

**Kazakhstani Secondary Teachers' Attitudes towards Blended Learning**

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## **Kazakhstani Secondary Teachers' Attitudes towards Blended Learning**

### **Abstract**

Blended learning is one of the most promising methods in modern teaching. It combines two learning environments: traditional face-to-face and online. This research is aimed at investigating Kazakhstani secondary school teachers' attitudes towards blended learning. This qualitative research was conducted in compliance with the connectivism and social constructivism theories and was aimed at investigating Kazakhstani teachers' attitudes towards blended learning, as well as the advantages and barriers to implementation. Preliminary data was collected through an open-ended survey from 30 teachers of different subjects to see if there was a difference in teachers' attitudes' depending on the subject they taught or years of their teaching experience. Based on the survey responds and participants' willingness, five purposefully chosen teachers participated in semi-structured interviews. While analyzing the data from survey and interview coding procedure revealed some common themes which were generated into research results. Findings showed that teachers consider that blended learning catalases individualization, improves students' engagement promotes collaboration among learners in different educational environment and makes the learning process more real-world relevant. Along with the benefits teachers mentioned challenges they face while implementing this method, such as technical issues related to the poor Internet connection, lack of materials related to the subject they teach and time-consuming lesson preparation. The research findings may be used to fulfill the gap in the literature regarding the blended learning experience in the Kazakhstani context. The research findings show that teachers are not against implementing this method. However, they should be provided with opportunities for professional development from more experienced colleagues in blended learning.

**Қазақстандық орта мектептің мұғалімдерінің аралас оқытуға көз қарасы.****Аннотация**

Аралас оқыту қазіргі заманда оқытудың ең перспективті әдістердің бірі болып табылады. Бұл әдіс екі оқу ортасын біріктіреді: дәстүрлі және онлайн. Бұл зерттеу Қазақстандық орта мектептің мұғалімдерінің аралас оқытуға деген көзқарасын зерттеуге бағытталған. Байланыстыру мен әлеуметтік конструктивизм теорияларын басшылыққа ала отырып, бұл сапалы зерттеу мұғалімдердің аралас оқытуға қатысты көзқарасына, сондай-ақ осы әдісті енгізудің артықшылықтары мен кедергілеріне бағытталған. Алдын ала оқыту тәжірибесіне байланысты мұғалімдер арасында айырмашылық бар-жоқтығын анықтау үшін түрлі пәндердің 30 мұғалімнен ашық сауалнама жүргізілді. Жүргізілген сауалнамаға байланысты арнайы таңдап алынған бес мұғалім жартылай құрылымдалған сұхбаттарға қатысты. Ашық кодтау деректерді талдау кезінде жалпы жауаптар анықтады. Нәтижелер мұғалімдердің аралас оқыту жеке, серіктестік, студенттік қарым-қатынасқа үлес қосып, студенттер үшін шынайы құндылықты қалыптастыратынына сенеді. Мұғалімдер артықшылықтармен қатар, бұл әдісті іске асыру кезінде туындаған қиындықтардың мысалдарымен бөлісті. Интернет желісіндегі нашар байланысқа байланысты техникалық проблемалар, оқытылатын материалдардың жетіспеушілігі және сабаққа ұзақ уақыт дайындалу сияқты мәселелерді атап өтті. Зерттеу нәтижелерін Қазақстандық контексте аралас оқытудың тәжірибесі туралы әдебиеттегі алшақтықты толтыру үшін қолдануға болады. Зерттеу нәтижелері мұғалімдер бұл әдісті қолдануға қарсы емес екенін көрсетеді. Алайда, оларға аралас оқытуда тәжірибелі әріптестердің кәсіби дамуына мүмкіндік беру керек.

## **Отношение казахстанских учителей средней школы к смешанному обучению**

### **Аннотация**

Смешанное обучение является одним из наиболее перспективных методов в современном обучении. Этот метод сочетает в себе две среды обучения: традиционную и онлайн. Данное исследование направлено на изучение отношения казахстанских учителей средней школы к смешанному обучению. Руководствуясь теориями о коннективизма и социального конструктивизма, это качественное исследование было сфокусировано на отношении учителей к смешанному обучению, а также на преимуществах и препятствиях внедрения данного метода.

Предварительные данные были собраны в ходе открытого анкетирования 30 учителей различных предметов, чтобы выяснить, есть ли разница в отношении учителей в зависимости от предмета, который они преподают, или опыта преподавания. На основании ответов на опрос и готовности участников участвовать в исследовании пять специально отобранных учителей приняли участие в полу-структурированных интервью. Открытое кодирование позволило выявить общие ответы во время анализа данных. Результаты показали, что учителя считают, что смешанное обучение способствует индивидуализации, кооперации, вовлеченности учащихся и создает реальную значимость обучения для учащихся. Наряду с преимуществами учителя упомянули проблемы, с которыми они сталкиваются при внедрении этого метода, такие как технические проблемы, связанные с плохим интернет-соединением, отсутствием материалов который они преподают, и длительная подготовка к уроку. Результаты исследования могут быть использованы для восполнения пробела в литературе относительно опыта смешанного обучения в казахстанском контексте. Результаты исследования

показывают, что учителя не против внедрения этого метода. Однако им должны быть предоставлены возможности для профессионального развития от более опытных коллег в смешанном обучении.

**Table of contents**

Author agreement.....ii

Declaration.....iii

Ethical approval .....iv

CITI training certificate.....v

Acknowledgment .....vi

Abstract .....vii

Table of Contents.....xii

Chapter 1. Introduction      1

    1.1 Introduction ..... 1

    1.2 Background of the Study .....2

    1.3 Statement of the Problem and Purpose of the Study .....4

    1.4 Research Questions ..... 4

    1.5 Significance of the Study.....5

    1.6 Definition of the central phenomena .....6

    1.7 Organization of the study .....6

Chapter 2. Literature Review .....7

    2.1 Introduction .....7

    2.2. The Role of Information and Communication Technologies in Educational Process 8

    2.3. Definition of Blended Learning.....10

    2.4 Features of Blended Learning .....11

    2.5 Advantages and Risks of Blended Learning Implementation .....14

    2.6 Educators’ Perception of Blended Learning.....17

    2.7 Blended learning in Kazakhstani Context .....19

    2.8 Theoretical Framework .....21

    2.8 Conclusion .....23

Chapter 3. Methodology.....	23
3.1 Introduction .....	23
3.2 Research Design and rationale .....	24
3.3 Research Site .....	27
3.4 Sample and sampling procedures .....	28
3.5 Data Collection Instruments .....	30
3.6 Data Collection Procedures .....	33
3.7 Data Analysis Methods.....	33
3.8 Ethical Concerns and Risks of Research .....	36
3.9 Benefits.....	37
3.10 Limitations.....	38
Chapter 4. Results .....	38
4.1 Introduction .....	38
4.2 Participants .....	39
4.3 Perception of blended learning.....	40
4.3.1. Teachers’ understanding of blended learning.....	40
4.3.2. The impact of teaching experience and subject taught on attitudes towards blended learning.....	42
4.4. Benefits of implementing blended learning into teaching practice.....	43
4.4.1. Learners’ autonomous and self-regulated learning.....	44
4.4.2. Real-world relevance.....	45
4.4.3. Personalization of learning.....	45
4.4.4. Increased engagement.....	46
4.4.5. Improved collaboration.....	47
4.5. Challenges and barriers of blended learning implementation.....	48
4.6 Summary of the findings .....	49
Chapter 5. Discussion of Findings .....	50

5.1 Introduction .....	50
5.2. Perceptions of blended learning .....	51
5.2.1 Perception of blended learning based on subject taught and teaching experience .....	52
5.3 Benefits of implementing blended learning into teaching practice. ....	53
5.3.1. Learners’ autonomous and self-regulated learning.....	54
5.3.2. Real-world relevance .....	55
5.3.3. Personalization of learning .....	55
5.3.4. Increased engagement.....	56
5.3.5. Improved collaboration.....	57
5.4. Challenges and barriers of blended learning implementation .....	58
5.5 Summary.....	59
6.1 Introduction .....	60
6.2 Research strengths .....	60
6.3 Research limitations .....	61
6.4 Recommendations for teacher practice .....	62
6.5 Future research directions.....	63
References .....	63
Appendices.....	81
Appendix A. Informed Consent Form .....	81
Appendix B. Survey questions.....	83
Appendix C. Interview questions (semi-structured interview) .....	85

**List of Tables**

Table 1. Digitalization of education.....21

Table 2. Interview Participants .....30

Table 3. Survey results coding. ....34

Table 4. Demographic data .....40

Table 5. Demographic data of the interview participants. ....44

**List of Figures**

Figure 1 Definition of blended learning. This figure illustrates teachers’ definition of blended learning .....42

Figure 2. Usage of blended learning according to the teaching experience (2a) and subject taught (2b) The figure shows whether there is difference in the use of blended learning depending on teachers’ experience and subject taught .....43

## **Chapter 1. Introduction**

### **1.1. Introduction**

The Republic of Kazakhstan is currently undergoing multiple changes in the educational sphere. Policymakers try to implement modern teaching methods and approaches encouraging and training teachers to enhance their knowledge and skills to meet the new educational demands. The modern educator is portrayed as a facilitator rather than knowledge provider; he/she should address individual needs of the learner to make learning a life long journey, not a monotonous process of attending school with the only aim of passing national exams. Considering this, the educational reforms in Kazakhstan are aimed at forming a new national educational model combining the best innovative practices to ensure that the modern graduate is a competitive member of the world labour market (SPED, 2011).

Nevertheless, not all stakeholders are ready and have enough knowledge to address these changes and demand (Nurgaliyeva, 2010). Apart from the few pilot innovative schools, e.g. Nazarbayev Intellectual Schools, Bilim Innovative Schools and some private ones, the teaching methodology can still be characterised as traditional with the teacher playing the dominant part in the classroom and little if no interaction with students. However, there are increasing numbers of educators who understand the importance of alteration in teaching methods to address modern students' needs. One of the methods that can be very useful to address the demands of modern education is blended learning. Kazakhstani educators slowly but surely started the implementation it in teaching various subjects, even though adaptation to this new method is a complex process for the school, teachers, students and parents (Nurgaliyeva, 2010). Unfortunately, it is sometimes met with the unwanted resistance from the stakeholders (mainly teachers and parents)

(Rybinski & Sootla, 2016). That is why it is essential to investigate educators' perception and attitudes towards this educational phenomenon to understand what the potential benefits of this method are and how it may help to improve teaching and learning processes.

## **1.2. Background of the Study**

Kazakhstani educational system is still at the stage of its development. So far the Republic has adopted the best practices developed in western societies (SPED, 2011). They have been tested in a few pilot schools and now the experience is disseminated to other public schools. The main changes and innovations that are promoted throughout the whole Republic are personalization and individualization of teaching and learning, as well as the promotion of life-long learning (SPED, 2011). It is obvious that reforming education is not an easy and rapid process. It requires a lot of factors and amendments, so blended learning may be considered as one of the viable solutions to address the priorities mentioned above. Analyzing the nature, the reasons and importance of changes it was proven that 70% of them happen because of the ever-changing nature of information and communication technologies (ICT) (Cascio & Montealegre, 2016). Nowadays, computers and related devices are widely used in every sphere of human activity including education despite the existing challenges from teachers' and students' point of view. According to the survey results conducted in 2008 among British learners of the 2,600 learners surveyed, 74 per cent had social networking accounts and 78 per cent had uploaded artefacts using various applications (Hadyn, 2008). Only a few pupils had an understanding of the ways in which the Internet might be used for educational purposes and few had well developed digital literacy and critical skills to navigate Web 2.0 territory in a mature way. It proves, that despite the widespread use of ICT it does not ultimately mean that modern society is ready

and knows how to use it in the educational context. Moreover, there was and still is a resistance to use computers in education. Less than ten years ago, Windschitl (2000) refused to accept the benefits of ICT for teaching and learning claiming that it is a waste of time and does not have any positive effect on learners' academic achievements. Luckily, the situation is slowly changing and a lot of the 21st-century learners cannot imagine their studying process without the use of Internet sources. This led to the rapid development and appearance of many new methods and teaching approaches such as eLearning, online learning, blended learning etc. This paper will be focused on blended learning which is a combination of face-to-face and online learning. It requires not only a flexible and experienced teacher but also a self-regulated/ autonomous learner (Sorden, 2012).

