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Author’s signature:
Teachers’ perceptions and practices towards differentiated instruction in an 
intellectual school in south Kazakhstan

Bekeyeva Ainur

Submitted in partial fulfillment of the requirements for the degree of
Master of Science in Educational Leadership

Nazarbayev University Graduate School of Education

June, 2019

Word count: 15780
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The NUGSE Research Committee reviewed the project entitled "Teachers’ perceptions and practices towards differentiated instruction in an intellectual school in south Kazakhstan" by Ainur Bekeyeva and decided:

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Acknowledgements

I would like to express my very great appreciation to my research supervisor, Professor Duishon Shamatov, for his encouragement, guidance, kindness and patience. Thanks to my supervisor I was able to conduct this research and complete my thesis writing.

My grateful thanks are also extended to all NUGSE staff members.
Abstract

In the multicultural society of the 21st century, the diversity of learners is an indisputable fact, and nobody can deny that differences exist between students in terms of their academic performance and learning outcomes. Therefore, teachers have to deal with different learners in their regular classrooms, and differentiated instruction is necessary to offer the best learning opportunities for all (Coubergs, Struyven, Vanhournout & Engels, 2017).

Implementation of differentiated teaching approaches into practice to meet the needs of learners is currently one of the widespread issues that require many teachers to modify and alter their perceptions and practices towards teaching and learning. The purpose of this qualitative study was to explore teachers’ perceptions and practices about differentiated instruction in one of the intellectual schools in southern Kazakhstan.

Through reviewing relevant empirical research literature and conducting qualitative research, this study aimed to identify what teachers’ understanding of differentiated instruction was, and to investigate how they practiced it and what issues they faced using differentiated instruction. To carry out a thorough analysis of the problem in one of the southern Kazakhstani secondary schools, a case study approach was conducted. Eight teachers from different departments of the school, specifically from Social science, Natural Sciences and Languages departments were interviewed individually and their lessons were observed. A focus group discussion with five other teachers of different subjects was conducted to triangulate the research results. The collected qualitative data were analyzed through key point coding (initial and focused) and via field notes (descriptive and reflective). Findings from the research may enable teachers to define the core of the problem, it may provide about some measures to be taken in schools in Kazakhstan, and
may particularly encourage teachers and practitioners to make changes in terms of teaching and learning.

**Аннотация**

Эртүрлі мәдени топтардан құралған қоғамда 21 ғасыр білім алушыларының саналуандылығы айтпаса да белгілі жайт, сол себепті де окуышылардың бір-бірінен түрлі айырмашылықтары бар екенінің де ешкім жокқа шығара алмайды. Бул мұғалімдердің өзінің калыпты сыныптарында эртүрлі окуышылармен жұмыс жасауына тура келетінінің айқын айғағы және оны орайда барлық окуышының қажетін қанағаттау үшін дифференциациялық оқыту тәсілдерін көлдану сапалы білім берудің негізі болмайды (Coubergs, Struyven, Vanthournout, & Engels, 2017).

Барлық окуышыларды қызығуышылығына сәй қажеттіліктерімен, қамтамасыз ету үшін дифференциациялық оқыту тәсілдерін көлданып білім беру қажет екен. Бұл мән барлық окуышылар кәсібетінен әсірі болып отыр. Сондықтан мұғалімдерден оқыту мен білім беру барысында қазақ тәжірибесі мен тәжірибесін қажет етіледі.

Бұл сапалық зерттеу жұмысының мақсаты Қазақстанның өнімдігінде зиянделік мектептердің біріндегі мұғалімдердің дифференциациялық оқыту мен білім беруге деген қәсібиі мен дифференциациялық оқытудың іс жүзінде қалай жұмыс асқырғы жатқаның тұралы және оны қалай қолдану үшін не болады. Бұл мұғалімдердің өз көзқарасынан дифференциациялық ең жақсы оқытудың қалай жүзеге асырылуының анықтау үшін орын алатын сапалық зерттеу.
TEACHERS’ PERCEPTIONS AND PRACTICES TOWARDS DIFFERENTIATION

Мектептегі түрлі әдістемелік бірлестіктердің, өсірсесі қасиби білім беру және тіл мамандықтары бірлестіктерінің сегіз мұғалімінен сұхбат алынып, сабақтарына бәқылау жасалды. Әртүрлі басқа пәндер әдістері бойынша тағы бес мұғалім ғылымға топ талқыламасына қатысты. Осындай ұшақтанық зерттеу әдістері бойынша нәтиже алынды. Жинақталған сапалық әдістерге бастапқы және арнайы кілт сөздер бойынша кодтама (кодтау) жасау арқылы және бөлінісіз пәндерінің сипаттамалық және рефлексивті талдау жасау арқылы нәтиже орналасады. Зерттеу әдістерінің қомегімен алынған нәтижелер көрінісінде мұғалімдерге мәселенің түпкі сөздерінің анықтауға, орта мектептерде ақыркылы уақытты түсінік кийініркі сәараптары баяуы әдістери және мұғалімдердің өкілінен білім беру қатысты арқылы ерекшеленеді. 

Аннотация

В мультикультурном обществе 21-го века разнообразие учащихся является неоспоримым фактом, и никто не может отрицать, что между студентами существуют различия. Поэтому учителям приходится иметь дело с разными учащимися в своих обычных классах, и для обеспечения наилучших возможностей обучения для всех необходимо дифференцированное обучение (Coubergs, Struyven, Vanthournout, & Engels, 2017).

Внедрение дифференцированных подходов к обучению на практике для удовлетворения потребностей учащихся в настоящее время является одной из широко распространенных проблем, требующих от учителей изменения своего восприятия и практики в направлении преподавания и обучения. Целью этого качественного исследования было изучение убеждений, взглядов и практики учителей в отношении дифференцированных подходов к обучению в одной из интеллектуальных школ на юге Казахстана.
Анализируя соответствующую эмпирическую исследовательскую литературу и проводя качественные исследования, это исследование было направлено на то, чтобы выяснить, каково понимание учителями различий, и выяснить, как они практиковали это и с какими проблемами они сталкивались, используя дифференцированные подходы к обучению. Чтобы провести тщательный анализ проблемы в одной из средних школ на юге Казахстана, был проведен тематический подход. Были опрошены и наблюдались восемь учителей из разных предметных кафедр школы, в частности из отделов социальных наук, STEM (наука, технология, инженерия и математика) и языков. Обсуждение в фокус-группе с пятью другими учителями-предметниками было использовано для триангуляции результатов исследования. Собранные качественные данные были проанализированы посредством кодирования ключевых точек (начального и целевого) и полевых заметок (описательных и рефлексивных). Результаты исследования позволяют учителям определить суть проблемы, могут дать представление о некоторых мерах, которые необходимо предпринять в школах Казахстана, и могут, в частности, побудить учителей и практиков вносить изменения в плане преподавания и обучения.
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Chapter 1: Introduction

This thesis is titled “Teachers’ perceptions and practices towards differentiated instruction in an intellectual school in south Kazakhstan”, and it puts forth the importance of using a differentiated teaching approach in the classroom with diverse learners. In this chapter, I present the background information about the significance of implementing differentiated instruction into the practice of teaching. This chapter includes statement of the problem, the purpose of the study, research questions, and the significance and benefits of the study.

Background

What is expected of teachers today requires not only addressing the varying needs of all learners, but also enhancing their educational achievements; and, therefore, a school has to look for effective approaches to reinforce the classroom practice (Rock, Gregg, Ellis & Gable, 2008). The considerable disadvantage of traditional instruction had proven to be 'teaching to the middle' (Hagger & Klinger, 2005, p.19), which signified that the needs of all learners were not met. As a result, those students whose needs were unmet could not cope with the standardized tests, they were labeled as low attaining students till graduation, and even after school contributed to increase the rate of the unemployed (Lipsky, 2005). Darling-Hammond and Snyder (2000) also indicated that in the case that teachers neglected the diverse needs of learners, they would become less successful; conceivably, in order to respond to the demands of learners, teachers ought to seek relevant teaching strategies grounded in research based experiments. Moreover, Hall, Strangman and Meyer (2003) pointed out that students were not capable to modify the curriculum by themselves, therefore it was necessary for teachers to be flexible and to adapt their teaching to satisfy the requirements of learners.

According to experts in education the solution to this issue is the use of a differentiated teaching approach (Hardre & Sullivan, 2008; Tomlinson, 2004).
Differentiated instruction is the process of “ensuring that what a student learns, how he/she learns it, and how the student demonstrates what he/she has learned is a match for that student’s readiness level, interests, and preferred mode of learning” (Tomlinson, 2004, p. 188). Even though it is suggested to use a differentiated teaching approach in a regular classroom, teachers are not prepared well enough to change their experience. A research conducted by Hardre and Sullivan (2008) discovered that more than half of the total teachers suffer from a deficiency of applicable knowledge and strategies to inspire their students and meet their expectations.

Learners of the 21st century are quite different from the previous generation and they come from different social and cultural backgrounds. The diversity even within one multicultural society requires teachers to use differentiated instruction to address the differences in learning in order ‘to provide all students with the best possible learning opportunities’ (Coubergs, Struyven, Vanthournout, & Engels, 2017, p. 41).

While doing his research Hattie (2009) synthesized students’ achievements and found out that though students were sitting in the classrooms they were not psychologically present. Some were not paying attention because they were bored due to the lack of a relevant challenge. Some lost interest because they could not keep up, and some were ready to cheat thinking that the teacher did not care about their success in learning. These facts show that teachers need to change the way they educate children.

Even though teachers have to cover the demands of the curriculum, which is also called ‘standard’ there is always a room for success through the use of appropriate approaches in teaching. Differentiation makes it feasible to address the needs of various learners along with curriculum requirements in a regular classroom turning it into an environment where all learners have equal access to excellence (Tomlinson, 2014).
Therefore, Kazakhstani teachers also need to relook at the ways of encouraging all children to make progress.

According to TIMSS - 2015 Kazakhstani students’ results were relatively better than the previous years, but it also showed that there is still a difference in the quality of education in terms of social background of students. Therefore, the reinforcement of knowledge should be one of the key foci in teaching children (TIMSS, 2015).

Another issue is related to the participants of the international survey PISA (The Programme for International Student Assessment) from Kazakhstan in 2009 and 2012. In PISA - 2015 the Kazakhstani students demonstrated better progress in the three main components of this survey in comparison with the previous years. Their results for Math were 28, reading 34 and science 31. It was evaluated that learners were able to achieve this outcome via the updated content of the secondary school curriculum. The National Action Plan (SPED, 2016) established by the Head of State to enhance teaching and learning in the country had proven to be fruitful. One of the main goals of this national curriculum is to provide quality education for all despite their learning abilities. Therefore, teachers have to change the way they are teaching to meet the demands of all learners.

Statement of the problem

Nazarbayev Intellectual Schools were established in 2008 to improve the education system in Kazakhstan, to provide learners with quality education and to develop the intellectual life of the country and are now being used as an experimental platform in putting the new updated curriculum into practice throughout Kazakhstan (SPED 2010-2020, 2010). According to the state program of education development (SPED, 2010), teachers are expected to use differentiated instruction in the classrooms to meet the diverse needs of learners. Most teachers undertook in-service trainings via the support of trainers from CoE (Center of Excellence), but the implementation of differentiated teaching into regular
classrooms is still a controversial issue in most of the secondary schools (Diagnostic Report, 2014).

Furthermore, Nazarbayev Intellectual Schools admit students after Grade 6, after a rigorous selection procedure. The students who are admitted to NIS from other mainstream schools do have different levels of academic performance and this poses additional challenges to the teachers who work at these schools. Therefore, a differentiated teaching approach is one of the main approaches the teachers are required to use.

Apart from the lack of literature on empirical research conducted on this topic in Kazakhstan, another reason for selecting this topic is with regards to the school inspection that teachers frequently encounter. Whenever different committee members observe teachers' lessons, they always conclude that differentiation had not been used properly. The latest inspection was the visit by CIS (Community of International Schools) experts in the 2017-2018 academic year and according to their report one of the aspects of teaching that needed to be improved was differentiation in the quality of teaching and learning criteria.

Within the context of this school, the research was conducted to identify how the inclusion is being implemented through the use of differentiated teaching approaches in regular classrooms and what the obstacles and challenges are for teachers in dealing with the issue.

**Purpose of the study**

The purpose of this qualitative study is to explore teachers’ perceptions and practices about differentiated instruction in one of the intellectual schools in south Kazakhstan.

This research aims to identify teachers’ understanding of differentiated instruction. The study also aims to investigate how teachers are using differentiated teaching approaches, and what challenges they are facing and how they are dealing with them in regular classrooms.
Research questions

The following question(s) are addressed in this study:

Main research question:

What are the teachers’ perceptions and practices towards differentiated instruction in an intellectual school in south Kazakhstan?

Subsidiary questions:

What are teachers’ perceptions towards differentiated teaching approaches?

What are teachers’ practices towards differentiated teaching approaches?

Definition of central phenomenon

The terms ‘differentiation’ and ‘differentiated instruction’ are frequently used within this research. A leading expert who did a lot of significant research on this topic, Tomlinson (2014), states that differentiation is not a strategy based on instructions, and there are no straightforward rules of performing it in the classroom. It can be better understood as a creative way of thinking about teaching and learning to respond to the needs of learners.

As for Ober (2016) differentiated instruction is an effective method that makes it possible to reach all students, and encourages them to enhance their learning. Bajrami (2013, p. 149) describes differentiation as a very useful and inevitable approach in every day teaching.

Significance of the study

In this study the participants got opportunity to be listened to and they may reflect upon their practices of differentiated teaching approaches. While reflecting on their practices, they may have further improved their understanding of differentiated instruction.

Findings from the research may potentially empower parents and children as well. Teachers' improved understanding of differentiated instruction may enable learners to get
equal access to learning that meets their educational expectations, and satisfies the needs of parents with the teaching provided.

Findings of this research may also help the school leaders and administration to improve their practices upon learning about differentiated teaching and it may inform them about some measures that should be taken within the school.

Structure of the thesis

On the whole, this thesis is comprised of six chapters, a list of references and appendices. Chapter 1 covers the importance of the use of differentiated instruction in the classroom, the stating of the problem, and purpose of the study, research questions, significance and benefits of the research, and structure of the thesis. Chapter 2 presents the review of the literature related to teachers' beliefs, perceptions and practices towards a differentiated teaching approach. Chapter 3 demonstrates the methodology of the study, which consists of research design, site and sampling selection, instrumentation, data collection procedures, data analysis and ethical considerations. Chapter 4 shows the main findings of the collected data about teachers' beliefs, perceptions and practices towards differentiated teaching in one of the intellectual schools in southern Kazakhstan. Chapter 5 presents the discussion of findings in accordance with the literature review and research questions which were employed in the study. Chapter 6 presents the conclusion and further implications of the study.

