learning process drawing on their learning needs, styles, and preferences while others use ability-based teaching approaches to differentiated instruction.

The collected data concerning teaching practices showed that teachers use different strategies of differentiated instruction in their lessons. However, due to a lack of shared understanding of differentiated instruction and lack of collaborative practices, differentiated planning and teaching approaches towards more effective and holistic learning are not promoted and employed at the research site.

As for the role of leadership position of the research participants, it was revealed that subject coordinators mostly view their leadership role as ensuring that all teachers share the same understanding of program's requirements, select relevant resources, and develop tasks

which fit different learning abilities. Another finding relates to the subject coordinators' mentoring role in guiding mostly novice teachers who might have challenges in understanding the specifics of the subject programs. Also, it was revealed that some participants perceive their leadership as a way to boost one's professional development, to gain more autonomy over curriculum teaching and planning, and to foster their colleagues to learn and innovate. However, in most of the cases, leadership in promoting shared understanding of differentiation in team planning and teaching is restricted accommodating various abilities rather than creating various opportunities for a meaningful participation and achievement. Furthermore, there is a lack of strategic planning in improving differentiated instruction as put forward by school-generated policies based on shared understandings of the concept and practice of differentiated instruction.

Finally, as reported by participants, the challenges that they face in implementing differentiated instruction are generally caused by lack of time due to work intensification, lack of collaboration among teachers due to formalized approach to team planning, lesson observation practices as well as teachers' professional development at school. Moreover, as findings show, there is a lack of moral support from the school administration to promote best teachers' practices.

Chapter 5. Discussion

5.1 Introduction

The research findings in this chapter will be discussed in regard to the literature review. The data is organized according to the research questions unlike the organization by themes in the previous chapter. The interpretations of the findings speak best to the questions posed in the research as several uncovered themes in the research data may relate to one research question. Thus, the findings will be discussed in relation to understandings of differentiated instruction, teaching practices, the relationships between different leadership styles and implementation of differentiated teaching practices, and challenges that teachers-coordinators face at the research site.

5.2 Perceptions of differentiated instruction

The first set of questions was exploring understandings of differentiated instruction of teachers who are also in the positions of subject coordinators. The findings reveal that teachers have an understanding of what differentiation is as they responded that different learners have different learning abilities, interests, and learning styles. Also, research participants consider it to be teacher's responsibility to ensure that learners are engaged in the learning process by using different strategies of differentiation. However, despite the fact that teachers have an understanding of core approaches in differentiated instruction, it was revealed that participants mainly focus on abilities rather than on a spectrum of learning needs, including their interests and readiness (Corley, 2005), and learning styles (Coubergs, Struyven, Vanthournout & Engels, 2017). This finding also has an immediate relation to teaching values and beliefs as discussed by Tomlinson and Imbeau (2010). The values that research participants consider to be important to be promoted in the differentiated classroom include openness and respect for students' needs, concerns, and preferences as well as respect for students' differences in

accommodating those needs. This finding has an immediate relation to what Dweck called teacher growth mindset (as cited in Coubergs, Struyven, Vanthournout & Engels, 2017) whereas Tomlinson and Imbeau (2010) called the ground to teach students respect and tolerance for diversity which is an essential part of the world outside school premises.

However, even though diverse learning needs and styles were pointed out when defining differentiation, most of the research participants still draw on students' abilities in developing differentiated tasks and activities. This finding was also reflected in the research study conducted by Nicolae (2014) who revealed a common practice among Romanian school teachers to "teach to the middle" (p.428), thus making a small number of students to receive instruction which meets their needs. Furthermore, the research participants mainly view differentiation as development of multi-level tasks. This finding is consistent with what Tomlinson and McTighe (2006) argued to be labeling practices, not differentiated ones. The premise upon which teachers draw when stigmatizing students by their abilities is also consistent with what Dweck described as teacher fixed mindset, a tendency to "teach down" (p.32) due to underestimation of what students might be capable of and willing to do (as cited in Tomlinson & Imbeau, 2010, p.32). The revealed tendency of the participants to draw primarily on abilities signifies the importance of having a fundamentally different understanding of what differentiation is. There is a need to shift understanding of differentiated instruction from what learners are not capable of doing to what they are able to do when their differences are viewed by teachers as learning opportunities (Norwich, 1994). The ability-based approach to differentiated instruction that is found to be commonly employed at the research site provokes a negative understanding and biased attitudes toward differentiation (Norwich, 1994).

Another finding revealed that teachers who take more autonomous approach to planning and teaching by implementing innovative teaching approaches and adjusting the curriculum standards to their learners' needs, have clearer concept of differentiation. This finding is reflected in the study by De Neve, Devos and Tuytens (2014) as they discussed the importance of teacher autonomy over subject-related curricular documents in developing their understandings and practices of differentiated instruction.

Furthermore, the data collected from interviews and lesson observations in regard of the differentiated practices, shows that those teachers who have experienced positive outcomes of differentiation in their classrooms by using differentiated approaches both in planning and teaching, have shaped the value of learning diversity which is grounded into the premise that every learner is able to meaningfully participate in the learning process and achieve successful results (Subban, 2006). Moreover, this finding is consistent with the arguments presented by Fullan and Reeves as they claimed that actions and choices that teachers make in their classrooms serve a starting point for shaping values and beliefs, or, conversely, the values that teachers hold determine their differentiated practices (as cited in Tomlinson, 2017).

Concluding, it is noteworthy to say that perceptions of differentiated instruction are grounded in the values that teachers hold in regard of the diversity of learning needs in their classrooms – whether it is a ground to create learning opportunities or create barriers towards all students' meaningful participation and achievement. It is evident that understanding of differentiation lies deeper than technical knowledge of what it is and it is generated by teachers' attitudes to their practices.