Despite the relatively “young age” of blended learning as an educational approach, there have been multiple kinds of research conducted to check its efficiency. Studies have revealed that blended learning might not only enhance student learning but also improve teacher pedagogy (Delialioglu, 2012; Wang 2011). Thus, apart from the fact that the teacher becomes more confident in planning the lessons and makes them more personalized, blended learning enables more frequent communication with learners tracking their progress and provides one-to-one attention.

The past researches devoted to blended learning mainly concentrate on measuring its effectiveness or specifying the pros and cons of this method. However, before implementing any new approaches into practice teaching staff should be ready and dedicated to learning the new methods through implementing the technology and apply it in the practice (Kliger & Pfeiffer, 2011). A number of studies (Aslan, Huh, Lee, & Reigeluth, 2011) revealed that there are few challenges for the teachers while implementing blended learning, however, there are only a few studies focus on understanding teachers' perceptions about blended learning.

### **1.3. Statement of the Problem and Purpose of the Study**

Currently, Kazakhstan is implementing blended learning or its elements mostly at Universities promoting online or blended courses but it is a very infrequent practice for the secondary schools (Rybinski & Sootla, 2016). However, the secondary school students are mature enough and demonstrate all the skills to be taught through this method, (e.g. autonomy, self-regulation, natural curiosity and ability to learn new things).

Despite the apparent advantages of this teaching method (students are more motivated and engaged (Gedik et al. 2012), education is more individualized in nature (García-Valcárcel et al., 2014; Gedik et al., 2012)etc. ) there is still a resistance from the teachers to implement this method. The reasons vary from lack of ICT knowledge to the desire to stick to more traditional methods of teaching. (Capo & Orellana, 2012; Gedik et al., 2012; Sanchez & Hueros, 2010). This study aims to investigate teachers' attitudes toward blended learning at Kazakhstani Secondary Schools. The data will be useful to determine possible factors that may impede the implementation of this method. Moreover, I will provide recommendations for teachers and administrators on how to eliminate the existing challenges and promote a positive environment for blended learning implementation.

### **1.4. Research Questions**

To achieve the stated aim, the research will be focused on the following main research questions:

1. What are Kazakhstani teachers' views on blended learning?

This main question can be divided into two sub-questions:

- Is there any difference between teachers' attitudes towards blended learning based on their years of teaching?

- Is there any difference between teachers' attitudes towards blended learning based on the subject they teach?

2. What are the barriers and challenges to the implementation of blended learning in Secondary schools in Kazakhstan?

### **1.5. Significance of the Study**

Having read the existing literature related to the topic, it may be concluded that the present study may fulfil the existing gap in investigating teachers' attitudes towards this method at Kazakhstani level. It is projected that even though the main participants of the study are Kazakhstani teachers the received results may be generalized to a bigger population. This assumption is based on the fact that even though this research is guided by the State Educational Program of the Republic of Kazakhstan and focused on Kazakhstani educational settings, it goes in parallel with the Goal 4 of the Sustainable Development. It says "Ensure inclusive and equitable quality education and promote lifelong learning" (Sustainable Development Goals, 2015). As mentioned before blended learning can be the key to realize this goal but without knowledge of teachers' attitudes, its implementation might be problematic.

It is expected that the investigation of the teachers' attitudes towards blended learning at the secondary school level will help to build an understanding of what educators' current practices are and how they perceive blended learning. The gathered information will allow teachers and in a bigger scale school administration to understand how to plan their work and what kind of support or professional development courses needed for successful implementation of this method.

There is a hope that the findings of this research will not only be of interest to educators but policymakers. Recent reports emphasize that the student have to be equipped

with the skills necessary for the work started at school and technology is a viable tool to achieve it. Thus, the implementation of this method into the National Curriculum will allow students not only to develop digital skills but also the qualities necessary for becoming life-long learners. Once the policymakers are aware of the educators' attitudes' towards blended learning they can use it as the platform for further planning of gradual implementation of this method.

### **1.6. Definition of the central phenomena**

*Blended learning* is a teaching and learning approach characterized as a combination of the effective classroom and online environments allowing for learning across groups of diverse students.

*E-learning* is learning that utilises electronic technologies to access the educational curriculum outside of a traditional classroom.

*ICT* is a “combination of computer, video and telecommunication technologies, as observed in the use of multimedia computers and networks and also services which are based on them” (Van Damme, 2003).

### **1.7. Organization of the study**

The study is organised into a number of chapters. This chapter provided a brief introduction to the research providing background information, aim and the significance of the research. The research questions and the problem that guides the current study are also outlined in this Chapter. Chapter 2 introduces the existing evidence from past research conducted in the area of blended learning in Western and Kazakhstani contexts. Chapter 3 is devoted to the detailed description of the research methodology, design, participants together with sampling techniques and ethical considerations. Data collection instruments and analysis approaches are explained and discussed. The research results are explained in

Chapter 4. Chapter 5 focuses on the discussion of results and its comparison with the literature. The final Chapter concludes the thesis with a summary of the main findings, study limitations, and research implications.

## Chapter 2. Literature Review

### 2.1 Introduction

The Kazakhstani educational system has faced numerous educational reforms over the last ten years. Since the Republic secured its independence it became clear that changes are the inevitable part of the modern era and even current alterations would later be modified due to political and economic factors. The State Program of Education Development in the Republic of Kazakhstan (SPED) was amended several times and its latest version for 2011 -2020 suggests that the main goal of Education System in the Republic is “increasing competitiveness of education and development of human capital through ensuring access to quality education for sustainable economic growth” (SPED, 2011). To achieve this, currently, Government aims to restructure the educational system through the implementation of new innovative teaching methods, updating the curriculum etc.

Special emphasis is devoted to skills development, especially functional literacy which is defined by UNESCO as the ability of “using skills in ways that contribute to socio-economic development; developing the capacity for social awareness and critical reflection as a basis for personal and social change” (Education for All, 2006). Considering all these demands, not only the curriculum but the role of the teacher in the classroom and the teaching method need to be reconsidered. Thornburg (2002) claims that rapid development and information flow make the teaching approaches used in the past not only old-fashioned but irrelevant. The traditional teacher-centred approach is steadily being replaced by modern, innovative approaches that change the role of the educator and student in the classroom. It can be implemented through the development and promotion of ICT in teaching and learning.

## **F. The Role of Information and Communication Technologies in Educational Process**

The widespread of ICT definitely creates challenges for schools and policymakers around the world. ICT has not superseded traditional tools, and most schools use a blend of different teaching tools with technology-enhanced ones; combining paper, pens, and textbooks with interactive smartboards or/and computers.

Having read various definitions of ICT suggested by many authors, this paper will use the one suggested by Van Damme (2003) who defines ICT as a “combination of computer, video and telecommunication technologies, as observed in the use of multimedia computers and networks and also services which are based on them” (p.17). The most common tools of ICT used in the educational context are computers, laptops, and mobile phones with certain educational applications or access to educational websites. The flexible nature of ICT does not only alter the role of the teacher in the educational process but let learners be responsible for their education allowing them to gain knowledge from any resource at any comfortable time (Oliver, 2010). Sethy (2008) reports that current information is generated and updated with such an unbelievable speed that it is almost impossible for the educator to keep up with all the changes, but the modern technophile generation is more suitable for being up-to-date with these changes.

The use of ICT in teaching and learning today is not a luxury but a must due to its proven positive effect on the learners' academic achievements. Djiwandono (2013) mentioned that modern educational process should not be limited by the scope of the classroom but should rather open opportunities for the students to gain knowledge from multiple sources. This is true due to the existing diversity of materials that educators can use to enrich and improve their practice. The Internet capabilities let modern teachers have almost limitless opportunities for designing, developing and implementing innovative

teaching methods (Hinkhouse, 2013). Lafferiere (1999) reported that the classrooms where teachers applied elements of ICT tend to attract students' interest and encourage them to study.

However, for education providers, relying heavily on ICT does not ultimately mean that there would be improvements in student learning outcomes and performance. It is suggested that technology improves learning when there is a diversity of teaching practices in place (Siemens, 2005). Technology is best used to support learning, rather than try and lead it. Moreover, despite the obvious impact of ICT on teaching and learning it is difficult to measure its effect on students' achievements. While it is easy to calculate the number of computers at school or to measure the speed of the Internet connection it is more difficult to count how and what ICT tools teachers use and it is even more problematic to assess pedagogic change it brings (Graham, 2005).

The factors and demands mentioned above catalyzed the importance of having a method of education that would combine the best practices of online and in-class teaching - "blended learning" which combines the best traditional face-to-face teaching approaches and online methods. Nowadays, blended learning develops and spreads fast all over the world slowly but surely substituting teacher-centred approaches (Salmon, 2004). If it is implemented correctly, this model is naturally student-centred since it is flexible in terms of time, and place where learning occurs, and allows self-regulated pace of knowledge acquisition. Due to the nature of blended learning educators may develop methods addressing the individual needs of every learner. This is especially handy in classes with more than 20 students each of whom demonstrates different knowledge levels, learning styles, preferences and personal interests. Combining face-to-face and technological environments the teacher can develop customized, adaptive lessons which would allow

measure students' progress and make necessary adjustments. Teachers' adaptation and mix of technology with their own expertise allow them to make more targeted instructional decisions, which in turn makes learning more meaningful and personalized for students.

### **2.3. Definition of Blended Learning**

Despite the excessive amount of existing literature about blended learning, there is still uncertainty in its definition. The definition may be different for every school and teacher depending on the school culture and educator's attitude towards this educational phenomenon. It should not be assumed that every teacher understands blended learning and its role in the classroom only because this word is widely used. The most common understanding of blended learning is that it is the right balance between online and face-to-face educational environments, but this definition lacks crucial details and precision.

Graham and Osguthorpe (2003) who are known as prominent researchers in the area of blended learning mention that it is the interaction of face-to-face and ICT methods with the aim of finding the balance between technology and human interaction. The key emphasis here should be paid on the word "balance" since blended learning does not mean total isolation from the teacher but rather finding the right ratio of technological and human components to achieve the set objectives. Garrison and Vaughan (2008) specify the importance of constant reflection evaluating teaching methods that are traditionally applied in the classroom to redirect them in a new direction which will allow "the thoughtful fusion of face-to-face and online learning experiences" (p.193). The educator should be able to identify how to address and meet modern demands and at the same time preserve the actionable methods of teaching. In his work Solomon (2002) specifies that while the definition of blended learning is vague, it definitely makes a difference in student learning. The working definition of blended learning used in this work was formed after reading the

existing literature on this topic. Blended learning is a teaching and learning approach characterized as a combination of the effective classroom and online environments allowing equal possibilities for learning across groups of diverse students. This definition was adopted from the work provided by The North American Council for Online Learning which claims that it is a “fundamental redrawing of the instructional model, including a shift from a lecture, to an increase in the interaction that contains integrated assessment” (NACOL, 2008, p. 5).

## **2.4 Features of Blended Learning**

Every teaching method and approach is unique with its own particular set of features or characteristics. These features vary according to the teachers and their practices. The consideration of these features is essential so that blended learning will not be confused with distant learning whose main characteristics is just focused on totally online teaching materials. Huang and Wang (2006) distinguish following primary attributes of blended learning: firstly, the teacher is not limited or restricted by choice of learning resources; and secondly, he/she can choose what websites or online tools to use to achieve the set learning objectives. Additionally, blended learning is aimed at supporting learners with different educational needs and learning styles. Thus, it provides opportunities for the individualized, self-regulated and self-paced learning.

Al Fiky (2011) provides a more extended description of blended learning features identifying the following:

1. *Changing nature of teaching from lecturing to student-centred learning.* Even though a lot of teaching methods promote this idea, blended learning allows learners to be active participants in their own learning rather than being passive recipients. Students are

trained to understand that now they are in charge of gaining knowledge and should regulate the pace and sources of information, assess the progress they have made and identify possible areas for further development.