Conclusion

This chapter demonstrates an introduction to the thesis, the research problem and the purpose of the study, research questions and its significance. The thesis “Teachers’ perceptions and practices towards differentiated instruction in an intellectual school in south Kazakhstan” is a significant topic for discussion, as within the implementation of an updated curriculum many mainstream school teachers face challenges in utilising
differentiated instruction. And this study will be of support for many teachers who need to develop their practice of using differentiated instruction in their classrooms.
Chapter 2: Literature review

In this chapter, the relevant literature focusing on differentiated instruction is reviewed in order to set a theoretical framework for this study. By scrutinizing articles based on empirical research it would also present a critical account of available literature on differentiated instruction.

It has been discussed and studied at length that students need learning environments where their individual differences are addressed (Ainscow, Booth, & Dyson 2006). Apparently, the term differentiation is not a new concept. Differentiated instruction as a teaching theory was first presented by Tomlinson where she indicated that teaching should vary in content, presentation, and assessment, and address the needs of all learners in the classroom (Tomlinson, 2001). Since then other researchers have also developed their definitions of differentiation. King-Shaver (2008) relates it to proper planning and teaching where teachers have to encourage all learners to achieve their set goals. Wilson (2003) defines differentiation as tiered tasks assigned to students according to their age and grade ranges. Tschannen-Moran and Woolfolk Hoy (2001) associates it with teachers’ confidence in their ability to endorse student learning (p.797).

Differentiated instruction derives from the notion of learners’ differences in learning profiles, interests and the way they learn, and in differentiated classrooms all learners are motivated to take part in their own learning (Algozzine & Anderson, 2007). Yet teachers should not accept that there is only one differentiated teaching approach because differentiation implies teachers’ understanding of their learners’ levels and practices (Logan, 2011, p. 9).

Due to the change of the student population, the global trend in the field of education is leaning towards differentiated instructions in the classroom. In the 21st century educated workers should be aware of complex concepts, be creative, develop new ideas,
analyze and criticize what they have read, be confident while expressing thoughts and perceive scientific and mathematical reasoning (OECD, 2008). The practice of "one size fits all" curriculum did not meet the unique needs of learners, therefore, differentiated instruction is the key to the success of all children (Loeser & John, 2018). The use of traditional instruction in the classroom did not encourage learners to develop their thinking and creative skills because teacher-centered learning limited them to memorization of facts only (Yakavets, 2014). There were other cases when the traditional way of teaching turned out to be less successful. Haager and Klinger (2005) mentioned this fact when learners failed to pass the standardized tests. The introduction of standardized tests in the US in 1972 revealed the achievement gap between students of the same level (Gundlach, 2012).

According to the empirical study of Tomlinson (2000), differentiation is an innovative way of teaching to respond to the needs, interests and abilities of learners. In case a differentiated approach is applied, learners will be able to demonstrate their strengths and, conceivably, show better results in education. Four ways of differentiating: content, process, product, and environment were presented by Tomlinson (2005). Apart from these types of differentiation, there are some other facts that should be taken into consideration such as readiness, interests, or students’ learning styles. By using differentiated strategies that focus on content, process and product which also considers learners’ readiness level, learning profile and interest, teachers make sure that all learners are provided with equal opportunities to learn (Loeser & John, 2018).

The learners' prior knowledge that they use to acquire new skills and expand their perceptions is referred to as readiness (Subbon, 2006). It is clear that the readiness level of learners differ in the classroom, and the learners with quite a low level of previous knowledge will need more support, activities and instructions that encourage them to attain more success. Differentiating tasks by readiness enable teachers to plan a lesson properly
and monitor how effective it is. To meet learners’ expectations, teachers should look for materials that are more transformational rather than foundational. Moreover, teachers should endeavor to follow such principals as concrete to abstract, simple to complex, single facet to multiple facets, small leap to great leap, dependent to independent, slow to fast and structured to open ended (Dixon, Yssel, McConnell, & Hardin, 2014).

In order to support learners to use research and problem solving, interest-based differentiation should be used (Tomlinson, Brighton, Hertberg, Callahan, Moon, Brimijoin, & Reynolds, 2003). The term "interest" can be revealed by students' motivation, enthusiasm and eagerness that they demonstrate while learning a new theme. They might be ready to explore the new topic in greater depth only if they are interested in it. That is the reason why they should be provided with new opportunities to learn which may lead them become lifelong learners who find learning satisfying and consuming (Tomlinson & Dockterman, 2002).

The purpose of the learning-profile differentiation is to help learners to perceive how they learn best as individuals, and what works best for them (Roiba, 2014). The learning profile is split up into four categories such as intelligence preference, gender, culture and learning style. In the differentiated classroom learners should be allowed to move around and to have learning choices, and teachers should ensure that learners are provided with different working arrangements (Eidson & Tomlinson, 2003).

Content is called the "input" of teaching and learning, and adaptation and modification are the major terms that support this idea (UNESCO, 2004). Content, or what learners should learn, is frequently dependent on how students master the material covered in the lessons on average. By giving different level materials according to their abilities teachers may cope with the problem. One example can be the graded reading texts in language or humanities subjects. Pre-tests are very helpful identifying the reading levels of
various students. The texts contain the same information, but written in different levels, therefore, suitable for their aligned test performance. Concept-based teaching, curriculum compacting, using varied text and resource materials, learning contracts, mini-lessons, and different support systems are basic strategies that teachers all over the world are using to differentiate content (Seikkula-Leino, 2007).

Process differentiation (the way materials are being taught and learnt) is related to the variety of activities teachers adopt to satisfy the needs of the learners, as well as their learning style preferences such as audial (aural), visual and kinesthetic. Process differentiation can usually encourage students to develop their higher order thinking skills. To describe process differentiation Tomlinson (2005) used the term "sense-making activity", which means that learners learn better if the classroom activities are interesting, and if the activities make them use their key skills to understand key ideas (p. 79). Learning logs, journals, graphic organizers, learning centers, interest groups, role-playing, choice boards, PMI (listing pluses, minuses and interesting points), and mind-mapping are among the most preferred strategies of process differentiation that educators refer to as sense-making (Nottage & Morse, 2003, as cited in Opitz & Ford, 2004).

Product differentiation is also stated as differentiation by outcome, because learners are given freedom and choice to demonstrate what they have learned in various ways. One common way of using this type of differentiation is the choice of projects that learners are required to fulfill. Product assignments help learners to rethink, reflect and extend their understandings. Designing, creating, compiling, presenting and developing are the verbs that characterize product assignments in most cases (Nottage & Morse, 2003, as cited in Opitz & Ford, 2004).

The learning environment in a classroom also plays an important role in supporting the learners to succeed and make progress. Working in pairs and in groups, being
encouraged to move around the classroom, or providing the silence to sit and work alone can reinforce students’ enhancement in learning. In addition, changing the methods of instruction or altering the classroom arrangement as often as possible may promote learners to move forward towards high attainments (Tomlinson, 2014).

One of the important aspects of differentiation is grading in a differentiated classroom. In such classrooms, where learners work at their own pace on varied learning objectives, it is difficult to grade them. As a way of transitioning from traditional to personal grading it is suggested to teach learners to keep personal portfolios, where each student’s progress and other information can be found. Another way of controlling student growth is maintaining student folders. Learners keep all their work done in a folder, which will contain some work samples with teacher feedback and dates. For it to become routine, learners should be taught responsibility from the earliest grades. All these folders and portfolios will help learners understand their personal goals and allow them to recognize their strengths and weaknesses. One thing that teachers have to make students realize is that not all activities require formal assessment. Via student growth charts or clipboards that are hung or displayed in the classroom learners will be able to observe the whole picture of their achievements. The purpose of grading in differentiated classrooms is not to make everyone gain equal grades; on the contrary, it aims at learners’ showing their ability (VanTassel-Baska, 2012).

Though there has been little research done on differentiation in Kazakhstan, in other countries researchers have studied the practice of implementing differentiation extensively and have identified how successfully it is being used. Researchers value the significance of differentiation. Winebrenner found it an effective approach of teaching, though challenging for the classroom teacher (1999, p. 12). Teachers may struggle finding the approach to each learner within a certain period of time, and preparing resources is also
time consuming. He further acknowledges that equality may strengthen learners to show their full potential.

Though the types of differentiation are identified, and teachers are aware of what it means, it is still hard for teachers to implement differentiated instructions in regular classrooms. Brighton (2002) explains that teachers are struggling to teach diverse students according to their expectations, when there is an issue of meeting educational standards and test preparation on the other hand.

The research carried out on geography teachers showed that not all differentiation approaches are similarly useful. Though grouping mixed-ability students was fruitful in terms of understanding the topic, setting and giving students different tasks according to their ability negatively affected learners’ self-esteem (Dunn & Darlington, 2016). When providing the students with tiered assignments teachers have to consider both facts such as the requirement of the task and the potential of the student. It shows that teachers need to plan their lessons carefully in order not to hurt the feelings of students, and it is another challenge for them.

As for Westwood (2007), in his research he tried to find an answer to the question whether a complicated scheme of differentiation is an aid or an inhibition to the success of students with learning disabilities. Relying on his own teaching experience and research he set out to define the workable approaches that might support learners to improve their academic skills. Hence, he raised the issue of curriculum adaptation, behavior management and social skills development that may affect the use of differentiated instructions in the classroom.

VanTassel-Baska (2012) identified one of the reasons why differentiation is not being used widely by all teachers; according to her research the problem lies in teachers themselves. Teachers do not want their lessons to be observed; they do not learn from
their more experienced co-workers, and they are not willing to share their experiences with other colleagues. In spite of the difficulties they are facing in practising differentiation in their classrooms they are still working alone in dealing with this problem.

The research of Berbaum (2009) conducted on teachers’ perceptions of differentiation illustrated that teachers possess a limited understanding about what differentiation is. In most cases they interpret it as different level tasks to different level students and provide their students with similar assignments according to their learning competence.

In their research, Suprayogi, Valcke and Godwin (2017) linked the implementation of differentiated approaches to teachers’ behavior, beliefs and competencies. In implementing differentiated instructions into regular classrooms collaboration plays a crucial role. If teachers interact and collaborate with each other to learn and practice more about differentiated instruction, this issue could be solved easily and the favourable impact of collegial consultation (p.298) may help to enhance their professional development in terms of improving the use of a differentiated teaching approach.

**Conclusion**

It may be concluded that differentiated instruction is the key to success for all children so they can make better progress through their levels. However, teachers all over the world are finding it difficult to use and implement differentiated instructions due to the lack of sufficient knowledge about it. Moreover, it is time-consuming for teachers to prepare resources and assignments that meet the needs of different learners. Teachers are also faced with challenges such as meeting educational standards and test preparation, working with learners’ low self-esteem and are impeded by the deficiency of collaboration among colleagues.
Chapter 3: Methodology

This chapter presents the methodology used to address the research questions: What are teachers’ perceptions towards differentiated instruction? What are teachers’ practices towards differentiated teaching approaches? I have conducted a qualitative case study research employing interviews and lesson observations that helped me to find answers to my research questions. Specifically, this chapter covers information about the research design, research site, sampling procedures, data collection methods, data analysis procedures and ethical considerations.

After introducing chapter, I include my justification and rationale for why I have selected this specific research design. The next section gives details about the site where this study was employed, as well as reasons for the choice and the participants of the research. Further, in the fourth and fifth sections data collection and data analysis procedures are described. I present information about what instruments were used in the study, and how the gathered data was analyzed. Finally, I demonstrate the ethical considerations that the researcher should follow and keep during the study.

Research design

To explore secondary school teachers’ beliefs, perceptions and practices, the research design applied in this study is a qualitative case study.

In educational research qualitative and quantitative paradigms are two major research designs that can be used to develop research work. They are called competing paradigms because of some differences in nature. In quantitative research, the data is numerical, it is scientific and it can be measured and generalized (Creswell, 2014). The limitation of this paradigm lies in the lack of context that makes it impossible to get the holistic picture (Burton, Brundrett & Jones, 2014). In contrast, qualitative research is naturalistic; it refers to meanings, and phenomenon is interpreted through interaction with
the participants enabling the researcher to explore the topic more deeply (Cohen, Manion & Morrison, 2007).

For this research, the qualitative approach is more applicable as it enables a researcher to obtain the overall picture about the practice of using differentiation through lesson observation and semi-structured interviews. Direct investigation from an observation field provides a researcher with in-depth rich data (Patton, 2005). By attending the lessons and talking to teachers face-to-face the researcher could better detect the problem and its causes (Creswell, 2012). Creswell (2014) also identifies that when there are no variables it would be better to explore than to compare and contrast the numbers. Hancock, Windridge and Ockleford (2009) further extends this by mentioning that qualitative research empowers a researcher to observe and study the behavior of people in real-world settings.

Within the qualitative paradigm case study is used. Case study is the type of research widely used by educators (Burton, Brundrett & Jones, 2014). It belongs to ethnographic study due to the fact that its focus is a single unit, usually one organization, like in our case (Ary, Jacobs, Sorensen & Walker, 2014). Through case study in-depth description and analysis of the issue is available, moreover, the outcome of the research could be generalized and extended to theory (Ary, Jacobs, Sorensen & Walker, 2014). Using case study allowed me to identify how teachers ‘understand the central phenomenon’ (Creswell, 2014, p.30) via participants’ perceptions and beliefs. For this research, a case study approach was used to obtain an in-depth and more holistic picture about teachers’ understanding and practices of differentiated teaching approaches in one school.
Site and sampling selection

This section describes the site of the study, reasons for the choice, which sampling type was applied and what actions were completed during the study. I selected one secondary intellectual school in southern Kazakhstan for my research. It is one of the 21 schools of Nazarbayev Intellectual Schools (NIS). The reason why I chose this school is that differentiated instruction is promoted at this school. I am also a local resident of this town and it was very convenient for me to collect data and to conduct study. I got acquainted with some teachers and developed better relationship with them while conducting the study. Finally, getting official permission from a gatekeeper for conducting research was not so difficult because I knew that the school principal is a person who values and encourages practitioner research. In spite of the challenges of being confused as a friend, a teacher, or a researcher that I might encounter (Glesne, 2011) I decided to employ my study at this school. Another reason is that the intellectual schools in Kazakhstan have been recently established and I was interested in dealing with these experimental schools.