5.3 Teaching practices

A number of questions in this research study explored teaching practices employed by the research participants in order to implement differentiation. It was generally revealed that

teachers use different approaches and strategies in order to differentiate their instruction toward the learning needs. However, the most frequently used approach to differentiation is ability-based teaching. This finding was described by Dweck as a way to undermine learners' capability (as cited in Tomlinson, 2017).

Among the strategies that were exemplified in participants' responses and observed at their lessons, the most frequently used one is flexible grouping which help the research participants to strengthen classroom collaboration (Corley, 2005). Furthermore, this strategy of differentiation, as described by the participants, is helpful for an accommodation of students' individual learning needs and styles (Wu, 2013).

Understanding by Design (Wiggins and McTighe, 1998) is another strategy that is employed at the research site as a way planning which substantially relies on students' readiness, considering their educational and personal backgrounds as well as multiple learning styles taking into account their multiple intelligences (Santamaria, 2008). As the data obtained from lesson observation and document analysis showed, the UbD approach provides more autonomy over curriculum and assessment which allows, as discussed by De Neve, Devos & Tuytens (2014), to increase teacher self-efficacy by the opportunities for their self-conceptualization and understanding of what differentiated instruction is and how it is possible to implement its multiple approaches in planning and teaching.

The backward design approach, which is another employed strategy at the research site, also helps learners to meaningfully participate in the learning process as the learning material selected and tasks developed by the teacher have an immediate relation to real world by being authentic and relevant to diverse learning needs (Corley, 2005; McTighe & Tomlinson, 2006). Furthermore, the findings revealed that the participant who employs backward design has more autonomy over curriculum (McTighe & Tomlinson, 2006) and

differentiation enables her to connect the curriculum requirements with the needs of her learners. This finding is in line with the perspective presented by Norwich (1994) who claimed that teachers who differentiate their instruction reduce the gap between the curriculum and learning needs in their classes, thus addressing the issues of equity in education (p. 293). Moreover, as research data shows, those participants who described strategies of differentiated teaching highlighted the importance of considering emotional disposition of students in their classroom as division by ability may undermine students' diversity (Santamaria, 2009).

The data collected from lesson observations and analysis of the participants' lesson plans showed that some teachers use differentiated strategies and approaches without referring to them as differentiation in their plans and interview responses. This finding is confirmed by Tomlinson (as cited in Wu, 2013) who spoke about the use of strategies in differentiated instruction as reflections of the priorities that teachers set in their classrooms - a mere acquisition of knowledge or a meaningful participation in the learning process. This finding indicates that teachers lack conceptual understanding of differentiation and implications that it sends to their teaching practices. There should be a thorough understanding of the principles and goals of differentiated instruction in order to enhance teaching practices by putting learners' needs first.

However, as most of the findings show, teachers at research site generally employ retrofitting practices (Stanford & Reeves, 2009) as opposed to differentiation. The use of ability-based differentiation by most of the research participants indicates their teaching practices which focus on curriculum and assessment standards accountability. It was showcased when participants discussed their responsibility for accommodating different levels of students' cognitive capacities. The retrofitting practices are employed by the participants who draw primarily on students' abilities as they expressed their concerns of having learners

of different academic capacities in their classes. This finding corresponds with Elliot who asserted that retrofitting practices take place when teachers face issues in their instruction (Stanford & Reeves, 2009). Therefore, it can be concluded that most of the participants perceive retrofitting practices as differentiation. This finding also highly resonates to the distinction that presented by Bray and McClaskey (2013) as they claimed that differentiation, despite its many overlapping areas with individualization, is a different way of planning and teaching. It puts diversity of learning needs as an essential part of planning and teaching whereas the latter focuses on individuality of learners and accommodation of their needs regardless the diverse classroom environment. This finding showcases the importance of the learning opportunities that teachers need to provide their learners with for a better socialization in the world which “is rapidly becoming everyone’s backyard” (Tomlinson, 2017, p.29). Besides, the finding which revealed a tendency among the research participants to adjust curriculum standards to various abilities of their learners was described in the literature (Stanford & Reeves, 2009) as opposite of what differentiation is.

It was revealed that those participants who teach in CLIL tend to develop multi-level tasks due to a lack of time. The practice of resource selection and multiple level tasks development was found to replace other planning approaches. This practice is consistent with the findings presented by Raskala (2014) in the qualitative study with Finnish teachers who implement CLIL education and differentiation. According to the results of the Finnish research, teachers also find it easier to develop tasks of multiple level tasks and select resources in authentic language in which Internet is abundant nowadays rather than spare time and effort to think about the ways of instruction differentiation in CLIL-based classes.

It was also revealed that the participants who teach in CLIL classes employ scaffolding strategies such as peer teaching which is a group level of differentiation as opposed to

individual one (Roiha, 2014). This finding also showcases that teachers consider the social aspect of CLIL education in the classroom fairly well. It was also found out that teachers consider differentiation mainly to address the needs of struggling students, omitting those of gifted students (Roiha, 2014).

Concluding, it is important to note that the findings of this research resonate with the perspectives and research findings presented in the literature on teaching practices in alignment with understandings of differentiated instruction. However, it is important to reconsider the research participants' understandings of differentiation along with the pedagogies that they employ in order to prioritize learners' meaningful participation and achievement.