2. *Improving teacher-student, student-student, student-content, student-outside resources interaction.* Blended learning is interactive and requires constant communication among the main stakeholders. Learners clarify the information they do not understand either from their teachers or peers through discussion and reflection.

3. *Introducing evaluation techniques for teachers and students.* Students and teachers learn not only to assess their own progress but also decide which resources are suitable for them and which are not. They can then replace them with ones found more appropriate.

4. *Enriching the opportunities for learning.* Learning no longer takes place just within classroom settings but allows every learner to have access to the best educational practices and educators through online databases.

As mentioned earlier, blended learning classrooms shift the role of the educator from being the main and frequently the only source of knowledge to the one who facilitates the learning process. The role of the educator and his/her authority might seem to be unclear since now the teacher must navigate the students in the search and evaluation of the information. It is usually done by combining online resources and activities with the existing learning environment. Consequently, this means encouraging learners to communicate, exchange and share their ideas or knowledge.

Al Fiky (2001) compares blended learning to a complex combination between traditional teaching methods and the best practices of e-learning with the aim of

supporting, and guiding learners at each stage but at the same time promoting their autonomy. Since blended learning is the combination of two parallel teaching and learning environments, the educator should manage it skillfully by minimalizing and ideally excluding the layering or repetition of the covered material (Garrison & Kanuka, 2004). This method does not mean that the content covered by learners through the online resources should be then duplicated in the classroom environment, but rather a meaningful integration of these two environments should be applied. For instance, an educator may assign students video material on a certain topic to watch at home. Next lesson, without retelling the content of the video a meaningful discussion of the main concepts may be organized. Thus, the material is not duplicated but used skillfully and aimed at addressing learners' individual needs. While watching the video at home the learners may re-watch it, take notes if necessary etc. The role of the educator will be to manage and organize the lesson so that each learner will be able to participate. As Gilbert and Flores-Zambada (2011) mention the aim of blended learning is to deliver a valuable educational experience to students.

Osguthorpe and Graham (2003) specify that a lot of teachers are not sure about the ratio of online and in-class components. This ratio merely depends on teachers' preferences, individual characteristics of a particular class, the learning objectives and availability of the online resources. The main aim is that all blended designs drastically increase the benefits of both instructional approaches considering the specific needs of learners (Osguthorpe & Graham, 2003).

Graham (2005) claims that to be effective four main principles of the blended learning methodology should be followed consistently:

1. *Thoughtful integration of face-to-face and fully online instructional components.* The integration allows for the use of both types of teaching environments to meet the diverse needs of modern students;

2. *Innovative use of technology.* Blended learning does not mean the usage of computers for the sake of implementing ICT into teaching practice. It should rather ensure that ICT tools used to serve the purpose of creating and maintaining highly interactive learning (Vaughan, 2007);

3. *Reconceptualization of the learning paradigm.* Blended learning aims at shifting the role and relationships between students and teachers incorporating new emerging pedagogies and learning theories, (e.g. constructivism or activity theory);

4. *Sustained assessment and evaluation of blended learning.* This principle ensures the quality and effectiveness of the educational process.

## **2.5 Advantages and Risks of Blended Learning Implementation**

Blended learning as a pedagogical approach has certain advantages which outweigh some minor risks an educator may face during implementation. Horn and Staker (2011) believe that blended learning is an evolutionary and justified alteration of e-learning. The rationale behind the development of this approach is the importance of increasing student-centred strategies and active knowledge which were not evidenced in e-learning. So, blended learning may be considered as a successful combination of the best face-to-face and e-learning educational experiences aimed at satisfying individual differences (Bersin & Associate, 2003). Graham (2006) supports this point and specifies that one of the advantages of blended learning is not only its technological nature but the ability to

find better ways of helping learners achieve their objectives. It could be done through differentiation techniques, choice of material etc.

Other benefits of implementing blended learning into the classroom have been identified by numerous studies. Blended learning helps educators to vary their teaching practice through the application of different methods which are much more diverse rather than those used in face-to-face teaching (Graham et al., 2003). The teacher's role here is really important because it is his/her responsibility to create workable combinations of teaching and learning environments. According to Wu, Tennyson, and Hsia (2010) blended learning creates a so-called "platform" for the educators to master and improve their skills through the application and skillful combination of different pedagogical strategies. Moreover, the role of the teacher is shifted from being "just a teacher" to more of a facilitator or a so-called "navigator" who leads the students to success by showing them what works best and supports them to find the methods, approaches, and materials that will address their individual needs. The whole idea is that blended learning creates opportunities for a more holistic approach to teaching and learning since it is an "ideal" combination of excellent and workable practices used for years.

A lot of researchers have also mentioned what role blended learning plays in motivating students and improving their academic achievements. Ware and Warschauer (2005) conducted a study and found that blended learning is extremely helpful in "bringing the outside world into the class." It means that learners can have as access to different materials so to work with teachers from all over the world. Learners felt more motivated and encouraged to learn new things if they realize what a unique experience they get (Ware & Warschauer, 2005).

Nevertheless, despite the evident benefits of using blended learning in one's classroom, the practice showed that there are some disadvantages and risks associated with its implementation. However, mostly they are based on teachers' own beliefs. For instance, while most of the teachers claimed to be very satisfied with this method, there are some subject teachers who think that this method is not suitable for their subject due to the certain peculiarities, and there was the minority of those who claimed that implementation of blended learning had neither improved their practice nor contributed the learners' progress in whole.

Delacey, and Leonard, (2002), and Rossett, Douglis, and Frazee, (2003) were among those who investigated the possible risks of using blended learning as a sole method of teaching. For instance, it is somewhat costly if compared to traditional methods. At the initial stage of the implementation, it requires funding for the purchase of the computers; teachers should ensure that the Internet coverage is available for the learners at school and home, some of the online resources should be paid for etc. Moreover, blended learning does not contribute to the development and formation of conversational and discussion skills among learners since it creates a "bubble-like" structure individualism in learning rather than collaboration (Delacey & Leonard, 2002).

Hofmann (2011) mentions sound reasons why blended learning may possess an inevitable challenge in the classroom and this paper would mention just some of them:

- *An educator should be a confident technology user and so to his/her learners.* Due to the technological nature of blended learning, the teachers and students should be familiar with the computer operating systems, be able to work on the Internet and solve some minor technical issues which can occur during the course. Unfortunately, a

lot of teachers, especially in the rural areas, still struggle with the ICT literacy that is why this approach may be challenging for them;

- One of the biggest risks while implementing this method is *educators' readiness to be open-minded and stop comparing and continually referring back to the traditional methods of teaching*. The educators' professional background should not be a barrier but rather an inspiration while applying the new method;

- *Managing and monitoring participant progress*. This risk is expressed most frequently by the teachers since the existing literature does not provide a definite answer of how to monitor and evaluate the progress of the learners while using blended learning. Teachers face several issues of how to record the progress, what the evidence that the progress of learners was due to the blended learning implementation and how to ensure that learners perform the task by themselves;

- *Minimalizing teachers' participation in the learning process*. The key point here is the understanding of the educator's role in teaching. Embedding the computer into the classroom does not mean excluding human participation and minimalizing the position to just a resource provider. The teacher still plays a vital role in educating the learners by guiding, and supporting them, while, providing valuable feedback at each stage of the learning process.

Overall, the literature suggests that blended learning is a complex method with a lot of features and peculiarities to be taken into consideration before implementing it into practice. It is crucial to investigate how these advantages and risks mentioned above correlate with the educators' attitudes.

## **2.6 Educators' Perception of Blended Learning**

As any innovative teaching methods, blended learning has its supporters and detractors. Based on past research, most of the western teachers believe that implementation of blended learning enhances student learning and makes them more engaged since now they are in control of their own learning (Graham, 2006; Clark, 2006). It encourages students to become more independent learners as compared with their peers taught according to the traditional method (Clark 2006). Moreover, according to Hinkhouse (2013), this approach is “more sensitive to the real needs of learners” since the learner is the one who can choose the form of the material delivery controlling the difficulty, pace etc. Teachers also say that blended learning promotes collaboration and they do not have to focus on delivering the instructions (Graham, 2006).

However, there are also those who consider blended learning not useful and even a waste of time since it requires additional preparation including looking for the resources, and more advanced computer skills in comparison with traditional courses (Hinkhouse, 2013). Subject teachers claim that blended learning is rarely used in maths and science not only because of insufficient online materials but mainly due to teachers’ beliefs that there is no pedagogic relevance to their subject area (Hadyn, 2008).

In his research Hadyn (2008) wonders about why some students make much more progress than others in their use of ICT in learning various subjects. He speculates that it may depend on teachers’ attitudes towards technology. Hadyn’s research was conducted among UK teachers and it showed the role of educators’ attitudes towards the use of ICT to the students’ progress. Teachers who had negative attitudes and even resistance intentionally passed the same attitude to their students. However, “more recently, research has suggested that the majority of teachers have positive views about the potential of ICT

to improve teaching and learning outcomes; one of their main concerns was finding time to fully explore this potential” (Hadyn, 2008, p.3).

Nevertheless, according to Garnham & Kaleta (2002), even the educators who are against using blended learning in their practice, mention that in whole blended learning positively affected interaction among students and in most cases improved their academic performance.

Overall, while there are some studies specifying the role of ICT in teaching and learning and blended learning as new educational phenomena, there is not enough evidence of past research displaying teachers’ attitude towards it. The existing literature and research do not allow one to make solid conclusions about teachers’ attitudes and beliefs, especially in the local Kazakhstani context. Thus, the lack of research in the area of teachers’ attitudes towards blended learning justifies the significance of this thesis.

## **2.7 Blended learning in Kazakhstani Context**

Blended learning is a relatively new educational phenomenon for Kazakhstani schools and educators. This lag in development could have been caused by several factors that can be divided into several subcategories: economic (undeveloped computer base, lack of the Internet access), historical (influence of the USSR heritage, resistance to innovative approaches) and social (lack of human resources). Currently, the Republic is on the 50th in the ranking of countries according to the level of digital development and literacy.

Overall, according to the official database digital literacy (which means the ability to use a computer and search information on the Internet) of the population is 77% but it is projected to reach 80% by 2021 (zakon.kz, 2018). The set goal to achieve proficiency in digital literacy creates hope and a certain “platform” for the widespread of blended

learning in the educational institutions of Kazakhstan. Nurgaliyeva and Artykbayeva (2010) specify that the promotion of blended learning is a must for Kazakhstani educational system since it is of a high social and educational significance.

During his annual speech, the President of Kazakhstan Nursultan Nazarbayev (2017) also highlighted that the third stage of education modernization is the smooth shift to digitalization. Blended learning can be an actionable tool to achieve it. Unfortunately, blended learning is only partially mentioned in some Kazakhstani studies devoted to e-learning. Basically, blended learning emerged from the e-learning methods because pure e-learning held some weaknesses, e.g. lack of face-to-face communication. Blended learning, on the other hand, mixes the strengths of both learning environments (Azizan, 2010).

Even though the importance of blended learning implementation has not been mentioned in any governmental programs, they highlighted the necessity of developing e-learning in education. The following table briefly summarizes the milestones in the development of e-learning in Kazakhstan.

