DOCTORAL (PhD) DISSERTATION

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TEACHERS' INFORMAL AND NON-FORMAL LEARNING IN MULTILINGUAL EDUCATION:

THE CASE OF KAZAKHSTANI HIGHER EDUCATION

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DOCTORAL (PhD) THESIS

Teachers' Informal and Non-formal Learning in Multilingual Education:

The Case of Kazakhstani Higher Education

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Signature of dissertation author

Table of Contents

List of Acronyms

ME – Multilingual Education

OECD – Organization for Economic Co- operation and Development

MES of RK- Ministry of Education and Sciences of the Republic of Kazakhstan

NIS – Nazarbayev Intellectual School

USSR- The Union of Soviet Socialist Republics

SPED – The State Program for Education Development in the Republic of Kazakhstan

EHEA – European Higher Education Area

HEIs – Higher Education Institutions

ECTS – European Credit Transfer and Accumulation System

NU – Nazarbayev University

PD – Professional Development

NPDC – National Professional Development Center

UNESCO – The United Nations Educational, Scientific and Cultural Organization

ELTE – Eötvös Loránd University

RoMME – Researchers of Multilingualism and Multilingual Education

CLIL – Content and Language Integrated Learning

BIL – Bilim Innovation Lyceums

KarSU – Karaganda State University

CPD – Continuous Professional Development

FDP – Faculty Development Program

UDL – Universal Design for Learning

CT – Complexity Theory

ICT – Information and Communication Technology

RSU – Regional State University

RNU – Regional National University

NL – Non-formal learning

IL – Informal Learning

List of Figures

List of Tables

CHAPTER I: INTRODUCTION

1.1 Background of the problem

The concepts of informal and non-formal learning have recently started to be used widely in the world. Currently, most of important and relevant knowledge, skills are acquired through the lens of informal learning. Informal learning contains discussions, communication, collaboration, mentoring, social interaction, and group work (Le Clus, 2011). Informal learning also results in collaboration or networking among the colleagues who are expert or more competent in a specific area in order to assist in gaining knowledge and insights where learners may or may not have disposition when learning happens; learning can also be fulfilled implicitly in the process of doing some activities as well (Le Clus, 2011). Especially, in the process of implementing new educational reform (multilingual education program) in the context of higher education institutions, teachers' informal and non-formal learning is a necessity.

1.2. Problem Statement

Formal learning – intentional, organized and structured, guided by curriculum or other type of formal program.

Non-formal learning- may or may not be intentional or arranged by an institution, loosely organized, no formal credits granted.

Informal learning- never organized, guided by a rigid curriculum, experiential and spontaneous (OECD n.d.; Werquin, 2007).

Informal learning is a part of learning continuum and regarded as a means of acquiring knowledge and skills in informal conditions and as indicated by Matthews (2013) 70 per cent of knowledge and skills are gained informally. The role of informal and non-formal learning is more important for the academics particularly in the process of implementing and integrating new educational reform. In the context of higher education institutions, teachers' learning, and their professional development plays a pivotal role, contribution of which to students' academic achievements is crucial. The issue of introducing and supporting innovation practices in the education systems brings about changes, and it is essential to consider the local interests, will and capacity in the implementation strategy to put into practice educational reform (McLaughlin, 1990). The motivation and will, needs and interests of teaching staff responsible for implementation are relevant and indispensable in order to reach successful practice of innovation in the field of education (McLaughlin, 1990). In addition, the pattern of innovative process is usually accomplished by the agents (inventors, adopters, national development agencies, researcher and

practitioners, educational entrepreneurship etc.). They collaborate and cooperate on specific issues and creating new practices and ideas (Halász, 2018).

It is important to study and explore teachers' informal and non-formal learning in multilingual education in the context of Kazakhstani higher education institutions. "Both formal and informal learning are regarded as core processes in the development of multilingual identities and skills" (Björklund et al., 2013). Introduction of multilingual education as a new educational reform in Kazakhstani universities led to a variety of challenges and obstacles mainly for teachers in the process of practical implementation. It focuses on teachers' learning who conduct lessons in multilingual groups. The main issue is that teachers were not formally prepared for the multilingual program in terms of methodological and pedagogical perspectives since the courses should be taught in English. In one hand, teachers encounter a range of challenges in conducting and delivering lectures and preparing seminars in foreign language, on the other hand they suffer from the lack of teaching resources leading them to the paucity of their time and overloadness. Informal and non-formal learning opportunities are the basic ways for their professional improvement and personal growth as well as for adapting to trilingual program.

1.3 Research strategy
1.3.1 *Purpose of the research*

The author of this research attempts to examine teachers' learning in terms of informal and non-formal conditions in the context of multilingual education in Kazakhstani universities. The purpose of this study is to explore how faculty members participate in multilingual education program and what kind of main challenges they encounter; how university teachers learn informally and non-formally in the context of multilingual education; how teachers participate in informal learning activities as well as how faculty leaders contribute and support academic staff in the development of multilingual education. The main focus is two different universities situated in the Northern part of the country. It also aims at identifying the possible and important insights, suggestions and advice from Hungarian experts related to the educational policy implementation.

1.3.2 *Research questions*

The basic research questions that we are intending to explore are how the faculty members' informal and non-formal learning facilitates the development of multilingual education in the context of Kazakhstani higher education institution. In this study there are three main research questions followed by their sub-questions:

1. **How do the teachers participate in the multilingual education program in Kazakhstani higher education institution?**

Hypothesis 1: Teachers' participation at regional state and national universities level's multilingual education is ambiguous and is possible to discover different attitudes and towards it, as we are investigating the activities of teachers belonging to different scientific disciplines.

1.1 How do the teachers get prepared to participate in the multilingual education program?

1.2 What challenges do the teachers and professors encounter while working in multilingual program?

2. **How do the teachers practice informal and non-formal learning in multilingual program?**

   Hypothesis 2: At regional state and national universities level teachers participate intensively, at daily level in informal learning activities for making better the ME and is possible to explore different learning patterns as we are investigating the activites of teachers belonging to different scientiffic disciplines.

2.1 What kind of typical teacher clusters can be identified in multilingual education? What is their typical approach to the concept of multilingualism?

2.2 What kind of informal and non-formal activities they are engaged in?

2.3 How do the teachers learn and participate in informal learning activities in the frame of multilingual education program?

3. **What kind of views do the faculty leaders have on multilingual education?**

   Hypothesis 3: At the regional state and national universities level faculty leaders intend to support multilingual education development but, in some cases, they are lacking tools for greater effectiveness.

3.1 What kind of support and motivation faculties are providing to the teaching staff?

3.2 How do faculty leaders interpret faculty members' informal and non-formal activities in the process of multilingual education?

4. **How to make more successful and efficient the implementation of multilingual education program in Kazakhstani HEIs?**

4.1 What kind of important actions should be accomplished at Macro, Meso and Micro levels?

1.4 Definition of key terms

In the current research, there are several important definitions to facilitates the understanding of the terminology used in this study such as: multilingual education, formal learning, non-formal learning, informal learning. The term *multilingual education* used in the current research identified by Bialystok (2018) as *bilingual education* the implementation of more than one language used in a formal education and curriculum as medium of instruction for the science subjects and without matching the language of community. The concept of *formal learning* used in the current research

is given by OECD Werquin (2007) determined as an intentional, organized, structured and conducted by curriculum. *Non-formal learning* defined as a somehow organized, without leading to certification, may or may not be intentional type of learning. Whereas *informal learning* is designated as a non-organized, experiential and spontaneous type of learning (Werquin, 2007).

1.5 Significance of the study

Current research study deals with the significant issue related to university teachers' learning formality which is, as far as we know, not explored in the context of Kazakhstani higher education: formality of learning in terms of informal and non-formal conditions, conceptualization of educational policy mainly of multilingual education. This study is dedicated also to the importance of exploring teachers' informal and non-formal learning in the context of multilingual education in Kazakhstani universities. In the framework of this project, it investigates informal and non-formal learning activities in which teachers are, what kind of challenges they encounter.

 This study is significant in terms of *educational research:*

This research may serve as an important theoretical implication in terms of informal and non-formal learning for the Kazakhstani research development.

- It provides with future research opportunities for the study of multilingual education and its peculiarities as an important theoretical input.

This study is significant in terms of *educational policy:*

- This research study may serve as an important input for the policymakers to be aware of the implementing process of multilingual education program as a reform at Kazakhstani universities. The research results can be useful for policymakers to make a revision for the educational policies in order to advance and facilitate to the development of multilingual program.
- This study may assist to the policymakers for directing to the contextual issues while implementing a reform in practice. Taking into consideration the findings identified in this research, policymakers may facilitate educational institutions with possible and necessary needs for reaching effective and successful implementation of multilingual program in practice.

This study is significant in terms of *Teachers' learning:*

- This study facilitates to the teachers' learning in terms of informal and non-formal conditions. As a result of this study results, it addresses and provides with detailed

information dedicated to the teachers informal and non-formal learning activities in the frame of multilingual program.

- It provides the teaching staff with specific informal and non-formal learning activities that may be useful for university teachers in adapting to a new reform to make effective professional development.

This study is significant for *Faculty leaders:*

- This research identifies the main challenges and hindrances the university academics encounter in the process of implementation practice of multilingual program. These results may assist the faculty leaders to prevent and eliminate the gaps. It may also help them to determine the weaknesses and strengths of the faculty members and put much effort where necessary to provide support.
- It provides with the essential theoretical input for the faculty leaders in term of the implementation of faculty development programs in Kazakhstani higher education institutions for providing effective and successful professional development for the teaching staff.

The significance of this study is provided in detail related to the theoretical and practical implications as well as contribution for the further investigation on the bases of this research results.

1.6 Structure of the dissertation

Current dissertation consists of five chapters including literature review, research methodology, and research findings. The introduction part involves the problem statement, research aim and research questions as well as definition of key terms and research significance.

Chapter two is dedicated to the literature review presented in two sub-chapters. The first sub-chapter provides with the theoretical background related to educational policy development and consists of two sections. The first one is devoted to the investigation of educational policy in the context of Kazakhstan, mainly "Trinity" program in the field of higher education institutions. The latter one discusses higher education system's reforms where a variety of state actions and programs were implemented to reach the goal. The second sub-chapter explains the different aspects towards the conceptualization of multilingual education. It consists of four sections where multilingual education development was explored from different perspectives and different contexts. First section elaborated multilingual education development in the international practices where the peculiarities of different countries are discussed. Second and third sections of this sub-

chapter presents the national examples of multilingual education practices in the context of Europe as well as in their higher education institutions. Fourth and fifth sections discuss the issues dedicated to the multilingual education in the context of Kazakhstan where different models and actions were stated in detail.

Following the literature review, *chapter three* also encompasses two sub-chapters and sections. The first sub-chapter dedicated to the understanding of learning formality. Two sections present the importance of transformative and professional learning. Second sub-chapter witnesses the conceptualization of formal, informal and non-formal learning peculiarities. These sections underline and present most important approaches towards the understanding of informal and non-formal learning.

The fourth chapter provides insights into the research methodology and research design peculiar to the given research. It presents philosophical assumptions and knowledge framework implemented by the researcher. The rationale explanation of research methods, participants and details of the sample size, data collection and data analysis procedure are presented. It also outlines the key ethical considerations as well as limitations in this part.

The research applied qualitative method with pre-set semi-structured interviews as well as online survey designed by qualtrics software, and the implementation of interview questions allows to interpret and answer the research questions. The involvement of the university teachers, academics, professors and faculty leaders assists in thorough exploration and investigation of teachers' informal and non-formal learning in multilingual education at universities.

Chapter five presents the research findings and results according to the classified clusters as the main findings of the study. It consists of several sections dedicated to the background and description of the universities, and four types of clusters as well as responses to the research questions and every sub-questions. It also encompasses the results from the conducted online survey.

Chapter six presents the research results of faculty leaders' interview analysis by underlining their approach towards the understanding of multilingual education practice as well as their motivation and support for the faculty members withing the program.

Chapter seven presents the research part dedicated to the identification of insights; suggestions related to the implementation of educational policy from Hungarian educational experts revealed through the use of semi-structured interview analysis.

Chapter eight presents the discussions of research results related to the research questions as well as in terms of literature review related to informal and non-formal learning in multilingual education at universities.

The final part of the dissertation offers conclusions, theoretical and practical implications for Kazakhstani practitioners, policymakers, and teachers and recommendations for future research.

CHAPTER II: LITERATURE REVIEW

2.1 Theory of education policy development

The complex phenomena what the dissertation intends to analyze is the result of new educational policy reform. For better understanding the context of the investigated area it is important to understand how education policy is formed and how it influences on the educational institutions (Bell & Stevenson, 2006).

Viennet and Pont (2017) characterize education policy as the actions taken by the governments which are connected with the practices in the field of education as well as the attitude of the government to the delivery and production of the policy in a definite system. Rayou and van Zanten's (2015) definition similar: they identify education policies as the developed programs by the public authorities considering the values and ideas referred to the education actors and applied and incorporated by the administrators and education professionals.

Passing a policy and making a strategy and imposing it into regular practices for the different actors like teachers, administrators of educational institutions, and local communities is a complex phenomenon, and especially difficult in the education sector (Wurzburg, 2010). Therefore, the peculiarities of implementing specific educational policy can be put as the responsibility of administrators and teachers to identify, at the same time with such kind of implementation process of educational policy may be left half-way. That is why, not all educational policies may be fulfilled as it planned before, or it may have unfortunate consequences. Experts, government actors do emphasize the importance of focusing mainly on the implementation process of policy in education to avoid different kinds of disrupts and failures (Viennet and Pont, 2017, p.8).

Education policies may cover several issues such as learning environment, preparation of the students for the future, the quality of education, learning outcomes, evaluation, funding issues and other mechanisms (OECD, 2015).

"In education, there is often a vast distance between policy and practice" (Hess, 2013). While implementing new educational policy the poser like "do teachers have the skills to teach this new curriculum?" is often missed out. Viennet and Pont (2017) it is not easy to evaluate the failure of the policy implementation due to its effectiveness of making or failed application which in its turn may result in hazardous interventions. Furthermore, due to the failed policy implementations it may cause several diverse negative reactions from the perspective of people disappointing society occurred by the policymakers and other actors of education sector. Therefore, the main rational point is to pay attention to the strategy design and focus on the accomplishment procedure of a specific education policy (ibid, p.11).

The education policy framework realizes the significance of indicating the policy content and the policy making process and in social context how the effort and power is allocated and implemented in education policy (Walt and Gilson, 1994, Taylor et al., 1997, deLeon and deLeon, 2002, Buse, Mays, and Walt, 2005, Bell and Stevenson, 2006, and Rizvi &Lingard, 2010; Mmari, Kovacs & Kalman, 2022[1]).

According to the findings of the Rand Change Agent study it is hard for policy to alter the education practice from the government levels with a top-down strategy. Its results emphasize the paramount change of researchers, policymakers and practitioners' thought or approach on understanding planned shift in the field of education. The study launched in the midst of 1970s presented the first federal level endeavor to make educational practice changes in the local level. While formulating this educational initiative the policymakers presumed the direct relation among federal policy, local responses, and program results (McLaughlin, 1990).

The Rand study highlights the important role of federal agents and local actors in the development of educational policies who will develop and disseminate it further. Major impact is put on the local agents and actors while developing or implementing educational reform. However, as the Rand Change Agent study is dedicated to the introduction of innovation in schools particularly in district schools much effort is to be given to the local actors and agents' active commitments that develop and support this educational reform. In accordance with McLaughlin (1990) one of the most essentials in putting educational policy into practice in the local area is the effective implementation strategies in the Rand study about innovation in district schools include the following:

- extensive and broad teacher – specific trainings
- classroom facilitation from local staff
- observation of teachers in different schools and local areas
- consistent meetings on projects' practical problems
- participation of teachers on project outcomes
- expansion of project materials on local level
- presence of principals in trainings (McLaughlin, 1990.p.12).

It may be one of the implications for policy that the variability plays a great role while operating or putting policy into practice. For instance, the same centralized educational reform being carried out through programs may have diverse outcomes depending on the location and the attitudes of the local organizations or educational institutions towards its implementation variance. It is

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[1] Mmari and Kovacs & Kalman (2022). Education sector policies and their role in the integration of workplace learning and higher education: A case of Tanzania's higher technical and engineering education.

possible that the same policy for the same educational program may fundamentally differ from each other in various districts or locations. The educational development policy is hugely dependent on the governmental and local actors and investigators. If they support and inspired to fulfill it the policy may reach its purpose.

The Rand study emphasizes the effort and energy of the individuals and actors who have the willingness to put their effort on the implementation of a planned change to reach successful results (McLaughlin, 1990). The Rand Change Agent study has important consequences for our research because it underlines the important role of local actors and implementers (teacher) as the required element for the success of the educational policy. However, the results of the study on Hungarian case, Benkei- Kovacs and Agnes (2017) determine that university faculty members possess dual attitude in educational policy, either an innovator or in contrast can bring obstacles in reforms.

In the study of Wurzburg (2010, p.160) on educational reforms several factors impact on the development and implementation of educational policies. One of the most influential factors is uncertainty in education reform which occurs due to a number of actors involving teachers, students, parents, and employers. Due to this the coexistence of extended interests of providers which is of a paramount significance in educational reform, the main reason for that is the public trust of teachers' positive approach towards educational reform. For instance, OECD countries teachers are regarded as well-organized and strong positive agents. The educational environment differs from the other aspects of public policies. For public spending on institutions is large. Almost everyone is shaped by the education sector even if they got only secondary education completion. The demand for the educators is high in the workforce as the power of teachers is reinforced.

One of the most significant issues and interventions of the educational policy is innovation which plays a top-down role in developing and reforming education system worldwide. Halász (2018) emphasizes the importance of innovation not only in educational sector, but it has a major impact on the economy and society as well. There are different ways to determine and define the notion of innovation: a product, outcome, or a process. Although he demonstrates that educational innovation products are covering a large field of action in educational sector for instance, the combination of specific teaching and learning approaches, critical thinking and classroom management etc. Halász (2018) in *"Measuring innovation in education: The outcomes of a national education sector innovation survey"* demonstrates some results of the so-called "Innova project" that aims at exploring the influence of EU interventions of pedagogical practices in Hungarian schools indicating the comparison among different educational unit groups together with various dimensions.

As it is mentioned above, the most essential part of integrating a new educational reform is its effective and in-depth strategy as well as the implementation process. There is always a gap between the theory and the practice of educational reform implementation and in order to remove that gap it is necessary to build a bridge between them. That bridge can be built with the help of successful or effective implementation procedure taking into consideration all the features and factors from the perspective of a range of actors participating in its fulfillment. In order to make the implementation procedure of reform successful Viennet and Pont (2017) propose the visual framework which includes its determinants in three dimensions of coherent implementation strategy to reach schools: *Smart policy design, Inclusive stakeholder engagement, A conducive institutional, policy and societal context* (see Figure 1).

Figure 1. Education policy implementation: A visual framework
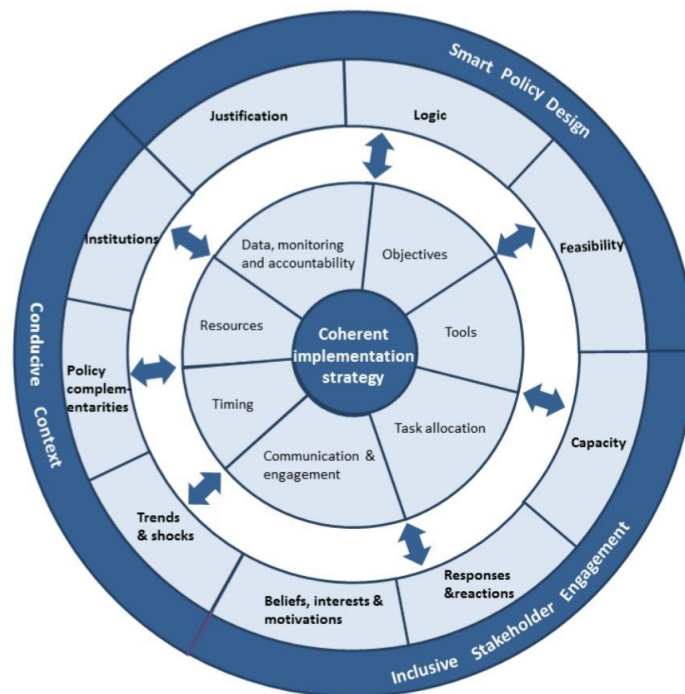
Source: Viennet and Pont (2017.p.43)

The given framework of coherent implementation strategy is practically tested by the group of actors (Viennet and Pont, 2017.p.43).

Another important aspect while integrating a new educational policy is the factors that have a great impact on the reform's further proliferation. The reforms are executed at three levels: macro, meso and micro learning analytics (Shum,2012). Each analytic learning level has their own description and functions. For instance, Macro level is operated in the level of cross-institutional level. Macro-level involves data from meso and micro levels being profitable with the benchmarking and other methodologies for development. The significance in this part is that it comprises non-educational sectors (government sector) as well. Whereas meso level is pervaded in institutional level and

diverse part within institutions such as faculties or department functionate together. The latter, micro level is probably the most popularly implemented one in learning analytics which traces the data in the level of individual and/ or learner (Figure 2).