5.4 Challenges in differentiated instruction

The research also targeted on revealing the challenges that teachers who are also in position of subject coordinators face in implementing differentiation. As suggested by the collected data, the main challenges that participants face relate to a lack of understanding of the concept of differentiated instruction as well as lack of collaboration. It is interesting to note that despite of the officially established and scheduled practices of team-planning at the research site, there is a lack of collaboration in improving teaching practices. It was pointed out by the response of the research participant that teachers resist change due to either being professionally disorganized as collaboration requires timely interactions and resource sharing or being overconfident in one's professionalism.

This finding was discussed by Friend (2000) who argued that professional interaction which lacks shared understanding of the goals of collaboration and which makes no impacts on the participants of the process cannot be referred to as collaboration. As Friend (2000) claimed, collaboration is a meaningful, interactive process which creates shared

understandings, practices as well as it develops communicative skills of participants. As the research data shows, the collaborative practices employed at the research site have a mandatory character. This finding relates to Friend's (2000) argument that top-down formal collaborative practices do not serve the goals of the improvement of teaching practices. Also, the findings indicate that there is a scarcity of collaborative practices at the research site which would foster collaboration across departments in order to share best practices as well as concept of differentiation. Furthermore, it was revealed that the participants need support and recognition of their practices. This finding was reflected by Suprayogi, Valcke, and Godwin, (2017) who claimed that collaboration is a key factor in defining teachers' well-being as well as their professional self-concept. Moreover, lack of time due to many work commitments was pointed out as one of the factors which create obstacles to improved differentiated practices at school. However, as Friend (2000) claimed, the issue with time shortage is mainly created by the lack of priorities that school sets forward.

It is evident that collaboration is an essential way to create shared understandings and practices, therefore, due time and attention should be allocated in order to improve the situation at the research site. Therefore, it can be concluded that there is a need to reconsider collaborative practices employed at the research site and, as proposed by the research participant, to make a strategic planning and evaluation of differentiated teaching practices employed at school in order to understand what areas need improvement.

5.5 The role of leadership in promoting differentiated instruction

Alongside teaching practices of research participants, their leadership roles as subject coordinators were aimed to be explored in the present study. Generally, it was identified that participants employ managerial or transactional leadership style as proposed by Shields (2009) as opposed to transformational and transformative styles which serve the principles of

inclusive education and differentiated teaching (as cited in Precey, 2011, p.38-39). The transactional style was reflected in the responses concerning the main duties as perceived and realized by research participants. However, the collected data demonstrated the division between leadership as management and leadership as change. Thus, support and professional guidance of the participants resonate with both leadership styles as it presumes ensuring that the subject programs are well-reflected in the lessons and the requirements of curriculum and assessment are followed unanimously by all department teachers.

Moreover, transformational leadership style is essential for implementing innovative planning and teaching approaches with UbD being one of them in order to lead changes on the transformational way towards differentiation. As Precey (2011) claimed, the role of transactional leadership should not be undermined because it has relevance to inclusive education by being a straightforward way of promoting inclusivity in the educational settings with high level of accountability which needs to be managed for precision. This perspective explains the opinion expressed by most research participants that it is important to ensure that all teachers understand and implement subject programs in the same manner to the point of subject-content accuracy and relevance. Also, as it was found out, all participants take responsibility for communicating the requirements of the subject programs to their colleagues. The limitations of managerial leadership style can be observed in expectations that subject coordinators hold in terms of differentiated instruction. The finding shows that subject coordinators consider it to be responsibility of school administration to promote differentiated practices by setting illustrations or demonstrations as best differentiated practices within school professional development framework. However, as it was revealed that school administration holds opposing view and considers it to be a responsibility of teachers to create their own differentiated practices through trials and errors and research of their practices. This

perspective is reflected in Tomlinson and Imbeau (2017) as she claimed that teachers gain knowledge and understanding of differentiation due to their experiences that they daily have with all the pitfalls and successes. As it was revealed, subject coordinators who perceive it to be their responsibility to set changes in motion in order to improve their teaching practices, expressed more positive attitude towards differentiation as they possess more autonomy over curriculum and assessment standards by implementing innovative approaches and accommodating the multiple learning needs. This finding also resonates with the concept of teacher increased self-efficacy through increased professional autonomy and actualization of the improved practices (Tomlinson, 2016; De Neve, Devos & Tuytens, 2014). Teachers increase their perceived self-concept and professionalism by becoming more autonomous decision-makers and leaders. However, the research findings suggest that there is a need for professional development programs in order to help teachers at the research site to build an accurate concept of differentiated instruction and establish stronger collaboration among teachers.

Furthermore, it was revealed that those coordinators, who perceive differentiation through the lenses of democratic values, including learning diversity and difference, highly foster self-learning and professional development of their colleagues which exemplifies the constructivist approach to leadership (Lambert, 2003). They consider it to be their responsibility as subject coordinator to ensure that teachers are involved into research practices and have opportunities to develop their teaching skills through improved collaborative practices, including team-planning, demonstration lessons, and mini-presentation to colleagues from other departments. This finding resonates with what Lambert (2003) called “learning community” for the enhancement of all individual teachers’ “leadership capacities” (p.425). As the central claim of constructivist leadership proposes that every teacher is a leader

on the premise that they can learn and construct meaning of their learning thus promoting the key principles of inclusive education which creates the contextual, cultural, and pedagogical framing for differentiated instruction.

Overall, it can be concluded, based on the evidence provided by the literature in the field of leadership in inclusive education as well as research findings, that different leadership styles as employed by subject coordinators respond to the general policies and subject programs' requirements set in the educational setting. Furthermore, the school collaborative practices as well as personal values make a considerable impact on the participants' perceptions of their leadership roles in creating and promoting differentiated practices at school.