Table 1 <i>Digitalization of education (adopted from Sapargaliev D., 2012)</i>		
<u>Program</u>	<u>Objectives</u>	<u>Results</u>
The State Program of Informatization of Secondary Education System for 1997-2002	The creation of <b>unit information and educational system</b> in Kazakhstan.	By the end of 2002 there was created flexible, methodological and technical support of education system, <b>the development of information culture and the basics of computer literacy in schools.</b>
The Concept of Informatization of Education System in Kazakhstan for 2002-2004	The creation of a unified educational information environment in the Republic of Kazakhstan and <b>the integration of information system</b> into the world educational space.	The aims of the Concept were not met mainly because of lack of systematic coordination and purposeful planning and financing of Concept. However, in the field of distance education, <b>some universities</b> started to research and develop this sphere. They have <b>developed a</b>

<p>The State Program for the Development of Education in Kazakhstan for 2005-2010</p>	<p>The modernization of education system and improvement of human resource quality. One of the main directions of the Program was <b>total computerization</b>.</p>	<p><b>series of electronic textbooks for university courses.</b></p>
<p>The State Program for Development of Education in Kazakhstan for 2011-2020</p>	<p>The main objective of the program is to increase the competitiveness of education, and human capital development by providing access to quality education for sustainable economic growth. One of the <b>main directions</b> of education program is <b>the e-Learning development in Kazakhstan</b>.</p>	<p>According to the official reports there was <b>increased use of ICT in the educational process</b> and improved quality of education by providing data access facilities to electronic resources. Moreover, <b>there were developed and implemented the modern e-textbooks for all subjects of secondary school</b>. In 2010 the number of personal computers in schools has reached to the ratio of 1 computer per 20 students.</p> <p>According to the Program all high schools will be <b>provided 100% access to broadband Internet by 2020</b>. There will be developed and approved requirements for the <b>creation of electronic textbooks and teaching materials in e-Learning system</b>.</p>

The Programs analysis shows that the country is on the right track of developing and immersing the elements of e-learning into the teaching process. Each of the Programs mentioned states ambitious though achievable aims with the consideration of previous document key points and areas for improvement. It is still early to assess the success of the Programs and the creation of computerization and Internet access. However, this still does not ultimately guarantee the successful implementation of blended learning. Nevertheless, it steadily leads to the changes in educational context altering the teaching and learning methods.

**2.8 Theoretical Framework**

This study was based on two relatively new theories: connectivism and social constructivism. Both of these theories fit to explain the need, characteristics and peculiarities of the digital age (Kop & Hill, 2008).

Originally connectivism as a learning theory was used to describe the process of learning through sharing, storing and manipulating existing knowledge to create the new one (Dunaway, 2011). Due to the vast integration of ICT into teaching and learning processes, there was a shift in the creation. Connectivism explains the process and impact of Internet technologies as tools for learning and sharing information. One of the main features of connectivism is that learning can happen across peer networks that take place online. The role of the teacher is to guide learners to information and support them when needed, but mostly learning happens through communication between peers. Salmon (2004) describes this interaction as a “community which is the clustering of similar areas of interest that allows for interaction, sharing, dialoguing, and thinking together” (p. 43). These processes are identified as the key ones in learning since knowledge is said to “rest in diversity of opinions” (Siemens, 2008, p. 8). Connectivism tries to address the issue of the ever-changing nature of information through two vital skills: the ability to seek out up-to-date information and the ability to differentiate important information from the irrelevant one. Siemens (2008, p.6) describes it as “The capacity to know is more critical than what is known». Overall, the learning is seen as a cyclical process when learners communicate through the network with the aim of sharing and obtaining new knowledge and experience and then alter their beliefs on the base of new knowledge. After that, the necessary connections are made and the process repeats itself. Learning is considered a “knowledge creation process, not only knowledge consumption” Siemens (2008, p. 6).

Social constructivism shares the same core idea as connectivism describing the learning process as the platform where teachers and students work together to explore and create knowledge (Paily, 2013). Another essential feature of constructivism is described by Siemens (2005, 2008) claims that a person can learn even without being taught in its traditional understanding. People can teach themselves actively constructing their new knowledge and connecting them with the previous one.

The core principles of connectivism and constructivism promote the ideas of self-regulated learning, development of critical thinking and the ability to communicate and share the knowledge with the peers and teacher. ICT can be as a tool to learn and master these skills. However, it is important not to see it as a panacea since the meaningless shift to technology-enhanced teaching does not mean good teaching. Teachers should learn to adapt and combine their best experiences (Francis, 2012; Garrison, 2011; Haythornwaite & Andrews, 2007).

## **2.8 Conclusion**

Overall, the literature on the topic of blended learning mainly focuses on investigating the effectiveness of this relatively new method while little attention is paid to understanding and examining teachers' attitude towards it. Moreover, there is almost no evidence of research in this field in the Kazakhstani context. Therefore, this thesis will contribute to further understanding and investigation of this educational phenomenon within Kazakhstan as well as beyond.

The research instruments described in the following chapter were designed according to principles of connectivism and social constructivism learning theories. It was

important to build gradual knowledge on the base of the existing one to find out how Kazakhstani teachers perceive blended learning.

### **Chapter 3. Methodology**

#### **3.1 Introduction**

This chapter describes the research design, the population, sampling technique, data collection and procedures followed by data analysis and tools description. The chapter also considers ethical concerns and possible limitations of the research. The chosen qualitative methods would contribute to answering the following research questions:

1. What are Kazakhstani teachers' views on blended learning?

Sub-questions:

- Is there any difference between teachers' attitudes towards blended learning and their teaching experience?;
  - Is there any difference between teachers' attitudes towards blended learning and the subject they teach?
2. What are the barriers and challenges to the implementation of blended learning in Secondary schools in Kazakhstan?

#### **3.2 Research Design and rationale**

This research focuses on understanding educators' attitudes towards blended learning. Having reviewed the existing literature through the chosen theoretical framework it can be concluded that learning happens through sharing knowledge and then constructing the new one together (Paily, 2013; Siemens, 2008). There are researches devoted to the

role of technology in improving learning but not enough teachers' attitude towards ICT implementation (Al-Ani, 2013; Delialioglu, 2012).

The research approach used for this study is qualitative which usually explores a problem to understand a particular phenomenon (Creswell, 2007). It usually starts with an assumption about a particular issue which is then compared with the view and beliefs of the individuals or groups who can either confirm or refute it (Creswell, 2007). Later on, the gathered information is analysed and presented through the reflective, objective and unbiased lenses of the researcher.

Even though the methods used in qualitative research are usually considered more time consuming due to their more "personal" nature (in comparison with quantitative research) as a researcher, I believe it is more suitable in the scope of my study. Mostly because the research takes place in the environment that is natural for the participants which partially ensures the credibility and reliability of their responses (Denzin & Lincoln, 2005). Considering the nature of the research questions used in this paper, it is of high importance to ensure that the participants have experienced the issues themselves and their answers are based on the personal practices and not only on theoretical knowledge.

Moreover, there are other significant reasons to use qualitative research techniques specified by Creswell (2007):

- *Researcher is the main instrument of data collection.* The qualitative approach implies that all the data will be collected personally by the researcher through document analysis, survey, interviews, observations etc. It will ensure the credibility and efficiency of the analysis since the researcher had a particular theory in mind from the start and all the selected instruments were headed towards this theory;

- *The data might be collected in different forms (words, images, video, audio, etc.).* Due to the more flexible and “free” nature of the instruments used in the research, it gives a certain degree of freedom how to obtain the necessary data. This variety ensures the reliability of the final results and helps to analyse the chosen phenomenon comparing and contrasting data. To strengthen the research results’ objectivity and credibility the triangulation of methods will be applied (analysis of the past researches, online open-ended survey and semi-structured interviews). It will also allow the exploration of the same phenomenon from different aspects, e.g. compare the existing findings with the primary data and make conclusions based on multiple insights.
  
- *Holistic view on the chosen research phenomenon.* Since the research is based on multiple perspectives towards the chosen issues, it ensures the investigation from different points of view and helps to build a complete picture of the phenomenon. This holistic view can only be achieved through talking, observing and asking an opinion of the people who are related to the issue.

Bearing in mind all the benefits of the qualitative research exploratory research design was applied. Burns and Grove (2003) define this research design as “a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings” (p.195). Having analysed the existing literature I understood that there were not enough examples of the previous researches identifying teachers’ attitudes towards blended learning, especially in Kazakhstani context. Thus, using exploratory research design I was able to focus on the insights of the phenomenon collecting information for further research. Another feature of this design was that it allowed me to answer the variety of research questions (e.g. what, when, why) and develop more precise research problem on the base of the collected data.

Comparatively, there are a lot of other types of qualitative research design that were not suitable in the scope of this study. For example, the experimental design was not applicable because it focused on finding and explaining the effect of a particular intervention and the bigger sample of population is supposed to be taken. This study did not aim at any interventions but rather collecting opinions through survey using limited amount of participants. Descriptive research design describes the current situation of the phenomenon without providing definite answers and its results mostly cannot be replicated. Therefore, the other research designs would fit the current research neither with data collection nor analysis.

The obtained results were analysed through the grounded theory which aimed at the generation of theory or a pattern from the existing, obtained data (Creswell, 2007). The model of the grounded theory applied for this study was suggested by Strauss and Corbin (1990, 1998). This model required constant analysis and comparison of the received data, e.g. after reviewing the literature on the issue of blended learning, a certain theory was formed. There was a possibility that this theory might have been altered or modified after the analysis of the survey and interview results. Thus, the final theory had undergone a few stages of review before the generation of final results. Creswell (2007) compares this model with a “zigzag” since the theory formation will represent back and forth process not a linear one.

In summary, an exploratory research design allowed having a deep insight into the chosen phenomenon. Data collected through a survey followed by an interview allowed me to understand how the participants’ attitudes towards blended learning. In addition, it developed positive, open, and honest relationships with the participants.

### **3.3 Research Site**

The research will be among the teachers of one of the Nazarbayev Intellectual Schools (NIS). The choice was predetermined by the fact that NIS was known as the pioneers of innovative approaches in teaching, so I assumed that teachers there were not only aware of blended learning but also actively used it. Since the research was devoted to the application of technologies it was decided that the main venue of the research would be an online environment in case it would be convenient for the participants. As Creswell (2007, p.40) mentions “We cannot separate what people say from the context in which they say it-whether this context is their home, family, or work”.

The data was collected in two stages, the site for the first step (online survey) was not important due to the flexible technological nature of the chosen tool. The only criterion was Internet access, computer/laptop or a mobile phone to answer the survey questions. The second stage of the research required more considerations because the participants had to choose whether they wanted to have a face-to-face or online interview. Few things were taken into consideration: the place, Internet access, participants’ skills to use technology in case they wanted to have an online interview (Skype or other platforms). The participants were also free to choose the location for the Skype interview (workplace, home etc.) but it was important to warn them about the confidentiality of the process, so it had to be some noise-free venue where participant felt free to answer the questions.

### **3.4 Sample and sampling procedures**

The research was focused on collecting opinions of NIS secondary school teachers to investigate their attitudes, practices and beliefs towards blended learning. The data collection was organized in two stages: online survey followed by semi-structured interviews of a subset of the survey participants. According to Holloway (1997), qualitative researchers do not normally know the number of people in the research

beforehand because it may vary during the research. Sampling can be carried on until saturation has been achieved which means no new information is generated.

During the first stage of primary data collection, an open-ended survey was distributed with the aim to receive at least 30 responses. This number was chosen with the consideration of the quality of the obtained data. The participants were considered as the population which Parahoo (1997) defined as “the total number of units from which data can be collected” (p.218). It was decided that out of at least 30 participants it would not only be possible to collect the necessary data for further analysis and interpretation but also select the potential candidates for the interview. In case the number of participants was less it could not be enough to make valid conclusions and generalizations which are the key elements of the research.

The survey was distributed among teachers working at NIS using purposive sampling which is a deliberate selection of participants according to certain qualities the researcher is looking for (Ilker, Sulaiman, Rukayya, 2016). This research was also non-probable which was defined by Parahoo (1997) as a procedure when the researcher bases the opinion to select the participants for the study based on their knowledge of the phenomenon. To participate in the research the teachers had to correspond to the following criteria identified by Burns and Grove (2001) as “a list of characteristics that are required for the membership in the target population”(p.234).

- To work at NIS secondary school;
- Preferably speak English (it would not only save time but also eliminate “lost in translation issue”).

- For the interview, it was important that the participant has experience in blended learning practice and they should express the desire to participate in the interview. It was identified during the survey answers’ analysis.

The survey was sent to the teachers of the whole school with the idea to receive the answers from at least six representatives from five different Departments in the NIS school (e.g. English, Maths, Humanitarian subjects etc.) to see whether teachers’ attitudes towards blended learning vary depending on the subject they teach.