Figure 2. The Convergence of Macro, Meso and Micro Analytics
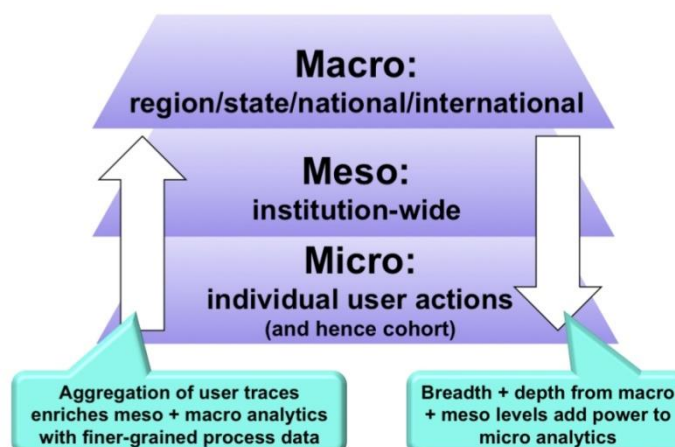
Source: Shum (2012.p.3)

In the framework of the given study, the implementation of innovative educational reform taking place in the context of higher education can be accessed through these three perspectives: macro, meso and micro. Dorner and Martensson (2021) also emphasize the use of multi-level structure in fostering faculty development. If to put these perspectives into the practice of implementing the multilingual policy, the government and especially the Ministry of Education and Science (MoES) is operated as macro level. Whereas the higher education institutions together with faculties and departments within are positioned at meso level being responsive to the posers under study. The cohort of teachers as learners is regarded as micro level. The implementation and integration of any educational reform require an extremely significant attention to the interaction and interconnectedness of these three perspectives considering all the peculiarities of each level in order to reach successful results in it. If the interests or the features of one of the elements or levels is ignored it may encounter a huge number of challenges and hindrances in implementation process.

2.1.1 Educational policy in Kazakhstan and Trinity program

Multilingualism and multilingual education are becoming one of the utmost and important educational issues that besetting all Kazakhstani educational system (Aubakirova & Mandel, 2018).

The initiation of multilingual education development in Kazakhstan was launched by the head of the country. The initiative of what the head of the state has entitled "The Trinity of languages" in Kazakhstan was first introduced in 2004. After two years in 2006 during the 12th session of the Assembly of the people of Kazakhstan the President of the country emphasized the significance

of knowledge of three languages which is essential for the country's future (Aubakirova et al, 2019).

Figure 3 Trinity of Languages
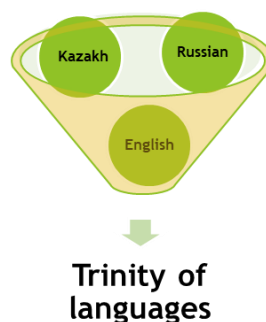
Source: Own compilation

These languages are Kazakh language as a native, Russian as an official and English as the language for successful integration into the global economy. Along with this the next step of implementing trilingual education was proposed in 2007 in the message of the President "New Kazakhstan in a new world" that involved the attraction of teaching staff from abroad and gradual implementation of trilingual education started (Address of the President of the Republic of Kazakhstan, Nursultan Nazarbayev, to the people of Kazakhstan, 2007).

In 2014 in the "Kazakhstani way-2050" declaration the leader of the country pointed out the necessity of the knowledge of three languages for the school leavers (Address of the President of the Republic of Kazakhstan N. Nazarbayev to the nation, 2014). Based on "Trinity of Languages" project the "State Program of functioning and development of languages for 2011-2020" ('Decree of the President of the Republic of Kazakhstan №110', n.d.) is being carried out in three stages.

The first stage starts from 2011- 2013 and is dedicated to the usage of language development of measures in order to improve the regulatory and methodological basis. Second stage from 2014-2016 is devoted to the introduction and application of technologies, language teaching methods, language diversity safety and practical implementations. Third stage 2017-2020 witnesses the maintenance of other language usage, the necessity for the use of state language in public life and the absorption of the demand for the quality and the validity of the monitoring system results (State Program of functioning and development of languages for 2011-2020). According to the aims of the "State Program 2011-2020" of the Republic of Kazakhstan 95% of the population should speak Kazakh, 90% - Russian language and 20% - English language (Toktamysova, 2012).

In pursuance of the instructions of the Head of State N.A. Nazarbayev, given at the XXII session of the Assembly of the People of Kazakhstan on April 23, 2015, and paragraph 89 of the Plan of the Nation "100 concrete steps: a modern state for all", a joint order was adopted. Of the Minister

of Education and Science of the Republic of Kazakhstan dated November 5, 2015, No. 622, the Minister of Culture and Sport of the Republic of Kazakhstan dated November 9, 2015, No. 344 and the Minister for Investment and Development of the Republic of Kazakhstan dated November 13, 2015 No. 1066 Approving the Roadmap for the Development of Trilingual Education on 2015-2020 years (Zubko, 2017).

The implementation of the Roadmap for the development of trilingual education for 2015-2020 is aimed at updating the content of curricula at all levels of education; ensuring the continuity of trilingual education in the context of a single educational environment; improving the system of training and retraining of teaching staff for the effective implementation of trilingual education; ensuring effective research in the field of trilingual education in Kazakhstan, popularization of the cultural project "Trinity of Languages" (Zubko, 2017).

The roadmap provides 7 strategic directions (Zubko, 2017):

1. Improving the regulatory and legal framework for trilingual education;

2. Research activities on the study of problems of trilingual education;

3. Methodological and educational support of trilingual education;

4. Training and professional development;

5. Institutional support for trilingual education;

6. Information support of trilingual education;

7. Financing of trilingual education.

In the study of Mehisto, Kambatyrova and Nurseitova (2014, pp. 152-172) describe language policy issues in Kazakhstan from the historical perspective up to current state. The problem of language policy is taking place from historical time because it is a multiethnic country and there are more than 130 nationalities are living there. Therefore, there are a number of schools that are running with different language of instruction. Russian still exists as the predominant language there. The Presidential decree on the Development and Functioning of Languages in the Republic of Kazakhstan for 2011-2020 together with the action plan for 2011-2013 is to retain the language diversity and develop English other foreign languages. In the frame of trilingual policy in Kazakhstani educational system they are fostering a range of opportunities and options for disseminating these languages.

There are Kazakh - Turkish Lyceums for gifted and talented students which are managed to conduct lessons in three languages, serving the talent management. They are directed by the Ministry of Education and Science of the Republic of Kazakhstan and Science; subjects are taught in English there. Another example is that there are 31 trilingual schools called "Daryn centers" which is also designed as a support for the trilingual education as they operate in three languages as well. One of the basic experimental platforms for the trilingual education policy is NIS

(Nazarbayev Intellectual schools). The educational program of these schools meets the international standards of Cambridge University, John Hopkins University and International Baccalaureate organization. The languages of instruction of subjects in all these schools allocated and organized according to the grades. All these three types of schools are designed and created to be as a model for the trilingual education policy in the whole education system. (Mehisto, Kambatyrova & Nurseitova, 2014, p. 159).

Another governmental support for language policy is the foundation of different kinds of organizations such as "Tildaryn Centre" to foster state language and Kaztest is for state language assessment. Ablai Khan University and Karaganda University are regarded as the main platform for trilingual education development especially they focus on preparing and training teachers.

They attempt to develop Kazakh, Russian and English dictionaries and resources in three languages and encyclopedias as well. Presidential scholarship "Bolashak" is founded for supporting teachers and students to gain knowledge and experience through internships abroad and they also allocate scholarships for the post-graduate and graduate, PhD students to study abroad (Mehisto, Kambatyrova & Nurseitova, 2014, pp. 162-163). The language of instruction in Kazakhstani higher education is serving as a motivator for students to have a choice to study. According to the decree of the President of RK in 2009 there are 50,7% of students were studying through Russian and 47,6% through Kazakh and 1.6% were studying primarily through English. Below in the table we can see the development of trilingual education in Kazakhstani higher education in numbers and status (Mehisto, Kambatyrova & Nurseitova, 2014, p.160).

This resource provision and the implementation process of the given educational reform still has weaknesses and remains somehow problematic due to that the actors of educational institutions encounter obstacles and troubles (Sagyndykova et al, 2017). The strategy and implementation procedure of multilingual education in the education system of Kazakhstan is taking its height especially in the context of higher education institutions. It has been witnessing a range of educational reforms that have been successfully implemented (Ibid, 2017).

2.1.2 Higher education systems' reform in Kazakhstan
The rapid development of Higher education system of Kazakhstan started its development from the period of Soviet Union because the education system was suffering from the lack of teaching staff, economic decrease, and delay of school education development. Soviet period rendered a huge impact on the establishment of not only comprehensive, professional, and vocational schools but higher education institutions as well. Kazakhstan began to develop a variety of higher education institutions all over the country after the collapse of the USSR (Kyzykeyeva & Oskolkova, 2011).

In general, the history of higher education grasps several periods of its development. Each period of development has a peculiar aspect starting from the foundation of educational institutions and including the rise of opening faculties, preparation of highly qualified personnel and modernizations in entering the higher education and funding issues as well. One of the impetuses of boosting higher education system and allowing entering the world educational arena is the integration of the national, international programs, connections, and implementation of study abroad programs. These programs involve educational exchange programs, governmental grants, Bolashak program and international scholarship programs (Kyzykeyeva & Oskolkova, 2011).

There are three main bases of State Policy in the field of higher education in Kazakhstan which is the Constitution of the Republic of Kazakhstan (RK), the "Law on Education" (2017), and "State Programme of Education Development for 2011-2020" according to that higher education is open to those who have finished general secondary, technical and vocational education or continuing education.

"Law on Education", launched in 1999, is the core and primary law ensuring general framework for higher education institutions in Kazakhstan to designate its strategy for development. Additionally, this law attempts to shape new national model for the country's educational system, and it presents principles of the State Policy in the field of particularly higher education.

Kazakhstan is focusing on the realization of the higher education system as well as modernizing it. Therefore, the government launched The State Programme for Education Development in the Republic of Kazakhstan 2011- 2020 (SPED) the goal of which is to "increase competitiveness of education and development of [Kazakhstan's] human capital through ensuring access to quality education for sustainable economic growth". The SPED program holds the measures for the provision of educational reforms regarding the structure, content, technologies, management, financing, and other features. The accomplishment of the SPED programme is performed in two stages: the first is dedicated to the development of education model taking into account the international standards respectively. Whereas the latter one is devoted to the embodiment of realizing these models complementing to the modernization of education with the aforementioned needs (Aubakirova et al, 2019). The strategy of internationalization in the educational system in Kazakhstan is carried out with the help of three considerable pillars involving the establishment of *Bologna Process, Bolashak scholarship program* and the *foundation of Nazarbayev University*. All of these reforms were successfully implemented.

First, Kazakhstan joined European Higher Education Area (EHEA) and launched Bologna Process (BP) in March 2010 being the 47th signatory in the Central Asia. Bologna Process had an

indispensable influence on the higher education system by gradually transferring to this process all higher education institutions applied to the three cycled education including bachelor, master's and doctoral levels. According to the plans of government these three levels of education intends to be competitive and meet the international standards by "*increasing [the] competitiveness of education and [the] development of human capital through ensuring access to quality education for sustainable economic growth*" (MoES 2010, 1).

Bologna Process disseminates a range of action lines and basic principles for the further development of higher education system which was presented in BP declaration. These actions include all the main steps for reaching the quality in higher education. Not all these Bologna process actions may be utilized in the higher education system in the given nation-state due to the challenges and obstacles (Yergebekov & Temirbekova, 2012). In Kazakhstani higher education system, another main pillar was the development and dissemination of internationalization of higher education institutions (HEIs) through the mobility programs not only among students but the academics as well mainly by the programme of Erasmus Mundus (Ahn., Dixon & Chekmareva, 2018). Moreover, the gradual transition to the internationalization of HEIs brought another dimension to be taken into account. All HEIs of this nation-state should accept and endorse the European Credit Transfer and Accumulation System (ECTS) with the arrangement of diploma supplement (Ahn., Dixon & Chekmareva, 2018). These key actions that came along with the Bologna process is making a huge insight into the higher education setting in this nation-state. Ahn, Dixon and Chekmareva (2018) claim that in the framework of internationalization and mobility program establishment multitude of students and academics have access for getting complementary knowledge as well as updating and sharing their experiences in the international education area. Most of these educational actors are becoming "Bolashak" and other program holders or graduates. However, in the study of Yergebekov and Temirbekova (2012) they argue that the implementation of this program and policy cannot be totally realized due to the lack of foreign language proficiency of students and educators as well (Yergebekov & Temirbekova, 2012).

Another incentivizing pillar is that by the initiative of the first president of the Republic of Kazakhstan (RK), N. Nazarbayev, "*Bolashak" international program* was established in 1993. This program is fully financed by the government, and it gives an opportunity for alumni and teachers to study or have an internship abroad in the leading universities of the world as well as for the educators providing them with internships for different time period. This program aims at developing human capital and positive impact of it on the country development. A number of applicants become this scholarship holder and "Bolashak" is an effective career assurance. The

terms of the given scholarship have been changed for years improving or updating the rules and requirements. For each "Bolashak" holder is obliged to return to the nation-state and be employed in different organizations including higher education institutions and huge enterprises or companies. The holders are to be recruited in a definite organization within 3 or 5 years where they present and show their gained knowledge and experiences. The scope of the countries that this program embraces is very big, and it is disseminated for all three cycles of education (Sagintayeva & Jumakulov, 2015). One of the key priorities of "Bolashak" program is that it provides the nation with trained and highly qualified professionals and experts in specific area where they disseminate the insights and contribution to the social and economic development of the nation-state. Bolashak alumni are the key drivers of modernization and improvement for the knowledge-based society being a potential path for the fundamental issues and decision making (Nessipbayeva, 2014).

The third educational pillar for the internationalization is the establishment of *Nazarbayev University (NU)* that aims at internationalizing the educational dimension. Teaching and research activities in the given university is fully adapted to the international curriculum and the teaching staff consists of more foreign academics. One of its main impetuses is that it is the fundamentally important laboratory of disseminating and developing high quality, tested education to the existing universities. NU has negotiation and partnerships with the world leading universities and research centers. NU also aims "to be a model for higher education reform and modern research in Kazakhstan and to contribute to the establishment of Astana as an international innovation and knowledge hub" ("NU Strategy", 2013, p. 7).

The most influential dimension is the professional development (PD) of teachers or educators in the frame of higher education institutions. According to TALIS "Professional development is defined as activities that develop an individual's skills, knowledge, expertise and other characteristics as a teacher" (Peña-López, (2009). Whereas Borko (2004) and Desimone et al. (2002) imply that teachers' PD is conceptualized as a profoundly intrinsic system for increasing an improving teacher's knowledge, skills, and experiences. There are a range of peculiarities that is embraced in the process and actions of educators' professional development, and it is also dependent on the political, economic, social, and contextual features (Tan & Dimmock, 2014).

Teachers' professional development may be diverse according to the universities on institutional level. It is also dependent on the educational actors themselves and on the capabilities of the universities. For instance, one of the state universities in the North part of Kazakhstan is proposing a variety of approaches devoted to the enhancement of teachers' knowledge, skills, and

competences. However, there are some governmental institutions for teacher's professional development the so-called National Professional Development Center (NPDC), "Orleu" which is dedicated to the improvement and strengthening knowledge and skills of not only teachers of higher education but as well as schoolteachers. The NPDC "Orleu" is widely spread in all the regions of Kazakhstan providing pedagogical staff of all educational sectors with high quality of education. It aims at creating conditions for the effective development of the teachers' professional competencies and increasing their status through updating the content of the advanced training system. There are 17 branch offices in all the regions throughout the country as well as around 250 teachers with academic degrees: PhD Doctors, associate candidates and master's work as trainers in the center. Around 625 thousand teaching staff have already been trained in all types of professional development in the related field and topic with the usual length of three months training ("Orleu" center for teachers' professional development, n.d.).

Another decisive and substantial educational reform is dedicated to the integration and implementation of multilingual education in the context of higher education setting. It was an innovative educational policy that also brought the challenges in the process of implementation.

The Higher Education World Declaration in 21st century in accordance with UNESCO, (1998) indicates the key point of integrating and developing multilingual education in higher education institutions such as "the practice of multilingualism, teaching staff and students exchange program should be an integral part of all higher education systems" (Article 15) cited in (Kulsariyeva, Iskakova & Tajieva, 2017). Multilingual learning program provides the foundation of new models of education making the language culture the main foci. Currently, the actions towards the implementation of that new education reform in Kazakhstani higher education are being penetrated. This also causes the transformation of educational regulations, the arrangement of special departments in the universities is being implemented where multilingual teaching provides education using three languages (Toktamysova, 2012).

There are one hundred and twenty-five higher education institutions in Kazakhstan. Most of these higher education institutions 54 belongs to private ones and the other 16 are corporatized, 1-international, 31 non-civil, 9 national and one is Autonomous (Nazarbayev University) (*Higher education in Kazakhstan*).

Table 1. Higher Education Institutions in Kazakhstan

Types of HEIs	National	International	State-owned	Corporatized	Private	Non-civil	Autonomous educational organization
HEI numbers (125)	9	1	31	16	54	13	1
Multilingual education	6	1	26	7	2	-	-

Source: Own compilation based on "Ministry of Education and Science of the Republic of Kazakhstan", n.d.).

Currently, the new generation of Kazakhstan is totally being integrated and influenced by innovative educational reform the so-called multilingual education because it is now being implemented and added into the curriculum of higher education institution.

2.2 The concept of multilingualism

Multilingualism and diversity are regarded as an intrinsic part of European Union. Nowadays there are several learners residing with various cultures and languages experiencing different school systems. While growing up in such a shifting multilingual and multicultural society people may represent themselves not only with one language and culture but they are able to be adjust to any situation with a plenty of languages. Therefore, in such a changeable social contexts multilingualism is considered as the way of life but not a big poser that needs a solution (Herzog-Punzenberger, Pichon-Vorstman & Siarova, 2017).

Multilingualism began to become an essential trial for a great number of national educational systems which lead to the diversification in the nations. As a result of it there are a flood of learners with different language and cultural backgrounds and it leads to the requirement for them to communicate in multitudinous languages because their native languages are not applicable in the schools they study (Herzog-Punzenberger, Pichon-Vorstman & Siarova, 2017).

It is apparent that multilingual education is a reality in most of the European countries but in some of them like Luxembourg and Switzerland multilingual education had started many decades ago. But there are a number of challenges in the field of multilingual education system in Europe and beyond. It is significant to indicate that there are several European Union countries such as The Netherlands, Spain, Switzerland, Luxembourg and etc. that are striving to develop multilingualism and multilingual education in their education systems and accordingly there are following vital reasons for its implementation:

- ✓ Cultural migration;
- ✓ Political and economic motivations;
- ✓ Moving for professional reasons including multi-national couples;

✓ Historical heritage, geographically concentrated (Herzog-Punzenberger, Pichon-Vorstman & Siarova, 2017).

One of the basic reasons of why European Union is officially promoting multilingualism is the more nations launch multilingual setting in education, the more mobility among various countries is promoted. The challenging issue is to adapt to such a complex setting providing high quality education and at the same time to meet the learners' necessities and equipoising political, cultural and social exigencies (Herzog-Punzenberger, Pichon-Vorstman & Siarova, 2017).

The widespread usage of more than two languages was driving the researchers discover the concept of multilingualism. In accordance with UNESCO, the concept of "multilingual education" denotes the usage and implementation in education at least three languages: native, regional, national and international (Ospanova & Azimbayeva., Timokhina & Seydakhmetova, 2016). There are several terms used in this research field ("polylingualism", "bilingualism", "multilingualism", "multilingual education", "polylingual education", "bilingual", "multilingual") which will be analyzed and differentiated in this study. Both concepts of bilingualism and multilingualism are very complex and widely used multidimensionally. A number of researchers who argue on the needs of clarifying the distinction between bilingualism and multilingualism as opposed to using bilinguals as "a blanket term entailing multilinguals as one variation" (Aronin & Hufeisen, 2009, Cenoz & Genesee 1998; De Angelis, 2007). In this case the dilemma is that the definitions on bilingualism are also contradictory to each other. For instance, Grosjean (2010) argues that bilinguals are "those people who need and use two or more languages (or dialects) in their everyday lives". However, at the same time another example can be seen in the work of Valdes and Figueroa (1994) they identify it "as an individual who possesses more than one language competence". The term bilingual "is used to refer to one type of multilanguage user who uses two languages, whereas multilingual refers to users of more than two languages such as trilingual, quadrilingual, and so forth" (Bhatia & Ritchie, 2012).

Multitude of researchers are being interested in the field of exploring multilingualism (Weinreich, 1953 &Vildomec, 1963 cited in Kemp, 2009) but mostly they focused on the context of sociolinguistic studies and other research are dedicated to the psycholinguistic studies (cf. Ramsay 1980, Nation &McLaughlin 1986, Klein 1995). Notwithstanding the broad dimensions of multilingualism this term has been researching and analyzing in educational perspectives which allows us to know that this term is considered to be of utmost importance in building comprehensive interests that has been analyzed for few past decades with different methodologies (Li Wei & Moyer, 2008).

Table 2 is outlining that there are various approaches towards the concept of "multilingualism". These definitions are classified from different perspectives taking into consideration the authors' research field and what they focus on.

Table 2. Classification of definitions of terms

№	Terms in use	Definitions given by the author(s)	Author(s)
1	Multilingualism	"the capacity of societies, institutions, groups and individuals to engage on a regular basis in space and time with more than one language in everyday life".	Aronin and Britta (2009)
2	Polylingual education	"a purposeful, organized, normalized triune process of training, education and development of an individual as a poly-language personality on the basis of simultaneous acquisition of several languages as a "fragment" of the socially significant experience of the mankind embodied in the language knowledge and abilities, language and speech activity as well as in the emotional and valuable relation to languages and cultures"	Zhetpispaeva (2009)
3	Multilingual education- bilingual education	"any school program in which more than one language is used in the curriculum to teach non-language academic subject matter or in which the language of schooling does not match the language of the home or community. The reasons for in-corporating the languages, the specific languages chosen, the structure of the program, and the relation between the school languages and the community, vary widely and influence educational outcomes".	Bialystok (2016)
4	Multilingualism	"usage of two or more languages referred to the individuals or to societies" being able to speak in a plenty of various contexts.	Biseth (2009)
5	Multilingual	"the ability to use three or more languages, either separately or in various degrees of code mixing. Different languages are used for different purposes, competence in each varying according to such factors as register, occupation, and education".	McArthur (1992)

Source: Aubakirova and Mandel (2018).