5.6 Conclusion

This chapter discussed the findings collected from teachers who are also in the positions of subject coordinators on their understandings of differentiated instruction, their teaching practices, the challenges they face as well as the role of their leadership position in promoting differentiated practices. The literature that was reviewed in order to create conceptual, theoretical, and research backgrounds for the present study was discussed in relation to each of the research finding. Overall, the research findings are consistent with the reviewed literature. The strategies which research participants employ were also discussed in the literature. The research findings revealed that there is a need to strengthen collaborative practices at school as teachers' professional development programs in order to assist them in building an accurate concept of differentiated instruction and share common visions and practices of differentiated teaching.

Chapter 6. Conclusions

6.1 Introduction

This chapter will summarize the research findings that were revealed in the present qualitative study which included semi-structured interviews, lesson observations, and document analysis. The results will be presented in alignment with research questions.

Recommendations derived from the research data will be provided to address the issues of differentiated instruction at the research site. Also, the chapter will discuss the limitations of the present study as well as implications for further research.

The main research questions concerned perceptions and practices of teachers who are also in the position of subject coordinators in a school for gifted students in Kazakhstan. The subsidiary questions included approaches and strategies to differentiate learning process, the role of leadership in implementing differentiated instruction, challenges encountered in their practices as well as methodological guidance and support provided by school curricular documents.

6.2 Perceptions of differentiated instruction

Overall, the perceptions of differentiated instruction varied among research participants. Some of them perceive it as a way to accommodate the learning needs, interests, and various learning styles. Some participants still perceive it as an ability-based approach which relates rather to accommodating curricular and assessment standards than meeting primarily the needs of learners. Furthermore, those teachers who perceive it as a way to accommodate learners' cognitive abilities believe that differentiation can be taught and learned as opposed to those who perceive it as an individual empirical practice that can be explored and shared.

6.3 Teaching practices of differentiated instruction

As revealed by the present research, teaching practices of participants are defined by understandings of differentiated instruction that teachers have. Those teachers who perceive it as a way to create multiple learning opportunities, use innovative planning and teaching approaches, such as backward planning, Understanding by Design as well as strategies which draw on multiple learning profiles. In differentiation by ability, teachers mostly use tasks of varied complexity levels, differentiate instructional language in CLIL classes, use multiple scaffolding strategies, including direct instruction and peer teaching. The team-planning practices are mostly restricted to retrofitting of learning capacities to curricula and assessment standards as development of ability-based tasks was found as the main planning priority. Furthermore, some research participants use teaching strategies without a conscious consideration of the differentiation that takes place in their classrooms.

6.4 Challenges of differentiated instruction

The challenges that teachers encounter are mainly caused by the lack of collaborative practices and ability-based approach to differentiated instruction. The challenges with lack of time and difficulties in language instruction in CLIL classes are created by the deficit of school wide collaboration which would identify the priorities for creating a shared understanding of what differentiated instruction is and how it should be promoted through planning and teaching practices as well as collaborative work along and across school departments. Due to the deficit of informal, intrinsically-driven collaboration that is grounded into common goals and priorities, planning and teaching practices also lack vision and main principles of differentiated instruction. The employed retrofitting practices accounted for curricula and assessment standards rather than differentiation of content, process, and learning

outcomes based on learners' interests, readiness, and profiles create the barriers for learning and derive teachers from the opportunity to increase their autonomy and self-efficacy.

6.5 The role of leadership

As research results show, the role of leadership in differentiated instruction is mainly defined by transactional leadership style as coordinators perceive it as their responsibility to develop and revise the subject program and ensure support and guidance to novice teachers in relation to curriculum standards and requirements. The coordinators, who foster self-learning and enhancement of their teaching practices through research, apply constructivist leadership approach. Though, due to a lack of bottom-up, teacher-initiated informal collaboration, this approach bears a rare character as few participants apply it. This leadership style would greatly contribute to developing learning professional community of teachers whose values and practices shape their understandings of differentiated instruction. The conclusion can be made that due to a lack of common understanding of differentiated instruction as well as deficit of collaborative practices that would benefit participants' professional development and learning, their leadership is mainly restricted to managerial role of subject coordinators.

6.6 Recommendations

The recommendations are made in consistency with the research findings and addressed to the research site community. First of all, it is important to create a common understanding of differentiated instruction by means of improved collaborative practices. The collaboration should become a priority for promoting and improving differentiated teaching at school. Teachers need to be accommodated with professional support and encouragement through informal professional development sessions, including improved practices of team-planning, lessons observation, and research-based practices. Teachers need to be given more support and encouragement through informal collaborative practices, including team-planning,

team-teaching, mentoring, internal professional development workshops, in order to gain more autonomy over curriculum and assessment standards due to a lack of guidance in the subject-curricular documents at the research site. The policy on differentiation should be developed collaboratively at the research site. It is important for the school management and leadership at the research site to create a learning community that will, in its turn, create school leaders and set changes in motion by pursuing common visions and missions. Furthermore, there is a necessity to establish professional development programs in order to help teachers to build an accurate concept of differentiated instruction in order to enhance their teaching practices. Furthermore, the finding of research participants' unconscious use of strategies of differentiation without reflecting on them shows that there is a need to develop a concept of differentiated instruction in order to enhance differentiated instruction that takes place in their classes.

6.7 Limitations and implications for further research

Despite the fact that all research questions in the present study were answered, there are a few limitations which need to be addressed. First of all, in the light of a qualitative approach to present research, the saturation of the collected data was not reached as the findings varied among the participants. Second, due to the fact, that only one lesson in each research participant's class was observed, the collected data did not provide sufficient evidence for a data triangulation. Furthermore, the research findings cannot be inferred to similar educational settings as the uncovered patterns, including similarities and differences in perspectives and practices, were not data saturated. Hence, there is an implication to enhance the research results by conducting a similar research in schools for gifted students with similar educational context.