The research project was conducted in accordance with ethical principles and standards. The researcher was required to offer a description of the research procedures to the review board of Nazarbayev University Graduate School of Education due to the involvement of people, recording of their personal opinions, interests and beliefs (Creswell, 2014). As soon as the ethics review was completed and the ethics approval was obtained, the researcher had to ask the school principal permission to conduct research. I sent an informed consent letter to the school principal where I described in detail the purpose of the study and the procedure for conducting the study. I also wrote detailed information about the role of participants, their rights, and the possible risks involved in the study. I then had an individual meeting with the school principal to discuss all the details of the research and gain his permission.
To select participants in this study, I used maximum variation purposeful sampling. Maximum variation purposeful sampling enables a researcher to get relevant information from participants intentionally chosen and selected (Creswell, 2014, p. 206) The site and the participants are called “information rich” (Patton, 1990, p. 169) because these are the people who are knowledgeable about the major phenomenon that a researcher is looking for an answer to.

I decided to choose eight teachers as participants for individual interviews and five more teachers for focus group discussion taking into consideration their willingness to participate in the study. These teachers were from different subject departments, they had work experiences in the same school of no less than three years, and they had practiced using differentiated instruction in their classrooms. These were the main indicators of choosing participants in order to be able to gain a holistic picture of teachers’ perceptions and practices on differentiated teaching.

Before conducting the interviews, I had an individual talk with each of the participants. I asked their permission and explained the purpose and nature of my study. There were some teachers who disagreed to join the research, and I had to select some other teachers who gave their consent. I introduced the informed consent form that I created to them and allowed them to read it before the interview. The participants signed the informed consent letters and they got copies of the same consent forms. The informed consent form contained the following information: description, purpose, time involvement, risks and benefits, participant’s rights, my contact details and my supervisor’s contact details (See Appendix C for informed consent forms).

During conversations we set the time and place where the interview would be conducted. Not to interrupt the teaching and learning process all interviews were held after the lessons were over, and the participants were informed that their interviews would be
recorded with their permission. An audio recording of the interviewee’s speech is essential as it enables the researcher to go back and analyze the data thoroughly and deeply (Creswell, 2014, p.243).

Table 1

List of participants of the study

<table>
<thead>
<tr>
<th>#</th>
<th>Pseudonym</th>
<th>Subjects</th>
<th>Work experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gulzira</td>
<td>Biology</td>
<td>6 years</td>
</tr>
<tr>
<td>2</td>
<td>Bekzat</td>
<td>Kazakh</td>
<td>5 years</td>
</tr>
<tr>
<td>3</td>
<td>Maira</td>
<td>Physics</td>
<td>4 years</td>
</tr>
<tr>
<td>4</td>
<td>Tolkyn</td>
<td>Russian</td>
<td>5 years</td>
</tr>
<tr>
<td>5</td>
<td>Kairat</td>
<td>Mathematics</td>
<td>4 years</td>
</tr>
<tr>
<td>6</td>
<td>Baglan</td>
<td>History</td>
<td>5 years</td>
</tr>
<tr>
<td>7</td>
<td>Fatima</td>
<td>Music</td>
<td>5 years</td>
</tr>
<tr>
<td>8</td>
<td>Assyl</td>
<td>Informatics</td>
<td>3 years</td>
</tr>
</tbody>
</table>

Data collection

This section covers the information about the data collection procedures and research tools that had been used to study the problem.

Instruments

To obtain qualitative data, a researcher can use such instruments as interviews, focus group discussions, observations, documents and audio-visual methods (Creswell, 2014). This qualitative research was conducted based on interviews and lesson observations; therefore, I prepared the questions in advance and while getting the responses from participants recorded their interviews with the help of the audio-recorder. Creswell (2014) indicated that interviews can provide a researcher with in-depth and more detailed information, and the interviewer can control the process by asking relevant questions related to the research topic. Ary, Jacobs, Sorensen and Walker (2014) also pointed out that the interview is a data-gathering technique which engages the participants and the interviewer in a
conversation. In an one-on-one interview the response rate is high because of the personal contact, and it allows the investigator to be flexible in order to get the desired information.

Before starting the interviews, I decided to test my questions in order to see how participant responded to them, and if all questions were relevant to help me get the desired answers. I asked my colleague, who was also a student at NUGSE, to respond to my questions and she accepted my request with pleasure. During piloting (January, 2019) I found out that some questions were too general, not specific enough and some were off topic. So, I had to eliminate, transform and develop new questions to make them more understandable for my participants.

For my study, I conducted eight interviews with different subject teachers who have worked more than three years in the same school, and who were supposed to implement differentiated instruction in their classrooms. The interview questions were focused on teachers’ understanding and use of differentiated teaching approaches in regular classroom. (See Appendix 1 for the examples of interview questions).

Focus group interview is a specific strategy that allows for the collecting of the shared perceptions of the sample participants on the topic during discussion. The interaction between the participants helps the researcher discover the final consensus (Creswell, 2014). Focus group discussion was conducted with five other different subject teachers to get the shared perceptions and concerns of the teachers about differentiated teaching. (See appendix 2 for the examples of focus group questions). The focus group discussion (FCD) added to my findings from the individual interviews and extended some responses of the teachers. I was able to compare the answers of the FCD with the main group consisting of eight people and determine the correlations and contrasts.
I used observation as the third instrument of my research. I observed the lessons of different subject teachers to define how differentiation was being used throughout various subjects at school.

Observation is a data collection instrument used in qualitative research. The major strength of observation is that it enables the investigator to collect first-hand account from the real situation. ‘Live’ data from in situ presents more reliable and valid information that the researcher could take for granted (Cohen, Manion & Morrison, 2007, p.396). In addition, compared to interview observation, this enables the researcher to get a reality check, as frequently what people say may not coincide with what they do (Robson, 2002, p.310).

Lesson observations were conducted with the same eight teachers, with their prior consent obtained after they had been interviewed. The focus of these observations were to observe how teachers implemented differentiated teaching approaches in their classes, what challenges they faced and how they dealt with those issues (See Appendix 2 for the observation protocol).

Before observing the lessons, I prepared an observational protocol that included information about time, place, setting and the researcher’s observational role in order to take field notes. It also contained special tables and boxes to take notes and write reflections. Lesson observations were conducted according to the timetable of teachers, and I requested the teachers to choose for themselves when it was best to observe their lessons. During lesson observations, I neither distracted the teachers nor interfered with their planned activities.

**Data analysis procedures**

This section presents the analysis process of the collected data from interviews, focus group discussions and observations.
It is generally accepted, to develop a matrix or a table of sources one should organise the data that has been selected as it enables the researcher to get the general sense of the data. The selected qualitative data can be sorted, stored, visualized and represented with the use of manual and computer analysis (Creswell, 2014). In this research a manual analysis was used for analyzing the observational field notes of the qualitative data. I used color coded key words that I jotted down by hand using color coding or cutting and pasting the parts of the text (Burton, Brundrett, & Jones, 2014). By highlighting the observational protocol of the lessons I observed, and dividing the different parts of the lessons into various categories I could identify how differentiated instruction was being used in the classrooms.

When I started analyzing the interviews of the participants that were recorded with the participants’ permission, I first copied them to my personal computer from the audio-recording device. They were put into separate folders that had been created beforehand, and each participant’s folder was placed in the order the interviews were conducted. I also saved copies of the interviews in the Google drive to ensure that I had extra copies.

In order to turn the raw material gathered through interviews into meaningful units, I tried to transcribe them with the help of computer software programs. Transcription is the procedure of converting audio-recordings into texts (Creswell, 2014). However, it was not a success, and I had to transcribe all my interview texts by typing them because none of the software programs recognized the Kazakh language. Hence, I transcribed every word and expression that was discussed during the interview because my supervisor advised me that even one word could play an important role during analysis. Transcribing texts took a lot of time. I sent one complete transcribed interview to the supervisor for his guidance with coding and further analysis. The transcribed text was further used to do coding. Coding is the process of segmenting and labeling text to form descriptions and broad themes in the
data (Creswell, 2014, p. 245). The researchers usually narrow the data via in vivo coding which refers to frequently repeated phrases mentioned by the interviewees (Burton, Brundrett, & Jones, 2014).

First, I created a table for transcribing the interviews, and then divided the juicy quotes into separate segments. Each segment was renamed and split into categories that later turned into subcategories of the findings. Thus, coding made it possible to obtain specific information that provided evidence to the main research question.

**Ethical issues**

While working on this research, I followed the ethical principles and standards of NUGSE Research Guidelines. According to these guidelines the participants were addressed respectfully, their interests were protected and they were free from any form of risk. Participants were informed about the purpose, approach, length, and nature of the study so as to allow them to identify what was required of them. Each participant was provided with an informed consent form and they signed them before giving the interviews. I collected them and kept them in a locked cabinet. The participants got acquainted with the purpose of the study, as well as all procedures including what they were asked to do. They were informed that their participation was voluntary and they were also free to withdraw at any moment from the study without any ramifications. Nobody, except me and my supervisor, had access to data obtained during this study. Moreover, data were saved in my personal computer and I restricted access to these documents by using study codes. I provided my participants with unique study identifiers (ID) before collecting data, and kept these assigned study IDs in a separate file. Any identifiable information was encoded, all data documents were securely stored within locked locations and they will be destroyed after the study is complete. I also strictly kept the confidentiality and anonymity of the participants through the use of pseudonyms. Only information which might enable me to
achieve the objective of my study was collected, therefore, in my research I did not use data that contained identifiers. The participants were promised that everything used was only for research purposes and there nothing risky about it.

Risks of the research

I anticipated and worked hard to protect the participants' anonymity and confidentiality. There was a minor risk for participants to be seen and noticed by colleagues while being observed or interviewed. Nevertheless, I made sure that no information was revealed to anyone. I also used pseudonyms, and kept the content of the interview a deep, dark secret.

Another minimal risk was caused that I worked in the same school as the participants. As an employee of this school I was asked by the school administrators to share the findings of this research. I explained to them the ethical norms of the NUGSE research and told them that I may share only the conclusions of my research without mentioning the details and participants once my study is complete.
Chapter 4: Findings of the Study

This chapter presents findings of the study on teachers' practice of using differentiated instruction in a regular classroom in one of the southern regions of Kazakhstan.

The finding were analyzed on the basis of the two research questions of this study:
1) What are teachers’ perceptions towards differentiated teaching approaches? 2) What are teachers’ practices towards differentiated teaching approaches? According to the data analysis the findings were divided into the following categories: a) Teachers' perceptions of differentiation instruction, and b) Teachers' practices of differentiated instruction.

Teachers' perceptions of differentiated instruction

Teachers' perceptions of differentiated instruction varies amongst teachers, therefore, they are categorized under some subheadings.

Teachers value differentiated instruction

Almost all teachers agree that the purpose for using differentiated instruction in the classroom is to allow all learners to show better attainments in their subjects, and to achieve the learning objectives of the lesson. Maira (pseudonym), a teacher of Physics, claims

Including elements of differentiation into your lesson may ensure that students better learn and better remember what they have discussed in the class. Thus, the purpose of using differentiation is to enable learners to understand the subject deeper, and to develop their skills.

A teacher of the Kazakh language, Bekzat (pseudonym) is sure that the quality of teaching and learning cannot be increased unless teachers master using differentiated approaches in the classroom.

We may not notice at once, but practice shows that when lessons are differentiated, with the lapse of time students begin to make progress. Conceivably, I believe that differentiated instruction should be implemented to raise the quality of lessons. If lessons are conducted well students may feel it, and act accordingly.
Gulzira considers that differentiation is applied in the classroom to provide students with all learning opportunities so that they are able to enhance their learning.

When we differentiate, we should take into consideration such matters as capability, learning styles, even the characteristic features of our students. Students have to deal with various types of assignments on different subjects. So, our aim as teachers should be to help them demonstrate better learning by offering diverse support and resources.

Teachers value the role of differentiated instruction in the classroom, and believe that it reinforces the learning opportunities of students.

In a Physics lesson, students did experiments to identify the force of electricity. They worked in three groups using different methods and tried to find out how powerful electrical appliances are used as a force to change the direction of wind. It was an interesting experiment for them, and through the support of their classmates and teacher they were able to understand the theme discussed in the classroom better. As they were involved in the process of defining the force of electricity themselves, there is more chance for them to remember and apply this knowledge in their everyday life. I concluded that the teacher could purposefully engage his students in learning successfully.

Some teachers were familiar with the term differentiation, and heard about it in their previous workplaces. They were mainly told that these were different level tasks assigned to different level students. Most of them could enlarge their understanding of differentiation during in-service training courses. However, some teaches have never heard this term before, and only came to know about it when they started working in this school.

Fatima (pseudonym), a teacher of Music says, "I got acquainted with this term when I studied the basic in-service training course "Effective teaching strategies". I understood that it was essential, and since that time I have tried to use them in my lessons". Baglan explains that though he heard this term before, he did not fully understand what it meant.
In my previous school our teachers called this approach 'leveled tasks'. I began to understand the real meaning of it after being trained by in-service trainers. The same approach being called differently in two different educational establishments also caused confusion. Through time and practice I was able to define what it meant.

If we consider the fact that all teachers in this school were required to learn to work with the new curriculum and undertake the in-service training, they all seemed to figure out the appropriate interpretation of this term only after they commenced working at this school.

As the first experience shows most teachers were familiar with the term 'differentiation', and they knew they could increase their knowledge via the in-service training courses. Still, they could not use differentiation properly while planning and conducting their lessons. The school administration could sense in time that teachers lack knowledge about differentiation, and took some actions in support of the teachers. The teachers valued the support of the school community in encouraging them to gain a better understanding, and shared some of the obstacles that inhibited them from implementing these strategies into regular classrooms.

Gulzira admits that they were informed about the importance of using differentiated instruction in the classroom through coaching, seminars, and master classes organized in their schools. However, it is being implemented too slowly and, is still in the initial phase of practicing and learning. She is one of the trained teachers to work with gifted and talented students, and she has to conduct seminars for school teachers weekly.

Previously teachers did not know a lot about the significance of this approach. By attending seminars, and demonstration lessons teachers could develop their perception. Teachers were informed that differentiation is not only tiered assignments, and splitting learners in pair and group work. Providing learners with diverse resources, giving them a choice to learn, even organizing activities according to the learning styles of students, could be considered as differentiation instruction.