The fundamental concept of "polylingualism" has almost the same meaning with the derivative term of "multilingualism" and the same as "polylingual education" and "multilingual education"

and it is considered to be originated from English term (Ospanova et al., 2016). The term "Multilingualism" or "Multilingual education" are very often used and implemented alongside with the term "Polylingualism" in many different scientific and academic studies (Ospanova et al., 2016). The term "Multilingualism and multilingual education" is regarded to be applicable in this research because these terms are most broadly and frequently used around the world.

Researchers are defining the term multilingualism with slight differences due to the heterogeneous focus of their research areas. In the following part we will present and analyze in detail sociolinguistics, educational, linguistics, multilingual education and psychological, psycholinguistics approaches of this term.

Aronin and Britta (2009) are offering a sociolinguistic definition in their study *The Exploration of Multilingualism*: they understood as the multilingualism "*the capacity of societies, institutions, groups and individuals to engage on a regular basis in space and time with more than one language in everyday life*". This definition put accent on the social issues indicating the usage of "*more than one language*" and making an emphasis on "*everyday life*". In contrast, Bloomfield (1933.p.56) argues that a multilingual utilizes more than two languages as in a native level. Comparing to the definition of Aronin and Britta, Bloomfield emphasizes the usage of more than two languages but not more than one language also indicating the need of native level of proficiency without identifying the context of its usage or other functions. Sometimes the identification of only the number of languages and level of proficiency while defining the term "multilingualism" is not sufficient for conducting research it means that the researchers should not limit the understanding of it by giving only a couple of characteristics. However, the most interesting thing that should be mentioned is that (Grosjean, 2010; Bhatia and Ritchie, 2012; Fabbro, 1999 and many others) define "Bilingual" as the people who use two, or more languages in their everyday life or colloquially. Here we see the difference that "Multilingualism" defined by Aronin, and Britta is devoted to the usage of more than one language and the other researchers say that bilinguals use two or more languages. It seems to be that this is somehow contentious according to the number of languages indicated by these researchers.

Another sociolinguistic researcher, Blommaert, is approaching the term in a different manner. Having decomposed and analyzed the variety of understandings and definitions related to the concept of "Multilingualism", it is apparent that almost all of the above-mentioned approaches towards this notion imply almost the same meaning stating that the term "multilingualism" means the knowledge and usage of more than two languages. However, in contrast to other opinions there is another extraordinary and unusual approach to the understanding of multilingualism in

comparing with other researchers, for instance, in accordance with one of the contemporary sociolinguists Blommaert (2010) everyone in the world is multilingual.

It will be appropriate to use the terms as multilingualism and multilingual education because of its frequent implementation rather than "polylingualism" even though polylingual education is also more or less used in educational sector in the context of Kazakhstan. For instance, according to one of the Kazakhstani linguist and researcher Zhetpispaeva uses different term "polylingual education" in comparison with the other researchers. Secondly, she indicates that it is a "*process of training, education*" considering some features. Thirdly she emphasizes on the" *development of a polylingual personality*", "*experience of the mankind*" with the *emotional and valuable relation to languages and cultures*". This kind of approach is too broad with a number of specific features also pointing out the formal educational process. It may depend on the researcher's research field and interest, focus. Nevertheless, in comparing with the above-mentioned approaches she highlights the educational context of it.

However, another approach also differs from the mentioned ones to some extent. Ellen Bialystok, psychologist and professor whose research field is dedicated to the cognitive and language development in children, bilingualism from childhood to adulthood identifies "multilingual education" as

> "*Any school program in which more than one language is used in the curriculum to teach non-language academic subject matter or in which the language of schooling does not match the language of the home or community. The reasons for in-corporating the languages, the specific languages chosen, the structure of the program, and the relation between the school languages and the community, vary widely and influence educational outcomes*" (Bialystok, 2016).

Unlike the other definitions this is considered to be appropriate and applicable in both sides taking into consideration the formal educational school program that she points out as the basic for teaching "*non- language academic subjects",* with the usage of more than one language. High accent is paid to the mismatch between schooling language and home or community languages indicating several vital reasons for that. Such definition seems to be more pragmatic in terms of wide diverse relation among "*school language and community*" and impact on "*educational outcome*". This definition is more specific in terms of educational issues as well as with the attempt to relate it with society.

Another definition of the term "multilingualism" is given by Biseth (2009), her research area is dedicated to the cultural, religion and social studies, multiculturalism (see Table 2). Biseth (2009) highlights the number of language acquisition (two or more), referencing on individuals' language use and society in a number of different contexts without considering any educational or formal

aspects of education. This approach is much more inclined to be general and may be more applicable for the research on social studies.

The last but not the least is the approach of McArthur, 1992 (see also Edwards, 1994; Vildomec, 1963). This researcher is the only one who denotes the usage of three or more languages which can be used separately or mixed (see Table 2). The researcher does not emphasize the language proficiency or the competence on contrary to Bloomfield (1993). McArthur states that it depends on the factors including education, occupation and etc.

Different approaches and steps towards the implementation of multilingual education development are proposed by a variety of researchers in this scope and their understanding in terms of "multilingualism" concept also varies. For instance, in the case of Kazakhstan there are a number of researchers (Issabekova, Abdullayev, Kasymbekov, Duysenov, 2013 and Toibekova *et al.*, 2016) who are attempting to contribute to the development of multilingualism and multilingual education by designing or forming polylingual or multicultural personality in educational settings.

According to Issabekova (2013) multilingual education is understood as the basis of multilingual personality formation that designates the individual self-realization of a human being in terms of competitiveness, social mobility and relations. It implies arranged and focused learning and development process of a person as the multilingual personality build upon "simultaneous acquisition of several languages as a "fragment" of different cultures of humanity". She also emphasizes that the content of multilingual personality embraces the knowledge and skills of native, official and other foreign languages as consistent with the "cross-cultural paradigm of modern linguistic education" (Issabekova, 2013). Thinking and speech development of an individual through mental, oral and written communication contribute to the development of an individual's multilingual consciousness (Kim and Uteulieva, 2010 cited in Issabekova, 2013).

Although Issabekova (2013) characterizes the multilingual education as *"education and contribution to students mastering other languages assimilation cultural values and traditions of the peoples of the world, their lifestyle as well as to education of youth in the spirit of respect for the worldview values of other nations"*. At the same time, she defines "multilingual personality" as an individual who is competent not only in their mother-tongue but in other foreign languages as well with developed linguistic and aesthetic consciousness. Whereas Toibekova *et al.*, (2016) makes an emphasis on that polylingual personality formation occurs while acquiring native and foreign languages taking into consideration cultural features. Taking into consideration varied approaches to the multilingualism and multilingual education we consider that the usage of more than two languages can contribute to the better adaptation in any situation and to assist the

international interaction. But the arguments concerning the language use and proficiency of multilinguals and in multilingual education also take place. The implementation and understanding of "multilingualism and multilingual education" varies and we found out that Kazakhstani researchers (Issabekova, 2013 and Toibekova, 2016) are developing multilingual personality formation constituting that it occurs in the process of learning languages and indicating a number of competences that polylingual personality should be competent at. However, Blommaert's (2013) approach is rather different and seems to be more applicable for the development of multilingualism. He considers everyone to be a multilingual person. For example, Kazakhstani researchers argue on forming and developing a multilingual personality who should be competent in all linguistic skills whereas Blommaert highlights the importance of language repertoire and resources but not the knowledge of languages. It is also important to mention that these two researchers Zhetpispaeva and Blommaert have different research areas and depending on that they identify it in accordance with their research interest.

In general, it is significant to mention that there are a number of diverse definitions and approaches to the given concept, and we endeavored to analyze them from different perspectives embracing the research fields, areas and interests in order to see the difference. From their definitions to determine their tension and inclination of the subject matter. This kind of diversity in defining this concept each of analyzed definition or approach can be of high importance in using in applicable scope of research. It is noticeable that the researchers indicated different amounts of languages that may be used by multilinguals but in this case, it should be noted that the user of one language is monolingual, the user of two languages is bilingual, and the user of three languages is trilingual or multilingual. For due to this language amount issue, one may notice it controversial because some of the definitions on multilingualism sometimes can confluence or overlap with the other definitions (monolingual, bilingual, multilingual).

As our research is dedicated to the educational sector, we decided to choose that one which is closer by its meaning and context. Therefore, we adhere to the definition of Bialystok (2016) which will serve as the theoretical framework for this research as in our opinion Bialystok's approach is regarded as the most applicable and widely used in multilingual setting research.

2.2.1 Multilingual education development of international practices
According to Joze Manuel Vez (2009), multilingualism is regarded as "the plus factor for European integration, competitiveness and the growth and better jobs". More to this point, it should be mentioned that in the context of European education according to Leonard Orban, former European Union Commissioner for Multilingualism between (2007-2010), multilingual education is defined as the phenomenon which well involves three or more languages rather than only two

(*European Commission*, 2005). The Council of Europe designates plurilingual competence as an "*ability to use languages for the purpose of communication and to take part in intercultural interaction, where a person, viewed as a social agent, has proficiency of varying degrees, in several languages, and experience of several cultures*" (Coste, Moore & Zarate, 2009, p. 11).

It should be mentioned that the role and principles of multilingualism are being expanded and elaborated in the European Union. European Commission published an official report in 1995 which is devoted to education identifying the principle goal of trilingualism of all the European countries (*European Commission's White Paper*, 1995).

Nowadays multilingualism and multilingual education have rapidly been developing. Multilingualism is becoming one of the most significant foci in the European Union's policy. The focus is mainly paid to the implementation of multilingualism and its semantic part development in European countries. One of the basic issues of multilingual policy is language and cultural diversity among member states (Krzyżanowski & Wodak, 2011).

The poser and problematic of multilingualism are so important that it was reflected in the policy documents of the European Commission. The key document of "The New Framework Strategy for Multilingualism" (*European Commission* 2005) reasons "commitment to multilingualism in the European Union" and for "promoting multilingualism in European society, in the economy and in the Commission itself". This document also indicates multilingual promotion in different fields embracing the social, economic, and other spectrums (Krzyżanowski & Wodak, 2011).

Krzyżanowski and Wodak (2011) explore the semantic field of multilingualism in the framework of European Union policy in different periods and describe each semantic development of multilingualism differently depending on time. Figure 4 illustrates Multilingualism that embraces "mother tongue" and several other domains related to foreign language learning. Learning a foreign language and language skills and motivation in this field shapes the economic and employment issues of the countries allowing people to increase the mobility in employment and economy as well. By creating this model, the Lisbon strategy has already an impact on language policy and multilingualism.

According to the European Commission (2005) in the frame of European countries, the use of three languages and the knowledge of languages allows people move among the nations for different purposes involving educational, professional reasons.

One of the most significant reasons for choosing the given model of the semantic field of multilingualism in EULMP is that it seems to be more applicable in the context of Kazakhstani multilingualism policy development and multilingual education system. The project of "Trinity of Languages" might serve as one of the economic reasons for multilingualism policy development

in Kazakhstan. The implementation of multilingual education reform in educational institutions may serve as the possibility for further investment and employment growth (Aubakirova et al, 2019).

The most important priority in the given model is the involvement of "mother tongue" which in Kazakhstani context is regarded as a must while integrating and implementing multilingual education. The core reason for multilingualism policy in Kazakhstan is the achievement of mother tongue knowledge which means that through multilingual education we can enhance the knowledge and use of Kazakh language (mother tongue – native language). At the same time, the utmost attention is paid to acquire foreign languages and now Kazakhstan is working hard on the development of learning foreign languages that embraces the implementation and practising of different kinds of learning methods, language skills and the significance of foreign language use (Tlemissov., Mamyrbekov., Kadyrov., Oralkanova., Yessenov & Tlemissova, (2020).

Figure 4. The semantic field of multilingualism in EULMP in 2000
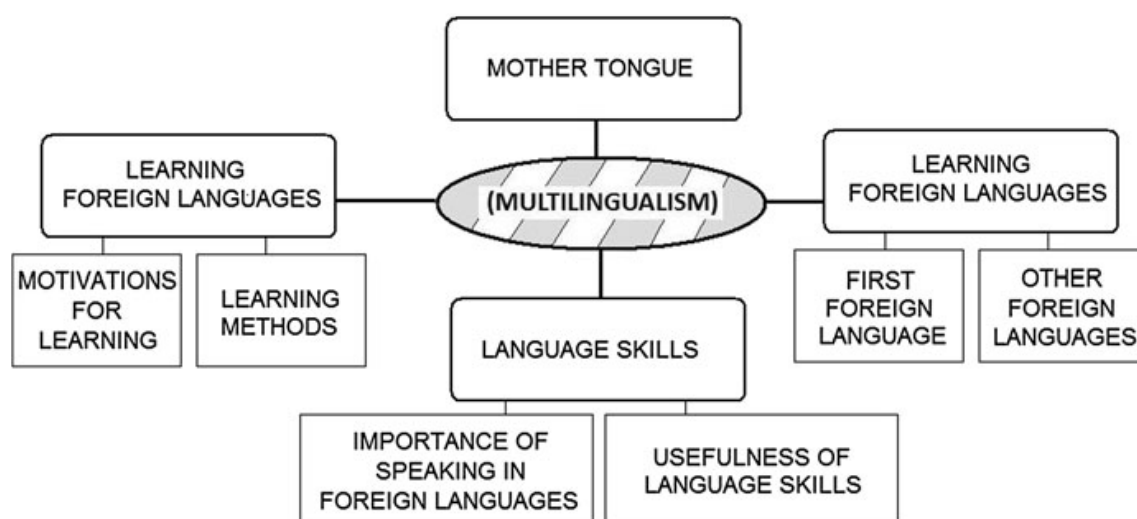
 Source: Krzyżanowski & Wodak (2011).

According to the European Commission (2005), Multilingualism is designated as "a person's ability to use several languages and the co-existence of different language communities in one geographical area." Moreover, the Commission's long-term task is to teach at least two foreign languages and enlarge individual multilingualism because everyone should acquire practical skills in foreign languages including their mother-tongue (European Commission, 2005). Following the European Commission (2005), they elaborated a strategy with several key fields for action in the educational system and practices that contain national strategies emphasizing the "*need for national plans to give coherence and direction to actions to promote multilingualism amongst individuals and in society generally*".

2.2.2 National examples of multilingual education in the European context
Case of the Nordic countries

A significant example of multilingual education systems is essential to research the Nordic countries (Denmark, Finland, Norway, and Sweden) because of their multilingual developments. Finland is regarded as one of those countries that possess two (Swedish and Finnish) official languages (Tucker, 1999 cited in Bjorklund & Bjorklund, Sjoholm, 2013). Denmark, Norway, Finland, and Sweden participate in *Network for Researchers of Multilingualism and Multilingual education, RoMME (2011-2013)* to develop multilingual policy in all of these states. Notwithstanding a huge amount of similarities in these four countries they also have differences in the development of language programs, the language of language use. To develop such a complicated task, the network of researchers in Nordic countries try to organize the congregations for the researchers involving the graduate and post-doctoral researchers, lecturers, and experts in identifying the advantages and disadvantages of multilingual education (Bjorklund & Bjorklund, Sjoholm, 2013).

All these four Nordic countries have similar language learning system in primary schools and their compulsory education is prolonged to nine years. Foreign language learning in these countries starts mostly from the primary education level as it is pointed out in the Table 3. As it is indicated in English language is the predominant language among the others and most of the learners choose English as their first foreign language (Bjorklund & Bjorklund, Sjoholm, 2013).

Table 3. The general national frames of foreign language in primary education

Foreign language education in comprehensive school (in general)	Denmark	Finland	Norway	Sweden
	English (grade 3) + another language (grade 7)	English (grade 3 or 4) + the other national language (grade 7 or 3) + 1 optional language (grade 8)	English (grade 1 or 3) + another language (grade 7)	English (grade 1) + another language (grade 6)

Source: Bjorklund & Bjorklund, Sjoholm, (2013)

As it is shown in Table 3, the development of foreign language education in comprehensive school illustrates that the languages are added gradually, parallel, and simultaneously with each other. Nordic countries disseminated the syllabuses for integrating and teaching of national minority languages (NML) as a mother tongue in addition to the foreign language program. Despite that, all these four Nordic countries have the same research area they put much effort into developing the languages differently. It is in Norway's interest to develop national language teaching for immigrants to be able to use the national study programs (Bjorklund and Bjorklund & Sjoholm,

2013). We should state here that multilingual education in Nordic communities was developed and spread from the early school environment.

International experience in multilingual education demonstrates two basic groups of multilingual education: weak and strong. The first means the usage of only one language whereas the latter implies the implementation and fluency in several languages. Out of 178 multilingual countries in the world, only five have implemented multilingual education successfully. According to the results of PISA- 2015, only Finland, The Netherlands, Switzerland, Spain (The Basque country) and Luxemburg have best practices and consequences in the sphere of multilingual education (Irsaliyev, Karabassova, Mukhametzhanova, Adil, Bekova & Nurlanov, 2017). Let us consider the development of multilingual education in Finnish schools and the way they allocate time for language learning.

Figure 5.The multilingual education model in Finnish schools with time allocation for each language, %
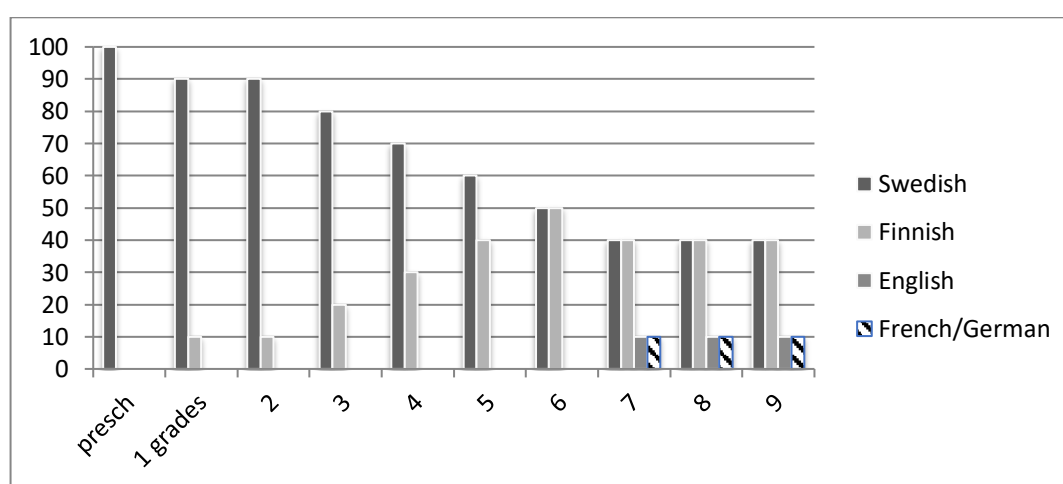
Source: (Irsaliyev et al., 2017, p. 149)

Success factors behind the Finnish model, in general, it is important to point out that in case of Finland the key points of multilingual education development are the right time arrangement of language learning in school grades and the high expenditure on education. More to this point, future teachers get compulsory subject blocks on multilingualism as a part of their academic program. The implementation of Content and Language Integrated Learning (CLIL) involving the universities where they acquire 50% of subjects in English on multilingual education theory and practice is an additional element that addresses multilingualism. Thus, after the graduation of secondary school, most of the students are already competent in four languages embracing Finnish, English, Swedish, German, and/or French. Ranging from 40% to 70% of subject content is taught in English within five years (Irsaliyev *et al.*, 2017, p.151).

2.2.3 Multilingual education in European higher education institutions

English language is regarded as the language of globalization and higher education institutions are competing in the world level as English became the global lingua franca (Coleman 2006 & Graddol, 2006 cited in Doiz, Lasagabaster & Sierra, 2013).

"The real meaning of globalization is multilingualism" (Shohamy 2007, p.132). The case of higher education is varying in comparison with the schools. English language is regarded as the predominant language among the higher education institutions and in the scientific field. All the basic domains of higher education (scientific research, education, and community services) are provided mostly using the English language notwithstanding the merits of national languages in Flanders they applied to utilize English almost in every aspect. For instance, in the context of Brussels, higher education they implemented both Dutch and French as the language of instruction, but The Flemish Ministry of Education permitted to use English in specific situations such as courses conducted by the international professors, programs and training for foreign students (Janssens, Mamadouh & Maracz, 2013).

The French community tends to arrange curriculum in English, and it leads to the frequent usage of this language in all three cycled levels of education such as bachelor, master, and post-academic degrees. Furthermore, European Union plays a pivotal role in initiating different international programs for student exchange like Erasmus or Marie Curie and others. This results in the enhancement of English language use developing the mobility settings among both students and teachers (Janssens, Mamadouh & Maracz, 2013).

Janssens., Mamadouh and Maracz (2013) exemplify that there is a cooperation between French-speaking (Université Libre de Bruxelles) and Dutch-speaking (Vrije Universiteit Brussel) universities in Brussels which provide trilingual (French, Dutch and English) education for the civil engineers. However, despite such good prestige of universities, the Flemish Ministry of Education insists on that all the teaching staff who teaches in English should prove their language proficiency according to the European standard C1 by passing tests. Moreover, foreign invited professors should also obtain a B2 level of the Dutch language to fit their environment (Janssens., Mamadouh & Maracz, 2013).