References:

- Ainscow, M. (2005). Developing inclusive education systems: what are the levers for change? *Journal of educational change*, 6(2), 109-124.
doi: 10.1007/s10833-005-1298-4
- Ainscow, M., Dyson, A., & Booth, T. (2006). Improving schools, developing inclusion. New York, NY: Routledge.
- Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2013). Introduction to research in education. Boston, MA: Cengage Learning.
- Baker, L. (2006). Observation: A complex research method. *Library trends*, 55(1), 171-189.
doi.org/10.1353/lib.2006.0045
- Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9, 2, 27-40.
doi: 10.3316/QRJ0902027
- Bray, B., & McClaskey, K. (2012). Personalization vs Differentiation vs Individualization. My eCoach. Retrieved from
<http://www.my-ecoach.com/online/resources/925/PersonalizationvsDifferentiationvsIndividualization.pdf>
- Bray, B., McClaskey, K. (2013). *A Step-by-Step Guide to Personalize Learning*. USA & Canada: International Society for Technology in Education (ISTE)
- Corley, M.A. (2005). Differentiated instruction: Adjusting to the needs of all learners. *Focus on Basics. Connecting research and practice*, 7, C, 13-15. Retrieved from
<http://www.ncsall.net/?id=736>

- Coubergs, C., Struyven, K., Vanthournout, G., & Engels, N. (2017). Measuring teachers' perceptions about differentiated instruction: The DI-Quest instrument and model. *Studies in Educational Evaluation*, 53, 41-54.
doi.org/10.1016/j.stueduc.2017.02.004
- Creswell, J. W. (2014). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson.
- Cronin C. (2014). Using case study research as rigorous form of inquiry. *Nurse Researcher*, 21,5,19-27.
doi:10.7748/nr.21.5.19.e1240
- De Neve, D., Devos, G., & Tuytens, M. (2015). The importance of job resources and self-efficacy for beginning teachers' professional learning in differentiated instruction. *Teaching and Teacher Education*, 47, 30-41.
doi.org/10.1016/j.tate.2014.12.003
- Dixon, F. A., Yssel, N., McConnell, J. M., & Hardin, T. (2014). Differentiated instruction, professional development, and teacher efficacy. *Journal for the Education of the Gifted*, 37(2), 111-127.
doi.org/10.1177/0162353214529042
- Flem, A., Moen, T., & Gudmundsdottir, S. (January 01, 2004). Towards inclusive schools: a study of inclusive education in practice. *European Journal of Special Needs Education*, 19, 1, 1-12.
doi.org/10.1080/10885625032000167160
- Friend, M. (2000). Myths and misunderstandings about professional collaboration. *Remedial and Special Education*, 21(3), 130-160.
doi: 10.1177/074193250002100301

- Hale, J. B., Chen, S. A., Tan, S. C., Poon, K., Fitzer, K. R., & Boyd, L. A. (2016). Reconciling individual differences with collective needs: The juxtaposition of sociopolitical and neuroscience perspectives on remediation and compensation of student skill deficits. *Trends in Neuroscience and Education*, 5(2), 41-51.
doi: 10.1016/j.tine.2016.04.001
- Hinton, C., Miyamoto, K. & Della-Chiesa, B (2008). Brain Research, Learning and Emotions: implications for education research, policy and practice¹. *European Journal of Education*, 43, 1, 87-103
doi.org/10.1111/j.1465-3435.2007.00336.x
- Huebner, T. A. (2010). What Research Says About... / Differentiated Learning, *Reimagining School* (pp. 83-84). Alexandria, Virginia US: ASCD.
- Lambert, L. (2003). Leadership redefined: An evocative context for teacher leadership. *School leadership & management*, 23(4), 421-430.
doi: 10.1080/1363243032000150953
- Lapham, K., & Rouse, M. (2013). Learning to See Invisible Children: Inclusion of Children with Disabilities in Central Asia. Budapest: Open Society Foundations and Central European University Press.
- Law on Education. (2007) Retrieved from:
https://online.zakon.kz/document/?doc_id=30118747#pos=120;-69
- Leavy, P. (2017). Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches. NY&London: The Guilford Press
- Levy, H.M. (2008). Meeting the Needs of All Students through Differentiated Instruction: Helping Every Child Reach and Exceed Standards. *The Clearing House: A Journal of*

Educational Strategies, Issues and Ideas, 81:4, 161-164

doi.org/10.3200/TCHS.81.4.161-164

Mac Ruairc, G., Ottesen, E., & Precey, R. (2013). *Leadership for inclusive education*.

Rotterdam, NL: SensePublishers.

McKenna, T., Cacciattolo, M., & Vicars, M. (2013). *Engaging the disengaged: Inclusive approaches to teaching the least advantaged*. Cambridge, UK: Cambridge University Press.