The participants for the interview were chosen according to the pre-selected criteria (their understanding of blended learning, the experience of using it, willingness to participate in the interview etc.) the purposeful sampling was be used again

The table below presents information about the interview participants. The pseudonyms were given to each participant due to ethical considerations. They were used throughout the paper to keep the identities of research participants protected.

<i>Table 2 Interview Participants</i>	
<u>Participant Code</u>	<u>Subject taught</u>
Participant A	Maths
Participant B	ICT
Participant C	Science
Participant D	English
Participant D	English

*Source: compiled by the author*

### **3.5 Data Collection Instruments**

Parahoo (1997) describes a research instrument is “a tool used to collect data” (p.325). An instrument is a tool designed to measure the knowledge attitude and skills of the participants.

1. Open-ended survey.

The initial data was collected through a survey using the existing online survey services Qualtrics (the survey is included in Appendix A). It allowed collecting the desired number of responses within a short period, and also, it was more convenient for the participants since they could complete the survey anywhere, e.g., workplace, home, café, etc. Since the primary method used for the research is qualitative, open-ended questions were used which allowed further analysis and interpretation (Creswell, 2014). It was decided to adopt some of the existing survey questions because it saved time and also these questions were already tested on a larger sample of the population and were proven to be actionable. The survey took approximately 30 minutes to answer.

The following questions were used on the survey:

- How can you define blended learning?
- Do you use Blended Learning in your teaching practice?
- What do you think the benefits of this method are?
- If you do not use blended learning in your teaching practice what are the reasons?
- Are there any possible challenges of using Blended Learning in teaching your subject? What?

The survey was short with only 10 questions to not overburden the participant but the questions were informative enough to collect the required data to respond to the set research questions. It was decided to ask participants to define blended learning in order to see how they understand it and whether this understanding was correct. The survey also included some demographic questions, e.g. place of work (NIS, public school, lyceum etc.) teaching experience, subject taught etc. The received data allowed tracking whether teachers' attitudes to blended learning depended on their work experience or subject they taught. One of the last survey questions asked for participants' willingness to participate in the interview. Those who agreed shared their contact details and after analyzing the survey results the interview was conducted with five of the most suitable candidates.

## 2. Semi-structured interview.

To support the survey results, individual interviews with five purposefully chosen teachers were organised. Participants were asked seven to ten questions regarding their practice of applying blended learning. As it was planned a semi-structured interview with a set of pre-prepared questions was conducted. Some of the questions were modified according to the participants' answers. This type of the interview was chosen because comparing it to the other types, it has more "knowledge producing potential" because the interviewer can immediately adjust/ add questions depending on the participants' answers (Denzin & Lincoln, 2005). As claimed by Brinkmann and Kvale (2015) "It is defined as an interview with the purpose of obtaining descriptions of the lifeworld of the interviewee in order to interpret the meaning of the described phenomena" (p.6). Thus, it was predicted that the chosen type of interview would allow getting a complete picture and support the results obtained from the survey because the participants were knowledgeable enough to

contribute to the study of the blended learning. The core interview questions were (see Appendix B):

- How would you describe your teaching style?
- How would you describe traditional teaching?
- What teaching methods do you use the most? Why?
- How do you understand the term “blended learning”?
- How do you think its effectiveness is compared to that of traditional methods?
- In your opinion what does a typical blended class look like? What types of activities can a teacher use?

The interview questions corresponded to the research questions and were aimed at exploring the teachers’ attitudes towards blended learning. In some cases, the participants were asked to specify and extend their answers given in the survey.

### **3.6 Data Collection Procedures**

I involved the NIS teachers on a voluntary basis. Firstly, I sent an e-mail to the school administration explaining the purpose and rationale of my study and asked their permission to distribute the survey among the teachers. After I received permission, I sent the link to the survey via e-mail using the school e-mail system that contained the address of the whole school community. The participants were familiarised with the purpose of my study via the email they received with the link to the survey.

As soon as I received the desired number of responses) I moved to the next stage of its preliminary analysis. The answers given on the open-ended questionnaire provided

insight into the researched phenomenon and helped to organise the interview with five purposefully selected educators. The interview venue was chosen by the participants but it was predicted that most probably it would either be a participant's working place or any other comfortable and quiet place outside the school. During the interview, I did not only record the interview but also took reflective notes about participants' answers which were necessary for further analysis.

All the data, (from the survey and the interview) was stored in secure conditions on my laptop protected by a password. The interview audio was transcribed, and de-identified did not contain any personal information of the participants. Data collection process took approximately a month.

### **3.7 Data Analysis Methods**

When the data was collected it was analyzed and reviewed to find out the common themes. It was stored with all necessary precautions to ensure the confidentiality of the participants.

#### **1. Survey.**

Firstly, the survey answers were used as the main source of data to answer the research questions. Since I used an online survey I was able to download an Excel spreadsheet and used it to filter the information according to the participants' responses. The survey answers should have provided enough information to make preliminary conclusions about teachers' attitudes towards blended learning and their abilities to apply it into the practice.

To analyze the received data from the survey, I questioned myself what the possible answers could be and created the code according to emerging themes. Later these

themes were used to aggregate the patterns that were revealed (Stake, 1995). I tried to predict the possible answers the teacher might provide and use them as a code. The table below shows the example of the coding used.

Table 3 <i>Survey results coding.</i>		
<u>Research question</u>	<u>Code</u>	<u>Possible answers</u>
What is blended learning?	1	Usage of ICT in the class
	2	Combination of online and face-to-face teaching and learning environments
	3	Learning through the Internet
	4	Others

*Source: compiled by the author*

Consequently, the received answers were marked using the numbered code which allowed deriving important from multiple appearances. As categories appeared, new information was compared, and codes/categories were renewed. It was important that every piece of the received data corresponded to one category (Merriam, 2009).

1. Interview.

After analyzing the survey, participants were selected for the interview basing on their answers and willingness to participate in the next step of the research. The interview questions addressed the research questions and the selected type enabled me as a researcher to clarify and get more detailed answer from participants to identify their perceptions of blended learning. In addition, I took the recording of all interviews with the permission from the interviewees and I also took notes. Then all information was transcribed with the consideration of the notes taken. The recordings and notes permitted me to recall the main points of the interview. Moreover, I focused on some of the nonverbal cues (e.g. gestures, mimic) and it let me be more precise while transcribing the

interview (Merriam, 2009). Since all the interview was conducted online (according to the participant wish) I used software to record the Skype session.

When the data from the interviews was collected I transcribed the interview and repeat the process of coding. Later, the coded results were analysed twice: firstly, within - to find some similarities in participants' answers. Secondly, it is important to conduct across analysis as well to identify existing relationships between teachers' experience, subject taught and the attitude towards the blended learning

After collecting the complete data, I created themes to categories the results. This helped me to analyse the teachers' attitudes towards blended learning. The use of multiple sources of information also helped to identify the consistency in answers ensuring the validity of the data.

### **3.8 Ethical Concerns and Risks of Research**

It is important for the researchers to be particularly cautious about the potential risks one might experience due to the participation in the study (Creswell, 2014).

One of the researcher's main aims is to ensure that the research is conducted according to the ethical principles and standards. Each participant was treated with respect and their interests and confidentiality were protected. Prior to conducting the research, I made sure that I did not put them in any form of risk. To ensure participants' full understating of the purpose and nature of the conducted study I provided them with the consent form before they start answering questions. Basically, the survey did not allow participants answering the questions if they did not tick the consent box. As for the interview the participants were asked to sign two forms and one copy remained with them. The second interview consent form was stored in my personal desk which was always locked so no one had access to it. To anticipate possible misunderstanding, I specified that

participants took part on the voluntary base and they could stop answering the questions at any stage.

The obtained survey responses were anonymous, and the interviews were recorded, transcribed and coded with the elimination of all personal data (names, place of work, subject taught, etc.). Since the participants were free to choose the venue for the interview they were informed that if they felt comfortable to answer the questions at the working place they had to be sure that the location was not accessible to other people at the time of the interview. In case the participant chose to have an interview outside the school the place had to be quiet without any possible distractions. Since I guaranteed the anonymity for all the participants they were be coded as Participant A, Participant B, Participant C etc. The recordings were stored on my personal laptop secured by the password and would be destroyed five months after the thesis defense to avoid the possible leak of information.

### **3.9 Benefits**

Oliver (2010) shared the opinion that since participation in the research requires time and effort it should be paid for. However, I agree more with Cohen et al.'s (2011) position that inducements could adversely affect participants' motives to cooperate or lead to the distortion of the information provided. Hence, no benefits, compensation or incentives were offered. However, there are numerous benefits as for the particular participants so for the wider teaching community in whole.

It is expected that the investigation of the teachers' attitudes towards blended learning at Secondary Schools level will help to build an understanding of what educators' current practices are and how they perceived blended learning. The gathered information will allow teachers and in a bigger scale school administration to understand how to move forward and what kind of support or professional development courses needed for the

successful implementation of this method. In a smaller scale, the research may simply change teachers' perception towards blended learning since they will identify all the benefits this method may bring, e.g. promote enhanced learning skills, active involvement in learning, and a sense of self-regulated learning.

In a broader context, attracting attention to the benefits of using blended learning will benefit students, parents, teachers, school administration, policymakers and the society in general. Thus, the participants of the study will mainly benefit from sharing their ideas and knowledge regarding this method of teaching.

### **3.10 Limitations**

As a researcher, I understand that there are a few factors that may limit the research results and basically they are predetermined by the chosen methods, sample size and partially by my location.

Firstly, considering the nature of qualitative research, I will have to use open-ended survey questions which are always a risk. The participants may give short or non-informative answers due to lack of their time or other personal factors. As a result, it may negatively affect the analysis and consequently the results of the whole research. The participants may also be unwilling to participate in the interview due to the reasons mentioned above.

Even though I intend to include representatives of different departments the chosen sample size may not be enough to lead to generalisation of the results and talk about the general Secondary School teachers attitudes' towards blended learning.

## **Chapter 4. Results**

### **4.1 Introduction**

This chapter presents the research findings concerning Kazakhstani secondary school teachers' attitudes towards blended learning. The study was aimed at investigating teachers' attitudes toward blended learning at one Kazakhstani Secondary Schools with the focus of identifying possible barriers to implement this method and providing recommendations for teachers, administrators, curriculum developers and policy makers. The qualitative research design allowed for the in-depth exploration of the research questions. The chapter is divided into four main sections. The first section presents demographic data about the participant while the findings on the first research question concerning teachers' attitudes towards blended learning are presented in the second section. This chapter also specifies the teachers' own definitions of blended learning. Possible benefits and a more detailed understanding of blended learning collected through the interview are described in the next section. The last section addresses the challenges and barriers educators may encounter while implementing blended learning.

## **4.2 Participants**

Overall, the findings revealed that participants' attitudes towards blended learning were mainly positive. Teachers shared beliefs that it facilitates individualization, collaboration, increased learners' autonomy and engagement, and promotion of a student-centered learning environment.

The data collection consisted of an open-ended survey and semi-structured interviews with selected participants. The participants for the interview were purposefully selected according to their survey results. Thus, if their answers revealed their expertise in this method they were invited to participate in the interview. Data was collected for two months during February and March of 2019. It was predicted that at least 30 answers for the survey would be received and even though 40 were received, some of them were not

completed. The incomplete surveys, a total of 10, were removed from further analysis. . All the collected data, including the survey responses, and transcribed interviews were stored electronically with consideration for participants’ autonomy.

All 30 participants worked at the same NIS secondary school; 19 of them were females and 11 males. Teachers of different subjects were asked to participate in the survey to see whether the attitudes towards blended learning depend on the subject taught. Most of the participants (10) were teachers of English, there were also teachers of Geography (3), Computer Science (4), Sciences (8) and Maths (5). The majority of participants had been teaching for more than nine years and only four participants had experience of only one-two years. The participant demographic data is presented in Table 4.