As for the case of Finland, there are several higher education institutions where multilingual education is spread. For example, the University of Vaasa and Abo Academy provide teacher training in two stages: undergraduate - 180 ECTS and Masters – 120 ECTS. The subjects on multilingualism, pedagogy and major subjects are compulsory. In Abo Academy the students learn three credits on the theory of multilingual education and two credits go to the practice of multilingual education and 50 % of these subjects are taught in English language (Irsaliyev *et al.,*

2017). The University Oulu and the University of Jyvaskyla provide 40-70 % of teaching in English in the 5-year CLIL teaching. In addition, the University of Helsinki and the University of Turku contribute to CLIL training for teachers a lot (p.151).

In summary, having analysed Finland's contribution to the development of multilingual education in higher education can be stated that much effort is spent on the provision of multilingual teaching staff and more credits for university students. While providing teachers with CLIL education and at the same time the universities facilitate multilingual subject blocks for students starting from the beginning of university education most percentage of which is supplied in the English language Irsaliyev et al, (2017).

Another example of multilingual education in higher education institutions refers to the case of Basque Country. Doiz, Lasagabaster and Sierra (2013) argue that it will be helpful to analyse one multilingual university to understand its picture. If to exemplify we can take Basque autonomous community that has the University of Basque Country which is estimated to be the bilingual one. This country witnesses the usage of two official languages such as Spanish, the majority and minority one is the Basque language. The given university also witnessed language policy development that comes together with the internationalisation process. It brought about three strategic actions and the first was dedicated to the development of student exchange and academic mobility, teaching staff mobility. The second one was dedicated to the international network, research, and university-wide involvement settings. The latter encompasses the production of multilingualism program which was launched in 2005-2006 and approved by the Governing Council. In the frame of the multilingual program, students are enabled to enrol for the courses conducted in foreign languages (Doiz, Lasagabaster & Sierra, 2013). There are several objectives of multilingualism program of the Basque University (ibid, 2013. p.1409):

✓　　　to proceed at the tertiary level with experimental trilingual level utilized at pre-university level (Basque, Spanish and English used as languages of instruction).

✓　　　to enhance students' foreign language skills and to conduct research in a foreign language.

✓　　　to develop students' work.

✓　　　to adjust the pursuit of postgraduate degrees abroad.

✓　　　to engage foreign students and teaching staff.

There were three paralleled groups in above-mentioned three languages with the subjects in three languages in this university within the multilingualism program framework. Students have the right to choose in what language to study and what compulsory specific subject to choose.

However, the optional courses are taught only in one of these languages. In 2010-2011 the University of Basque Country witnessed that in the frame of multilingualism program the number of students' increased 1300 and over 400 qualified teaching staff that acquired the indispensable level (C1) of official language proficiency (Doiz, Lasagabaster and Sierra, 2013 p. 1409).

Multilingualism and multilingual education are expanded in the frame of South-East European University, which is situated in Macedonia, created in 2001. The educators in Macedonia encounter the obstacles in terms of languages in their work as it is regarded a multilingual nation (Xhaferi & Xhaferi, 2012). In accordance with Xhaferi and Xhaferi (2012) conducted research dedicated to the issues of teachers' perception of multilingual education and implementation of teaching techniques in multilingual groups in higher education. The research sample consisted of fifty professors and young assistants of that university faculty. For the data analysis, the researchers resorted to the quantitative method encompassing questionnaire-based inquiry and classroom observation. The findings state that the faculty teachers fully support the development and implementation of multilingual education claiming that it is helpful for the students' future career. Moreover, the researchers argue that Magazines, Newspapers, TV, posters are frequently utilized in the process of teaching in multilingual classrooms and of paramount importance for the students' effective communication and interaction (Xhaferi & Xhaferi, 2012).

This kind of research is significant in the frame of multilingual education Southeast European University as well as analysing teachers' perception of multilingual education. However, the given research lacks detailed theory and needs deeper analysis with more meaningful and significant queries or probably the researchers are limited with the interpretation of research results in this study.

Based on the above-mentioned cases on multilingual education considering five successful states that have the best theory and practice we could conclude some implications of multilingual education in the context of Kazakhstan. Kazakhstan may try to follow the models of international cases due to that they have a great practice in it. Provided that at the same time we should also keep in mind that in all the cases which were introduced above more than a hundred and some countries have around thirty and forty years of experience in multilingual education. For example, Finland introduced multilingual education in 1987 and Luxembourg in 1912, The Netherlands in 1997, Spain (The Basque Republic) in 1982 (Irsaliyev *et al.,* 2017).

Kazakhstan is in its early stage of integrating multilingual education having introduced it in 2004 and started to implement in 2008. Thus, the country is encountering several considerable problems in introducing multilingualism, like the preparation of teaching staff, redesign of study programs, provision of teaching resources and tools as well as supporting the learners, teachers with

applicable and required knowledge and equipment (Sagyndykova et al, 2017; Tlemissov et al, 2020; Aubakirova, 2021). By analysing the international models of multilingual education, one could argue that they are the best and examined one that can strongly contribute to the development of multilingual education in Kazakhstan. The experienced countries are well-developed and in the case of Kazakhstan, we should also brood about the social-cultural, economic, political interventions that may have a great impact on it (Aubakirova et al, 2019).

Kazakhstan can gain necessary insights and practical implications based on the international experience to adapt the process of developing multilingual education. It covers almost all the needs in this sphere starting from the model of multilingual education to the teacher preparation. Considering the whole process of multilingual education, it is of high importance to prioritize the key features of teaching staff preparation that contributes to the rapid development of multilingual education area.

Let us consider the key features of teaching staff preparation in multilingual education in Finland, The Netherlands, Luxembourg, Spain, and Switzerland. First, the significance of usage and training the Content and Language Integrated Learning (CLIL) method is necessary from the teachers' perspective. Such trainings on specific direction for teacher preparations give opportunities for acquiring different kinds of teaching methods and ideas, competences, as well as language course attendance for teachers. Furthermore, it cannot be limited only to the language learning it expands to the participation various teacher training courses, different online courses, the development of content knowledge, CLIL methodology as well as cognitive skills (Hillyard, 2011).

Another contribution of CLIL is "experience with teaching content matter through more than one language is bringing new insights into improving general education programmes" (Baetens-Beardsmore, 2001). Teaching trough CLIL method implies teaching content subject material via foreign language. Sometimes it is also available that content subject teacher and foreign language teacher may work together by learning mutually and supporting each other (Vázquez & Ellison, 2018). With the help of these features, it will be easier to provide with multilingual teaching staff in several universities in a multilingual area. One of the essential recommendations is the facilitation and support of multilingual teachers, their professional development, and the enhancement of motivation for both teachers as well as students. To develop it further, it is also necessary to upgrade the proficiency of three languages of educational leaders. The expenditure per student and salary for teachers in Nordic countries are very different in *comparison with Kazakhstan which needs consideration too (Irsaliyev et al., 2017).*

2.2.4 Multilingual education practice in Kazakhstani schools

Since 2007-2008 the multilingual education started by the initiative of the Kazakhstani Ministry of Education and Science (Kulsariyeva, Iskakova & Tajieva, 2017). First of all, the implementation of multilingual education in three languages in the country began in three experimental bases including 33 "Daryn" pilot schools 20 NIS (Nazarbayev Intellectual Schools) and 30 BIL (Bilim Innovation Lyceums) of all educational levels in pilot mode. Both NIS and BIL use the strong model of trilingual education while implementing three languages as instruction languages (Irsaliyev *et al*., 2017, p.135). In the context of Kazakhstani schools, trilingual education is understood where only science subjects (physics, chemistry, biology, computer science) are taught in English language in senior grades (Syrymbetova, Zhumashev, Nygmetuly, Shunkeeva & Zhetpisbaeva, 2017). The role of English language is significant and multilingual education is regarded as key aspect contributing to the effectiveness of country's education system (Nurmukhanova and Gyori, 2020, p.403).

Strong model of multilingual education can be divided into three (Irsaliyev, 2017.p.143):

1. First element is the language immersion for schoolchildren where they study in two languages including early, medium, and late immersion which depends on the grades and ages of students.
2. Second step is the two-way immersion that means the equal study of the speakers of first and second languages in the same classroom.
3. The third one is dedicated to the traditional bilingual education in those countries which are officially regarded as multilingual (Luxemburg and Singapore).

It usually occurs in the international schools where one of the language instructions is English (Björklund, Cabianca, Cenoz, Ehrhardt, Etxague, Garau & Bangma, 2011 cited in Irsaliyev *et al.,* 2017). These schools presented the study process in Kazakh, Russian and English embracing the STEM subjects trained in English (Kulsariyeva, Iskakova & Tajieva, 2017).

Nazarbayev Intellectual schools (NIS) and Bilim Innovation Lyceums (BIL) have their system of integrating the languages of instruction from the definite period of time for example, BIL adopt lately Kazakh language from the 9th grade whereas NIS provide their learners with English language for language instruction and BIL start using English language instruction only after the language preparation (Irsaliyev *et al*., 2017). NIS and BIL schools are piloting schools of multilingual education. In 2019 the implementation of trilingual education will start in the other public and mainstream schools based on the experience of the above-mentioned piloting schools (Irsaliyev *et al*., 2017).

Table 4. The amount of academic load of students' language subjects at schools

Schools	Week load	Expected level of L2	Expected level L3
NIS (Nazarbayev Intellectual school)	4-5 hours	C1	C1
BIL (Bilim Innovation Lyceums)	4-5 hours	B2, C1	B2
Mainstream schools	2–3 hours	B1	B1

Source: Own compilation based on Irsaliyev et al., (2017)

NIS prepares their learners for 4 years extensively for instruction in English (see in detail Table 4) whereas in BIL they began to teach only after four months of intensive language training (*Irsaliyev et al., 2017*).

Figure 6. Model of trilingual education in NIS with time allocation for each language, %
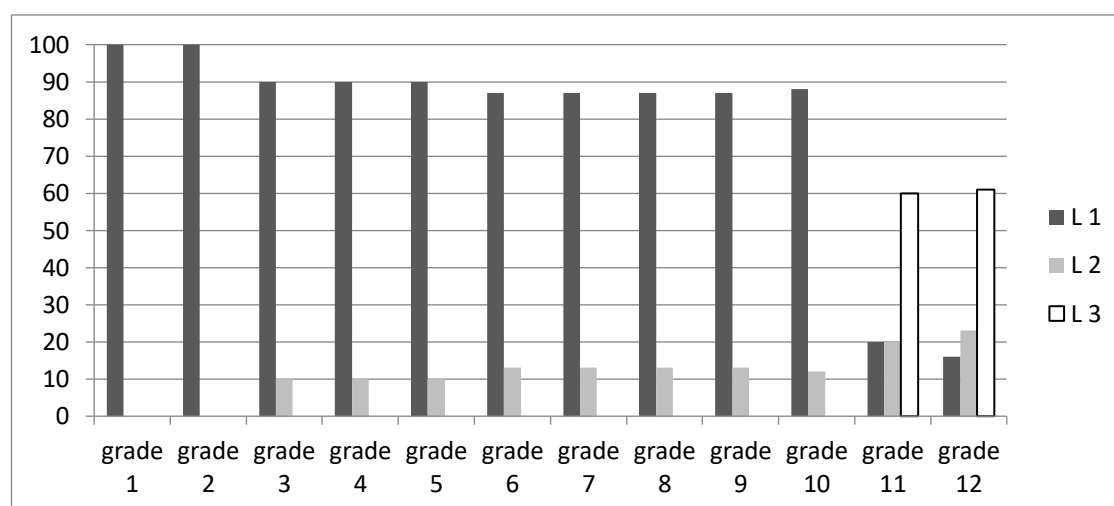
Source: (Irsaliyev et al., 2017)

As it is illustrated in Figure 6 the model of trilingual education in NIS keeps the early immersion of the first language until grade twelve. Native speakers, implementing bilingual team teaching are carrying out teaching in this type of schools. In teaching English, they provide the learners with four-year extensive language training and therefore by the end of school completion they are to possess C1 level of English. More to this point the learners are encouraged to be engaged in extra-curricular activities in English language (Irsaliyev *et al.,* 2017, p.137).

As NIS and BIL schools are regarded as piloting they have different kinds of multilingual education development strategies and models, grading systems and various time allocations for integrating all three languages. They are even facilitated by the different curricula. Those hopefully will show the right procedure and results and contribute to choose which pilot mode to apply to the other mainstream schools (Sagyndykova, Svinarchuk & Kubrina, 2017).

Multilingual education practice at schools

The implementation of multilingual education at one of the schools in Kazakhstan experienced a huge struggle in program integration. For instance, Gymnasium №3 for gifted students located in the south-east of the country is one of the first schools which experimented trilingual education. Initially this program implementation brought a plenty of difficulties for teachers, students and even parents. It requires teachers to have greater language skills they must speak Kazakh, Russian and English in order to conduct multilingual education. Teachers had to work a lot independently, in a team, in methodical associations. A significant role was played by advanced training courses when teachers mastered new technologies and methods. Teachers were indulged in preparation and elaboration of necessary manuals, books (English version). Another problem was the lack of professional specialists in this area. Teachers must know both their subject and English as well to be able to teach in English. Now this process is being developed and improvement procedures are being reached (Kovaleva, 2018).

They teach computer science, English and Chemistry for senior grades (grades 9, 10, 11) in English - these optional special courses have been running for several years. As a part of the educational process, they teach Biology, Chemistry, Computer science in English starting from the 8th grade. The implementation of this project provides for an annual increase in classes and a gradual transition of the entire school to teaching general education subjects in three languages from the 7th grade: the study of one or more subjects of the natural and mathematical cycle in English, the Kazakh language and literature, the history of Kazakhstan in schools with the Russian language of instruction — in the Kazakh language, according to the program of schools with the Kazakh language of instruction; Russian language and literature in schools with the Kazakh language of instruction - in Russian, according to the program of schools with the Russian language of instruction (Zhetpispaeva, 2015).

2.2.5 Multilingual education in Kazakhstani higher education institutions

The same trilingual education process is accomplished at universities where English is used a language of instruction for teaching science subjects (Physics, Chemistry, Biology, Computer science) (Polatova et al, 2020). Sagyndykova, Svinarchuk and Kubrina (2017) give a detailed statistic of the multilingual education development and describes it starting from 2012 - 2013 academic year 32 higher education institutions (HEI) in Kazakhstan opened specific departments on multilingual education where the lessons are being conducted through English. In 2015 – 2016 the scope of those specific departments widened in 42 out of those 125 higher education institutions in the framework of trilingual education: 6 of them are national HEIs, 26 - State HEIs, 1- international HEI, 7-JSC (Joint Stock Company) HEIs and 2- private HEIs (Sagyndykova,

Svinarchuk & Kubrina, 2017). They point out that in 2015 – 2016 the number of multilingual groups increased to 2393 in which 18 006 people are studying: 16121 students are studying - in bachelor's degree, 1662 – in postgraduate education and 223-in graduate education (Sagyndykova et al., 2017).

The teaching staff in multilingual education consists of 2121 teachers who conduct lessons in English (Sagyndykova, Svinarchuk & Kubrina, 2017). In 17 universities training in three languages began since 2012. They conduct teacher preparation in Biology, Chemistry, Physics, and ICT (Information and Communication Technologies) in English as a medium of instruction. Since 2016 there is   a transformation to the model of multilingual education **"50:20:30"** which means (50% of subjects are conducted in the first language, 20% in the second language and 30% in third one) (Irsaliyev et al., 2017, p.139).

Having researched the above-mentioned details of multilingual education development in Kazakhstani higher education institutions it is noticeable that trilingual education is rapidly advancing. Almost one-third of Kazakhstani higher education institutions are implementing and penetrating multilingual education policy which shows the significance and relevance of multilingual setting development on the national scope. Furthermore, according to Toktamysova (2012) the multilingual education implemented in Kazakhstani higher education is the unique program that embraces the conduction of training parallel and simultaneously in three languages (Kazakh, Russian and English). She also emphasizes that all the works connected to the formation of multilingual personality in the roles of multilingual teachers and different kinds of teacher training and preparations involving multilingual education are accomplished and supported by the Ministry of Education and Science (MES of RK) (Toktamysova, 2012).

The rapid development of multilingual education in Kazakhstani higher education institutions may cause some challenges as well. As it is regarded to be a new model, educational institutions face the lack of teaching materials and staff in the English language. For example, Kazakhstani scholars, Sagyndykova, Svinarchuk and Kubrina (2017) indicate that the whole elaboration and organization of teaching materials in Kazakhstani higher education system are prepared by the universities. Special teaching staff who conduct lessons in multilingual groups on a specific area, for example, Chemistry, Biology in Kazakh or Russian languages usually fulfil the procedure of the teaching materials preparation. The new materials and manuals, online courses, dictionaries in three languages, glossaries elaborated in Kazakh or Russian are translated and reviewed into English by the teachers of English in the English language department (Sagyndykova, Svinarchuk & Kubrina, 2017). The most significant challenges in multilingual education in Kazakhstani higher

education institutions are the lack of teaching staff with English knowledge proficiency (Tastanbekova et al, 2010). Despite the paucity of teachers with the proficiency of three languages (Kazakh, Russian, English) all around Kazakhstan, invited professors from abroad also work in Kazakhstani higher education institutions mainly in the capital city and other megacities.

Universities in the country prepare specialists and pedagogical staff in specific subjects in English (Zhetpisbayeva&Arinova,2012). Training of multilingual staff is the basic point for modernization of higher education (Zhumay, Tazhibayeva, Shaldarbekova, Jabasheva, Naimanbay, & Sandybayeva, 2021. p.57). The development of multilingual education started in higher education institutions and there are basic universities, such as Karaganda State University (KarSU) situated in the central part of the country and Nazarbayev University (NU) in the capital city Astana, that are considered the bases of multilingual education for disseminating its implementation practices and experience to other universities. KarSU is contributing for the better development of a "Framework of multilingual education development in Kazakhstan" since 2008. The given framework involves all the necessary documents and teaching resources, scientific and methodological supports as well as their implementation stages (Irsaliyev *et al.*, 2017, p.139). There are also universities such as KIMEP, KBTU (Kazakh-British technical university), IT university where English is used as a language of instruction (Polatova et al, 2020). A plethora of science educators are being sent to KarSU for yielding language courses in order to improve and master their foreign language skills.

According to Irsaliyev *et al.,* (2017) one model of trilingual education in Kazakhstan is devoted to KarSU (see Figure 7) and a different for the other universities (see Figure 8) where multilingual education is being developed and expanded. In Kazakhstani higher education the undergraduate (bachelor) education takes four years of study thus there are a total of eight semesters to fulfil for the students.

Figure 7.Model of trilingual education in KarSU Academic load (credit numbers)
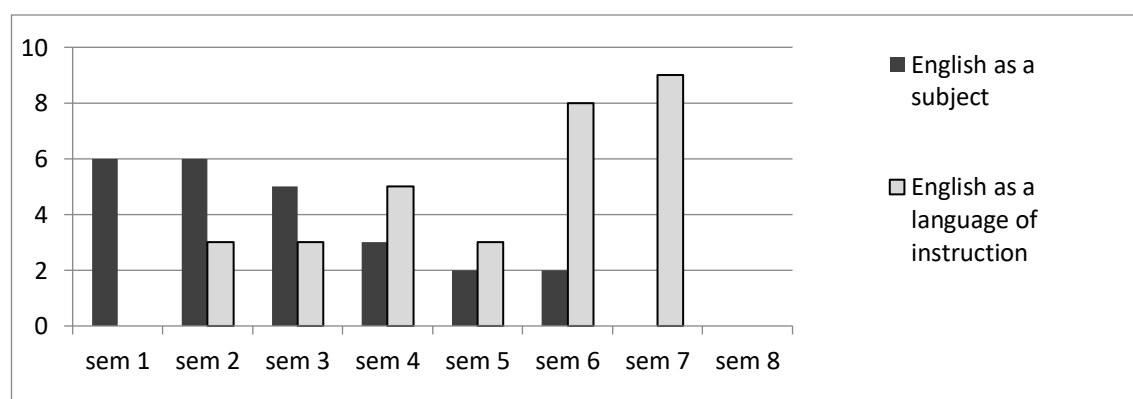
Source: (Irsaliyev et al., 2017, p.140).

Figure 8.Model of trilingual education in universities (average), Academic load (credit numbers)
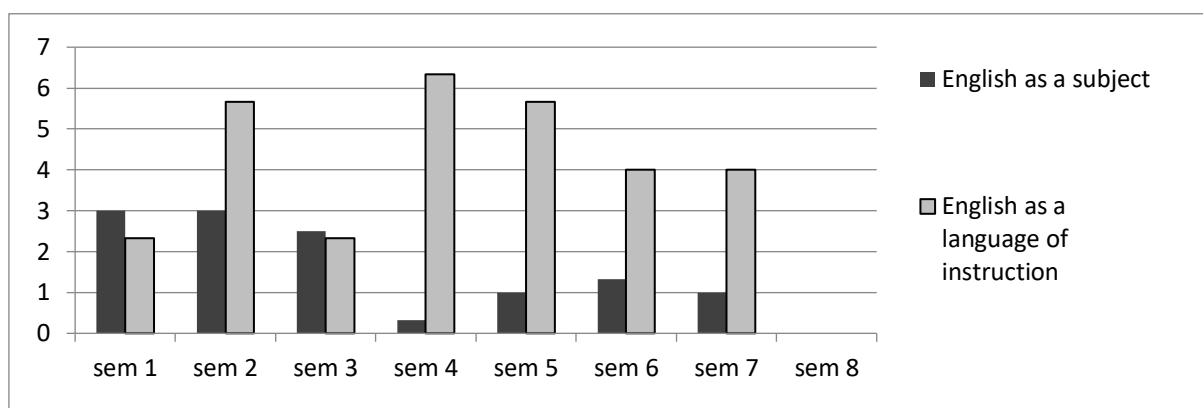
Source: (Irsaliyev et al., 2017, p.141).