Meyer, O. (2010). Introducing the CLIL-pyramid: key strategies and principles for quality CLIL planning and teaching. *Basic Issues in EFL-Teaching and Learning, Winter, Heidelberg*, 265-285. Retrieved from:

<https://www.researchgate.net/publication/275887754>

McTighe, J. & Brown, J. L. (2005). Differentiated Instruction and Educational Standards: Is Detente Possible? *Theory into Practice*, 44, 3, 234-244.

doi.org/10.1207/s15430421tip4403_8

Mills, M., Monk, S., Keddie, A., Renshaw, P., Christie, P., Geelan, D., & Gowlett, C. (2014). Differentiated learning: From policy to classroom. *Oxford Review of Education*, 40(3), 331-348.

doi.org/10.1080/03054985.2014.911725

Nicolae, M. (April 01, 2014). Teachers' Beliefs as the Differentiated Instruction Starting Point: Research Basis. *Procedia - Social and Behavioral Sciences*, 128, 426-431.

doi.org/10.1016/j.sbspro.2014.03.182

Norwich, B. (1994). Differentiation: from the perspective of resolving tensions between basic social values and assumptions about individual differences. *Curriculum studies*, 2(3), 289-308.

doi.org/10.1080/0965975940020302

OECD (2015). *OECD Reviews of School Resources: Kazakhstan 2015*. Paris, FR: OECD Publishing.

Precey, R. (2011). Inclusive leadership for inclusive education-the Utopia worth working towards. *Contemporary Management Quarterly/Wspólczesne Zarzadzanie*, 235-44.

Retrieved from: 8723.indexcopernicus.com/fulltxt.php?ICID=1063305

Raskala, J. (2014). *Differentiation in CLIL: methods and challenges*. (Bachelor's Thesis)

Retrieved from: <http://urn.fi/URN:NBN:fi:jyu-201504221648>

Roiha, A. S. (2014). Teachers' views on differentiation in content and language integrated learning (CLIL): Perceptions, practices and challenges. *Language and Education*, 28(1), 1-18.

doi.org/10.1080/09500782.2012.748061

Saldaña, J. (2015). *The coding manual for qualitative researchers*. London, UK: Sage.

Santamaria, L. J. (2009). Culturally Responsive Differentiated Instruction: Narrowing Gaps between Best Pedagogical Practices Benefiting All Learners. *Teachers College Record*, 111, 1, 214-247.

Retrieved from: <https://eric.ed.gov/?id=EJ826003>

Shields, C. M. (2010). Transformative leadership: Working for equity in diverse contexts. *Educational administration quarterly*, 46(4), 558-589.

doi.org/10.1177/0013161X10375609

Smit, R., & Humpert, W. (2012). Differentiated instruction in small schools. *Teaching and Teacher Education*, 28, 8, 1152-1162. doi.org/10.1016/j.tate.2012.07.003

Stanford, B. & Reeves, S.. (2009). Making It Happen: Using Differentiated Instruction, Retrofit Framework and Universal Design for Learning. *TEACHING Exceptional Children Plus Volume*, 5(6),3-7. Retrieved from:

<https://files.eric.ed.gov/fulltext/EJ967757.pdf>

Subban, P. (2006). Differentiated instruction: A research basis. *International education journal*, 7(7), 935-947. Retrieved from:

<https://files.eric.ed.gov/fulltext/EJ854351.pdf>

Suleimenova, R . (2015). K voprosu ob inkluzivnom obrazovanii. [To the question of inclusive education]. *Otkrytaya shkola*, [Open school], 06 (147), 56-58. Retrieved from:

http://www.open-school.kz/glavstr/inclusiv_obraz/arhiv_stat_2012_2015/147.pdf

Suprayogi, M. N., Valcke, M., & Godwin, R. (2017). Teachers and their implementation of differentiated instruction in the classroom. *Teaching and Teacher Education*, 67, 291-301.

doi.org/10.1016/j.tate.2017.06.020

Tomlinson, C. A. (1995). Deciding to differentiate instruction in middle school: One school's journey. *Gifted child quarterly*, 39(2), 77-87.

doi.org/10.1177/001698629503900204

Tomlinson, C. A. (2000). Reconcilable Differences? Standards-Based Teaching and Differentiation. 58,1, 6-11.

<http://esblogin.k12albemarle.org/attachments/7b8c23a2-1dd0-4aab-943f-d417df093124.pdf>

Tomlinson, C. A., Brighton, C., Hertberg, H., Callahan, C. M., Moon, T. R., Brimijoin, K., &

Reynolds, T. (2003). Differentiating instruction in response to student readiness, interest, and learning profile in academically diverse classrooms: A review of literature. *Journal for the Education of the Gifted*, 27(2-3), 119-145.

doi.org/10.1177/016235320302700203

Tomlinson, C. A. & McTighe, J. (2006). *Integrating differentiated instruction & understanding by design: Connecting content and kids*. Alexandria, US: ASCD.

Tomlinson, C. A., & Imbeau, M. B. (2010). *Leading and managing a differentiated classroom*. Alexandria, Virginia US: ASCD.

Tomlinson, C. A. (2016). Why differentiation is difficult: Reflections from years in the trenches. *Australian Educational Leader*, 38(3), 6.

United Nations Educational Social and Cultural Organization. (2009). Policy Guidelines on Inclusion in Education. Paris, FR: United Nations Educational, Scientific and Cultural Organization.

Van Garderen, D., & Whittaker, C. (2006). Planning differentiated, multicultural instruction for secondary inclusive classrooms. *Teaching Exceptional Children*, 38(3), 12-21.

doi.org/10.1177/004005990603800302

Wiggins, G., & McTighe, J. (1998). What is backward design. *Understanding by design* (pp.13-34). Alexandria, Virginia US: ASCD.