<u>Gender</u>		<u>Subject taught</u>					<u>Teaching experience (years)</u>			
Male	Female	English	Geography	ICT	Sciences	Maths	1-2	3-5	6-8	9 and more
19	11	10	4	4	9	5	4	6	5	15

*Source: compiled by the author*

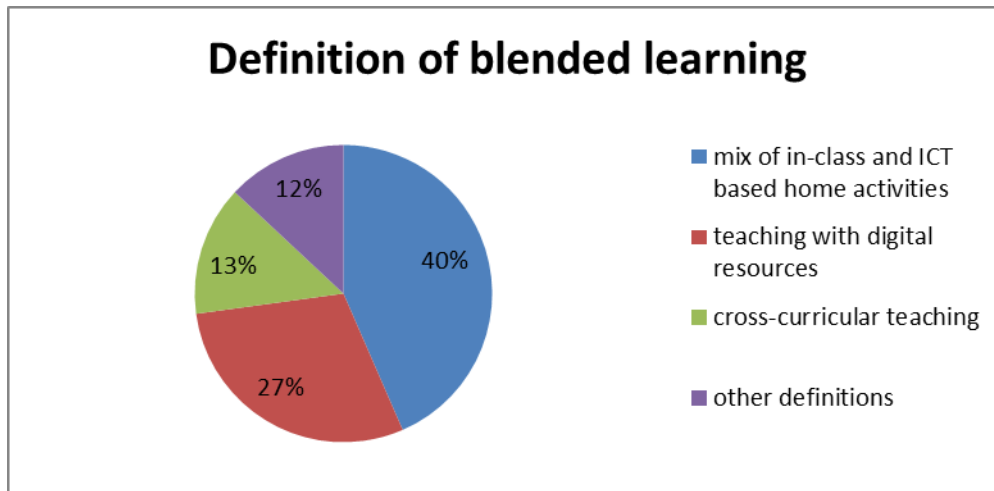
### 4.3 Perception of blended learning

The survey was aimed at identifying teachers’ understanding of blended learning, whether they see any benefits of using it as well as challenges of implementing blended learning.

#### 4.3.1. Teachers’ understanding of blended learning.

The answer to this question was received through the open-ended survey. This type of survey was chosen intentionally despite of the possible danger of not receiving enough answers. Open-ended surveys are more time-consuming for the participants and require more involvement than multiple choices. Nevertheless, its use was important to revealing teachers' personal understanding of blended learning rather than providing them with ready answers. Analysis of the survey revealed that there is a diverse understanding of blended learning among participants but what most respondents had in common was that "blended learning means offering a range of learning resources to students". The majority of the respondents also claimed that blended learning is "a combination of electronic media with more traditional approaches of teaching to teach the pupils". Another popular definition of blended learning was "incorporation of technology in your classroom". Few participants defined blended learning as "the method that may or may not be using ICT but rather application of a variety of techniques and methods in teaching". Figure 1 summaries the most common answers among participants.

Figure 1. Definition of blended learning. This figure illustrates teachers’ definition of blended learning.



*Source: compiled by the author*

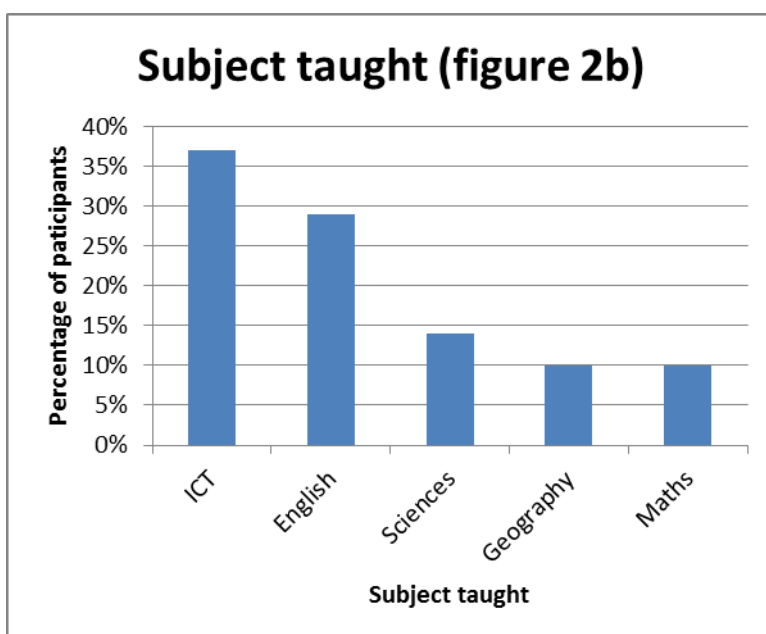
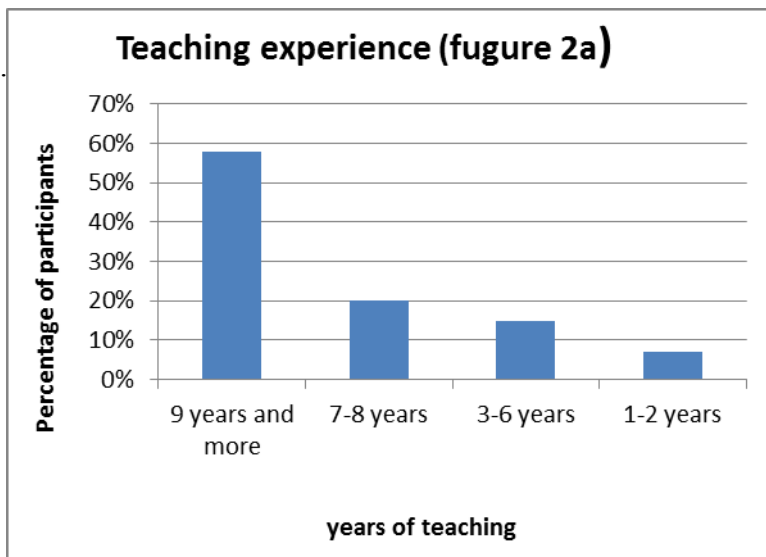
While most of teachers (40%) understood the inclusion of ICT was implied in definitions of blended learning, for some of them blended learning was much more than implementation of a number of electronic and web-based tools (27%). According to the survey answers these respondents specified that the use of a diversity of teaching tools and methods was at the core of the definition of blended learning.

**4.3.2. The impact of teaching experience and subject taught on attitudes towards blended learning.**

Out of 30 respondents 21(70% of the participants) used blended learning in teaching their subjects. The majority of those who claimed to use blended learning in their teaching had over nine years of experience (58%). The teachers with one-two years of teaching experience were in with minority with only 7% of them were in this category. Teachers with three to five and six to eight years of teaching displayed relatively similar results (20% and 15% respectively). Figure 2a summarizes participants responds.

The participants were also asked to specify the subject they teach to see whether there was any difference in their attitudes towards blended learning. Thus, teachers of computer science were the most active supporters of this method (37%) closely followed by English teachers (29%). According to the survey results, blended learning was least applied while teaching Geography and Maths (10%). Figure 2b summaries participants’ responses.

Figure 2. Usage of blended learning according to the teaching experience (2a) and subject taught (2b) The figures show whether there is difference in the use of blended learning depending on teachers’ experience and subject taught.



*Source: compiled by the author*

**4.4. Benefits of implementing blended learning into teaching practice.**

Five participants were purposely chosen for the interview according to the survey answers. The criteria used were participants’ willingness to be interviewed, and their experience of implementing blended learning. It was also important to choose teachers of different subjects and teaching experience to see whether answers would differ. The participants were interviewed one time only. Overall, demographic information is presented in Table 5.

Table 5 <i>Demographic data of the interview participants.</i>			
	<u>Gender</u>	<u>Subject taught</u>	<u>Years of experience</u>
Participant A	Male	Maths	2
Participant B	Male	ICT	9
Participant C	Female	Science	4
Participant D	Female	English	5
Participant E	Female	English	7

*Source: compiled by the author*

The research findings demonstrate prevailing attitudes towards blended learning were positive. Mostly teachers specified that the biggest value of implementing blended learning was its ability to personalize student learning, increase engagement in learning, and improve communication and collaboration between teachers and student peers. A few teachers mentioned that blended learning allows students to be more responsible for own learning and offers real-world relevance. The answers were received through the survey and were more extended during the interview.

**4.4.1. Learners’ autonomous and self-regulated learning.**

During the interview Participant A expressed the opinion that one of the benefits of using blended learning was that it made learners more responsible for their own learning. As an example, Participant A mentioned that students do not have the chance to say that they did not do their homework or forgot the worksheet. Since, blended learning is very organizational, students know where all their assignments and materials are. Participant A also specified that he makes sure that the materials used during the lesson are available in e-version.

I always struggled to make students accountable. You know, they can have thousands reasons for not doing their homework. But, now the situation is different. Both students and parents know that all the materials are online. So now I see how my students become more responsible and organized.

This makes the students feel responsibility and at the same time develops their autonomy in learning. Participant A also shared the opinion of his students who were happy that they can access the resources anytime and anywhere.

...and students told me that if before they had to look for the information they need in different worksheets now it is different. They can revise the material on the bus while commuting to school using their phones.

#### **4.4.2. Real-world relevance.**

Some teachers mentioned that blended learning created a real-world relevance conditions to the students' learning. During the follow-up interview Participant D said:

I was surprised to see how incorporation of ICT into teaching English could support my students in finding that the topics they learn at school could be applied outside of school.

She provided an example where the students were for homework asked to use Pinterest to find five non-famous English speaking countries and some information about them. In class, the students used this information to write an brochure in English using the notes from the homework. The students seemed liked the exercise and in the reflection

they mentioned that they were happy to know about different countries and maybe they would even visit them one day.

Participant E mentioned that secondary school learners often question how the skills can acquired at school be used for the future University studies. As he sees it blended learning itself leads to the development of critical thinking and drastically improves digital literacy skills.

Whenever I question myself whether my teaching style has real life relevance for the students I can answer “yes”. The methods I use not only help them academically but also develop the skills that they can apply at University. I am sure that my students are ready for real life in and outside the school.

#### **4.4.3. Personalization of learning.**

The vast majority of teachers specified that blended learning has positively affected students performance due to the more individual nature of teaching. Teachers can easily provide more ways of doing things. As Participant A mentioned: “Blended learning offers choices but at the same time aims at achieving the same results”.

Blended learning provided choices and personal assistance, and at the same time encouraged learners to learn and be more engaged in the learning process. Participant C showed an example that while explaining some complex concepts in Science she usually takes into account students learning styles. So, before the lesson she presents the material in audial and written form and also considered levels of difficulty. The learners can choose not only the format of the material to study but also its difficulty. As she says:

I am trying to provide different learning opportunities for my diverse students who will eventually achieve the same learning objective but in the way that is comfortable and understandable for them.

Overall, all five interview participants mentioned personalization of learning as one of its benefits.

#### **4.4.4. Increased engagement.**

All five interview participants mentioned that learners are much more engaged with learning when they have an opportunity to use ICT tools. Science teacher B mentioned that while students developed better understanding of a particular concept they learnt, it was noticed that they were much more motivated and engaged into the process. He says what keeps learners engaged is the fact that the teacher can easily provide instant feedback on the work done and it makes them very motivated. Participant D shared the project-based activity she had with the students

Every single student was doing something that they were supposed to be doing. Even the ones who usually sit and do nothing. They were really engaged into learning by themselves. I guess they felt like adults.

Participants also mentioned that this characteristic is very important for Kazakhstani students who are heavily reliant on teachers and their supervision. When the students are engaged in the learning process they not only show better results but also two of the interviewed teachers mentioned that when learners feel that they are responsible for the learning it makes them more engaged.

#### **4.4.5. Improved collaboration**

Participant E mentioned that blended learning is a great method to develop and/or improve collaboration in the classroom. She says that sometimes she makes learners accountable for explaining certain topics to their peers. Usually she intentionally puts students into groups. She mentioned that learners have to communicate and collaborate with each other before the actual lesson they are going to teach.

I provide them with freedom of communication tools. It doesn't have to be ICT. If they want to sit in the library and prepare for the lesson using "old-school" method they can do it. What I insist on is that each person of the team should be responsible for the particular part of their presentation, thus they need to work in collaboration.