Kairat showed signs of regret and despair concerning this issue. Due to the lack of time and intensified workload teachers are not able to benefit from those seminars and trainings.
I know that a lot of seminars and trainings are being held in our school. In most cases I could not go there because of my time table, because they are held at unsuitable times for me. Consequently, I do not know much about differentiation. I have no idea about the types of it. I still need to develop my understanding of it.

In contrast to this, some teachers are content that they know a lot of data about differentiation and teachers do not need much support to enrich their knowledge. Baglan is sure that teachers know what differentiation is and how it should be used in practice. The only reason for them not to use it is fear. "Our school teachers are familiar with the differentiated teaching strategies. Simply', they are afraid that improper use of differentiation may lead to low quality of lessons, therefore, they prefer not using it".

Teachers are familiar with the term and what should stand behind it while implementing this approach into their classroom, but they are facing some challenges in putting it into practice.

**Limited perceptions of differentiated instruction**

The second finding is related to “Limited perceptions of differentiated instruction”. This category includes following subcategories: i) Limited to tiered assignments; ii) Limited perceptions of types.

**Limited to tiered assignments.** The study demonstrated that the teachers who participated in this study are aware of the term differentiation, however, they perceive this term in their own way. The majority of teachers described differentiation as different tiered tasks that learners are assigned according to their level of learning abilities. Tolkyn (pseudonym), a Russian teacher, explained

> I assume that differentiation takes place when all students in the classroom are involved in the activities organized by the teacher. The A,B,C level students do various tasks that suit their levels, and try to achieve the learning objectives of the lesson.

A similar definition was given by the teacher of Informatics, Assyl (pseudonym).
I understand differentiation as tiered assignments and always try to provide students with A,B,C tasks. If an A level student finishes his task earlier than his classmates, a teacher should offer him more complicated tasks to fulfill. Teachers should always prepare additional tasks for their A level students beforehand.

However, Gulzira (pseudonym), a Biology teacher, does not follow the views of her colleagues. She highlighted that,

Differentiation is not only providing students with different level tasks. It is a way to satisfy the learners’ needs so that they were able to make better progress together with their classmates. By splitting students into mixed-ability groups and by organizing pair and group tasks you can support the learners to show progress according to their levels.

The participants of the focus group discussion observed that differentiation is a way to prepare tiered assignments for different learners in the classroom. Hence, they added that one must start from the easiest tasks and significantly move to the more challenging ones. In this way teachers can develop the thinking skills of learners, and help them proceed.

Observation also showed that in most cases teachers were aware to differentiate their activities by giving different assignments to different groups.

This is the example from a Kazakh lesson that I observed on January 15, 2019. The students (there were 12 students in the classroom) were discussing the genre of fables written by Krylov. They had to choose one fable from this author's works according to their interests, join the same group (students are split into groups purposefully according to the fable they found interesting to analyze) and had to analyze his fable according to the criteria.

1. Identify the genre of the poem.
2. Identify the structure of the poem.
3. Compare the written style of this poem with another poe
4. Illustrate the moral of the poem.
This is a kind of assignment differentiated by content. The criteria are the same, but the fables are different. In general, it may be defined that most teachers use the tiered assignments as differentiated instruction, nevertheless, there are teachers who fully understand how differentiation strategies should be aligned to meet the demands of learners.

**Limited perceptions of types.** Though seven of the participants out of eight have worked in this school for more than three years, they could not tell the types of differentiation that teachers are supposed to use in a regular classroom. Some of them refused to answer this question, and some admitted that they only understand it as tiered assignments, and use only this aspect.

Rose, a teacher of Informatics, was confused and interested to know if there are other forms other than the level tasks. "I do not know any forms of differentiation and understand it as preparing different tasks for different level learners".

A Math teacher, Kairat (pseudonym), was also confused when he heard this question. He found it difficult to answer this question and replied that what he knew was working on Bloom's taxonomy, and providing tiered tasks. In addition he said that,

> During the lesson I make sure that students apply, analyze, synthesize, and evaluate what they are learning. It is not so accessible to use game elements in the Math lessons. I let them be involved in pair and group work, so that they support each other. These are all that I use as differentiation in the classroom.

A History teacher, Baglan (pseudonym), believes that differentiation should be used in regard to gifted and talented students, and to teach low attaining students their characteristic features are taken into measures to scaffold.

I have some encyclopedia and history books in my classroom. In case gifted students finish their tasks ahead of time, I always let them read and find additional information from them. Sometimes I suggest that they work on some questions to explore further. This is how I differentiate my lessons. These are the types of differentiation.
Tolkyn also mentioned that graphic organizers are also some form of differentiation. "I always use graphic organizers in my lessons to integrate the subjects and find the link between them. Clusters that students create themselves demonstrate that they are good at connecting the gained knowledge with the real life".

Even though teachers do not know the terms that identify the types of differentiation, they use them in their lessons, and work to meet the needs of learners. Teachers seem to confuse the differentiated strategies with the types of differentiation, but their main goal is to reinforce and enhance learners to achieve and become successful.

**Teachers' practices on differentiated instruction**

Teachers' practices on differentiated teaching also vary, and they are further described under the following sub-categories.

**Planning for differentiated instruction**

One of the obstacles for teachers not to use differentiated approach is that it is time-consuming. Most teachers think it takes too much time to prepare differentiated tasks according to the needs, learning styles and characteristic features of students because in their school they do not use textbooks and not all internet resources are credible. They indicated the time spent on it as being between two hours, two-three days and a week.

Bekzat shared his difficulties and highlighted why they spent lots of time to plan their lessons with the elements of differentiated instruction.

I want to differentiate my lessons because I know that it is profitable for every learner to succeed. However, I cannot always find time for it. Due to the lack of textbooks I have to use Internet sites. After finding resources, I need to adapt it to suit my learners' age peculiarities, and language proficiency.

Another issue is related to the other responsibilities that teachers perform in school. Maira claimed that apart from preparing differentiated assignments, they had some other duties to fulfill.
Usually it takes me more than two hours to prepare one lesson plan with differentiated tasks. If I just spend all my time on planning, I will not be able to comply with my other responsibilities. I am also in charge of developing internal summative assessment tasks and per unit summative tasks.

Not all teachers are in agreement with them. Some teachers do not lose so much time to differentiate their lessons as long as co-planning is working, and some acknowledge that differentiation does not take much time as it depends on the teacher's practice and experience. Gulzira is content that it is not exhausting and time-constrained. "If differentiation is consistent and systematic, a teacher does not have to hang about. On the contrary, it makes your work easier and your lessons more successful".

As for Assyl, differentiation is a very simple assignment to do. "I usually spend 20 minutes to prepare tiered assignments because while co-planning we just discuss different methods, select and plan our lessons accordingly. Why should I spend so much time on it?"

Teachers' ideas of hours to work on planning lessons indicate that they prefer to spend different amounts of time planning their lessons properly. It may be summed up that planning the lessons with differentiated teaching approaches also depends on how experienced teachers are, and how they are dealing with this issue.

**Use of differentiated instruction**

It was mentioned above that teachers confuse the types of differentiation with strategies that can be used in the classroom. Nevertheless, some of them recalled some activities and explained how it is organized in the classroom. The Kazakh teacher mentioned such strategies as 'Research Tree', 'Six thinking hats', 'Keys of the Wise', 'Literature Club' and 'RAFT'. The History teacher pointed out that she used higher order thinking questions to make her students think and answer the questions according to their abilities. For the Russian teacher the key to differentiation is using various types of graphic organizers. Both
the Music teacher and the teacher of Informatics use numerous programmes to help learners develop their high-tech and creative skills. The Physics and Math teachers mainly concentrate on learners developing their applied skills in doing experiments and solving sums. The Biology teacher mentioned comparing and contrasting two similar and different processes for learners to identify the distinction between them.

Teachers tell and express that they are using a diversity of differentiated strategies in their lessons. What was noticeable is that teachers are not confident that they are good at using differentiated teaching approaches. Some of them even stated that they need some events organized in their school to make sure that they are on the right track. One of the teachers said that she did not know any types of differentiation except the tiered assignments. However, during the lesson observation it was clear that she was using differentiation by product in response to student readiness and interest.

During the history lesson, learners got acquainted with the establishment of Ak Orda, one of the important events in the history of the Kazakh nation. After asking some leading questions students were given the map (not coloured) of Ak Orda, and some resources where they could find more information about that event. On the PPT the teacher showed the list of activities that they were supposed to do in the classroom. According to their interest they were free to choose what activity to do, but they needed to use their prior knowledge to complete the tasks. Students selected the tasks and split up into three groups. One group had to identify the borders of Ak Orda with other countries and illustrate it on the paper with coloured pencils. The second group had to discover the reasons why Ak Orda was one of the powerful countries of that time. Students in the third group had to find evidences in the resources that the political situation in Ak Orda was in a threat. All students were involved in the tasks and completed their tasks with interest.
Even though the teacher could not tell for sure that this is differentiation by product, she was using it successfully in her lesson.

Teachers admit that they do not always use differentiated instruction in the classroom, nor plan their lessons with the use of differentiated teaching strategies in mind. Especially in grades 10 and 12 they mainly focus on exam preparation, and do not think about a differentiated approach.

While being asked permission to observe her lesson, Tolkyn, a teacher of Math, immediately told me that there was no use attending grade 12 lessons because I would not notice any form of differentiation there. For 12 graders the most significant issue is meeting the standard and passing their exams with good results.

The focus group participants certified and endorsed their replies. All Geography, English and Chemistry teachers verified that as attainment of student when writing external exams is crucial, and they dedicate all their time to preparation of external assessment tasks for grade 10 and 12 students.

Nevertheless, lesson observations revealed that there are good examples of differentiated instructions in some classes.

During the Informatics lesson the teacher worked on the introduction of the theme “Cycles (do while and while)” with 9 grade students. The students were expected to create their own programs towards the end of the lesson. They were provided with laptops, and they were given freedom to start with the task they could cope with. The leading questions that the teacher used at the beginning of the lesson allowed students to revisit and remember the previous topics because there was a diverse range of questions. To support the students the teacher modelled it first and it worked well, but when they began to confuse the difference between 'while' and 'do while' the teacher asked Talgat (pseudonym), who was the advanced learner, to explain and show the difference on the
interative board. Talgat guessed at once what was causing the problem and wrote the names of each operation next to their symbols (I- output, II- input, III-condition, and IV-operation). Before moving to the next step, Talgat always asked his classmates what he should do further, even requested some of them to come to the board and try themselves. It was clear that Talgat was often asked to encourage his classmates during the lesson of Informatics and with the teacher's support he was striving to strengthen his classmates’ needs according to their learning styles. By backing Talgat to be an expert in the classroom she was successfully satisfying his commitment as well.

When they were assigned the more challenging task, which was creating their own program, the teacher asked them to work in pairs so that they had an opportunity to talk, discuss and solve the problem together. Via the peer support students could create the program, and achieved the learning objective of the lesson. This was a contradiction because she was also one of the teachers who responded that she knew nothing about the types of differentiation.

Yet, there were the cases when teachers said that they were nearly experts in implementing differentiated teaching, but lesson observations presented everything contrarily. The Music teacher convinced me that he plans his lessons beforehand.

I usually prepare my lesson plans beforehand. It takes me a week to plan and prepare my resources thoroughly. My main purpose is to identify the talented students and inspire them be involved in art. Different programs like 'Audacity' help me to differentiate my lessons, and learners always enjoy the music lesson.

In the Music lesson all learners were doing the same activity and differentiated instruction was not observed. During the lesson, all learners were playing the same tunes with the help of the online piano, and there were no other activities that might have interested the students.
The contrasting situation between the words and the actions of the teachers presents that teachers still perceive differentiation differently. For some teachers it is something unattainable and inaccessible, yet others still confuse equity with equality.

**Use of resources in differentiated instruction**

One of the aspects of teaching is continuous professional development. Teachers confirmed that they always try to enlarge their knowledge about differentiation. They go to the school library to refine and upgrade their expertise, look for information on various educational websites, and also watch YouTube channels. The Teacher of History was convinced that there are numerous articles in Russian, and they are very helpful to her. However, the Math teacher found it hard to find any information related to differentiated teaching of Math lessons.

I sense that teachers are supposed to enrich their knowledge and practice all the time in respond to learners’ needs. Therefore, I have to search for information about differentiation, though I am not always successful. I could not find relevant articles in Russian, and I suspect that even in Russia this is one of the challenging issues.

Even if they do not do it intentionally, students' demands make them respond to their needs, and they have to look for ways to raise interest in their subjects. Teachers endeavor to refer to research articles and methodology manuals, or websites. To their regret, there are some obstacles as well. Most teachers indicated that not knowing the English language as being the main hindrance of finding resources. They are certain that it is possible to find research-based articles in English on the topic they are interested in. Hence, insufficient knowledge of foreign language skills does not allow them to use rich resources.

Bekzat says,

The difficulty we are encountering in finding resources and expanding our understanding of differentiation lies in not knowing the foreign languages, especially English. We look for the resources in Russian because of a lack of literature in Kazakh.
Maira was also anxious about the issues related to self-education and skills in languages.

I attended the online course about differentiation, but it was not so beneficial to me. The reason is that I was only able to understand it partly as it was held in English. I intend to try to use some strategies shown to us, but again I am afraid of confusing and misusing them. I want to be certain about what I am doing.

Tolkyn complained about a lack of sufficient knowledge on differentiation too. In order to find solutions to the problem she also refers to Russian literature, and in most cases asks advice from her colleagues. They share with each other what they know about differentiated teaching.

The participants of the focus group discussion confirmed that they work individually to develop their professionalism, but when it comes to research articles they face difficulties of not knowing English well. Some of them expressed their sorrow that they could not use rich resources of EBSCO, though they possessed free access to this site thanks to the school support.

Hence, teachers do try to reinforce their knowledge and experience about implementing differentiated teaching approach in their classrooms. Both interviewees and participants of the focus group discussion stated that due to co-planning and being involved in projects such as ‘Action Research’ and ‘Lesson Study’ they endeavor to work on continuous professional development.

Gulzira reported that her colleague asked her to collaborate and work on the project ‘Action Research’ to solve the problem with differentiation in the classroom.

We focused on encouraging our students to do structural equations through the use of differentiated teaching strategies. We did not only help the students but grow ourselves as professionals. Eventually, in spite of the hindrances such as time schedule, lack of resources, language barriers and inadequacy of experience we were one way or another able to inspire our students to cope with structural equation.
Teachers’ practice demonstrates that they are devoted to their work, self-knowledge and professional development is an important matter for them, and despite some barriers they try to extend and broaden their awareness about differentiated teaching.