Wu, E. H. (2013). The Path Leading to Differentiation: An Interview with Carol Tomlinson. *Journal of Advanced Academics*, 24, 2, 125-133.

doi.org/10.1177/1932202X13483472

- Yelisseyeva, I.G . (2015). Izhucheniye gotovnosti pedagogov k realizatsii ideyi inklyuzivnogo obrazovaniya. [The study of teachers' readiness to inclusive education implementation]. *Otkrytaya shkola*, [*Open school*], 05 (146). Retrieved from: http://www.open-school.kz/glavstr/inclusiv_obraz/inclusiv_obraz_146_1.htm
- Zainal, Z. (2007). Case study as a research method. *Jurnal Kemanusiaan*, (9), 1-6. Retrieved from: http://psyking.net/htmlobj-3837/case_study_as_a_research_method.pdf

Appendices

Appendix A. Informed Consent Form

The perceptions and practices of differentiated instruction of teachers who are also in the position of subject coordinators in a school for gifted students in Kazakhstan

DESCRIPTION: You are invited to participate in a research study on exploring perceptions and practices of differentiated instruction of teachers who are also in the position of subject coordinators. You will be asked to participate in interview and lesson observation as well as provide researcher with access to Subject Program, Course Plan, and Unit/Lesson plans. The interview will be recorded at your personal permission in order to be further transcribed and analysed. Once the data is analysed, the recordings will be deleted, electronic and paper data will be discarded. Observation notes taken during lessons will be shredded after being analysed. Observation will take one lesson period time which is 40 minutes. After the lesson observation, you will be asked to schedule any time convenient for you to discuss the approaches and strategies employed at the lesson in order to member-check the researcher's interpretations for the accuracy of research results. The data collected from interview and observation will be used only for research purposes.

TIME INVOLVEMENT: Your participation in interview will take approximately 40-60 minutes. Classroom observation will take one lesson – 40 minutes. No additional time will be needed to allocate for the document analysis process. The researcher will work on curricular documents analysis independently, accessing them via school server.

RISKS AND BENEFITS: The risks associated with this study may relate to some sensitive research findings. However, the identities of research participants will be kept anonymous and known only by the researcher. The research data will be kept confidential and password-protected. The research data collected from participants will be aggregated and further communicated without any indication to individuals in order to maintain anonymity. The sensitive research findings will be presented in noncritical manner as areas which need to be addressed for further improvement. The benefits which may reasonably be expected to result from this study relate to the fact that one of the priorities for professional development of school teaching practices has been set upon differentiated instruction. Therefore, any research findings which might indicate the areas for further improvement of teaching and coordinating practices on differentiated instruction will be beneficial for research participants and research site. Your decision whether participate or not in this study will not affect your employment.

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 Rita Kasa, rita.kasa.@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. 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: _____

Appendix B. Sample Interview Protocol

The perceptions and practices of differentiated instruction of teachers who are also in the position of subject coordinators in a school for gifted students in Kazakhstan

Date: January, 8 2018

Place: a school for gifted students in Kazakhstan

Interviewer: Ainur Aliyeva

Interviewee: a teacher and subject coordinator of Language Arts

Questions:

1. What is differentiated instruction in your understanding?
2. How do you identify individual learning needs of your students?
3. Do you think it is important to differentiate your instruction? Why? Please, explain your answer.
4. Do you think that your personal values shape the way you teach? How? Please, explain your answer.
5. How do you use planning in differentiated instruction? Team planning? Team teaching?
6. What approaches and strategies do you use to accommodate learning needs of your students?
7. What is the role of your leadership position in implementing differentiated instruction?
8. How do you support, as a subject coordinator, differentiated instruction practices of your colleagues?

9. How do you know that the learning needs of your students are met?
10. How do school subject programs support differentiated instruction?
11. What strategies do you use to ensure participation/achievement of students with language barriers at your lessons?
12. What challenges do you encounter in improving your practice of differentiated teaching?
13. What kind of support do you need to improve your skills of differentiation teaching?

Thank you very much for participation! I want to assure you again that data will be kept confidential and protected.

Appendix C. Sample Interview Transcript

A – Interviewer

B - Interviewee

A: Thank you very much for agreeing to take part in the interview. As you know, I am working on the research on differentiated instruction. Your responses will be helpful for my study. Do you mind if I record our interview?

B: No, please, do, of course.

A: Ok, thank you. What is differentiated instruction in your understanding? How can you define it?

B: Well, I see differentiated instruction as teaching that takes into account personal needs and interests of students, adapting teaching to the needs ... exactly not dividing students into groups by level like “here we have the strongest students; here we have the weakest students”. It’s just adapting teaching to the needs of students ... that may be different.

A: Ok, thank. Do you think that your personal values shape the way you differentiate your instruction?

B: Values determine the way we teach ... when it comes to differentiation I say ... For example, I hate dividing students into “good” and “bad”, “strong” and “weak”. That’s why I never make those groups. I try not to ... I try to make my differentiation invisible. For example, if someone needs support I’ll give this support, but without emphasizing in front of the whole class. “Look at this girl, she is weak, that’s why I am helping her”. I try not to do so. Maybe, my value is that ... I try to value the personality, ... the differences in people. That is why I don’t think that differentiation should be so clearly observed in a lesson. It should be behind the scene. A teacher should realize that he or she is differentiating, but it shouldn’t be visible to everyone.

A: Ok. Can you give any examples of different learning needs in your class?

B: I do have one class where for example, there is a student whose level of English is close to mine and ... it is very difficult to get him involved, he is very polite, he does participate out of respect to me, but I can see this is not what he needs. I try at least to ask him higher order thinking questions, more ... higher order thinking questions than to others. But at the same time in the same class there is a girl, who barely speaks English at all. It is not even a problem of language; it is a problem of her personality. She doesn't speak at any language. She is very shy. But I try not to emphasize this, I try to ask her ... For example, when there is an easy question, just to reproduce something. I ask her when I am sure she can answer in front of the class. And when there is something more difficult that requires more thinking, more couch I ask that guy. But, I realize that this way prevents her development, and the development of a weak girl, but at the same time I try not to hurt the feelings because when she is asked to speak in front of the class, she gets stressed. I try to get her involved step by step ... Sometimes when I see she can say something I give her a chance. When I see that she doesn't know what to say, I try not to expose her.