As long as the result is achieved I am happy. This is how blended learning works, isn't it?"

Participant B was surprised to see how the students who never participated in discussions became more active after blended learning was implemented into practice.

The student who refused talking in class and worked in a group changed completely. He was a real ICT type of guy. When I created an on-line chat to discuss the text they read he was one of the most active one. So, I created the favorable condition to find his "element".

Overall, the teachers named many benefits of using blended learning approach in teaching their subjects. All five interview participants were able to make their classroom more individualized while increasing students' engagement in the learning process.

#### **4.5. Challenges and barriers of blended learning implementation.**

According to the research results, blended learning is not always perceived as a positive teaching approach. Whereas most of the teachers see it as a beneficial method to teach their subject there are some challenges and in some cases even barriers to implementing this method into practice. Among the most commonly mentioned one were technical issues, lack of materials specific to their subject and time-consuming preparation.

Almost all participants expressed the concern that since this method is "heavily relying on ICT" there is a big risk of being faced with different technical issues. Some of the most commonly mentioned ones were old infrastructure and home Internet access. Participant D complained during the interview that some of the students have the old models of computers which do not support particular software he uses as a platform for pre-class preparation.

I cannot blame my students when they come with this problem to me. I can neither help to solve it. So before uploading the material I have to make sure that all my students can access it.

Participant C provided the following example when the technology reliance let her down.

I spent three hours recording the tutorial explaining the cell structure. What a disappointment I had the next day when my students came unprepared because I used Apple software and they all got Windows. Situations like this make me want to return to the old-fashioned but reliable blackboard.

Participants also mentioned unstable Internet connection as one of the barriers of implementing blended learning. They say that some of the learners struggle to access the video materials due to the low speed of the home Internet. Sometimes learners cannot simply open the video thus they come to the lesson unprepared. Maths teacher, Participant A mentioned:

This is particular for my students who live in the dormitory. Just because all of them use the Internet to prepare for their classes sometimes the speed is very low and they cannot look through the materials I prepared for them. However, I think sometimes they use it as an excuse.

Most of the surveyed teachers mentioned (approx. 58%) that unfortunately there is not enough online material for their subjects. So, it is easier to use the ones they find in the class rather than assign it to learners for independent study and then struggle to find more for the in-class session. During the interview Participant C also mentioned that she mostly uses YouTube videos to show to her students but sometimes they are blocked or deleted due to the copyrights. She shared the concern that you always have to have an alternative plan in case something like this happens.

...I still remember having my lesson observed by the school administration. I told them about the success of blended learning and invited them to my classroom. To my disappointment the video that I put on the site to be viewed at home was blocked. Students came unprepared. That was a mess...

This teacher was so disappointed by this situation that she even thought about moving back to traditional teaching methods and relies more on textbooks rather than online materials:

“I question myself whether I should stop experimenting with “innovative and creative” approaches and make my life simple by using the book...”

Almost all participants mentioned that it is a very time-consuming method since you have to look for materials, upload them, and prepare follow-up materials for the class.

Sometimes I look at my colleagues who teach using traditional methods and think is it worth it? They spend half of the time preparing the same lesson. However, I am still at the start of my “blended learning journey” maybe it will be easier in the future,, [Participant D].

#### **4.6 Summary of the findings**

Overall, the participating teachers’ understanding of blended learning varied from inclusion of ICT into the teaching process to the opinion that this method helps to develop cross curricular links. Results of the research demonstrate a prevailing perception of blended learning as a mix of ICT based and in-class environments. The results also revealed that there is difference of teachers’ attitudes towards blended learning depending on their overall teaching experience and subject they teach. Thus, according to the survey results teachers of ICT and English were more reluctant to use blended learning than those of Maths, Sciences and Geography. It was also revealed that teachers with nine or more years of teaching experience applied blended learning more often than their less experienced colleagues. Most of the teachers viewed blended learning as an effective tool to develop learners’ autonomy and motivation, to increase the level of collaboration among learners and make learning more relevant for the students.

Despite the fact that most of the teachers demonstrated positive attitudes towards blended learning supporting it with the successful examples, some respondents found the preparation stage time-consuming and experienced technology related failures. The next chapter will compare the results with the existing research findings.

### **Chapter 5. Discussion of Findings**

## 5.1 Introduction

This section compares the findings of the research with the existing literature. It gives an overall picture of how the reasonable and meaningful implementation of technology in a blended learning environment influences the teaching and learning processes. The section also provides information about possible barriers while integrating blended learning in the classroom.

The research examined Kazakhstani Secondary school teachers' attitudes' towards blended learning. It was projected that the received results may be used as a tool for developing a deeper understanding of blended learning as a new method of teaching and learning. The following research questions were used in this study:

1. What are Kazakhstani teachers' views on blended learning?

Sub-questions:

- Is there any difference between teachers' attitudes towards blended learning and their teaching experience?;
  - Is there any difference between teachers' attitudes towards blended learning and the subject they teach?
2. What are the barriers and challenges to implementation of blended learning in Secondary schools in Kazakhstan?

The data for this qualitative research was collected through open-ended surveys and semi-structured interviews.

The data analysis showed that teachers' understanding and attitudes' towards blended learning varied. There was also a difference in implementation of this method depending on the subject taught and the teaching experience. Generally, teachers agreed

that integration of blended learning promoted the development of 21<sup>st</sup> century skills. It helped learners to become more autonomous in their studies, as well as increase their communication and engagement in the learning process. Moreover, blended learning made learning more relevant and personalized for the students in teachers' opinions. However, teachers revealed several barriers while implementing blended learning, such as technical issues (mainly related to the Internet), lack of online subject-specific materials and the time-consuming prep work required to successfully implement the method.

## **5.2. Perceptions of blended learning**

Since blended learning is a new educational phenomenon for the Kazakhstani teachers taking part in this research, the way they defined blended learning varies considerably. Some teachers mentioned that blended learning must include ICT whereas others agreed that blended learning can be without any computers as long as it includes learners who collaborate to educate themselves. What teachers agree on is that blended learning is a very powerful pedagogical tool. Solomon (2002) also emphasizes that with the opportunities of modern technological, it is "the pedagogical way in which the blend is used that makes the difference in student learning" (p. 35-50).

As one of the participants defined "blended learning is the combination of the best practices: online and face-to-face". This agrees with the expert opinion of Graham & Osguthorpe (2003) who define blended learning as combination of face-to-face and ICT methods targeted at finding the balance between technology and human component. Considering the diversity of teachers' definitions of blended learning it was interesting to find out that the combination of their responses compose the working definition of this thesis provided by The North American Council for Online Learning "*Blended learning* is a teaching and learning approach characterized as a combination of the effective classroom

and online environments allowing equal possibilities for learning across groups of diverse students”.

### **5.2.1 Perception of blended learning based on subject taught and teaching experience**

One of the research sub-questions was focused on identifying whether there were differences towards blended learning based on teacher experience or the subject taught. Modern literature does not provide information about this question thus the results will be based only on this study’s respondents’ answers and can be considered a new result in the field

The survey results showed that it was ICT teachers who used blended learning to the largest extent. This might not be surprising considering the technological nature of their subject. English teachers were the second category who claimed to use blended learning more than any other subject teachers. This could be explained by the variety and availability of online materials that could be used for the online component of the blended learning approach. Another possible reason could be the communicative and collaborative nature of the subject. Teachers of Maths and Sciences were the one who claimed they did not use blended learning a lot mainly because of lack of online materials in their subjects. One of the Maths teachers mentioned that he could not devote that much time searching online materials so he preferred to use books.

Another important point was to identify the difference towards blended learning among teachers with different teaching experience. The results were surprising. It was assumed that young teachers would be more open to new methods of teaching but in fact they were the minority of those using blended learning. Teachers who had more than nine years of teaching experience were in a prevailing majority of blended learning supporters. Since there is no literature related to this issue it could only be assumed that young

professionals were not willing to implement this risky method because of the fear of making mistakes and/or not achieving positive results. At the same time more experienced teachers might have been tired of using traditional methods and realized the necessity of shifting to some new approaches.

### **5.3 Benefits of implementing blended learning into teaching practice.**

The literature supported the research findings of the benefits and barriers while implementing blended learning. Multiple researchers (i.e., Handy & Braley, 2012; Poon, 2013) found similar results to this study that showed that using technology in teaching creates the conditions for individualization and personalization of learning and it is an effective method to engage learners. The reflective nature of modern teachers was demonstrated when the majority of them agreed with Roblyer and Doering (2010) that technology is not an ultimate answer but a teaching tool to be implemented correctly “the application of technology influences performance, not as a delivery system, but as instruction that works under certain circumstances” (p. 13). During the interview conducted in the scope of this research all five participants mentioned a few times that they were against using technology in the classroom if there was not a need for it. Moreover, meaningless application of ICT into teaching does not create any conditions for successful teaching and learning. Teachers agreed that there should be a balance and smooth integration of technology and face-to face practices.

Surprisingly, none of the surveyed and interviewed teachers mentioned about the role of blended learning as a tool to develop 21<sup>st</sup> century skills though it was widely described by different authors. For instance, Van Dam (2012) mentioned that, teaching students to apply and use technology in their learning has a direct impact not only on their current progress but also prepares students for the 21st century workforce.

### **5.3.1. Learners' autonomous and self-regulated learning**

As indicated by Osguthorpe and Graham (2003) one of the major objectives of blended learning is to create conditions for learners' independent study. This study's participants mentioned that the focus on self – directed learning was a main reason for using blended learning

A majority of the research participants specified that the integration of blended learning into teaching their subjects had drastically improved learners' autonomous learning. During the interview Participant A mentioned a few times that this method allowed her to shift the learning responsibility towards her students. These findings agree with the research of Ignatova, Dagienė, and Kubilinskienė (2015) who found that implementation of technology changes the teaching approaches allowing teachers to facilitate the learning process. The majority of the surveyed teachers in this study specified that blended learning let their classroom become more student-centered allowing learning to be autonomous and self-regulated.

### **5.3.2. Real-world relevance**

One of the benefits of blended learning found in this study was its real-world relevance. Teachers mentioned that modern learners want to study and use material that is not only useful, and age-appropriate but also allows them to see how they could apply the concepts to the real world. Participating teachers mentioned that when students see how to apply the given knowledge to the reality they are more willing to perform the task.

Moreover, the findings of this research showed that secondary school learners want to develop the skills necessary for their further studies. This was also mentioned in multiple studies. For instance, Handy and Braley's (2012) research revealed that teachers' perceived blended learning as promoting more individualized skill-based research which

develops the skills important for University studies. Blended learning positively affects the development of digital literacy necessary in postgraduate careers. According to one the researches 90% of secondary school students thought that computer skills are necessary for University studies and they wished to spend more time on its development while studying at school (Hall, Nix, & Baker, 2013). Similarly, Shailaja and Sridaran (2015) agreed that digital skills are important in shaping learners' future studies and careers.

### **5.3.3. Personalization of learning**

Past researches have shown that teaching will only be effective when it considers the interests and needs of each individual learners. No longer should education focus on the "average student". Learners cannot and should not be educated using the same methods that were used in the past. Delialioglu (2012) claims that the technological nature of the modern world alters the learning environment from passive to more active allowing learners to choose the most appropriate methods for learning. Participants in past studies have mentioned modern learners are actively involved in what and how they learn (Bassendowski& Petrucka, 2013). Current research proved that blended learning creates the opportunities for this choice. As mentioned by the Participant C "learners can choose not only the format of the material to study but also its difficulty".

As the research findings show, using technology provides opportunity for teachers to assist each learner in the learning process (Headden, 2013). Participant C in this study mentioned during the interview about the importance of considering the learners' styles of acquiring knowledge. This participant felt that blended learning allowed learners to work at their own pace thus creating equal learning opportunities for different types of student learners. This is in line with Karsenti and Fievez (2013) and Poon (2013) who specify that blended learning is also a very flexible method and does not leave any student behind.