**Challenges of implementing differentiated instruction**

During the interviews and focus group discussion teachers shared some of their concerns related to using differentiated teaching in the classroom. Almost all of them acknowledge the importance of differentiated instruction for learners to succeed. They understand that they are supposed to use differentiated instruction for every learner to achieve. However, due to some circumstances they are not using their full potential to implement differentiated teaching into their practice.

Firstly, they complained about a lack of time. Apart from conducting lessons, teachers have to fulfill some other responsibilities such as organising extra lessons, preparing internal summative assessment tasks, coordinate monitoring on different learning skills, prepare exam, write reports, or prepare individual educational programs. The intense schedule at school does not always allow them plan their lessons properly with appropriate differentiated teaching strategies.

Another issue is also related to the lack of time. Trainers of school courses blamed teachers for poor attendance of seminars and trainings that are organized within the school to develop teachers' understanding of differentiation. Teachers explained the reason for their poor attendance with the scarcity of time again. In addition, the scheduled time for conducting seminars are not suitable for teachers. In the evenings after the lessons they are too tired to learn, or because of family problems they cannot stay after work, nor are morning sessions comfortable to come. Rising early for them and problems with the public transport (especially for young mothers who need to leave their children in kindergarten) inhibit teachers to attend those seminars.
Thirdly, the uncertainty of teachers to properly manage differentiated teaching makes them lack confidence in their experience and practice. Though they collaborate, and share their experiences with each other, none of them could tell for certain what it really means. Fear of misuse or improper use of the approach may keep them from using it at all.

Insufficient knowledge of English and lack of language skills is also an obstacle in using differentiated instruction in the classroom. Without access to relevant resources on differentiation teachers feel troubled and disconcerted. Looking for information in Kazakh and Russian is not so beneficial because it is next to impossible to find credible sources in Kazakh and Russian. Even online courses and webinars held in English are not of any advantage as teachers only partially understand them. Asking for help from English and international teachers is impolite when the problem intensifies there is a problem of intensification and there is a shortage of time at school.

The next issue is associated with the absence of textbooks that include ready-made differentiated assignments. Finding resources and adapting them to the level of the student is a time-consuming process.

Exam preparation and meeting standards is another hindrance that is preventing teachers from the diverse use of differentiation in regular classrooms. Keeping a balance between a differentiated approach and teaching the structure of an exam do not always coincide and are not comprehensible.

Due to a change of the assessment system teachers have to prepare mini-summative assessment tasks within three weeks and give feedback based on them. Considering the fact that they need to provide written feedback for each learner in his/her classroom, it is possible to imagine how busy teachers are.

Before starting to work with a new class, teachers have to identify the learning styles, characteristic traits and interests of the students. Though there are different tests
that help teachers to define them (such as the Gardner test) they are not always applicable. Not knowing the preferences of students may also hamper them organizing various activities in the classroom in an appropriate way.

Some teachers use the differentiated teaching approach successfully in the classroom but they do not assume it themselves. They just confuse the term, or do not know the language to explain. However, it does not prevent them from using the differentiated instruction profitably. There are also some teachers who think that they are good at using differentiation, but observation demonstrated that they still need to develop their practice.

Teachers still think that differentiation takes too much time. Yet, if it is applied consistently and systematically it does not consume too much time.

This chapter displayed the findings of the study done to identify teachers' perceptions and practices towards differentiation.
Chapter 5: Discussion

In the previous chapter, I presented the findings from the collected and analyzed data. In this chapter, I will discuss the findings with reference to the literature reviewed in Chapter 2. The purpose of the research was to explore teachers' perceptions and practices towards differentiated teaching in a regular classroom.

Teachers value differentiated instruction

Concerning the purpose of using differentiated instruction, researchers proved that (Hattie, 2009; Tomlinson & Imbeau, 2012) the proper use of a differentiated approach can influence the learning outcomes of students, and in cases where learners' needs were taken into account, they positively learnt and attained which led to the setting of goals and achievements. According to the current research teachers also understand the value of differentiated instruction and consider it the best way to support learners to become better achievers.

In educational context teachers did not always receive the relevant training and support to work in accordance with the new educational reforms (Westberg et al., 1993; Westberg & Daoust, 2004), and working with the new curricula where teachers are expected to meet the diverse needs of learners is not an exception. Implementing differentiated instruction requires teachers to know certain types of skills and expertise. Teachers are forecasted to create higher level questions, endorse reasoning and critical thinking, recognise problem-based learning, develop integration of subjects, and acknowledge the significance of formative assessment to encourage learners to succeed (Civitillo, Denessen & Molenaar, 2016). Only by gaining such pedagogical models and strategies (VanTassel-Baska, Zuo, Avery, & Little, 2002) can educators guide learners to overcome their difficulties. Unless teachers delegate practice through ongoing training and modeling, and make sure when and how to use them, they are more likely to fall back.
According to this study, some teachers were somehow aware of differentiated teaching due to in-service training courses that they had attended, and some of them have heard about this term, though they did not fully perceive what stood behind it. Almost all participants shared lack of experience, or insufficient training about this pedagogical approach before they came to this school. They figured the appropriate interpretation of this term out only after they commenced working at this school. Therefore, it is advised to do further studies about the effects of training and modeling before starting to make consistent changes in teaching.

The previous studies of Dixon, Yssel, McConnell, and Hardin (2014) showed that if teachers were provided with workshops, seminars and coaching organised within the school they develop their skills and begin to teach effectively through the use of differentiation strategies. Experience in planning tiered lessons together would enable teachers to extend their practice. In the same school where present research was conducted teachers were also offered a lot of trainings, seminars and master classes. The school administration was helpful in holding such support to increase teachers’ knowledge about this issue. However, due to the lack of time, or the nonconformity of the timetable not all teachers attended those courses and workshops. From there another question that needs further research appears. It might be beneficial to identify how the school administration is to organize support for teachers so that everybody could make use of it despite the intensification and workload of teachers.

**Limited perceptions of differentiated instruction**

**Limited to tiered assignments.** Previously conducted studies had examined various aspects of differentiation. The research of Berbaum (2009) done on teachers’ perceptions of differentiation demonstrated that teachers’ understanding of this term is somehow narrow and limited, and frequently they refer to it as tiered tasks assigned to different level
students according to their learning abilities. In accordance with this assertion, the current study also discovered that teachers undertake it as differentiating tasks and mainly concentrate on assigning different level exercises to learners.

**Limited perceptions of types.** The participant teachers of the present study did not seem to know the terms that divide differentiation into types, but they use various forms in their classrooms. The observation revealed that without certain theoretical knowledge about it different subject teachers use various elements of differentiation such as content, process, product and learning environment. They also partially try to take into measures learners' readiness, interests and learning profiles to predict the differentiated instruction. However, they are not ready to share their practices because they consider that they possess insufficient experience, they have limited understanding of differentiated instruction and they do not use all elements of differentiation properly. In contrast to this finding, research by Robinson, Maldonado and Whaley (2014) express that there are teachers who are successfully utilising the various types of differentiation, and those teachers who are using them effectively in their classrooms are passionate to turn it into a whole school practice. They further intended to share their differentiated instructional practices with the whole school. What they were anxious about was finding time to help their colleagues with implementation of differentiated instruction. Unlike the teachers of this school where the study was administered the only hindrance to those teachers appeared to be time constraints.

**Teachers' practices on differentiated instruction**

Teachers' practice about differentiated instruction have been investigated throughout the world in different educational organizations (Clift & Brady, 2005; Darling-Hammond, 2010; Santangelo & Tomlinson, 2012) and research results show that what teachers need is good modeling. Participants of various studies responded that they use some elements of
differentiation, however, they were not confident that they were meeting the needs of learners in full. In addition, not all participants indicated the comprehensive model of differentiation where they should have mentioned ongoing assessment, instructional planning, flexible grouping, students' interests, readiness level, and the modes of learning. The present study also demonstrates that teachers are in deep need of support to ensure that they are using differentiated instruction properly. Even the teachers with experience could not tell for certain that differentiated teaching is being implemented very well. Almost all participants wanted to be shown models to become assured about their practice. Furthermore, they even required the researcher to give them full information about the differentiated approach. It indicates that there is still lack of knowledge about differentiation, and teachers still need to develop their proficiency.

Another finding of this research is also confirmed by other previous studies. Regarding the theory of differentiation teachers are expected to base, teaching in the classroom according to the learning styles of students, and they usually split learners into audial, visual and kinesthetic students. To do selection they refer to Gardner’s Theory of Multiple Intelligences (Roiha, 2016) and consider it the most credible source with the help of which it is possible to identify the learning styles of students. The current study also presents that teachers use Gardner’s test as well to know their students, and in addition they talk to school psychologists.

Planning for differentiated instruction

Participants of this research observed time limits to plan their lessons with the elements of differentiation. They indicated the time devoted to planning and preparing differentiated teaching activities as requiring between 20 minutes up to one week, and mentioned that it depends on the theme and materials that should be covered during the lesson. Research of Robinson, Maldonado and Whaley (2014) also confirmed that time to plan a differentiated
lesson is based on the amount of material and length of the class period it is necessary to teach, and thus there is no fixed time.

Teachers' practices also demonstrated that time to plan and conduct lessons depends on the experience of the teachers. The more engaged and trained teachers were, the less time they spend to plan a differentiated lesson, and they were also able to cover all planned activities in the classroom. Research of Tricarico and Yendol-Hoppey (2012) confirmed that teachers should be provided with support and professional training to be more experienced in planning and conducting a lesson before they started. They further extended that newly-hired teachers had to develop their skills in team relationship, effective classroom management, awareness of student demand, and tolerance to criticism and comments to cope with planning and conducting a successful differentiated lesson.

**Use of differentiated instruction**

While talking about teaching strategies, the teachers of this study mentioned flexible grouping and heterogeneous groups. Rogers (2002) found out that if students worked in groups to solve the problem together, it led to advanced learning, and grouping students of the same classroom into diversified bands is a way to differentiate learning. Though present research participants also stated the same fact, studies of VanTassel-Baska and Stambaugh (2005) extend this idea by suggesting some significant examples. According to their research, flexibility does not mean random grouping only. Flexibility covers all types of differentiation, and is found to be a multiple option for differentiation. To differentiate content teachers not only provide students with advanced reading, they can also offer them math concepts, or ask them to define the related issues to the raised problem. To satisfy the needs of learners while doing different activities they are offered varied choices to fulfill the task. Alternative project-based options to demonstrate the outcome of learning are also suggested, or they are given the choice to work based on their interest.
Splitting students into flexible groups is another issue extended by the research by Tomlinson (2005). Teachers of this study mentioned that they divided students into mixed ability groups, but only a few indicated learning styles. Tomlinson's research proved that only purposefully selected group members based on readiness, interest, or learning styles could work successfully together. Inappropriate grouping does not provide students the chance to learn and progress well.

Teachers talked about using various strategies as well to differentiate their lessons. Apart from mentioning some strategies they also indicated technical support, the learning environment and feedback. The previous studies of Coubergs, Struyven, Vanthournout, and Engels (2017) discovered that teachers use white boards, computer support, kinesthetics, songs, and verbal activities to raise the interest of students.

**Use of resources in differentiated instruction**

The studies of Powell and Bodur (2018) presented that where teachers strived to develop their understanding and practice of differentiation through online courses teachers' experience was not so beneficial in learning new information because they were utilizing some of them already in their classrooms. Thus, it just helped them to refresh the forgotten material, and may enforce them to rethink the differentiated approach. In contrast to this, the current study results show that teachers might have found the online course useful, and might have gained new knowledge in case it was held either in Russian or Kazakh. The language barrier was the hindrance to enlarge their perception of differentiated instruction.

An interesting and contrasting result was discovered by the research of Fives and Buehl (2014). Teachers found it unimportant to know the knowledge of theory about differentiated teaching considering that it was not useful, and did not try to read more about its theoretical basis; instead they preferred learning to teach through practice with the help of various strategies. However, participants of the current research regard that
teachers need to develop their understanding of differentiated instruction via research-based articles to ensure and enforce their understanding. They contemplate that without basic knowledge about the theory it is impossible to make sure that the appropriate approach was being used to meet the needs of learners. What worried them much about developing professional proficiency was the lack of literature in Kazakh or Russian. Almost all of them mentioned the fact of learning English to get access to rich resources. Unlike other research results teachers of this school are too anxious about knowing foreign languages (especially, English) to obtain and enrich their understanding about differentiation.

**Challenges of implementing differentiated instruction**

One of the important challenges that teachers are facing is the issue of standardized tests. Participants of the current study mentioned that use of differentiated instruction depends on the grades. For grades 10 and 12 where students have to take an external summative assessment teachers do not worry much about differentiation, they were more anxious of exam results. Correspondingly, they mainly focus on the similar assignments of the standard tests. In their study McTighe and Brown (2005) tried to find an answer to the question if standards and differentiation could coexist (p. 242), and it was maintained that teachers should make it a target to use differentiated instruction in the classroom despite the fact that there was a need to meet exam outcomes. Only coexistence of standards and differentiation can maximize the academic performance of learners.

Some interviewees of the current research were completely content that they had already implemented differentiated instruction into their classroom and were using them on a regular basis, but the observation revealed that they are rating themselves higher. While being observed they used one size fits all activities among mixed ability groups, and considered that that was differentiation by content. The same reaction of teachers was
noticed by the participants of the research done by French and Tyler (2004, as cited in VanTassel-Baska, Feng, Brown, Bracken, Stambaugh, French, & Bai, 2008).

The participants further indicated some of the challenges they are facing such as lack of time, lack of resources and lack of knowledge. The research results of Tomlinson (2014) and Westwood (2013) also found the main obstacles of differentiation not being used in schools as lack of resources and time.

Stuart and Rinaldi (2009) stated that in enriching teachers' understanding and implementing differentiated instruction into a regular classroom teachers' collaboration and cooperation play a key role. To raise the quality of education given to learners teachers should work together following the same purpose. They suggested doing further research to identify the validity of this experience. The current study participants are also content that the best way to implement differentiated teaching to reinforce student attainment is possible only through teachers' collaborative work and practice.
Chapter 6: Conclusion and Implications

The previous chapter presented a discussion of the findings in accordance with relevant literature. The purpose of this qualitative research is to explore teachers’ perceptions and practices towards differentiated instruction in an intellectual school in southern Kazakhstan. In this chapter conclusions based on the analysis of the gathered data are presented. This chapter describes the outcomes of the current study in relation to two research questions featuring limitations, recommendations for further research and implications.