Figure 7 belongs to Karaganda state university which establishes the framework for multilingual education development in Kazakhstan and the latter one is dedicated to other universities where multilingual education is developing. As it is delineated in the diagram while integrating trilingual education the KarSU allocates several credits on English as a language of instruction only starting from the second semester along with English as a subject. It continues until the seventh semester, so it means that the students study English as a subject from the first semester and starting from the second semester they have the other subjects with English language instruction. Implementation of English as a language of instruction form the second semester allows the students to acquire English language proficiency even though sometimes it cannot be sufficient and in the seventh semester, they totally transfer to the English language instruction model. As it is illustrated in the diagram the levels of English language as a subject and English as a language of instruction changes every semester. In the eighth semester students develop their teaching practices in schools thus they have no classes (Irsaliyev et al., 2017, p.141).

In the trilingual education model of other universities, as it is illustrated in the diagram (see Figure 8) they strive to keep it somehow altogether by allocating credits both for English as a subject and for subjects with English as a language of instruction. Implementation of English as a language of instruction starting both from the first semester may lead to the deterioration of students' internalization on those specific subjects due to the lack of language proficiency of students. At the same time, it gives the advantage to provide with the credits for English as a subject until the end of their graduation. That contributes the students to support and enhance their knowledge of the language that will lead to better subject cognitions. Even though this kind of model can be a plus factor for trilingual education integration to make students study for example Biology, Chemistry, and other science subjects from the beginning in English. But it can cause problems

concerning the students' understanding of the subject in English due to the lack of students' English language competence.

European countries have a solid experience on Multilingualism, but Kazakhstan has chosen its own way of developing trilingualism – multilingualism. Such development and intervention of multilingual education may serve as an implication for the multilingual education system of Kazakhstan and as the best practices for usage. Notwithstanding the best experiences of above-mentioned European multilingual countries, the case of Kazakhstan in this field remains heterogeneous because of cultural diversity and various language backgrounds but nevertheless we opine that Kazakhstan can somehow benefit from these approaches too (Irsaliyev et al 2017). Although with the thoroughly elaborated policy the education system encounters a variety of issues: lack of teaching staff, lack of teaching resources and aids. However, time by time with the development of teaching resources, the teaching environment is getting more favourable for multilingual education (Aubakirova et al, 2019).

It is also necessary to describe the realization of multilingual education practice in one of the universities in the Southern part of Kazakhstan. For instance, M. Auezov University started the implementation of trilingual education as one of the mainstream universities. From the beginning multilingual program spread on only natural sciences such as Maths, Chemistry, Biology, Physics and so on where only science subjects were taught in English language.

Since 2020-2021 ten faculties have launched trilingual education with more than forty educational programs in pedagogy, engineering, and natural and scientific areas in bachelor's degree. There are more 700 students participating in trilingual education at this university. Annually the number of educational programs in different faculties are extending. For example, there Ecology, Biotechnology, Informatics, and many others where English is used as the language of instruction in Bachelor's, Master's, and Doctoral degrees.

There are around 112 faculty members engaged in teaching in trilingual education program who has TOEFL and IELTS certifications. There is TOEFL centre at the university that contributes to the enhance and improve language competences of both teachers as well as students. This university enrol students to the trilingual program only by determining their level of English language knowledge. Such teachers constantly participate in courses for professional development in the country and abroad as well. 15 textbooks, 82 textbooks, more than 200 methodical instructions, 27 role-playing games, 96 lecture notes, 48 cases, 13 methodological textbooks have been developed by the university teachers in the last three academic years (Education in three languages. 2017).

An important problem in connection with updating the content of education, the new paradigm of language education is the issue of training teachers of a new formation, which involves the development of a conceptual model of a teacher who is able to work in a multilingual education. A modern teacher should have a wide range of personal and professional competencies for innovative and pedagogical activities, for continuous development and improvement of their qualifications.

CHAPTER III: FORMALITY OF LEARNING

3.1 Contemporary understanding of learning as a complex system

However, the contemporary studies underpin that learning is a self-standing theoretical subject which is multidimensional, and these present-day approaches impart special attention to support and yield a comprehensive, consistent, and coherent understanding.

The issue of identifying what the learning theory is and what kind of precise definition to give to the concept of learning has been a central focus for scholars (Knowles, 2005; Illeris, 2015; Jarvis, 2006, 2009; Wenger, 2009; Cloe, 2012). A plethora of studies are being explored and researched in order to conceptualize and dignify its functions. For instance, if to go back to the 1960s one may encounter different approaches regarding the characterization of learning. Knowles (2005) in his book of "The Adult Learner" suggests three dominant and still different definitions.

Table 5. Defining learning theory

Crow and Crow, (1963, p.1)	Haggard, 1963, p.20	Burton, (1963, p.3)
Learning is a change related to the gaining of different human assumptions like knowledge, skills, habits etc. any shift occurred in behavior is the existence of learning. The change process if equal to the learning process.	"…change in behavior as the result of experience".	Learning is a change taking place in result of the cooperation between people and environment.

Source: Knowles (2005)

All of these approaches emphasize the change in behavior but from different perspectives. The learning theorists including the precursors and their contemporaries keep twofold approaches. Some of them scaffold learning process by which behavior is altered, formed and managed (Haggard, 1963; Burton, 1963; Crow and Crow, 1963). Whereas the other theorists espouse the learning which is based on the enlargement of knowledge, skills and competences attempted to the realization of potential (Knowles, 2005). In the following chapter we will present in detail three contemporary authors amongst the learning theorists (Illeris, 2015; Jarvis, 2006; Wenger, 2009).

The Danish scientist, researcher of lifelong learning, Knud Illeris adheres to the exploration of this learning concept considering diverse approaches and analyzing their peculiarities in the works of well-known scholars such as Dewey, Kolb, Schön and Mezirow. Illeris does not take only into account various aspects for further elaboration and consideration. He attempts to develop the notion of learning, Illeris (2015) is defining the learning as "*a learning implied a subjective and positive connection between the learner's objective interests and subjective motivation and the*

learning content, which always includes a cognitive, an emotional and a social dimension" (Illeris, 2015, p. 32). Illeris argues that the learning theory tends to be complicated embracing a wide scope in learning process and acquisition in different context, not only in schooling and education but the working life as well; it also comprises different kinds of elements and factors that influences comprehensive and coherent learning. Therefore, to make it clearer and more palpable triangle (Figure 9) that depicts human learning process illustrating the interaction of indispensable factors (Illeris, 2015, p.30).

Figure 9. The triangle of learning process
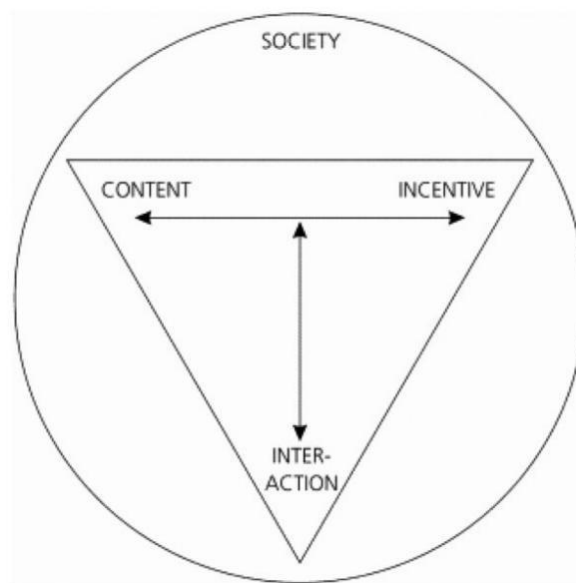
Source: Illeris (2015, p. 30)

As it is illustrated in the Figure 9, all types of learning and learning process comprise three basic and essential dimensions in the process of learning. As it is depicted in the figure above this vertical double arrow implies interaction between an individual (learner) and the environment delivering learning insight whereas the horizontal double arrow is the process of acquisition that comprises the content and incentive of learning process. Each of these factors has their own functions to fulfill. For instance, the content may vary consisting of knowledge, skills, competences, beliefs, behaviors, conceptions. An incentive, in its turn has an impetus to drive pull the mental process with emotional traits including motivation as well. Content and incentive are mutually interrelated and nonseparable; it is impossible to internalize and construe any learning process without scrutinizing all these three directions. Based on learning triangle Illeries worked out the following description of learning:

"The interaction process between the learner and the environment provides the learner with some input, which may or may not be absorbed by the learner through an acquisition process. When

absorbed, the input is connected to the results of subjectively relevant prior learning and thereby forms the learning outcome, which is always individual, and influenced and sometimes distorted or misunderstood by the learner" (Illeris, 2015, p. 35).

Illeris (2009) puts a huge stress on the essentiality of the fundamental factors which is framed by learning triangle. Content and incentives are extremely dependent on the interaction process. Illeris (2009) gives practical implication to the implementation of learning triangle in the context of school learning with the situation of Chemistry subject in the classroom among the teachers and students. Here, the students are already in interaction process with teacher where they internalize and learn something new in the related subject under different circumstances which may be impacted by different conditioned factors. The learners may sometimes encounter challenges in understanding the subject matter for instance, due to the inadequate acquisition of students, teachers' mistakes in explicating or scarcity of concentration of learner that may lead into deterioration in the process of learning in order to reach the goal. However, it is not only a matter of cognizing level of alumni but the role of other factors concerning the learners' attitude is taking its height as well with respect to the motivation, mobilization, mental energy that belong to the incentive part of the learning triangle. Provided that one of these learning triangle dimensions is failed or is not adequately supplied or accepted by learners, it may bring to the wrongheaded direction in the process of learning. Such disparities may come from different perspectives including educators, alumni, or learners, of subject or the other external factors as classroom or educational institution situation (Illeris, 2009, p. 11).

Illeris (2009) attempts to draw our attention to the meaningfulness of fundamental and interdependent learning dimensions of triangle that assists in contribution and adequate distribution of learning process in order to gain the required or planned learning.

Another approach in understanding the learning theory belongs to Peter Jarvis (2006) claiming on utmost importance of learning that takes place in society at crossing point between people and environment when they are in exertion or dissonance. He puts the emphasis on the consequences of *learning resulted in transformation or change in person*. These changes imply the transformed and more experienced individual may involve peoples' self-esteem, skills, competences, knowledge, and assumptions such as beliefs, values, norms, concernment, and identity and so on. Under the word of disjuncture, Jarvis dignifies as a "gap between the individual's biography and perception and construction of the experience of the external world" (Jarvis, 2006, p.49). Initially, while analyzing the learning process Jarvis juxtaposed Kolb's learning cycle highlighting its redundant simplicity to present the complication social learning of human being. Therefore, Jarvis suggested his own model of human learning (see Figure 10).

Figure 10.Learning process
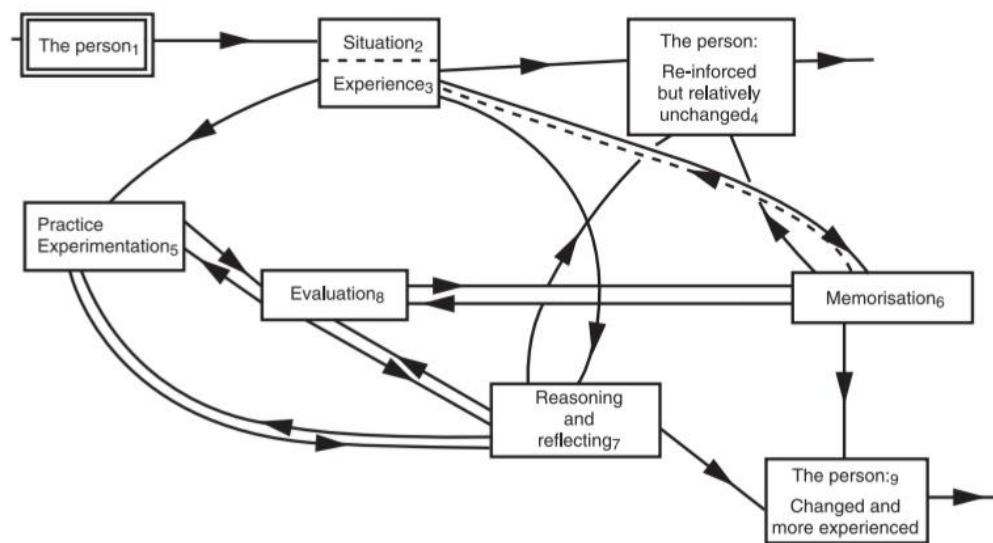
Source: Jarvis (2006)

This model of learning process presented by Jarvis is more holistic and takes into consideration *interdisciplinary and multidimensional* approaches to the conceptualization of learning process. As such, the model illustrates the relevance and value of the complicated features of learning of human being embracing the social scope and environment as well as the central foci of learning experience. One of the most important features of learning theory as Jarvis stresses on is that the subject of learning is an individual who learns, and the learning outcome is the changed or transformed individual. This *changed individual* may impart a variety of social outcomes. Hence, regarding the multidimensional and multidisciplinary features of learning process and learning outcomes as well as its interaction among different sciences and directions, Jarvis suggests the following definition:

> *Human learning is the combination of processes throughout a lifetime whereby the whole person – body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs and senses) – experiences social situations, the perceived content of which is then transformed cognitively, emotively or practically (or through any combination) and integrated into the individual person's biography resulting in a continually changing (or more experienced) person (Jarvis, 2009, p. 25).*

Here, Jarvis highlights the major concern of the learning process of human being drawing the attention to its basic elements such as body and human brain that is considered to be as a whole person and identity formation who learns in the diverse of social contexts. His conceptualization of human being learning emphasizes the significance of its implementation in all learning spheres not only in the field of education. The fundamental point is that we should investigate the learning

process from psychological and sociological dimensions in tandem with a learner to be a philosophical perspective.

There are many other various approaches towards the understanding of learning theory in terms of social perspective (Wenger, 2009; Jarvis, 2006; Illeris, 2015). Most of these different learning theories are used for a range of diverse goals. Each of them depicts more meaningful assumptions in relation to the substance and essentialities of knowledge mattering in the process of learning. Wenger (2009) is proposing a social theory of learning, but this given learning theory has its own components of assumptions and focal point.

Figure 11.Components of social learning theory
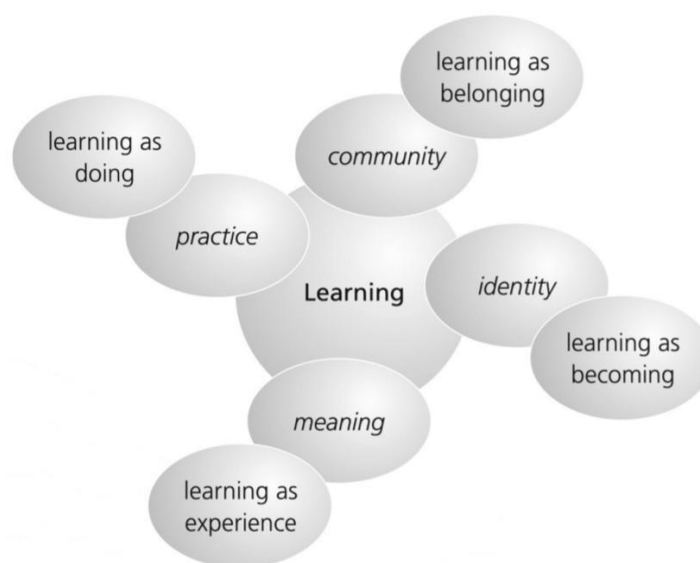
Source: Wenger (2009)

As such the main pillars of this model of social learning theory lie on the profound consideration of assumptions of learning by partaking of people or learners in the society or environment. It does not imply the participation of humanity in specific social arrangements, but it implicates the involvement of human being in active processes or practices in the environment as well with regard to identity formation related to a particular congregation or clique. The contribution of such social practices in a community allows us to shape actions, identity as well as our interpretation in the society. Therefore, there is a need that this social learning theory should encompass considerable sets of constituent elements in order to mark and specify the participation of human being in the society as a process of acquiring knowledge or learning process. These components consist of four aspects including meaning, practice, community, and identity. These constituent parts of the social learning theory are mutually interrelated that depicts how social learning process if fulfilled (Wenger, 2009). Learning is characterized and accessed differently by the variety of theories

encompassing behaviorist, cognitive, constructivist and social learning. Each of them has their own way of gaining and interpreting knowledge; behaviorist focuses on the behavioral transformation, cognitive theory sees learning as modification in cognitive structures where the information is provided by explication, communication and so on. Constructivist theory intends in building their mental structures through the interplay with society as well as with task-driven focal point from pedagogical perspective. Whereas social learning theory adheres to the interaction in society through the mutual interrelationship among people and observation is the main weapon and origin of learning where these intercommunication and cooperation greatly influences on the behavior (Ibid, p.217).

Taking into consideration all these theories through which learning process is characterized differently with various specifities where learning process takes place. Regarding the peculiarities of other theories, social learning theory is the most fundamental and indispensable learning theory being a bridge connecting behaviorist and cognitive learning theories (Muro & Jeffrey, 2008). One of the famous scholars in social learning theory is Bandura who claims that human being acquires knowledge and behavior through the observation of other people as well as emphasizing the importance of that as a result of learning change may or may not take place (Bandura & Adams, 1977). He adheres to the implementation of modeling in the process of learning. According to social learning theory learning is carried out through observation, imitation and modeling. Learning through modeling implies acquiring knowledge via watching the models and model in its turn are the people who are being observed and therefore, this is called learning process.

All these learning theories are regarded as essential and integral part of learning process with different focuses and perspectives. As such having analyzed multitude of diverse learning theories the most relevant is social learning theory among them for our empirical research. The interaction and interrelation of people contributes to the development of learning acquisition as well as bringing essential insights through learning process; the emotional condition in the environment is a rationale independent on the content of learning.

3.1.1 Professional learning: Faculty members' learning & Workplace learning

There are two fundamental terminologies such as professional learning and professional development that are quite problematic to discern as researchers in the field of education use it interchangeably. However, professional learning plays an essential role in the education sphere being hand in hand with professional development in practice (Webster-Wright, 2009). It implies that professional development is based upon the active, ongoing, social, and empirical professional learning. Professional learning includes "*mostly formal programs—those that provide meaningful time for teachers to work together, are embedded in teachers' work, are school-based to allow for*

ongoing support, are planned and implemented with the meaningful leadership of teachers, and are effective in changing teacher behavior, school function, student behavior, and/or student achievement" (Easton's, 2008).

In general, common definition of professional learning encompasses *"activities to develop an individual's skills, knowledge and expertise and other characteristics as a teacher"* (OECD, 2009). Whereas another approach towards professional learning states that it is "*the sum total of formal and informal learning experiences throughout one's career from pre-service teacher education to retirement"*. This approach explicates the importance of learning activities and experiences but without considering the goal or professional learning and context where faculty members are engaged in (Cole, 2012).

"Professional learning is the formal and informal learning experiences undertaken by teachers and school leaders that improve their individual professional practice and the school's collective effectiveness as measured by improved student engagement and learning outcomes" (Cole, 2012).

Such kind of definition put a priority on learning results rather than inputs and is not only dedicated to teachers' individual level learning but encompasses effective educational policy implementation process as well as emphasizes the manifoldness of teachers' formal and informal learning opportunities as an uptake of their professional development by which faculty members focus upon the enhancement of professional and pedagogical repertoire that results in whole educational institutions improvement (Ibid, 2012, p. 5). The researcher also highlights the effectiveness of teaching and learning practices which requires much effort from the faculty members as well as their leaders to accomplish professional commitment efficiently. There is a funnel of transferring professional learning which illustrates how teachers' professional commitment is accomplished step by step (see Figure 12).

Figure 12. The funnel of professional learning transference

This triangle is somehow similarly constructed hierarchal as of Bloom's taxonomy implying the essence of that the more the actor is involved in professional learning, the more complicated actions they have to perform that requires high cognitive and social skills as well at the top of the pyramid.

"Professional development consists of all-natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school, which contribute, through this, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitments as change agents to the moral purpose of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues throughout each phase of their teaching lives" (Day, 1999).

The quality of teachers learning outcomes and quality of knowledge improvement all of these things lead to the teachers' professional development. According to Opfer and Pedder (2011) previous research related to the teachers' professional learning do not reveal and explicate the process the teachers learn from their professional development. They attempted to conceptualize the teachers professional learning taking into consideration the conditions, supports and promotions in this field of learning (Opfer & Pedder, 2011). They also consider a number of researchers who had different approaches identifying the concept of teachers' professional learning differently. For instance, as the consequences of several research in this field conclude that teacher learning involves huge and very broad features such as local knowledge, challenges, everyday routines, practices, and beliefs. Furthermore, it is as a very complex system including various kinds of process, mechanisms, elements (Opfer, & Pedder, 2011). The work and occupation of teachers as a whole embrace a number of different activities and cooperation which contributes to enlarging and enhancing their knowledge and skills as well as helps for refinement in practice promoting them further as teachers (Desimone, 2009).

As for the professional development there are a range of responsibilities and role for teachers that they should acquire along theory and practice integration as well as curriculum, effective teaching, assessment. Knowledge and skills and through theories that teachers are apt to comprehend and contribute to the ongoing process of practice (Timperley, Wilson, Barrar, & Fung, 2008). Teachers are constantly participating in diverse educational trainings for professional development (Markus & Erdei, 2014).