#### **5.3.4. Increased engagement**

Almost all participating teachers in this study highlighted that technology engaged learners in the learning of their subjects. Similar results were found in the study by Saritepeci and Çakir (2015) where they showed that ICT made learners more engaged and interested in studying. Some teachers in their study expressed concern that this engagement did not correlate with the achievement results. However, the researchers were confident that proper integration of blended learning approach into teaching would have positive effects on learning (Saritepeci & Çakir, 2015).

Numerous studies focused on learners' engagement are often framed within the constructs of self-regulated learning (SRL). Dembo and Eaton (2000) defined SRL as "the ability of students to control the factors or conditions affecting their learning" (p. 474). Unfortunately, Kazakhstani teachers mentioned that secondary school students are still dependent on their teachers and parents for motivation. This attitude can create unfavorable conditions for implementation of blended learning. However, when a teacher creates the conditions and cultivates the environment focusing on developing self-regulated learning "it can lead to greater academic achievement" (Dembo & Eaton, 2000, p. 450). A number of survey participants in this study mentioned that incorporation of blended learning into teaching has a positive effect on learners' interest in studying a particular subject. This is in line with Larson and Sung's (2009) study that showed that the use of the blended learning approach produced more interest among learners compared to online or face-to-face approaches. The results of this research also showed improved collaboration among learners through blended learning in the opinion of the interviewed teachers.

#### **5.3.5. Improved collaboration**

During the current research it was found that teachers' understanding of blended learning varied greatly since each individual puts something personal into it depending on their experience and teaching philosophy. What they agreed on was that it allows students to communicate and collaborate better.

Florian and Zimmerman (2015) supported by Downing et al. (2014) showed that even though teachers used various tools of blended learning approaches they all specified how it created and improved on the overall collaborative classroom culture. Although, Participant E of this study did not use any ICT tools to promote blended learning she was confident about the increased level of communication and collaboration among her students.

One of the teachers mentioned that she was surprised when she noticed that some of the learners who were naturally reluctant to participate in traditional face-to-face discussions were willing to participate in the online component of the blended course.

It is apparent that since blended learning is a new educational phenomenon for Kazakhstani schools the teachers must still get used to it and concentrate a lot on the challenges that go along with the successes. Buckenmeyer (2010) specifies that teachers need time to learn how to effectively implement technologies and then they would not be focused only on barriers.

#### **5.4. Challenges and barriers of blended learning implementation**

The analysis of the existing literature corresponded to the answers of the Kazakhstani teachers in terms of common barriers to blended learning implementation. Among the most common answers were technical issues, lack of online subject-specific materials and some teachers found it more time-consuming compared to traditional methods.

While unfortunately poor Internet reception is still a reality for Kazakhstani society the earliest evidence of this problem was reported in 2012. Crichton, Pegler, and White (2012) reported a similar barrier to blended learning implementation in Tippecanoe School District in Indiana. They suggested to “sync, power, maintain, and manage personal devices in public settings” to avoid this problem (Crichton, Pegler, & White, 2012, pp.23-29). SPED plans to improve this situation by 2020 supplying 90% of educational institutions with the stable Internet connection. Another reported issue was lack of Internet sources for the specific subjects. Kazakhstani teachers found it frustrating and time-consuming finding materials for learners’ independent studying and follow-up classroom instruction. One teacher expressed concern that she had to compromise and she decided to focus purely on traditional teaching. She repeated several times that she could not devote that much time searching for the materials. Rismark and Solvberg (2011) found a similar problem during their study and suggested that teachers should share the materials they have so that it would ease the lesson preparation while implementing blended learning. They believe that “knowledge is acquired when teachers share” (Rismark & Sølvsberg, 2011) mention that not only learners would know something new but also teacher could improve their knowledge.

## **5.5 Summary**

Overall, the research showed that teachers have positive attitudes towards blended learning but there is still a certain degree of skepticism towards this method. It is suggested to the school administration to focus on integrating technology to enhance learning. This recommendation correlates with one of the objectives of the SPDE that suggests “developing electronic textbooks and teaching materials in e-learning”. Technology implementation would have a multiple advantages for teachers and learners. It would allow

having access to the up-to-date materials thus creating conditions for the authentic learning.

It is also recommended that the teachers collaborate with colleagues to create the three frames of knowledge—content knowledge, pedagogy knowledge, and technology knowledge (Koehler, Mishra, & Cain, 2013; Paily, 2013). Considering the extensive nature of these three frames it is apparent that implementation of blended learning into teaching is challenging but a rewarding process (Koehler et al., 2013). It was found in this study that blended learning helped to shift teaching from teacher-centered to student-centered which encourages active learning and that various online educational tools offer students a chance to engage in the learning process (Anwar, 2011; Chickering & Ehrmann, 1996; Williams & Chinn, 2009). Moreover, using technology as one of the tools of blended learning supported learners in being more active by promoting new and effective ways for them to communicate and collaborate (DePietro, 2013; García-Valcárcel et al., 2014).

## **Chapter 6. Conclusion and Recommendations**

### **6.1 Introduction**

The purpose of this research was to explore Kazakhstani Secondary School teachers' attitudes towards blended learning. It was also intended to explore not only the benefits but also the possible challenges of this method. This section provides the study's strengths, limitations, and some recommendations about how to improve the limitations of this approach. This chapter will also specify the direction of future research. It is hoped that the findings of this research may encourage others to extend the study area on the effectiveness of blended learning.

Throughout the research, it was obvious that teachers who use blended learning in their practice felt it had a positive impact on students' achievement. According to the survey and interview this approach helped teachers to produce more individualized, and student-centered activities while also providing greater real-world relevance. At the same time, however, teachers revealed several challenges such as technical issues, lack of online subject specific materials and time-consuming preparation.

Since the research focused on benefits and barriers of blended learning implementation one of its outcomes addressed teachers' concerns and some recommendations were given.

### **6.2 Research strengths**

The results of the research extend the existing knowledge and provide objective first-hand data about teachers' attitudes towards blended learning in the Kazakhstani secondary school context. It also created an opportunity for a deeper understanding of the phenomenon, attracted teachers' attention and raised their awareness of the concept. A few

teachers who had not heard about this method before expressed the willingness to know more and apply it to their practice.

Even though the research findings did not bring any dramatic changes to current teachers' practices, it has still provided them with some insights about implementing blended learning into the teaching process. This could lead to the creation of an action research team to investigate this educational phenomenon.

Finally, blended learning is not researched enough in Kazakhstani context. Thus, this research partially fills a variety of gaps on this educational phenomenon. It shows teachers' attitudes towards blended learning and can be used as a base for the further research in the same topic area.

### **6.3 Research limitations**

Even though the stated research questions were answered, there are a few limitations which need to be addressed in further research related to the topic. Unfortunately, some of the teachers' responses could be assumed to be unintentionally false. It is still a part of the Soviet era culture for some of the teachers not to accept the fact of not knowing something. Thus, some of the teachers provided fake information during the survey because of the fear to appear not knowledgeable enough. One of these teachers was chosen for the interview and their interview answers were quite divergent from reality. This research focused on the opinion of teachers in one school and it is an obvious limitation since it is impossible to generalize the results on the whole population and claim that the obtained results are the same throughout the whole Republic. The results may also shift a lot if the research was conducted in public schools because the level of innovative pedagogical skills there would be different from NIS' teachers.

Since the method chosen for this research was qualitative it did not allow seeing the depths of variables dependence, e.g. how the teachers' age experience influences the perception of blended learning. To ensure more reliable data triangulation of a few lesson observations could have been organised. In addition, only one interview was conducted with each of the five selected participants. Follow-up interviews would have helped to clarify and deepened the researchers understanding of some of the examples given by the teachers. . Ideally, it is suggested to have a few follow-up interviews after the analysis of the main one to ensure that all questions were asked thus the data will be more reliable.

#### **6.4 Recommendations for teacher practice**

The recommendations are composed in relation to the problems identified during the research. One of the solutions to improve teachers' awareness and confidence while using blended learning is to promote a collaborative culture at school. If those teachers who are already experienced enough in applying this method could "advertise" it to the colleagues and support its implementation. This would drastically change most of the teachers' attitudes and eventually their practices. Technical issues with the Internet, teaching educators how to search for online materials should be solved through professional support. It is advisable to create a more supportive and encouraging environment at school through informal collaborative practices and promote research-based practices for personal investigations of the educational phenomenon. It could also be useful to establish professional development programs in order to help teachers to build awareness of blended learning and its benefits.

#### **6.5 Future research directions**

Future research could also determine the relation between blended learning and learners' achievements. This could be the quantitative or mixed method research that would

allow for one to track the degree of blended learning's influence on students' achievements. This research could have two experimental groups to compare and contrast how blended learning affects students' results.

Comparative case study of different schools that use blended learning practices will also be useful to receive more accurate and precise data. It would be useful to compare the results in mainstream schools and NIS since these schools possess different infrastructures, teachers' professional development and students' level of achievements.

Overall, blended learning is a pedagogical approach that combines the online delivery of content and face-to-face instruction with some element of student control over time, place, path, and/or pace. Blended learning may increase learners' participation, make them more accountable for own studies, develop communicative and collaborative skills. It also aims at making teaching and learning more relevant and hopefully more personalized.

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## Appendices

### Appendix A. Informed Consent Form

#### Kazakhstani Secondary Teachers' Attitudes towards Blended Learning

**DESCRIPTION:** You are invited to participate in a **research study** on investigating teachers' attitudes, beliefs and practices towards blended learning. You will be asked to participate in an online survey and answer 10 questions.

**TIME INVOLVEMENT:** Your participation will take approximately 20-30minutes

**RISKS AND BENEFITS:** There are no risks associated with this study. The benefits from this study are the expected change of your perception towards blended learning since you will identify all the benefits this method may bring, e.g. promote enhanced learning skills, active involvement in learning, and a sense of self-regulated learning. Your decision whether or not to participate in this study will not affect your employment at school.

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

#### CONTACT INFORMATION:

**Questions:** If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact the Master's Thesis Supervisor for this student work

**Independent Contact:** If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the NUGSE Research Committee to at [gse\\_researchcommittee@nu.edu.kz](mailto:gse_researchcommittee@nu.edu.kz)

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

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

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

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

**Appendix B. Survey questions.**

**Thank you for your time in completing this survey. The answers are mostly open ended but this is so that I can understand in more depth your ideas about blended learning.**

1. Gender

- Male
- Female

2. Where do you work?

- NIS
- Public School
- Private School
- Language Courses

3. What subject do you teach?

- |           |             |                 |
|-----------|-------------|-----------------|
| • English | • ICT       | • Languages and |
| • Maths   | • Geography | Literature      |
| • Biology | • Economics |                 |
| • History | • Physics   |                 |

4. What is your overall teaching experience?

- 1-2 year
- 3-5 years
- 6-8 years
- 9 and more years

5. How can you define blended learning?
6. Do you use Blended Learning in your teaching practice? Yes/No  
*In case the person answers YES he/she moves to questions 7,9,10; if the answer is NO the person moves to question 8*
7. What do you think the benefits of this method are? \_\_\_\_\_
8. If you do not use blended learning in your teaching practice What are the reasons? \_\_\_\_\_
9. Are the possible challenges/barriers of using blended learning in teaching your subject? What?
10. If you are willing to participate in an interview, please leave your e-mail and/or phone number and I will contact you \_\_\_\_\_

### **Appendix C. Interview questions (semi-structured interview)**

**Thank you for agreeing to complete this interview. I appreciate the time you are taking to help me with this research. If at anytime you wish to skip a question, take a break or stop the interview you only have to tell me.**

- How would you describe your teaching style?
- How would you describe traditional teaching?
- What teaching methods do you use the most? Why?
- How do you understand the term “blended learning”?
- How do you think its effectiveness is compared to that of traditional methods • in your opinion what does a typical blended class look like? What types of activities can a teacher use?
- What do you think are the key elements of a successful and effective blended learning environment?
- Since you use blended learning, how do you combine face-to-face, online learning and other types of students' activities in one single class, so they will support each other?
- What are the challenges a teacher can face while implementing blended learning?
- Many people say they may try blending learning and it does not work for them. Considering your own experiences, what common reasons do you think might be causing blended learning to fail in some cases?