RQ1: What are teachers’ perceptions towards differentiated teaching approaches?

The findings of the study demonstrated that the teachers who participated in this study have ideas about what differentiation is, and in most cases they perceive it as the tiered assignments that they offer to different level learners. To differentiate their tasks they start from the easiest ones and slowly move to the more difficult types of tasks. They try to use differentiation to meet the demands of the learners so that they are able to make better progresses in their levels and reinforce their learning.

Even though the teachers had work experiences of more than three years, they did not know the types of differentiation for sure, they had an understanding of some indicators and worked according to their own beliefs. There was a significant difference between the understanding of the trained and non-trained teachers, as trained teachers perceive it much better than their colleagues.

Nevertheless, teachers use some types of differentiated instruction in their classrooms but most of them could not describe and identify what type of differentiation it was as they did not know how they were called and how they differed from each other.

The teachers had heard the term differentiation before, but they understood the real meaning of this word only after they started working in this school. What they realized was
that differentiation should be an indispensable part of their planned activities in the classroom. However, differentiated instruction is not being used regularly in their everyday lessons. The majority of teachers did not know that there were principles of differentiation, and that they should have focused on the principles rather than types.

The teachers indicated different amounts of time for planning lessons with the elements of differentiation. Most teachers considered that it was a time-consuming process, and indicated the length of planning time as between two hours and a week. It turned out that the time teachers spend to plan a lesson with differentiated instruction depends on how well teachers know the differentiated teaching strategies, and how long they have been using them in their lessons because trained teachers highlighted that if differentiated instruction was applied consistently and systematically it should not take much time to plan a lesson.

Teachers felt that they needed to deepen their understanding of differentiation and tried to expand their knowledge about it, but the scarcity of relevant resources in Russian and Kazakh, and the lack of foreign language skills for reading research-based articles independently did not allow them to learn more and grow professionally.

RQ2: What are teachers’ practices towards differentiated teaching approaches?

The teachers seemed to be devoted to their work and they were all interested in professional development and self-knowledge. They use different ways to broaden their understanding of differentiation such as library resources, articles, magazines, internet articles, online courses and webinars. Teachers know some types of differentiated strategies and use them successfully in their classes, but they are not confident that they are using the differentiated instruction appropriately in their practice. Some of them prefer not to use differentiated instruction in the classroom because of the fear of using it improperly.
Almost all teachers mentioned that they need extra support to use differentiated teaching approaches with confidence to better encourage their students to succeed.

However, teachers’ practice on differentiated instruction turned out to depend on the age range and the grade of students they teach. When it comes to meeting the requirements of the standardized tests teachers do not even try to differentiate activities in the classrooms. They mainly concentrate on the exam preparation and focus on the outcome of the external assessment. This happened to be the standard situation with grade 10 and grade 12 students’ prep lessons.

There was one contrasting finding. Some participants could not tell what types of differentiation they knew, but lesson observations revealed that they use differentiated instruction with success in their classrooms. In contrast to this, some teachers were too confident that they were using differentiated strategies well during their lessons. Hence, observation implied that they misunderstood what differentiation was and needed support to develop their experience and practice. It showed that teachers still confused the difference between equity and equality while applying differentiated teaching strategies.

Moreover, the teachers acknowledge the significance of using differentiated instruction in the classroom to provide students with all learning opportunities to succeed, but there are some obstacles that teachers face which prevent them from using differentiation in their practice. Lack of time, being overburdened with too many other responsibilities such as writing reports, accountability to parents, preparing mini-summative and external summative tasks, and organizing extra lessons did not enable teachers to advance their practice of using differentiated activities in their classrooms.

In addition, an inconvenient schedule of organized trainings and courses within the school did not allow teachers to attend them and expand their practice of the differentiated teaching approach. In case school administration organize the support inappropriately, that
is at an unsuitable time and place they will not be of any benefit to teachers to be encouraged.

The absence of suggested textbooks or bank of differentiated assignments for different age groups also made teachers think negatively about differentiation. Looking for resources, finding them and adapting them to the level of their students is a time-consuming process, therefore, teachers find it hard to plan every lesson with elements of differentiated instruction.

**Limitations of the study**

The present study illustrated some thought-provoking and intriguing findings about teachers' perceptions and practices towards differentiated teaching. However, the research bears some limitations.

The first limitation is linked to the site and the setting. The research results could not be generalised because the study was administered in one school of Kazakhstan and the number of participants was also limited.

The second limitation concerns the observed lessons. The lesson observations took place in accordance with the consent of the participants, and at a convenient time and place for them. Conceivably, the outcome of the lesson observation cannot be granted as the teachers may plan and prepare their lessons according to my research interest.

The third limitation is about the type of school where this study was employed. In comparison with the mainstream schools, the intellectual school teachers' working conditions are much better and the schools are also better equipped. For that reason, the research results cannot cover and be delivered throughout all secondary schools in the republic.

**Implications of the study**

This section offers practical, personal and theoretical implications for various stakeholders.
Implications for me as a researcher

Conducting a study in the role of a researcher was a challenging experience for me. Though I was in confusion at the start of this process, via the thesis seminars held by my supervisor I was able to commence and administer my study. While employing the research I had better understanding about the various aspects of research methods and data analysis process. Following the ethical considerations and applying the participants and the gatekeeper was another confronting task for me. Interviews that I had had with the participants and analysis of the observed lessons helped me improve my communicative and interpretive skills, as well as it enabled me to have better relationship with teachers whom I did not know very well before. Now I have a clear picture about how teachers perceive differentiation, what they are doing to implement it into their practice, and what challenges they are facing in teaching. The research, analytical and communicative skills I developed and acquired through employing this study will help me to conduct other practitioner research related to school climate, teaching and learning in education.

Implications to secondary school system

The participants of the research appreciated the support offered by the school administration in developing their understandings about differentiated instruction. However, the results of this study demonstrated that due to time and schedule constraints teachers could not regularly attend the courses, trainings and seminars organized within the school. Apart from teaching there were other responsibilities that inhibited teachers to attend seminars, or develop their knowledge on the current issue. Teachers’ insufficient literacy of foreign languages, especially English, was another obstacle that hindered them to expand and advance their expertise and proficiency of differentiated teaching strategies. Therefore, it is suggested to strengthen the collaborative culture among teachers via which they will be able to share their experiences through joint planning, lesson observations and
publications. The school administrations should also take into consideration the matter of
time-table so that everybody could join the event organized in the school whenever it is
held. Teachers should also be encouraged to advance their foreign language skills to get
access to research - based credible resources to enhance their practice and knowledge
about the issues that bother them.

**Policy implications**

The findings of this study presented that though teachers understand what differentiation
is, they still lack proper knowledge about its types, principles and strategies. Thus, policy
makers are suggested to develop the manual of differentiated instruction in Russian and
Kazakh, and to distribute it to all mainstream schools so that teachers obtain the guidance
about its types, forms and usage. Inappropriate and insufficient knowledge about
differentiation is causing diffidence, fear and improper use of differentiated instruction in
the classrooms.

**Areas for further research**

The current study participants were only intellectual school teachers, hence it would be
useful to conduct research with mainstream school teachers to identify what their
perceptions and practices are towards differentiated teaching because teachers’ working
conditions and the curriculum they use to teach students in these schools differ. To explore
teachers’ perceptions and practices about differentiation only qualitative data were
collected in this study; that is why I would recommend using mixed methods and
conducting explanatory research to have the holistic picture of the issue.

**Conclusion**

Teachers understand the value of differentiated instruction and have some experience in
using them in their classrooms. The implementation of differentiated teaching has
contributed to professional development of teachers and to the change in their teaching
practices. Using differentiated instruction in the regular classroom changed teachers attitude towards teaching and learning. However, the time issue, excessive workload, shortage of resources and lack of knowledge and skills inhibit the implementation of using differentiated approach. It is important to take immediate measures to encourage teachers to develop their knowledge and skills about differentiated instruction (allocate time, develop sharing practice between experienced and non-experienced teachers, reduce workload, provide with accessible resources (in Kazakh, Russian), and PD on differentiated instruction).
References


Hancock, B., Ockleford, E., & Windridge, K. (2009). *An introduction to qualitative research.* Nottingham, UK: Trent Focus Group


Meaningful Independent Activities During Small-group Reading Instruction. *The reading teacher*, 58(4), 394-396.

NUGSE Research Guidelines (2018-2019). Nazarbayev University Graduate School of Education


Appendices

Appendix A

Interview Questions (Sample)

1. What are differentiated teaching approaches?
2. What is the purpose of using it?
3. When did you first hear about the term differentiation?
4. What types of differentiation do you use in your classroom and why?
5. Do you think other teachers in your school use differentiated teaching approaches in the regular classroom? Why? / Why not?
6. What issues do you face related to differentiated teaching approaches and how do you deal with them?
7. How much time do you need to prepare your lesson plan where you include differentiated teaching approaches? Why does it take long / short time?
8. How do you cope with covering your planned activities?
9. How difficult is it to use differentiated instruction in the classroom? What are the causes?
10. How do you usually handle the situation?
11. What can be done to implement differentiated instruction into the classroom more effectively?
Appendix B

**Observational protocol (adapted from Creswell, 2014)**

<table>
<thead>
<tr>
<th>Program / Session Observation Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Name:</td>
</tr>
<tr>
<td>Observer’s Name:</td>
</tr>
<tr>
<td>Date:</td>
</tr>
<tr>
<td>Time Observation Began:</td>
</tr>
<tr>
<td>Time Ended:</td>
</tr>
</tbody>
</table>

*Before the observation begins, briefly describe in #1 below, what you expect to be observing and why you have selected it.*

1. Subject of the Observation

At the very beginning of the observation, describe the setting. Be sure to note any changes in setting as the observation proceeds. Also note how the session begins.

2. Describe the setting

3. Describe how the session begins. (who is present, what exactly was said at the beginning)

4. Describe the chronology of events in 15 minute intervals.
   - 15 Min.
   - 30 Min.
   - 45 Min.

5. By answering the following questions, describe the differentiation instructions that take place during the observation.
   - 5A. Did the teacher use any differentiation instruction? If yes what?...
   - 5B. Why did the learners need support?
   - 5C. Did the teacher notice it? What did she do? How was it used? Describe 1 or 2 examples.
   - 5D. Did it help the learner? If yes, How? If not, Why?

6. How do I assess and conclude the lesson?

**Engagement in effective practice**

<table>
<thead>
<tr>
<th>Practice</th>
<th># of participants</th>
<th>Description/Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differentiation by content</td>
<td>None</td>
<td>Some</td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Differentiation by process</td>
<td>None</td>
<td>Some</td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Differentiation by product</td>
<td>None</td>
<td>Some</td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Differentiation by learning environment</td>
<td>None</td>
<td>Some</td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Overall session rating:</td>
<td>Poor</td>
<td>Fair</td>
</tr>
</tbody>
</table>
Focus group questions

1. What are differentiated teaching approaches?

2. What types of differentiation do you use in your classroom and why?

3. What issues do you face related to differentiated teaching approaches and how do you deal with them?

4. How difficult is it to use differentiated instruction in the classroom? What are the causes?

5. What can be done to implement differentiated instruction into the classroom more effectively?
Appendix D

INFORMED CONSENT FORM

Title: What are teachers’ perceptions and practices towards differentiated teaching approaches in an intellectual school of south Kazakhstan?

Dear Participant,

This letter is an invitation to participate in the present study I am conducting as part of my M.Sc. in Educational Leadership at Nazarbayev University. I would like to provide you with information about the research project. Your participation in this research is entirely voluntary. You may decide not to participate or to withdraw from this study at any time.

The purpose of this qualitative study is to explore secondary school teachers’ beliefs and practices including their perceptions, attitudes and concerns about differentiated teaching. Through your participation, I hope to explore how Kazakhstani teachers understand and practice differentiated teaching approach and what their attitudes are toward the inclusion of differentiated teaching into regular classrooms.

This research will involve your participation in a one-on-one interview that will take about one hour in length, with a follow up interview if necessary. You will be asked a series of questions about your perceptions and any experiences of differentiated teaching. If you do not wish to answer any of the questions during the interview, you may say so and the interviewer will move on to the next question. I hope you will permit me to record the interview to facilitate collection of information.

The observation of your lesson is also voluntary and it could be done only with your consent. The purpose of the observation is just to explore teachers’ attitudes and concerns about differentiation, and no report will be sent to school. All data I will gather will be read by me and my supervisor. There is no risk of it being checked or read by the school administrators as the data will be kept in a special locked place.

All gathered data will be used in writing a qualitative research report, which will be read by researcher’s supervisor. Though excerpts from the interview will be included in the final research report, your name and other identifying information will be kept anonymous. Pseudonyms will be used to protect your anonymity.

The information gained from the interview will only be used for the above aims, will not be used for any other purposes and will not be recorded in excess of what is required. Your name and institution will not be identified with any data reported. The information recorded is confidential, and no one else except me and my research supervisor will have access to the tapes. There are no known or anticipated risks to you as a participant in this study. Your participation will potentially contribute to a better understanding of differentiated teaching in Kazakhstan. If you have any questions regarding this study or would like any additional information, please do not hesitate to contact me or my supervisor.

My research supervisor's contacts are:
Duishon Shamatov
Associate Professor
Graduate School of Education, Nazarbayev University
53 Kabanbay Batyr Ave, Block C3 #5028
Astana, 010000, Republic of Kazakhstan
Phone: +7 (7172) 70 93 64
Mobile phone: +7 706 636 32 84
E-mail: duishonkul.shamatov@nu.edu.kz

In case of further questions, please contact the NUGSE Research Committee at gse_researchcommittee@nu.edu.kz

Please sign this consent form if you agree to participate in this study.
RQ: “What are teachers’ beliefs and practices towards differentiated teaching approaches in an intellectual school of south Kazakhstan?

• I have carefully read the information provided;
• I have been given full information regarding the purpose and procedures of the study;
• I am aware that my interview will be recorded;
• I am aware that my lesson will be observed;
• I understand how the data collected will be used, and that any confidential information will be seen only by the researcher and research supervisor 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: ___________________

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ЗЕРТТЕУ ЖУМЫСЫ КЕЛІСІМІНІҢ АҚПАРАТТЫҚ ФОРМАСЫ

Зерттеу жұмысының тақырыбы

Қазақстанның әндүстікіндегі зияткерлік мектептің мұғалімдерінің дифференциациялық оқыту тәсілдерінің деген көзқарасы мен тәжірибесі қандай?