Professional learning features involve content focus implying in-depth conception of student learning. Next is dedicated to the active learning which betokens proactive learning among faculty

members. Coherence is a must meaning the intrinsic relation between teachers' belief and state initiatives. Time length should also be regulated considering specific contact time. And the latter one is devoted to the collaboration of faculty members with each other or with those who are from the same schools or engaged in similar content transmission (Desimone, 2009). However, these fundamental features were used in order to illustrate activities that influences on teachers' in-depth learning as depicted below (Smith, 2010).

Table 6. Professional Development Activities and Relation to Depth of Learning

PD Approach	PD Activities	Objectives	Core features
Reading about a resource or method	Individual	Build awareness	Content focus
Training	A single workshop	Build knowledge	Content focus
Professional development	Multiple session workshops	Change practice	Content focus, active learning, duration, linked to teacher beliefs and standards
Professional learning	On-the-job, In a community of practice	Change theories and assumptions	Learning in the workplace, using student data, learning through experience, learning through reflection

Source: Stewart (2014)

Stewart (2014) argues that an individual builds knowledge and experience or awareness through iterative exploration, implementation, and improvements. Students' learning acquirement is dependent on an educators' flexible explication of subject matter and therefore, it is influential when teachers are within the same learning community with colleagues to reflect. Professional learning activities must be related to the subject matter and job-related, with particular time length as well as such learning framework should involve all the features and activities illustrated in the Table 6. This table includes the list of activities proposed by Smith (2010) and its influence on the deepness of teachers' learning using the core features of professional learning suggested by Desimone (2009). Reading and training attendance imply the content without affecting teachers' practice as well as considered to be passive which do not bring any alterations in teaching practicum. Whereas the latter two approaches (multiple workshops and professional learning communities) are considered as active learning activities causing on the changes according to the specific necessities in order to enhance the teaching practice (Stewart, 2014 p. 31).

The professional learning activities and development are accomplished the most efficiently by a small group of teachers, qualified by Cole (2012) as "highly accomplished teachers". That implies not only that they possess high quality of competences in their professional field, but it means that such teachers are open and willing to work efficiently by collaborating with colleagues to contribute to the learning and teaching practices. Whereas faculty members engaged in individual learning may pervade their professional development through reading, sharing experiences, collaboration as well as being involved in building professional meshwork to improve teaching practice (Ibid, pp.17-18).

The continuous professional development of faculty members is inevitably essential for their work engagement. Lieberman (1996) differentiate three types of CPD. The first type is direct teaching which encompasses courses and workshops, trainings etc. the second one is learning in school including mentoring, coaching, collaboration, and action research etc. The latter is devoted to the out of school learning involving partnerships among educational institutions, visits to schools and networking (Lieberman, 1996). Kennedy (2005) gives a very detailed explanation of these models along its categorization, and he is creating synthesis in that field. Kennedy (2005) differentiates nine models of continuous professional development through which teachers can develop their knowledge (Kennedy, 2005).

- The training model mainly focuses on developing skills delivered by an expert so that they should be able to implement their competences through which they can be able to develop and disseminate their knowledge in the classroom and beyond.

- Award-bearing is considered as a mark of quality assurance that is usually validated or recognized by the funding or controlling bodies.

- The deficit is the model that signifies the deficiency in teachers' performances that strives to remedy the shortages or weaknesses of not only in teacher performances but in organizations as well.

- Next is the cascade model which is very interesting one with the help of which teachers collaborate and learn from each of other. If to exemplify the given model is mostly used as one of the sources of knowledge and sharing ideas. For example, suppose that a group of teachers attend workshop, trainings or conferences and after that they share that knowledge with their colleagues what they had learned but the weakness of this model is that the absence of value it means that the conveyed knowledge may lose its value without detailed consideration.

- Standards-based model "*represents a desire to create a system of teaching, and teacher education, that can generate and empirically validate connections between teacher effectiveness and student learning*" (Beyer, 2002).

- The coaching and mentoring model grasps a huge number of CPD practices. Both are the significant parts of teachers' professional development because they embrace counseling, professional friendship, collaboration, peer support and it usually occurs in school context causing the enlargement of collaboration and coordination with colleagues. Kennedy (2005) also indicates the importance of mentoring the novice teachers by the experienced one that supports and contributes to their professional development. The community of practice model betokens learning within the community. Teachers as the members of group learn in the group, they can be a passive learner or active where they gain the wisdom and knowledge of the dominants. The author also emphasizes the importance of the richness of the connections among the learners rather than regarding it individually considering accountability and interconnection among the learners.

- The next model is the action research model where the learners conduct the experiments in the classroom or even, they can be involved in other research projects in the school context. Here, they gain the internalization of the situation and the practice in it.

- The last one is the transformative model that is regarded as the integration of the rest of models which brings some changes in practices and conditions (Kennedy, 2005).

These models of CPD are characterizing the essence and process for further development that may help teachers to be more experienced, to share ideas and knowledge, skills and implement it in practice.

Multitudes of countries are financially supporting teachers by providing them with professional learning programs (Borko, 2004; OECD, 2004). There is a lack of research on how and what exactly teachers learn under different contexts as well as by different ways through formal, informal, structured and unstructured and other professional development ways (Borko, 2004). There is a necessity for the empirical research or evidence to identify PD (professional development) activities and educators engaged in teaching practice, disseminating professional awareness as well as increasing professional knowledge and competences. Although it should be admitted that teachers' professional learning is diverse and the occurrence of it may vary as well. Whereas some educators may express preference to learn individually to pervade professional knowledge, skills, competences by promoting and modernizing qualifications as well as enhancing pedagogical knowledge; some more akin to learn from collaboration (Yates, 2007). Furthermore, in order to be an effective educator, it is necessary for them to get in touch openly and collaborate with colleagues in regard with pedagogical issues (Grodsky & Gamoran, 2003).

In the framework of this study, teacher learning is the main foci that contribute to their further development as well as fostering specific educational policy in the higher education institution. Teacher learning is understood as a form of adult professional. People used to learn and teach each other for a long period of time ago by creating and discovering their own ways despite the assistance of other sources of instructors or facilitators (Kennedy, 2009). Currently, educators have access to almost everything and may acquire any knowledge anywhere. Once having been certified to teach, they usually keep continuing their ongoing learning process in terms of a variety of sources involving interaction, collaboration and by perceiving complementary courses in their field of professional interest (Ibid).

Teachers, who are admitted and recognized to be apt professionals tending to make complex changes and flexible to producing transformations should be provided with the possibilities to learn and foster in their professional context. King and Lawler (2003) claim on the need of specific and applicable learning activities together with contexts in which the existence of learning occurrence may be tackled. Such communities of practices may vary according to their dimensions including social, cultural learning events where teachers may possibly have opportunities to learn from their senior professionals. Participation in such learning interventions contribute to the professional development of teachers as well as underpinning in-depth transformations in the process of teaching which in its turn is a continuous and collaborative action with other fellows (Gregson & Sturko, 2007).

One of the distinguished scholars in the field of adult learning and education, Malcolm Knowles et al (2005) stress on the significance of unique learning demands or necessities that adult learners possess. Moreover, teachers as adult learners have their own needs which are exposed to changes depending on a variety of contexts where the learning is taking place in. What is meant by this is that if to explore such learning process in the field of adult learning, teacher's professional development is similarly characterized as the needs of adults in the given context (King & Lawler, 2003). In the book of "*The Adult Learner*" by Knowles et al (2005) are presenting assumptions and andragogical models and interventions related to adults as learners. According to these researchers, first aspect of adult learning is the need to know and at the same time the organizers or the facilitators of adult learning ought to draw vital attention while engaging and organizing programs for adults. Knowles argues that all adult learners should be fully involved in designing and programming their professional growth according to their needs in their teaching activities to be successful in their work. Another intrinsic issue in such planning is the coordination and cooperation among local management and educational institution administration that leads to the incorporation and mutual support in fostering any educational reform or policy implementation

(Hawley & Valli, 1999 in Gregson & Sturko, 2007). As it is mentioned above (Chapter number 2.1) the intervention of different stakeholders and educational agents (teachers) should be inevitable in planning educational programs for facilitators; reasonable rationale is teachers' internalization and scrutiny of educational policies and innovation, the influence on alumni and therefore teachers should intend their learning activities respectively.

Knowles et al (2005) emphasize another assumption implying that responsibility lies on adults' self- conception, self-efficacy and proactive performances. The support of self-directed learning is more akin to adults' needs and teachers being a proactive contributor to their professional growth where teachers in the role of adult learners should totally be involved in organizing and planning their learning activities because accountability, freedom of choice in content and delivery together with controlling their own learning process and experiences.

Adults are more inclined to problem- solving learning and this orientation is more useful for them facilitating in job. Knowles et al (2005) attempts from teachers' perspective in learning is often problem-oriented because if they encounter an issue or an intervention which is new for them that may bring and cause a poser for them, they strive to learn such insights that are productive and effective in their life and workplace. Likewise, it is worthwhile to indicate the concernment of external and internal motivators in the process of adult learning. To the external motivators belong salary, higher status, incentives, and job promotions whereas internal motivators being more forceful involve self-worth, willingness to grow, occupational satisfaction and quality of life that are dramatically essential for adults in the learning procedure. However, such obstacles like time consuming, lack of time, attitude towards learning overlook determined principles of adults to foster further. (Knowles et al, 2005).

In multitude of cases while integrating and implementing educational reform teachers face a dilemma if they are not competent or lacking specific knowledge and skills in a particular intervention they immediately function and attempt to adapt to the educational strategy and apply acquired insights in practice. Therefore, to avoid the discrepancies in integrating innovation it is advisable for teachers to orient their professional development experiences related to their work necessities. To make professional development of adults more transparent and effective the following model of is created by researchers.

Figure 13.Professional development model for adults
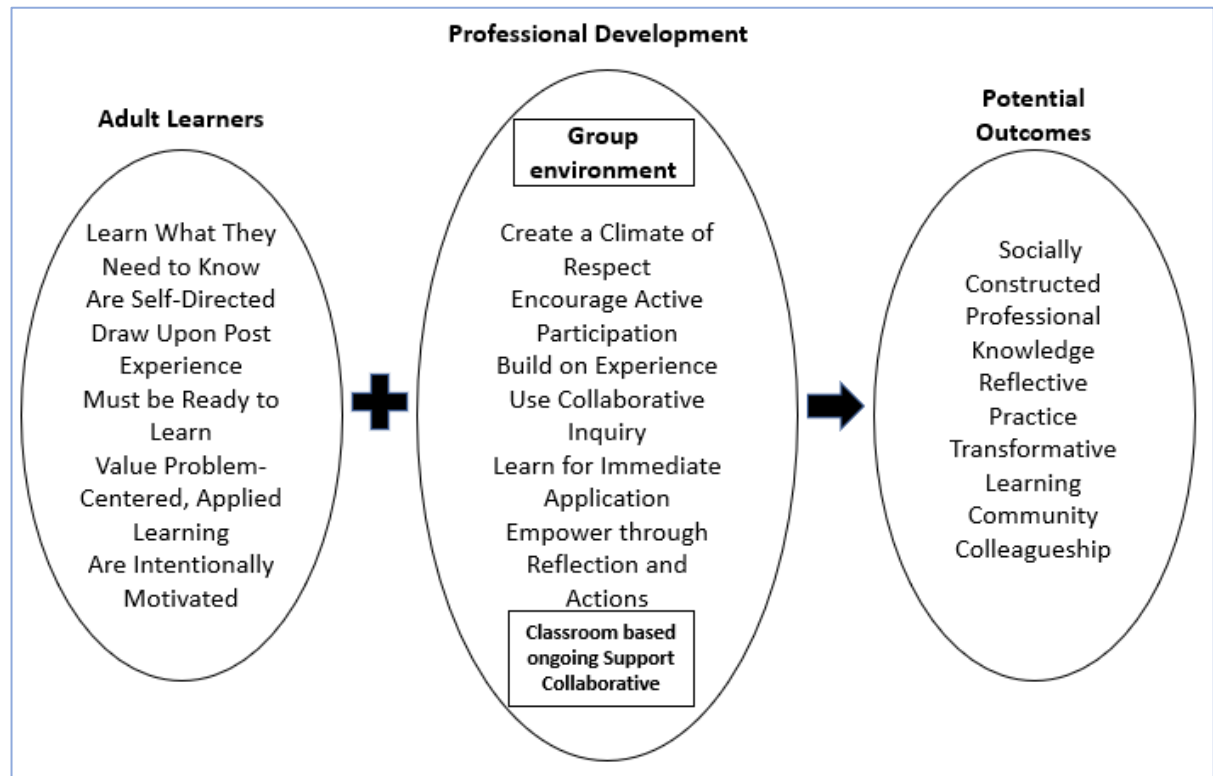
Source: Knowles, Holton III, & Swanson, 2005, pp. 64-68 and Lawler & King, 2000 as cited in Gregson and Sturko (2007, p. 7).

The professional development model for adults presented on the Figure 13 indicates that the organizers of professional development programs should be aware of how and what programs, activities and environments have to be created. While building such learning atmosphere as illustrated in Figure 13, the involvement of climate of respect and proactive attitudes of learners towards learning, learners' previous experiences and expertise and collaboration matters should be considered. It is not sufficient only to create such environment, but all these features should be accomplished according to the learners' needs where teachers' experiences and attainment are valued and keep pervading them on an on-going and collaborative ways. Such simultaneous and consistent approach of learning may lead to the productive results and outcomes. Based on peer learning, cooperation and collaboration with colleagues, teachers may absolutely reflect on the gained expertise which brings to the implementation, utilization and transformation put in practice (Gregson & Sturko, 2007).

Being an expert in learning and influential agents, academics grasp education for the sake of alumni as well as providing the educational institutions with innovation and transformations through changes (Bakkenes, Vermunt & Wubbles, 2010). One of the basic and substantial reasons of failures in the process of integrating and implementing particular educational innovation is

negligence and non-recognition of teachers' learning (Lieberman & Pointer Mace, 2008). Therefore, a key could be to support and promote teachers in fostering their professional growth. Much of endeavors have been done in the field of education, mainly exploration in teacher learning dimension and several of them focus on teachers' work-based learning (Beijaard, Korthagen, & Verloop, 2007).

Teachers, being educational agents should tend to adapt and change in order to reach definite results in their work. Shulman and Shulman (2004) developed a model that scaffolds teachers' learning. Their model incorporates several actions that should be considered in the process of teacher learning. These components consist of *Vision, Motivation, Understanding, Practice, Reflection*, and *Community*. The interaction and interrelatedness of these components are meaningful as well each of them having intrinsic function and influence on teachers' learning. If to exemplify, the existence of minor contradiction among vision and practice may lead to learning motivation. This can be considered as one of the strongest external motivations what Marry (2010) describes.

The contribution of this model is leading to the successful performance and reach productive outputs from their work. Significance consists in enriching skills to reflect and react to the modification and have the right way to tackle it. Matthews (2013) argues to support more workers to learn informally and provide them with necessary skills to respond to their challenges on their way (Matthews, 2013). As such, teachers should foster their vision in learning or teaching as well as get motivated to learn and acquire innovation at the same time to understand quality and direction of innovation pervade competences putting them into practice, reflect on their trials by learning and creating their own community where all teachers are engaged in to learn something new. Bakkenes et al (2010) as well as Knowles et al (2005), Illeris (2015) highlight the importance of collaboration and interaction of learners with environment which may result in a particular theoretical and practical learning outcome.

Workplace learning is another significant learning system for faculty members. It is usually acquired through interrelation and interaction among learners in the place of work. Workplace is the room where a learner obtain knowledge and skills by non-formal and informal means (Cacciattolo, 2015). Both informal and non-formal learning take place in workplace learning where workers. Informal learning can embrace employees' consultations, seek for a piece of advice, building professional networks (Vaughan, 2008). Researchers should be involved in university academic communications as well in their workplace (Fabri, 2008). There are three types of workplace learning (See Figure 14).

Figure 14.Characteristics of the formal, non-formal and informal forms of the workplace learning
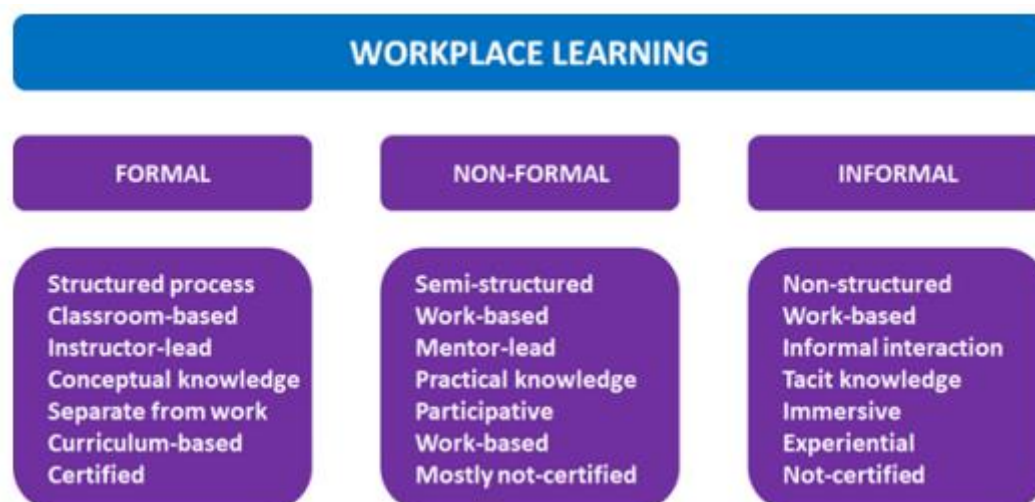
Source: Cedefop (2014)

Figure 14 represents three forms of workplace learning including formal, informal and non-formal[2]. These forms are analyzed in detail in the following sub-chapter (See chapter 3.2).

3.2 Formal, non-formal and informal learning

«Informal and formal learning are the end points of a continuum. On one end, formal learning is like riding a bus: The driver decides where the bus is going, while the passengers are along for the ride. On the opposite end, informal learning is like riding a bike: the rider chooses the destination, the speed and the route» (Jay Cross)

There are three different forms of learning formal, non-formal and informal learning which extremely interrelated and corresponding to each other. It is impossible to analyze them in isolation. The concept has long tradition in education theory, going back to the 50s, and important early work to Malcolm Knowles. The Faure report (1972) contributed also very effectively to the international spread of those concepts and made the theory visible also for experts of educational policy[3]. We begin the analysis of these concepts with the definitions of the Memorandum on Lifelong learning.

A Memorandum of Lifelong learning (2000) the Lisbon European Council which was held in March 2000 marks the importance of lifelong learning in the European Union concluding that "*the move towards lifelong learning must accompany a successful transition to a knowledge-based economy and society*" (p.3). The concept of "lifelong learning" makes an emphasis on time stating that it is learning throughout life which lasts continuously and periodically. However, there came

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[2] Following the more recent trends in Europe, the non-formal and informal learning can lead also nowadays in some education system to the validation of prior learning (Balazs Benkei-Kovacs).

[3] We were choosing that framework of learning typology for the actual dissertation, maybe it is not a recent theory about learning formality, but it has an important effect also on policy level in the last decades and on the theory of education on the international field.

a new term to use instead of "lifelong" they use "lifewide" learning that encompasses the whole spectrum of learning that takes place in our life. The "lifewide" dimension brings the complementarities of formal, non-formal and informal learning into sharper focus (Commission of the European Communities, 2000).

Ainsworth and Eaton (2010) suggest that the integrated model of learning is involving all three types of learning, formal, non-formal and informal learning (See Figure 14). As illustrated in the Figure 14, the occurrence of learning takes place while putting learner in the middle of three integrated learning contexts where the learner is in the center can acquire the needed knowledge, skills, and competences from each context. The gained knowledge and insights may be integrated in the center.

Figure 15.Integration of formal, non-formal and informal learning contexts
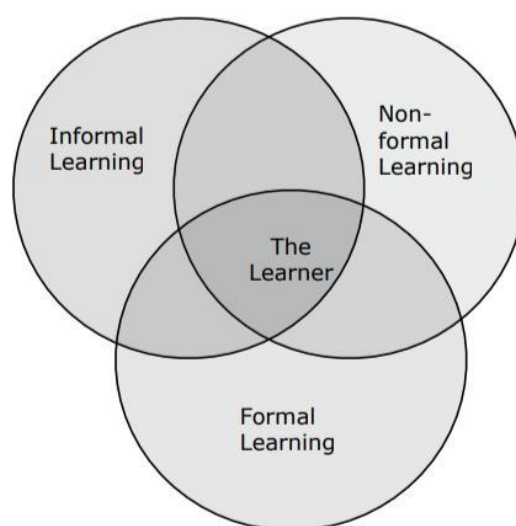
Source: Ainsworth & Eaton (2010, p. 25)

To structure and internalize the understanding of these learning types, it is significant to analyze them one by one and step by step not to come across misunderstanding of their essence and difference (See in detail Table 7).

Table 7. Conceptualization of formal and informal learning

Authors	Formal learning	Informal learning
Colley, Hodkinson & Knowles (2003)	Teacher as authority, teacher control, planned and structured, assessment and measured outcomes fixed and limited time frame,	No teacher involved, learner control, no assessment, internally determined objectives, practical and process knowledge, low status,

	learning is the main explicit purpose, learning is applicable in a range of contexts.	no education, outcomes imprecise - immeasurable, learner-centered, learning is implicit and context specific.
Burns., Schaefer, & Hayden, (2005); Marsick & Volpe (1999)	Direct instruction, Learner engaged in discussions, lectures, structured activities	Unstructured, spontaneous, through trial and error, occurs outside learning institution, mentoring, networking, other self-directed learning modes.
Klink., Van der Heijden., Boon & Rooij (2014).	Participation in workshops and trainings.	Learning via interaction, networking, and job.