A: Ok. Thank you. So my next question refers to leadership position as a coordinator of the subject program. What do you think is the role of your leadership position in supporting your colleagues' differentiated practices? Can you give examples maybe from your co-planning? Or working together on developing differentiated strategies?

B: As a coordinator I think my main responsibility is to ensure that teachers are educated in this area. That they know what the differentiation is and how it works, that they are familiar with some strategies and for this there are different approaches. We do have co-planning; I try to coordinate it as much as I can. We discuss the program from time to time when I try to coordinate it. I try to share what I know, what I can do, I try to encourage people to do

research in this area. I know that some teachers are doing research into differentiation. That's all I think I am doing.

A: What support do teachers at your department need to improve their differentiated instruction?

B: Teachers need education, first of all. They need maybe a course, but not the formal one ... not just something to attend. I mean they need something real ... some real knowledge. They need to be aware of core strategies; they need to be able to conduct a research ... again they need education in this area. They need support in terms of time, allocated time for co-planning, for discussions, for education and professional development. I think if teachers had more time and were more encouraged, they would do more lesson study, action research and a lot of this kind. This would help them differentiate, because I am sure most of our teachers are experienced and they know what the differentiation is. But they have no time to think into deep level about their teaching. If they could sit down and think, especially together. If they had, for example the opportunity of guided reflection; If someone had a mentor or someone who could guide this discussion, they would come up with great ways to differentiate new strategies, new little things that improve their teaching. Time ... Encouragement. School admins should encourage people, they should provide opportunities for educational and professional development, they should find best practices and provide opportunities for sharing. For example, they could say "Well, we have observed the lessons of English department and for example this teacher is great at differentiating. Let's ask her to share her best practices", and that teacher could have 10 minutes in a general meeting to speak about her differentiated practice. Or could do a demo lesson for others. I think there should be time for professional development. And freedom of this professional development. I think every teacher should have a mentor, who would in the beginning of the year ask them like "What

would you like to develop?” ... for example in terms of differentiated instruction. And then decide on the aim for the year and ways to achieve it. And then the teacher should be given time to read, to do research and share the results of this research. I think time, some guidance, ... maybe formal procedures ... And every teacher should have a mentor, because very often even very experienced teachers they need guided reflection, because we tend to overlook a lot of staff. You, for example, focus on one thing, and don't realize that other things are happening to you and your students. Guided reflection could help in this case. Having specialists from Astana is not an effective way to develop professionally because they do not our challenges.

A: Thank you for a substantial response. So, next question refers to your teaching practice. What strategies do you use to ensure participation and achievement of learners in your classroom? Strategies, approaches, methods ... Can you give examples?

B: Well, I think participation mostly depends on personality of a student. Because, in my experience most of them can speak English. But they may be shy, may be tired? Maybe preoccupied with other staff. The role of the teacher is to provide opportunities to everyone to participate and one good way would be to ... For example, when there is student who feels shy, I give him/her a chance to rehearse with me. For example, when other people work in group and prepare, sit with that student and ask him “Well, tell me what you gonna say in front of the class?” And then I help them with language ... with some words, help the paraphrase for their sentence to sound better. And then they prepare to speak in class they have experience of pronounce this sentence and they feel more comfortable speaking in front of the class. So, rehearsal this is one way.

There is another way when you can make a card, saying for example scribe. And when there is group discussion you give this card to one of the students, it means that he should be silent

while the group discussion, but note down everything that being said. And then when the group discussion is over, it's time to share with a whole class, this student can speak on behalf of the group. It can be the weakest student because this provides opportunity for them to speak without being interrupted. But at the same time it can be the strongest student, who usually dominates the group discussion and this is a way to stop them. This student will be silent during the group discussion, but then he/she will get their chance to speak. This is another strategy.

What else ... of course there can be tasks of different level. But I try not to rely on tasks of different level because it brings you back into dividing students into strong and weak. If I do this, it works with pretty well with junior grades, if I do this, I do not give the task saying "this is a task for weak student and here we go". I ask students to choose. I tell them that "this task is more difficult", "this task is easier" "you can decide which one you want to do today". And the funny thing is that students always choose more difficult tasks, even if I think they are not very strong, even students that are weak in my opinion, they usually choose more difficult task. It's very, very rare that they select the easy one. They do not want to admit that they are weak.

A: So, they like to challenge themselves, right. Maybe especially in front of their peers.

B: Oh, yes, they do. They like to challenge themselves. It is interesting for them.

A: Ok. Do you always use the strategies and approaches as you planned?

B: Of course not ... Especially when I teach the lesson for the first time, when it has been planned and I am with the first class. Sometimes students work fast, sometimes they work slower and you have to deviate from the plan. Sometimes I can see that students don't like it, they are not interested and that very often they do things just out of respect to me. And when I see that they are not interested I try to shift the focus. Example, today with one class we had to

speaking about reading, their reading habits, their favorite books, and I realized that these guys don't read too much. But then I asked ... there was not such question prepared in the plan ... but then I asked "Maybe you don't like fiction, maybe you've read some non-fiction?" and that opened them up. They read non-fiction, some of them read a lot of non-fiction and they were much more involved when we spoke about non-fiction. This is how I shifted the focus of the lesson. I kept the same activities, but change the topic.

A: Thank you for your participation in the interview. It was a pleasure to talk to you.

B: Thank you. You are welcome.