Құрметті катысушы,

Сіз осы хат арқылы Назарбаев Ұлттық университетінің Білім беру өсіндегі қошбасша ақпараттарды жасағаның білін мүмкін. Олардың қолданылуы мен құрысқандықты оқу-ауыру әріпке сапатты болыңыз.

Бул сапалық зерттеудің максаты орта мектеп мұғалімдерінің дифференциациялық оқу-ауыру және тәжірибесіп табу. Зерттеу дифференциациялық оқу-ауыру және тәжірибесіп табу.

Сіздің аяқтауға қатысып, бұрынғы оқыту мәліметі мен тәжірибесі пайдаланылған әріпке сапатың зерттеу мүмкіндігін анықтау. Сіздің бұл жолға қатысуыңыз арқылы қоғамдық әңірдің қандай қандай және қандайыңызға қарама-қарсы болады.

Сіздің сабактарыңызда қатысушы ретінде, шамамен бір сағат үшін әріпке сапатыңыз аяқтауға қатысып, бұрынғы оқыту мәліметі мен тәжірибесі пайдаланылған әріпке сапатың зерттеу мүмкіндігін анықтау.

Сіздің сабактарыңызда қатысушы ретінде, шамамен бір сағат үшін әріпке сапатыңыз аяқтауға қатысып, бұрынғы оқыту мәліметі мен тәжірибесі пайдаланылған әріпке сапатың зерттеу мүмкіндігін анықтау.

Сіздің сабактарыңызда қатысушы ретінде, шамамен бір сағат үшін әріпке сапатыңыз аяқтауға қатысып, бұрынғы оқыту мәліметі мен тәжірибесі пайдаланылған әріпке сапатың зерттеу мүмкіндігін анықтау.

Ақпараттық форма. Зерттеу жұмысының барлық мұғалімдері дифференциациялық оқу-ауыру және тәжірибесіп табу.

Зерттеу жұмысынан барлық мұғалімдер дифференциациялық оқу-ауыру және тәжірибесіп табу.

Зерттеу жұмысынан барлық мұғалімдер дифференциациялық оқу-ауыру және тәжірибесіп табу.

Зерттеу жұмысынан барлық мұғалімдер дифференциациялық оқу-ауыру және тәжірибесіп табу.
Сұхбат пен бакылау арқылы жинақталған мәліметтер жоғарыда аталған өтілгендей тек зерттеу максатында ғана қолданылады, басқа ешқандай мәлімет көздемейді. Сіздің атыңыз бен мекеме туралы мәлімет еш Жерде қосатылмайды. Жазылған құпия ақпарат құпия сақталады, мен және менің ғылыми жетекшімінен басқа ешқандай оны ғана пайдалануға немесе кұқығы жоқ, Сіздің бул жобаға қатысуыңыз сізге қауіп тәуелді. Сіздің бұл зерттеу мақсатындағы сұхбат, менің ғылыми жетекшіммен қолданылғанда, басқа немесе көздемейді.

Менің жетекшімімнің байланысы: Дуйшон Шаматов, Қауымдастырылған профессор Назарбаев Университеті, Жоғары білім беру мектебі Қазақстан Республикасы, 010000, Астана қ.

Щеңде жоғарыда айтылған болғандықтан қазақстандық мұғалімдердің дифференциациялық құқығы тәсілдері туындыларын біршама қосатынын, басқа немесе құқығы жоқ.

Зерттеу сұхбатқа жоғарыда айтылған туралы толық түсінік беру үшін, біз дифференциациялық құқықты тәсілдерінің қосылуына қажет. Бұл ақпарат құпия құпиялауға ғана пайдаланылуға құқығы жоқ. Сіздің зерттеу сұхбатыңызға қатысуыңыз өзге ешқандай қауіпті емес.

• Берілген акпаратты жақсарту қабілетті екінші оқығының құқығына қоссыңыз
• Маган зерттеу сұхбаттары қабілетті екінші оқығы жасау қабілетті екінші оқығына қоссыңыз
• Менің сұхбатымда құқығының құқығына қоссыңыз
• Мен керек екен мәліметтер құқығында жақсарту қабілетті екінші оқығына қоссыңыз
• Жоғарыда айтылғандарға қосымша құқықтың құқығына қоссыңыз
Сұхбат 1


Сұхбат алушы: Оте жаксы рахмет. Сіз дифференциация деген терминді алғаш рет қандай естініз?
мұғалім өзі жай гана жоспарласа. Егер мұғалім оқушының қажеттілігін ескере отыра сабақты жоспарласа онда дифференциация болады.

Сұхбат алушы: Сіз дифференциацияның қандай түрлері жайы мәлімді білесіз?

Сұхбат беруші: Қазіргі танда біз дифференциацияның принцииперін және окыту қезеніндегі арнайы модельдерін қолданамыз. Принцииперін атап отсем, углубление, ускорение, усложнения, креативность. Бір сабақта барлықының корініс міндетті емес, алайда кем дегенде екі принциипті қолдананызда қиынды оқуға мүмкіндік береді. Мектепте кәріпі танда тәріздер бар, сол кісілердің қерегі арқылы біз сабақ барысында дифференциацияның модельдерін де қолданамыз.

Сұхбат алушы: Сіз дифференциацияның қандай түрлері жайы мәлімді білесіз?


Сұхбат алушы: Мектепте оқытылып жатырған мұғалімдер дифференциацияның қандай модельдері жайы мәлімді пайдаланып жатыр?

Сұхбат беруші: Әрбір тәріздің кең жоспарлы түрде мұғалімдерге арналған тренингтер откізіліп жатыр, бірақ бір үлкен кемшілік – ол мұғалімдердің қатысу денгейінің ұзындығы. Мектептің кесінді менин басқанын, мұғалімдердің қатысы тапсырысы. Осы қатысын тапсырғысына қарай мұғалімдер мен оның жерінде қатысамыз. Бұл мұғалімдерге бірінші етіп үшін ұрыс тапсырысын білу керек. Ал жалпы бұл, барлық мұғалімдерге дифференциация және оның принциипері жайы акпарат көрсетіп беру. Болашақта мұғалімдерге барлық мұғалімдердің қызметін қатыстыру сіздерге мүмкін.

Сұхбат алушы: Неге енді қолдану жілілігі темен дейсіз?

Сұхбат беруші: Қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі сіздерге мүмкін. Мұғалімдердің сабақтарында дифференциациялық қызметі қолданып жатады, бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді. Бұл мұғалімдерге дифференциацияның қолдану жілілігі темен дейінға енді қолдану кәріпі болып саналады, мүмкін екі есік пайда болады, сондықтан мүмкін екі кәріп оқуға мүмкіндік береді.
дифференцияцияны сабақ барысында елі де толық колдана алмай жатырғандығымыз деп айта аламын.

Сұхбат алушы: Бір сабақты дифференциялық оқыту тәсілдерін енгізеп жоспарлауға шамамен канша уақыт кетуі деп есептейін?

Сұхбат беруші: Уақыт негізінен сол күнгі сабақтың құрылымына, тақырыбына байланысты. Кейбір мұғалімдердің пайымдауынша дифференция сабақты жоспарлауымдың көп уақытын алады деп есептейді. Бастапқы уақытта кез-келген мұғалімдің сабақ жоспарлауына біршама уақытын алуы мүмкін, алайда мұғалім сабақта дифференциялау тәсілдерін енгізеді, дағдысын қалыптастырса, бірнеше ай бойы құрылыстың қажеттілікті ісі көрсететін деңгейге деңгейлік екен қағаздары, қолданылатын әр түрлі оқу-оқушылық тәсілдерін енгізеді. Бастапқы уақытта кез-келген мұғалімдің сабақ жоспарлауымның көп уақыты бекітілген, алайда кез-келген ықысы жасауға жатады.

Сұхбат алушы: Оз сабағыңыздан мысал бере аласыз? Оқушылардың қандай қажеттіліктері болды және оларды қанағаттандыру үшін сіз сабағыңызды қалай ұйымдастырудыңыз?

Сұхбат беруші: Қазіргі 12 сыныптағы оқушыларымның дәнге тұрғыны және оларға барлық мағлұматты ұғындыр алмайтын ықысы болды. Бұл жағдайда негізінен өзінің және оқушылардың құрылысына байланысты. Оқушыларға өзінің кеңінен көрсететін ақпараттарым менен өз білімінің ықысын жасауға, оларға қәдім жасауға жатады. Бұл ықысын қақпа жасауға, оларға қәдім жасауға жатады. Яғни, оқушылар оқу-оқушылық тәсілдерін енгізеді.

Сұхбат алушы: Дифференцияция жұйесіне елі үйренбеген моменті сыйныптарда сіз жұмысты қалай жүзеге асырақсыз?

Сұхбат беруші: Гамма тест секілді тест түрлерін арқылы балалық қабілдетін анықтау үшін, алайда мұғалімдер арасында дифференцияцияны ықысымен қамтып оқу-оқушылық қызметін салып береді. Бұл ықысын қанағаттану үшін, оларға қәдім жасауға жатады. Яғни, оқушылардың бір-бірінен қолдау қабылдайтын қандай сәбізге жатады.

Сұхбат алушы: 40 немесе 80 минутка жоспарланған сабақтың ықысын же қабілдетін оқу-оқушылық қызметін салып береді. Бұл ықысын қанағаттандыру үшін, оларға қәдім жасауға жатады. Яғни, оқушылардың бір-біріне қолдау көрсетеді.

Сұхбат алушы: Дифференцияция жұйесіне елі үйренбеген моменті сыйныптарда сіз жұмысты қалай жүзеге асырақсыз?

Сұхбат беруші: Гамма тест секілді тест түрлерін арқылы балалық қабілдетін анықтау үшін, алайда мұғалімдер арасында дифференцияцияны ықысымен қамтып оқу-оқушылық қызметін салып береді. Бұл ықысын қанағаттану үшін, оларға қәдім жасауға жатады. Яғни, оқушылардың бір-біріне қолдау көрсетеді.

Сұхбат алушы: 40 немесе 80 минутка жоспарланған сабақтың ықысын же қабілдетін оқу-оқушылық қызметін салып береді. Бұл ықысын қанағаттандыру үшін, оларға қәдім жасауға жатады. Яғни, оқушылардың бір-біріне қолдау көрсетеді.
Сұхбат алушы: Дифференцияциялық оқыту тәсілдерін сабақ барысына енгізу кезінде қандай және оларды шешу қолдақтарының қордініз жоқ ма?

Сұхбат беруші: Негізгі қиындық баланың аудиал, визуал немесе экстраверт/інтроvert екенін анықтауда нақты дәлелдің болмауы. Нәтижесінде біздің кейбір акпараттарының сөзін қіскес болмауына байланысты біз де нәтижеге жетпей ұатамыз.

Сұхбат алушы: Басты кедергі оқушы дайындауға екен, әнді ері қарай білімінізді қарастырып көрдіңіз бе?

Сұхбат беруші: Ондай жағдайда мен психологпен сөйлестім, психологпен көрсетіп көрсетіміз. Нәтижесінде біздің ақпараттарымызға байланысты біз де нәтижеге жетпей ұатамыз.

Сұхбат алушы: Бийкі екен, немесе каражатты жасауға мүмкіндік беруіміз. Мұндағы оқушылардың жұмысы жақсы болдық.

Сұхбат беруші: Эгер бұл өз қарай білімінізді қарасаңыз, біз қандай әрекетже қолданып, шешу қажететін құлқындағы ықпалдарды жоқ жоқпай екен. Анық және кез келген мүмкіндікке қолданып, біздің мектепіміздегі ақпараттарымызға тәуелді екен.

Сұхбат алушы: Дифференцияция жайының қоғамдық мәселәсіз екен. Мәселенің түрін жоқ екен. Мәселенің өзгертү және сауалнаманы аяқтауға мүмкіндік болып екен. Біздің мектепіміздегі көздеріміз қандай тәжірибеңіз, қандай кеңесіңіз бе?

Сұхбат беруші: Бұл қандай мүмкіндік, мұндағы оқушылардың қажеттілігін қарастырып, қандай кеңесіңіз бе?
Сонымен қатар қатар, егер қажеттілік туынды жатса, чатта да жауап бере аламыз, мұмкіндігінше ақпарат беруге тырысымамыз.

Сұхбат алуы: Мұлдем дифференциация жайлы білмейтін әріптестерінізге осы дифференциация оқыту әдістери туралы, жүзеге асыру туралы Сізге ақыл кенес бер деп айтса, Сіз қандай тәжірибенізбен, қандай ақыл кенестеріңізбен болісе алат еңіз?

Сұхбат бериші: Әмнің және тәжірибенің дагы болісір едім, бастапқы анықтау өткен кыныңдықтарының. Сонымен қатар көп ресурстарымызды өзіңізің ақпараткер өзіңізге шығуына ұсынамыз.

Сұхбат алуы: Ол кісілер неден бастау керек деп ойлайсыз?

Сұхбат бериші: Олардан адыммен дифференциация ол кісі үшін, жалпы қоғам үшін не үшін қажет деп сұрағ едім. Егер ол кісі әрқылы келсе құнда, оқушыларының қажеттіліктерін ескер отыра сабағын тиімді өткізгісі келу үшін әрқылы келсе, ол қісімен жұмыс жасау өзіңіз болар еді деп есептеймін. Контенген зерттеулер ерісіз турде болады. Нәтижесін бериңіз сондайқанда да қиын. Қажеттілік бар болса ғана тіімді жұмыс болады деп есептеймін.

Сұхбат алуы: Экімшілік тарапынан сіздерге қандай көмек көрсетілді? Және осы жұмыстың көлігі біржолға түсіріп келеді гызымы созы осы ұакытқа дейін?

Сұхбат бериші: Экімшілік тарапынан біздің мектеп және ПШО арасында келісім ұсталған, ол кісілер жоспарлы тұрға біздің мектепке жұмыстарың ұсынып жатыр. Алғашқы әліметтерді осы ПШО берген болатын. Бұл бізге жеткілікті. Өріңіз кәріжі тұруыменызға біз өзіңіз әреттейміз.

Сұхбат алуы: Яғни, қісі, акімшілік тарапынан қолдаудын өрі қарай қажеті жоқ деп есептейісіз ба?

Сұхбат бериші: Дарындылық курсында экімшілік тарапынан көмек қажет, себебі мұғалімдердің қатысу әдеттіге оте тәуел. Ол кісілер қатысқысы келмей жатырган жоқ, ұакыттың тапшылығына байланысты қатысу кей кезде мұмкін болады. Бірақ біз онда қалпына келдігерің жатырғаныңыз жоқ, ортақ түрде мәліметтерді талқылау әріптестерге болмайды.