Source: Own compilation

Comparing with non-formal and informal learning, formal learning has clearer distinctive characterization. In the opposition of 2 terms, formal learning is conceptualized as hierarchically structured learning that takes place in a variety of organized programs, courses, discussions, lectures, and other activities under the instruction of a teacher, with pre-specified and organized learning objectives and predefined learning outcomes. The formal learning encompasses specific knowledge and skills elaborated and intended to engage learners to acquire them. In the frame of workplace learning learners are allocated from their daily works in order to afford the participation in these lectures and formal learning activities (Choi & Jacobs, 2011, p.241). More to this point, Dib et al (1988) provides with exact factors that should be comprised in formal education including a set of laws and norms, strict curriculum, objectives, methodology that are mainly adopted by educational institutions such as schools and universities. In the frame of formal education teachers and students follow organized program, the presence of students is controlled, and assessment is carried out to improve the learning process as well. There are a variety of approaches towards the conceptualization of formal, non-formal and informal learning as illustrated in Table 8.

Table 8. Definition of formal, non-formal and informal learning

Authors	Formal learning	Non-formal learning	Informal learning
European Commission (2001). OECD (2005),	Structured program, educational institution, qualification or certification, Intentional from learners' perspective	loosely structured, without leading to certification, Intentional from learners' perspective.	Related to daily life and work, family, and leisure activities,

			May be intentional, mostly non-intentional, random.
Eaton (2010), Werquin (2007)	Intentional, organized, structured, guided by curriculum, arranged by institution	May or may not be intentional, somehow organized, non-certified	Never organized, spontaneous, experiential, guided by rigid curriculum
Livingstone (2001)	Authorized facilitator, Organized curriculum,	Learners' choice in gaining needed skills and knowledge, with facilitators' assistance, with the help of facilitators, within adult education programs, courses and workshops.	Mentors instruct learners, Spontaneous, random, without any curricular, any context beyond institutions.
Eshach (2007)	Usually at school May be repressive Structured Usually prearranged Motivation is extrinsic Compulsory Teacher-led Learning is evaluated Sequential	At institution out of school Usually, supportive Structured Usually prearranged Motivation is intrinsic Usually, voluntary May be guide or teacher-led Learning is usually not evaluated Typically, non-sequential	Everywhere Supportive Unstructured Spontaneous Motivation is mainly intrinsic Voluntary Usually learner-led Learning is not evaluated Non-sequential

Source: Own compilation

Table 8 summarizes some characteristics and influential definition of the basic concepts. The identification and definition of the formal, non-formal and informal learning is challenging and opposing in some ways, according to different theoreticians (Colley, Hodkinson & Malcolm, 2003; Golding, Brown& Foley; 2009; Hager & Halliday, 2006; Werquin, 2007).

However, European Commission (2001) as well as OECD (2005) is using similar definitions (see Table 8) indicating the factor of the intentionality of learners for dividing the three concepts. Their definition refers to the Lifelong learning policy contexts that addresses the whole process of lifelong learning. Livingstone's (2001) definitions are focusing on the pedagogical perspective emphasizing on the occurrence of learning between the relationship among teachers and learners or mentors. As depicted in the Table 8, first of all, it is necessary to draw attention to the word *education* that Livingstone (2001) uses and secondly, non-formal education is also defined as further education, nonetheless, he provides with complementary definition on informal *learning* stressing that knowledge and skills take place without any curricular and outside of educational institution.

Some of the researchers (Colley, Hodkinson & Knowles (2003); Burns, Schaefer, & Hayden, (2005). Marsick & Volpe (1999); Klink., Van der Heijden., Boon & Rooij, 2014) are focusing only on exploring two learning types comprising formal and non-formal learning. Having analyzed different approaches towards the conceptualization of the learning formality, the definition designated by of European commission and OECD is peculiar for this research.

3.2.1 The understanding of informal and non-formal learning

The concepts of informal and non-formal learning have recently started to be used worldwide. The understanding of formal learning is clearer and more distinct in comparison with conceptualizing the terms non-formal and informal learning which is somehow blurred. There are a number of researchers who have different approaches for conceptualizing the definition of informal learning and all of them are designating it from many fields. For instance, starting from the policy documents and those who are engaged with defining direct definition of the given term (Colley, Hodkinson, & Malcom, 2003a, 2003b; Misko, 2008; Schugurensky, 2000); and from adult learning and lifelong learning perspective (Livingstone, 1999a; Merriam, Caffarella, & Baumgartner, 2006); the latter perspective is informal learning in workplace learning (Eraut, 2007, 2009; Hann & Caputo, 2012; Le Clus, 2011; Matthews, 2013; Manuti, Pastore, Scardigno, Giancaspro, & Morciano, 2015, Noe, Clarke, & Klein, 2014). All these perspectives are providing with various conceptions on informal learning because each of them is highlighting different central foci respectively. As informal learning is one of the utmost and profound learning types, the definition of it brings to reasonable argumentation among researchers.

Important reference concerning informal learning should be made to Malcolm Knowles, researcher of Andragogy[4] in the United States. He used for the first time the term "*informal education*" in his book of "Informal Adult Education" published in 1951 where he introduced the concept "*informal education*" (p.84). Knowles (1951) determines the understanding of informal courses when a flood of people meet in a numerous congregation in order to be in the know about something or to learn something on purpose (p.84). He argues informal courses do not lead to any certification or gaining credits. On the other hand, it does not have any educational goal at all, and it will not be considered even as teaching-learning course as well. Informal courses are involving different kinds of forums, a set of lectures, and clubs. Informal courses are characterized with the combination of organization, membership continuity and leadership features. This first historical appearance of the term relates not to an individual, but to a collective learning form ("course") of the informal learning. Informal courses are ubiquitous in forums, different kinds of organizations, libraries and

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[4] The term Andragogy was first coined by Alexander Kapp in 1833.

the subjects of courses may vary. For example, informal courses are mostly comfortable for training workers with the orientations. Moreover, informal courses are applicable in such situations when there is a necessity to develop specific basic skills, alterations in attitudes. All these insights are usually taken form individuals' own experience that assists to develop behavioral and understanding peculiarities of other people. Such informal courses have a great influence on people and community. It is flexible mainly for changing needs of adults (Knowles, 1951, p.91). Informal courses are somehow organized with the enrollment features and schedules and with instructors in different fields hired by a program director, the courses being either for short-term or long term. The subjects of courses may vary according to the context and interest of the participants usually identifying the subjects of courses through the conduction of various interest questionnaires. Informal course programs also arrange faculty meetings which is not so easy to appoint because not all the instructors can be found in that meeting because of time. During that meeting they held discussion, collaborate with each other, and negotiate the peculiarities of programs. Program director carefully chooses the instructors and arranges class visitations and observations. Informal adult education is functional and is dedicated to solving real life dilemmas of people (Knowles, 1951). However, it is essential to keep in mind that this approach was conceived in 1951 and after the study of Knowles (1951) this concept was developed and exposed to further transformations in sense and currently is characterized differently.

The modern conception of informal learning is drawn by Straka (2004) investigating the genealogy of informal learning, he assures that non-formal learning consists of five developmental phases starting from the end of World War II. These phases have their peculiarities of development time by time that encapsulates the dissemination of non-formal learning[5]. Straka (2004) differentiates the importance of explicit and implicit and incidental learning. While conceptualizing the formality and non or informality of learning, the researchers stress the introduction of external conditions in explicit, implicit learning as well as incidental learning that emerge and originates between the two as illustrated in Figure 15.

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[5] Straka (2004) Informal learning: genealogy, concepts, antagonisms and questions

Figure 16. Learning types with external conditions
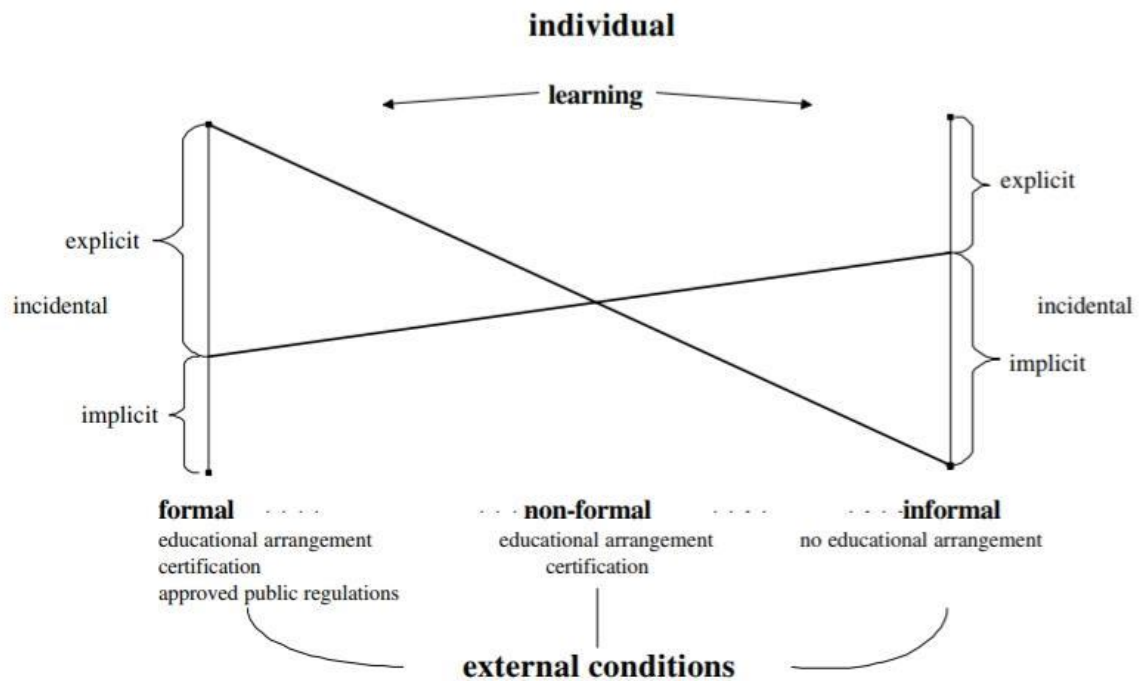
Source: Straka (2004)

As illustrated in the Figure 15, external conditions involve formal, non-formal and informal learning and both explicit and implicit learning may take place in all of these external conditions, but it has a tension to be diverse when it comes to its relevance; whereas incidental learning can be originated in all conditions even in formal one. This figure demonstrates three types of learning including formal, informal, and non-formal that can happen with an individual. Each of them has different external conditions that influence on the individual learning. The implicitness and explicitness of individual learning varies in accordance with the typology of external conditions whereas incidental learning is ubiquitous and may take place everywhere. For instance, in the formal learning individual learning is more explicit and less implicit and whereas in informal learning it is more implicit and less explicit depending on the importance (Straka. 2004, p. 12).

Eraut (2000) understands the concept of informal learning as a residual category of learning which happens beyond the formal learning events or programs. Since informal learning is associated with a range of different learning elements such as behavior, discourse, dress and so on being regarded as a descriptor of communication may lead into the confusion. Therefore, Eraut (2000) decided to implement the term "non-formal learning". The author suggests several learning modes in the frame of non-formal learning focusing more importantly on the level of learning intention. Eraut (2000) highlights the timing dimension of learning events, and this timing aspect is used in order to identify when the learning is happened if it is the past action or present time or the part of action

or future. Taking into consideration this timing measures as well as the level of intention Eraut (2000) suggests the typology of non-formal learning in the following table (pp.115-116).

Table 9.Typology of non-formal learning

Time of Stimulus	Implicit Learning	Reactive Learning	Deliberative Learning
Past Episode(s)	Implicit linkage of past memories with current experience	Brief *near-spontaneous reflection* on past episodes, communications, events, experiences	*Review* of past actions, communications, events, experiences. More systematic reflection
Current Experience	A selection from experience enters the memory	*Incidental* noting of facts, opinions, impressions, ideas *Recognition of* learning opportunities	*Engagement* in decision-making, problem-solving, planned informal learning
Future Behaviour	Unconscious effects of previous experiences	Being prepared for *emergent* learning opportunities	*Planned* learning goals *Planned* learning opportunities

Source: Eraut (2000)

This typology (Table 9) of non-formal learning is fulfilled in accordance with the learning intention and timing event dimensions. In one hand it is well-known implicit learning and on the other hand it includes deliberative learning. Implicit learning is designated as "'the acquisition of knowledge independently of conscious attempts to learn and in the absence of explicit knowledge about what was learned"; in the process of implicit learning, learners are not conscious of learning occurrence and are non-intentional. The category which is placed between implicit and deliberative learning is reactive learning, which is used to depict learning events that are explicit but near spontaneous related to recent or current situation. This implies that reactive learning has a near spontaneous reflection and consciousness from learners' perspective, but the intentionality level varies. Deliberative is a planned learning referred mainly to solve problems, make decisions and designing plans intentionally. Ultimately, by the combination of these three types of non-formal learning as well as including the intentionality and time frame dimensions, the performance and production of non-formal learning is presented. Similar approach can be tracked in the study of Colardyn and Bjørnåvold (2004) that put much effort to ascertain formal, non-formal and informal learning making *intention to learn, structure in learning* as a central focus.

In the study of "The base of the Iceberg" by Alan Rogers (2014) the author emphasizes the importance of learning intentionality of informal learning by providing with the matrix of intention (see the Figure below).

Figure 17. Matrix of intention

formal

advertisements

non-formal

campaigns

LEARNERS
intentional
deliberative

self-
directed

LEARNERS
unintentional
reactive

task-conscious

incidental
accidental

PROVIDERS
unintentional
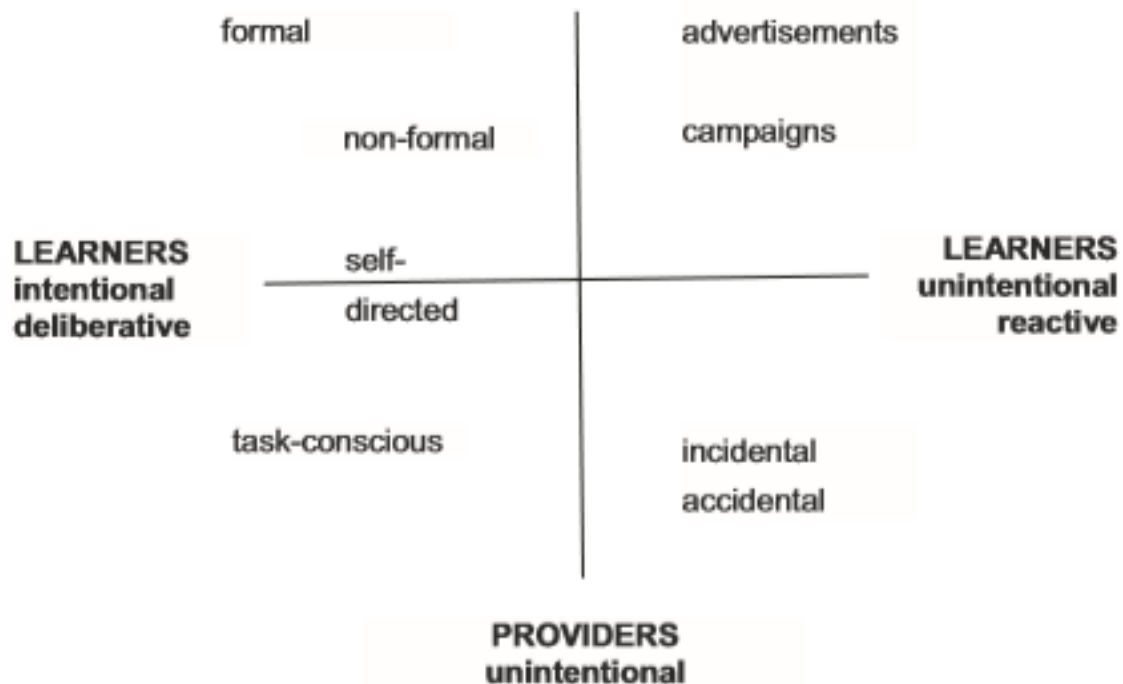
Source: Rogers (2014. p.20)

Rogers (2014) highlights the role of learners as well as the significance of roles of learning providers. Due to the fact that now all the learning activities can be intentional from the learner's perspectives but there might be those learning events which is promoted and set by the providers on purpose where learners are engaged. However, the author claims on the independence of diverse intentions according to the various contexts where learning occurs.

Moreover, Rogers (2014) proposes the interpretation of informal, non-formal and formal learning as a learning continuum which can be parallel and depicts a variety of educational dimensions (see the Figure below).

Figure 18. Learning continuum

informal (accidental/incidental)   self-directed   non-formal   formal

unplanned/unintentional   intentional/self-planned   purposeful/planned by others

unconscious learning   task-conscious learning   learning-conscious learning

not measured   measured by task   measured by learning
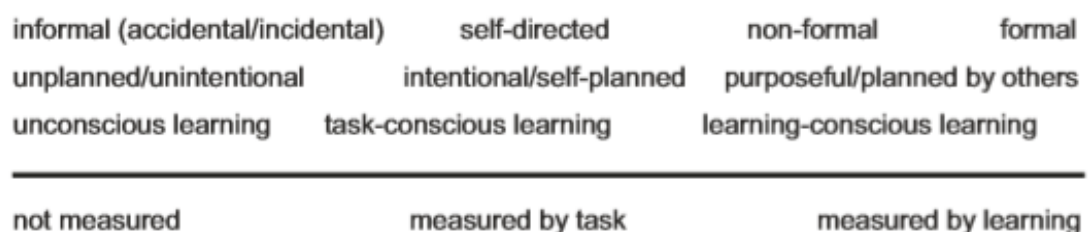
Source: Rogers (2014.p.21)

Figure 17 depicts the learning continuum of informal, non-formal and formal learning. Due to the fact that it is not possible to scrutinize them separately from each other because every learning event can be fulfilled or contain some elements of both formal and informal learning. Formality

and informality of learning can be viewed through the lens of lying continuum where learning occurs ranging from accidental or incidental learning through the lens of self-directed learning and task-conscious learning towards non-formal and formal learning. The boundaries between them may be altered depending on the learning context and community dialogue.

It is impossible to consider informal learning as only one process so therefore it is important to regard various types of informal learning. It includes self-directed learning where the learner is conscious of their learning process and admit what they have learned while accomplishing, planning and controlling specific learning activities. It takes the measurement of a success that have been learned by the learner. Whereas "task-conscious learning" happens when an individual accomplishes a task by putting a focus on a definite task. In the frame of self-directed learning, a person does not construct himself or herself as a learner, but they form themselves as a worker or employee. In addition, that process of an individual is not considered as learning but just as an accomplishment of a definite task. As a result, it measures not what a person has learned but how he or she mastered the given task (Rogers, 2014).

One of the proponents in the field of informal learning is Alan Rogers (2014) who explores the importance and the process of learning formality considering all types. Among them informal learning is taking its height in widening its scope of implementation in different dimensions. By stating that informal learning is more expanded than formal one he assumes that informal learning is hugely invisible. Therefore, he associates such learning with the image of an iceberg as illustrated below.

Figure 19. The Iceberg of learning

formal learning

non-formal learning

self-directed learning

task-conscious learning

unintentional learning – incidental learning

accidental learning
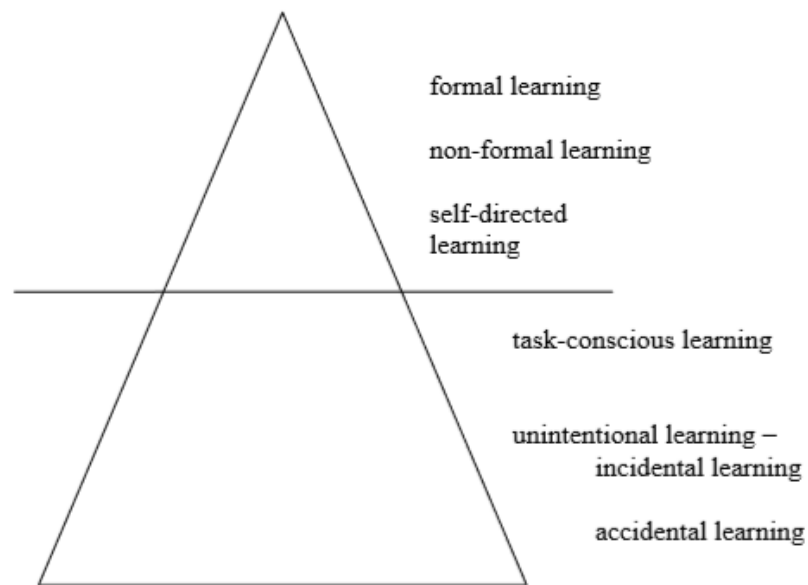
Source: Rogers (2014.p.22)

The image of an iceberg of learning depicts the extent of learning acquired by formal, non-formal and informal learning. The part of an iceberg which is not seen or showed for us is not only huge by its side, but it is the most significant part which influences and supports the upper part what is visible above the water line due to that "it takes place below the level of consciousness" and is not validated as learning. For most people regard that learning is that which takes place with structured curriculum within formal educational institution. However, huge amount of learning is fulfilled and developed unconsciously, informally which is always invisible (Rogers, 2014, p. 22). Therefore, sometimes informal learning is also called as invisible learning which is not seen but have an influential impact on learning of an individual.

Another approach is given by Schugurensky (2000) who understands informal learning as learning types which is fulfilled beyond the formal educational institutions, it somehow similar with the definitions presented by European Commission (2000) as well. However, for differentiating internal forms of informal learning not to be confused, he identifies three main forms of informal learning according to the criteria of intentionality and consciousness (See Table 8).