Сұхбат алуы: Мұғалімдердің өрі қарай курсқа жіберудің қажеті жоқ, іштегі потенциалды дұрыс пайдалау білу керекпіз деп есептейісіз бе сонда? Келдерігер бар, мәліметтер мұлдем білмейтін, курсқа қатысатын мұмкіндігі жоқ мұғалімдер сонда не істей керек?

Сұхбат бериші: Облыстық әлімет білім беру және білім жетілдіру өртальқтарында осы техникалық қолданыста жүзеге асыру қамалы. Арнауы мамандар бар сонда. Қазіргі мұғалімдердің дифференциация жайлы мұлдем хабарды жоқ дегенге келісіп етіңіз.
Бұрынғы сарап оқыту бар. Мұғалімдер тек дифференцияция жайлары білімдерін төрендету қерек деп есептеймін.

Сұхbat алушы: Мұғалімдер өз беттерінші зерттеулер жүргізу қерек, солайша білімдерін көңілсіз алады деп есептейсіз гой соңда.

Сұхbat беруші: Облыстық білім беру және білім жетілдіру ортагас бар жұмыстықтары арнайы жұмыс, курстар, семинарлар жүргізін, дифференцияция тұрақты ақпараттар бар. Тәжірибелері болмадыңыз, жалпы маглұматтары бар. Ал тәжірибелерін енгіздеміз келсе біздің мектеппен байланыс жасаса білдік, біз көмегімізді аяқтып келдіміз.

Сұхbat алушы: Ойынызды корыта келе, біздің мектептегі мұғалімдер өсі дифференцияциялық оқытуда 5 баллдық жүйеде есептегенде кәңітсіз дәрежеде жүзеге асырып жатыр деп өйлесіз.

Сұхbat беруші: 4 ке бағалаймын. Біз ал ішінде жоқы. Процестеміз. Алдағы 2-3 бызда жақсы нәтиже көрсетеміз деп өйлесіз.

Сұхbat алушы: Рахмет, сұхбатыңызға. Егер де сізден өсі дифференцияциялық оқыту жайларыда қерек деп аламын десем сіз келісіміңізді берсеңіз бе?

Сұхbat беруші: Өрине.
<table>
<thead>
<tr>
<th>№</th>
<th>Interviewtranscripts</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Мен жалпы дифференция деген терминнің әзін қажеттілікті қанағаттандыру, қажеттілікпен қамтамасыз ету деп тусінім. Қазіргі танда дифференция тек сабақта белгілі бір тапсырманы берумен гана шектелмейді. Дифференцияны топтық, ресурстар түрінде дифференция деп айта аламыз, яғни бул әр топовын көрсету барлық турде баланың қажеттілігіне қарай әр топқа байланысты орын аударуы.</td>
<td>Code 1: What is differentiation? Satisfy needs Types of DN</td>
</tr>
<tr>
<td>2</td>
<td>Яғни, қазіргі танда осы мектепте дарындылық курсы жүріп жатыр. Бірінші фактор - мұғалімдер дифференциацияны сабақ барысында қолданады, және қолдану барысында тінміді тұстарын анықтай отыра біз қандай жетістікке жете аламыз, ал екінші фактор – дарынды балаларды анықтау әрқылы біз жұмысқа жүрізетін боламыз. Қазіргі танда дифференцияция ұғымы мен көлемдегі қолданылуда, мұғалімдердің дифференцияция тұралы нәтижелері бар, бұрын дифференцияция тұралы акпарат аздау болса, қазір семінарлар, коучингтер өткіру орқысы ақпаратты мұғалімдер толық қабілетіне қарай бөлінуін жататын. Кейін мұғалімдердің пайымдауыла бар құқытты алады, ала бір мұғалімді дифференцияция копыққа алатыны алатыны алатыны алатыны, көрініші мүмкіндіктерініңізі алдыңғы және әр нәтижеге жетудің жолы деп есептеймін.</td>
<td>Code: 2 Teachers' perception/ beliefs Ts' knowledge of DN Seminars on DN</td>
</tr>
<tr>
<td>3</td>
<td>Дифференцияция деген терминді алғаш рет мен орта мектепте жұмыс жасау барысында сақтау, араланды оқыту, араланды тапсырмалар деп басталған болып табылады. Бірақ бастапқы біз дифференцияцияны тек тапсырма деп түсінетінбіз. Осы мектепте жұмыс жасау барысында дифференцияцияны тек қана тапсырмалы емес, ресурстар әрі, әр топқа қабілетіне қай балулық ортінде дифференцияцияның.</td>
<td>Code: 3 First experience with DN DN as an assignment? Understood DN here</td>
</tr>
<tr>
<td>Вопрос</td>
<td>Описание</td>
<td>Ответ</td>
</tr>
<tr>
<td>--------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>4</td>
<td>Кез-келген бір акпаратты кору кезенінде әр адамның қабылдауы ар тұрлі болады, әрбір балаларға акпаратты беру кезенінде ол балдардың барлығы ресурсті бірдей қабылдауы мүмкін, ойткені окуышылардың акпаратты қабылдау денеейлері мен қажеттіліктері ар тұрлі. Біздің негізгі мақсатымыз – біздің түсіндім. Мұны мен тиімді деп ойлаймын. Бір жақты түсінік емес, жан-жакты қамти аламаыз. Бір жақты түсінік емес, жан-жакты қамти аламаыз.</td>
<td>Code: 4 Purpose of using DN</td>
</tr>
<tr>
<td>5</td>
<td>Қазіргі тандағы біз дифференциацияның принциптерін және әкімді оқыту кезенінде арнайы моделиерін қолданамыз. Принциптерін атап отсем, ұлкен, көмек, үндестірілуі, ұлкен. Бір сабақта барлығының ойнығы бар, бірақ балдардың қабылдауы қатытуын өзінің қажеттілігін ескере отыра сабақты жоспарласа, егер оқушылардың қабылдау деңгейлі және қажеттіліктері артқан.</td>
<td>Code: 5 models of DN</td>
</tr>
<tr>
<td>6</td>
<td>Три модели опроса деген бар, мысалыға біз жай гана фотосинтез тақырыбына Кім? Не? деп жалпы сұрақ қоятқан болсақ, баланың фотосинтез жайлы ұғымыны нығылуының және фотосинтезі дәлелдену қызметі мен жалпығы мүмкіндік береді. Мектепте қазіргі тандағы тәрттр тренер бар, сол жағдайларға көмек қызметін қызмет. Осы жағдайда сұрақтың дифференциациясы арқылы баланың фотосинтез жайлы ұғымыны нығылуы мүмкін.</td>
<td>Code: 6 examples of using DN</td>
</tr>
<tr>
<td>7</td>
<td>Өрбір тәртіпіндегі сұрақтар ұрысұлы әр түрде мұғалімдерге арналған тренингтегі ерекшениң жатыр, бірақ бір үлкен кемшілік – ол мұғалімдердің қатысу денеейінің төмендігі. Мектепбіз 5 күн құрылуын кейін, мұғалімдердің уақыты тапшы. Осы уақытының тапшылығына байланысты жатысу денеейінің төмендеп тұр. Болашақта мұғалімдерге мәліметтер әтіп уақыт табуға тырысымыз. Алюминий және болып, мұғалімдердің дифференциация және оның принциптері жайлы ақпарат қалпына келтірілсін.</td>
<td>Code: 7 weekly seminars</td>
</tr>
<tr>
<td>8</td>
<td>Жалпы шіңірме әр күнде курстарға болатын, құрастырылыған қайтадан қарашылық форматында дифференциация байланысты бірінші ашық есік көрсетіп, көрсетіп, маster қласылық жүргізілді. ПШО келген мұғалімдерде осы және басқа да тәртіпті арқылы жүргізілді. Бұл әрі болатын, сондықтан біз мұғалімдерімізді дифференциациядан хабарлы деп айтамын.</td>
<td>Code: 8 Support for teachers</td>
</tr>
</tbody>
</table>

Ответы на вопросы: 4 Purpose of using DN, 5 models of DN, 6 examples of using DN, 7 weekly seminars, 8 Support for teachers.
Сабақтарында дифференцияны қолдану жиілігі мүмкін әлі де әлі де, жоқса да болса жұмыстар атқарылуда.

9 Қолдану жиілігі төмен дүйнөдің сапасына тәуекелдіктердің қанагаттандыру деп айтып оттім. Біздің қызметкерлерінің қазірғі кезде оқу сапасының төмендігі байқалады, яғни бұл мұғалімдің сабақты 100 пайыздық корсетілікке жоспарламаганы дегені. Осыған қарап, мен дифференцияцияны сабақ барысында әлі де әлі де толық көрсету мүмкін.

10 Уақыт негізінен сол құнды сабақтың құрылымына, тақырыбына қарай. Мысалы, біздің сабақтың құрылымына, оқушылардың көп уақыты алынады деп есептейді.

11 Қазіргі 12 сыныптағы оқушыларының денгейлері ертүрлі, бір презентациямен оларға барлық мәліметтер көрсетілген. Бұл курстарда тексттік ақпараттар беретінің, немесе A level дің қайсы бар, бірі қыздықтағы және оқушылар ақпарат жоспарламаған. Оқушыларға бірнеше және тұрлі ресурстар берілетін. Бұл құрылымында оқушылар барлық және оқушылардың қәсіби, жұмыстарының қасиетін қалдырып, оқушылардың өзіндік қосымша құрылымын қамтамасыз етеді.

12 Қазіргі 12 сыныптағы оқушыларының денгейлері бір-біріне қосымша құрылым, содан кейін олар қолданып, оқушылардың барлық қасиеттерін қамтамасыз етеді. Бұл құрылымда оқушылардың дифференцияциясы және оқушылар барлық жұмыстарды өзіндерге қамтамасыз етеді.

13 Сабақтар идеал болып шықпайды эріне. Такырыптың құрделілігінен байланысты немесе қайталу жұмыстарына қарсы күрделіліктер көрсетіледі, әлі де әлі де оқушылардың және оқушылардың дифференцияциясына қызмет көрсетеді.

Work on application of DN

Code: 9 Teachers' Practice

Main purpose of DN

Not 100% yet

Code: 10 Planning lessons with DI

DI takes time?

Practice will help

Code 11: Examples of lessons

Textbooks

Easy resources

Leader helps others

Code 12: How to start?

Gamma test

Code 13: Conducting the lesson

Individual work
14 Негізі қысқы баланың аудиал, визуал немесе экстраверт/интроверт екінің анықтауда накты дәлелдің болмауы. Нәтижесінде біз кейін кейбір акпараттарының сонғы сыйкы болмауына байланысты біз де нәтижеге жетіп жатамыз. Бірінші фактор біз баланың диагностикасын оте жақсы білуіміз керек, және сол кезенден мінез—құлқында білуіміз керек. Мұқтім көздер ғана біз оны болашақта көздерге боларым деп ойлаймын.

<table>
<thead>
<tr>
<th>Code 14: Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning styles</td>
</tr>
<tr>
<td>Credible sources</td>
</tr>
<tr>
<td>Characteristic traits</td>
</tr>
</tbody>
</table>

15 Ондай жағдайда мен психолоپпен сойлестім, психолоғпен келіспен кездерім де болды, себебі сол ұақытта балаға алуеметтік факторлар да есер етіп мұқтім. Кураторламын сойлестік. Уй жағдайындағы мәселелер кедергі болуы мүмкін екенін ескеріп отырдық.

<table>
<thead>
<tr>
<th>Code 15: Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curator</td>
</tr>
<tr>
<td>Parents</td>
</tr>
<tr>
<td>Support</td>
</tr>
</tbody>
</table>

16 Дифференцияция жайлы 100 пайыздық игеру болды деп ойламаймын. Біз елі де зерттеу жұмыстарын жасап жатырмыз.Қазірғі таңда дифференцияция принциптерінің пайдаланылып жайылап ізденіп жатырмыз. Өр принципің әр ізде асері әртүрлі екен. Сабақ процесінде усқорение деп барлықтан қолдана алмайды екен. Біз әлі де өзі балаға алуеметтік факторлар да есер етіп мұқтім. Кураторламын сойлестік. Уй жағдайындағы мәселелер кедергі болуы мүмкін екенін ескеріп отырдық.

<table>
<thead>
<tr>
<th>Code 16: Self- learning and practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading, searching</td>
</tr>
<tr>
<td>Action Research</td>
</tr>
</tbody>
</table>

17 О баста бізге едебиеттерді зерттеуге үақыт берді, едебиеттерді көрсетді, топтадық Такырыптарымызды өзерттік, қуашылардан сауалнама алдық. Сол сауалнама нәтижесінде оқушылармен құрылымызда бастап кеткіт.

<table>
<thead>
<tr>
<th>Code 17: Literature review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire</td>
</tr>
</tbody>
</table>

18 Сіздердің мектептерінді дифференцияция тәсілдерін сабаққа енгізіңде көп ұақыт біржолға койылған, ал еңді озге мектептерге енгізу жобасы 2019 жылын қыркүй айына басталады. Сол әріпестеріндізге осы дифференцияция оқыту әдістері туралы, жұмыр асыру туралы. Біз оган ешқандай қарсы емесіз. Осы ұақытқа дейін біз мектепті жалпы мектеп мұғалімдеріне арналып арнайы сабақтар жұргізілді. Сонымын катаң чат бар, егер қажеттілік тұындан жатса, чатта да жауап беру ғана боларым, мұқтімдігінше ақпарат беру ғана боларым.

<table>
<thead>
<tr>
<th>Code 18: Sharing experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skype chat</td>
</tr>
<tr>
<td>Demonstration lessons</td>
</tr>
<tr>
<td>Sharing resources</td>
</tr>
<tr>
<td>Co-planning</td>
</tr>
</tbody>
</table>

19 Оз жеке тәжірибедені ғана болісер едім, бастағы
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice</td>
<td>Support 2</td>
<td>What should be done?</td>
<td>Teachers' experience</td>
<td>At the moment</td>
</tr>
<tr>
<td>Enthusiasm</td>
<td>Administration</td>
<td>Good attendance</td>
<td>Partnership</td>
<td>Need support</td>
</tr>
<tr>
<td>Necessity</td>
<td>Centre of Excellence</td>
<td>Reduce time</td>
<td></td>
<td>Need to improve</td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td>Educational centres</td>
<td></td>
<td></td>
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</tbody>
</table>