Table 10 Three forms of informal learning

Form	Intentionality	Awareness (at the time of learning experience)
Self-directed	yes	yes
Incidental	no	yes
Socialization	no	no

Source: Schugurensky (2000)

Self-directed learning is dedicated to the purposeful actions form the learner's perspective without the assistance of an educator or mentor but by themselves to acquire needed knowledge and skill. Whereas incidental learning is referred to the learning type where an individual learns it accidentally without any intention and being conscious of the happened learning. Socialization is occurred in everyday life activities by internalizing the attitudes, skills and beliefs but without being conscious of it when a learner is engaged in the same activity (any) everyday or very often and became very skillful without being aware of it (Schugurensky, 2000). As an important contribution to this study, it is necessary to present the conception of Matthews (2013) with respect to the understanding of notion of informal learning. In his work of "*Informal Learning at Work*" he provides with a detailed characteristic of informal learning in terms of workplace learning. Informal learning is any learning or collaboration that takes place outside of a class, seminar, or workshop, beyond the scope of a self-study course, and away from any environment recognized as part of formal learning (p.43). Matthews (2013) suggests 70:20:10 learning model which implies that 70 % of learning within the institution is gained through informal conditions, 20 % is done with the help of other individuals whereas the left 10% happens formally. There are a range of different informal learning activities through which people learn informally in the workplace (summarized in Table 11. Matthews, 2013.p.118):

Table 11. Informal learning activities

INFORMAL LEARING ACTIVITIES

• Task accomplishment • Trial and error • Self-directed learning • Networking, coaching, mentoring, performance planning • Seeking advice from someone knowledgeable • Use of internet or other software • Observing someone performing a task • Attending conferences, fairs or conventions • Attending lectures, seminars or special tasks	• Learning through assignments in different part of organization • Getting help from others • Using video, television or tapes to learn • Self-paced study using books, videos, computers • Consulting books or manuals • Reading manuals, reference material, professional journals or magazines

It should be mentioned that Matthews (2013) highlights that Informal learning can be characterized in several ways: just-in-time, in context where informal learners follow their own interests. Since it tends to be omnipresent and as well as such learners are akin to access more than one resource or source of knowledge repertoire. It is always social reinforcement of network among peers and learners, experts; it is cost-effective and sometimes informal learners are not conscious of the learning occurrence. It is individualized due to the specific needs and necessities of a learner who strives to learn but at the same time it is important to keep in mind that such learning has a limited scope on contrary to formal one. Matthews (2013) also highlights diversified methods and ways of learning formality as depicted in the table below.

Table 12. Different delivery methods of formal and informal learning

Type of learning	Format	Method of delivery
Formal (structured learning in which a curriculum is required)	Live| interactive (requires interaction between individuals)	Classroom learning, virtual classroom
Formal (structured learning in which a curriculum is required)	Just-in-time\self-placed (learning without direct interaction with another individual)	Self-study guides, distance learning, and computer, web, video, or audio-based training
Informal (learning without the help of a structured curriculum)	Live\ interactive learning that requires interaction between individuals	A help desk, a coaching or mentoring session, collaboration, communities of practice, presentations, virtual knowledge sharing, desk-side support
Informal (learning without the help of a structured curriculum)	Just-in-time\self-placed (this is learning without direct interaction with another individual)	Publications, reference guides, job aides, electronic performance support systems, or online self help

In accordance with the type of learning, Matthews determines different specified ways and methods of formal and informal learning with respect to the format of learning. Traditionally, formal learning is structured, scheduled, and intentional with curriculum and particular outcomes whereas informal learning is ongoing, non-stop with shifting outcomes. Formal learning has specific objectives in contradiction to informal learning because the latter tends to be vague and is dependent on learners' satisfaction and understanding if learning is happened or not as well as valuing it. The emphasis is put on learning outcome resulted in the combination of formal and informal one due to that in such cases learners (employees) possess richer possibilities for proliferation and dissemination of knowledge as well as strong retention existing along in a continuum. Informal one is being sensitive in the context concern the consequences or the learning

outcomes may vary respectively. Therefore, the researcher is suggesting different ways of delivery methods of formal and informal learning.

Prosperous informal learning implementation involves multitude of methods and ways where informal learning happens: on-the-job training; bottom-up learning; mobile learning; information gathering; accessing individualized instruction; lunch gathering; professional groups; trial-and-error; apprenticeship; networking with suppliers; online help; using wikis; communities of practice; improving information sharing through social networking; the virtual classroom; knowledge sharing; documentation; job execution; job shadowing; the help desk; informal coaching; supervision style; social learning; formalized coaching; cross-functional and cross-divisional movement; peer coaching; asking colleagues in the office for help; mentoring; flash mentoring; case studies; informal feedback; conversations; incidental meetings; private social network (Matthews, 2013, pp.76-111).

Matthews (2013) indicates two ways of distribution of formal and informal learning. For the part of informal learning there are two formats of acquiring this learning, the first demand the interrelation and intercommunication among people. The way of its delivery varies, and it involves coaching, mentoring, collaboration, sharing knowledge, presentations, and a help desk. Whereas the latter takes place just-in-time, and it does not require any direct interaction with a person and is delivered through different kinds of publication, online self-help support system job resources and other performances (Matthews, 2013).

What is profoundly important in informal learning is dedicated to the workplace learning perspective where formal learning developments is not sufficient for the employees and practitioners and in the frame of on-the-job learning learners have more opportunities to learn and acquire new and complementary skills, knowledge, competences effective for their work. For this reason, informal learning is the main pillar and driver for potential and continuous professional development mostly through interaction with others.

Taking into consideration various peculiarities and dimensions of non-formal learning it is indispensable to provide with conflated characterization. It is defined as learning, which is somehow structured, may or may not be organized, intentional from learners' point of view to some extent leading to certification of learning outcomes as well as implicating diversity of courses, educational programs, mainly workshops, language courses or other types of leisure activities.

Out of such theoretical and to some extent empirical interventions in terms of teachers' professional learning, one can conceive relevant importance of educators' formal as well as informal learning opportunities. Even such theoretical and practical implications prove to us that

any learning related to work or teaching-oriented practices that happen anytime and anywhere are professional learning no matter whether it is carried out in formal or informal contexts.

3.3 Leadership and Faculty development programs

In general, a leader should have specific personality characteristics that contributes to the support of their colleagues or fellows in the workplace as well as motivate them in order to reach definite academic or professional achievements. However, leaders' personality may vary, and it can change with respect to their job performance and set goals. For instance, they can be democratic, authoritarian, or goal-oriented style towards their subordinates as it is dependent on the context and situation, they are in (Siddique., Aslam., Khan., Fatima, 2011). Therefore, as for academic leaders, they should have their own activities that they accomplish with their faculty members in order to remain effective workers within a definite educational setting. As such, their commitment usually consists in directing, orienting, supporting, motivation, inspiring and affiliating them. Even though these supports are not sufficient for work performance because it is also necessary to encourage and unite or group their subordinates and fellows by managing and guiding them how to fulfill required work objectives as well as making them enthusiastic towards their committments (Siddique et al., 2011). One of the problematic issues concerning academic leadership is that academic units encounter challenges and are under huge pressure related to the quality assurance, work accomplishement and ongoing improvements in education leads to the deterioration of teachers' freedom in their work and as a result it brings towards harsh and rigouros leadership (Moore, 2008).

In accordance with multitude of researchers, academic leaders should possess a range of qualities such as

"honorable, brave supportive, and enthusiastic person, forming networking skills and relationship building, participative and consultative management style, open discussion on teaching approaches, credibility of leader, building formal and informal channels of communication for information transfer, sharing experiences and ideas, adaptation to internal and external environment, encourage transformation and change, to have selflessness and awareness of things, developing people and making collaborative partnerships with others, creating collegial working atmosphere, and able to get necessary support from others" (Siddique et al., 2011. p.189).

Although not all the effective academic leader may handle or possess such qualitative characteristics, but the point mainly lies on the right decision of when and where to demonstrate these qualities in order to preserve the efficiency of subordinates. Siddique et al (2011) suggests the following model of linked leadership typology and its factors they may expose to (See Figure 19).

Figure 20. Typology of Leadership
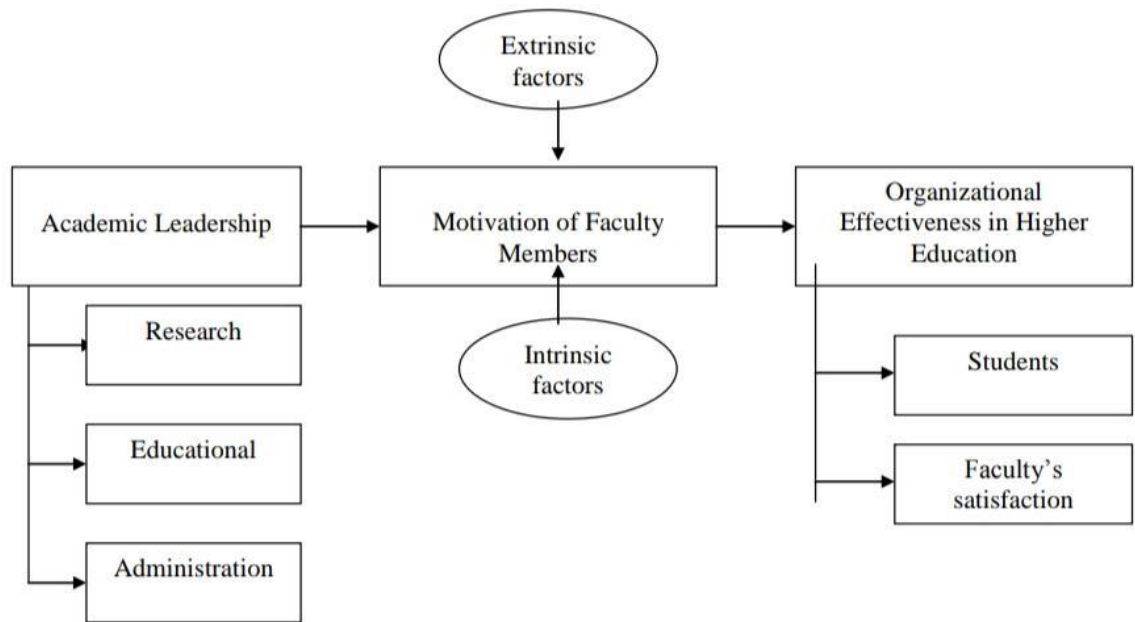
Source: Siddique et al (2011)

This model of leadership typology illustrates three roles of leaders who are engaged in different commitments. For instance, universities are regarded as a place or centers for conducting research, so the role of research leader implies directing and supporting the conduction of research studies as well as financially supporting and organizing it as a team builder or team leader. Whereas in the educational aspect, leaders should be more collaborative, and lead orient their faculty members, sharing knowledge and skills, competences and yielding positive feedback related to their job execution. In line with it, leaders must possess administrative traits as well for operating and managing them. Likewise, the motivational domain as one of the most remarkable factors play as an impetus for establishing and demonstrating fellows' commitments when leaders provide them with worthwhile rewords and some benefits or encouragement in job. Motivation is combined with the volition, enthusiasm, fulfillment as well as insistence in reaching a goal (Khusainova et al., 2018). Polatova et al, (2018) emphasize the importance of motivation in learning English in the frame of multilingual education in universities. The leaders can motivate faculty members not only by reward or benefit provision but by sound job conditions, flexible time, proper training organizations as well (Siddique et al., 2011).

As it is shown in the above-mentioned theories in relation to the leadership roles as well as their integral parts, it is paramount to scrutinize leaders' role and their effectiveness in educational institution. Especially, its influence can be traced in the process of integrating and implementing new educational policy, in our case, it is the introduction of multilingual education in higher education institution. Leaders' communication and analysis will contribute to this research by

exploring and identifying the impact of faculty development and facilitation on the teaching staff within multilingual education.

Despite different roles of leaders, theory emphasizes the significance of motivation and its internal and external factors impacting hugely on fostering the professional development of faculty members by resulting in appropriate specifities. According to literature, the formation of personality, building attitudes, perception and learning together with motivation are considered as an integral part of leadership (Tella., Ayeni., & Popoola, 2007). The concept of "motivation" is conceptualized as an integration of such terms as "want", "desire", "wish", "aim", "goals", "needs", and "incentives" (Luthan, 2000) that drives as an impetus for realizing the set objectives. Such educational leadership milestones possibly contribute to the faculty development programs for supporting faculty members' learning and professional growth.

Significance of financial state of faculty members since money empowers them to strive and reach high work performance as well as motivates and attracts teachers to work effectively by fulfilling their commitments. Not all academic units may afford or provide their employees (faculty members) with such opportunities to have extra financial support or rewards by way of advance or in terms of bonuses and incentives. Faculty staff feel inspired and induced when the leaders put less workload on them as well as they get proud by developing their alumni are approved by colleagues and leaders (Tella et al., 2007).

Though Rowley (1996) emphasizes that financial provision is not so beneficial, and it is futile. Due to those academics work in a fixed-salary and there is no need for other endeavors to work for supplementary payment. As such faculty members' job promotion is dependent not only on their work productivity but on their long and rich work experience. This can be another valuable input to indicate that faculty members also strive to enrich and foster their knowledge repertoire and skills by participating in different kinds of trainings, conferences, workshops, seminars and so on.

Faculty Development Programs

Currently different types of faculty development programs are developing in order to increase teaching skills and building up the relation between colleagues. Faculty development is conceptualized as

"a set of activities that engages all members of the teaching faculty in the kind of continuous professional development that enhances their ability to construct curricula and modes of instruction that more effectively fulfill the educational mission of the institution and the educational needs of students and society" (Fink, 2013).

Teachers in faculties should be ready for their teaching commitments with the help of faculty development programs which contribute to be flexible for changes (Kamel, 2016). Graff in 1975 argued that faculty development activities assist faculty members to advance teaching skills and design curriculum. Moreover, in accordance with literature faculty development programs contribute to existing skills improvement as well as to the enhancement of teaching and learning practices. Similarly, it has a positive effect on participants of educational institution but such programs in organizations may vary in respect to its scope arranging a variety of objectives and promotion comprising research, teaching skill training or skills improvement and so on. Educational institutions that embarked reform that requires the change of teaching and learning practices indicate the fundamental relevance of faculty development programs (Dalrymple, Wuenschell, & Shuler, 2006).

As indicated in the study of Kamel (2016) faculty development programs (FDP) contribute to the professional development of faculty members as well as impact on the students' achievement. FDP may vary according to its organizational, financial, faculty issues. As the results of his study FDP facilitates greatly on the improvement of teachers' performance in the sphere of medicine. According to Austin (2002) it is necessary to change faculty preparation to alter the role of the faculty members. The importance of the teaching quality and learning in educational institutions are usually covered by the efforts of individuals and the actors, departments, and faculties. Therefore, the essential role plays in developing faculty programs or the educational institution as a whole. According to Rowbotham's (2015) study results the more faculty members are prepared and are provided by all assets for professional development the more the learning outcome of the students is high. One more alternative for the education institution actors to develop is the foundations of university-based centers which embrace a range of various programs. They even can offer grants, scholarships other innovative educational initiatives, skill building workshops, communication tools, individual consultations, and other resources (Ibid). The results of this study show high importance of faculty development programs that facilitate to develop and prepare faculty members to train students in skills like problem solving or critical thinking, collaboration, and teamwork. To work with students requires faculty members to advance their skills and learn new approaches for teaching and other relevant actions that contribute to develop faculty members. Faculty development program involves support for faculty improvement and assessment of teaching and such different learning and teaching supports can be a part of faculty members' professional development. As a result of this study Colleges of Applied Arts and Technology (CAATs)' faculty development activities include various activities for the development of faculty members' professional development which is also supported by the institutions. Based on

province-wide agreement college faculties are provided by influential programs for professional development (Jones & Geis, 1995). Multitude of colleges function different kinds of seminars, workshops, and other events in order to contribute to the development of the staff with such activities. Based on the financial support colleges strive to organize conferences and seminars for the development of faculties. All educational institutions accomplish various kinds of trainings for teachers in terms of teaching skills, in-service programs. Jones and Geis's study reveal that eighteen colleges out of twenty-two fulfill continuous workshops and seminars addressing specific topics related to teaching. Some colleges also conduct individual assistance for faculty members who encounter teaching problems such as informal assessment of teaching, class visits. It should be mentioned that these educational institutions also produce numerous publications including newsletters and annual reports, brochures (Jones & Geis, 1995).

Another objective of FDP is that all trainings carried out within the framework of such programs have tendency to support and contribute to the efficiency and effectiveness of teaching activities in order to develop competent educators. In the light of FDP advancement there are four types of components for further promotion and educational growth: professional instructional, leadership and organizational. Despite the fact that FDPs mainly contain workshops, seminars, short courses or other programs, the potential priority is given to the experiential learning such as the implementation of different teaching and learning methods, peer learning, collegial collaboration, peer learning, well-structured and organized interventions in terms of adult learning theory (Sarikaya, Kalaca, Yeğen, & Cali, 2010). However, it should be noted that out of above-mentioned FDP activities, informal learning network is most frequently used by participants' activity through which they retain their interest, and this concept is also supported by other research due to the expression of faculty staff on the importance of motivation, self-conception as well as enthusiasm from trainings (Ibid, p.39).

Higher education holds main priority in disseminating educational values and shortening cultural boundaries with the help of research and development. Contribution to the FDP may also lead to the improvement of skills and capabilities of workers and staff to reach preset goals and outcome in case both individual and organizational accomplishment are interrelated. The education quality is dependent on the competences of faculty, and in its turn is responsible for all the study process and performances of students and in order to ensure effectively and efficiently such actions and functions, faculty members are in the need of professional development and support and renewal in the respective fields of work engagement.

In order to execute such performances of a faculty it leads to the necessity of implementation a variety of interventions where faculty members are to be integrated to be engaged in professional trainings and orientation programs with the contribution to better conceive and be competent in values, ethics, culture in a specific field of education. In the level of individual development of faculty members, they are required to update not only skills and knowledge repertoire but their functional duties such as mutual relationship, organizational and administrative activities, teaching, research, interaction among academics and alumni, curriculum and disciplinary policies as well. In result of such individual growth of faculty program development, the contribution of linked personal and organizational development leads to the effective and beneficial development of educational institution performance (Dar, Jabeen, Jadoon, & Dar, (2016).

What is significant for training skilled teaching staff is that it can be performed by several ways involving three main levels of training such as department-level, institution-level and national-level trainings. Whilst, department-level training implies mentoring system, peer review teaching functions, teaching workshops and these activities demand considerable time and effort while putting into practice. Quality of education skills are a must within the frame of department and are usually improved by feedback, presentations, meeting at faculty level, source provisions, teaching methods manifestation. Whereas institutional faculty development programs are more flexible in performing for educationalists as such trainings are accessible and acceptable without requiring any travel beyond. The latter one is national-level trainings are of high quality but demands additional financial support and time for travel (McLaughlin, 2005, p. 301). McLaughlin (2005) suggests several methods in order to enhance the skills of faculty members as follows:

- Mentoring with a skilled educator
- Observing faculty presentations and giving feedback
- Mini workshops at faculty meetings on educational topics
- Direct observation of teaching in the emergency department with feedback
- Department teaching awards
- Release time/ money to attend formal courses on education

In the frame of faculty development programs there are ten main things that is extremely important and necessary for adult learners (McLaughlin, 2005.p.302):

- Learner-centered teaching
- Clear learning objectives
- Activation of their prior experience
- Community and sense of shared responsibility

❖ Being active in the learning process

❖ Opportunity to practice

❖ Immediate feedback

❖ Understanding of the underlying principles

❖ Help transferring knowledge to the real world

❖ Having their individual learning needs met

It should be mentioned that educators' portfolio is also important activity for faculty members to guide and reflect on their teaching practice which requires being constantly collected and consistent with the collection of educational activities and in case of tenure or work promotion it can possibly be handed to administration to get assessed and evaluated (Ibid, p. 302).

The establishment of faculty development program can be achieved differently, and it usually starts with eliciting the incentives of faculty and its members as well as teaching staff by negotiating teaching, learning, work promotion and leadership development aspects or problems. Actually, there is no unique FDP model that can be implemented in all educational institutions because they vary in terms of their structure and function. Important involvement of such factors as financial support, resource provision and stimuli of staff should be kept in mind while triggering it.

Figure 21. The potential scope and purpose of faculty development program
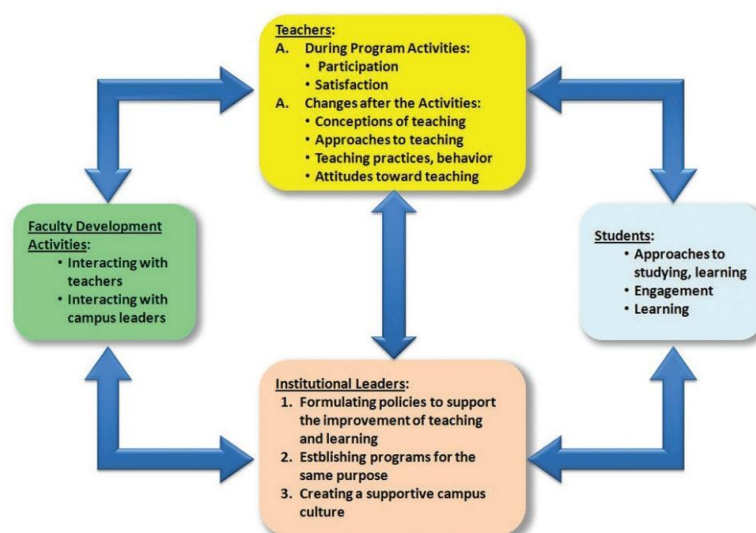
Source: Kamel (2016)

As illustrated in the Figure 20 FDP involve a range of educational agents and activities that should be executed by each of them. in the literature, one can encounter that FDP may be founded with the help of faculty development centers responsible for the academic objectives of an educational

institution. Likewise, specific courses or programs dedicated to enhance and improve teaching and learning including organized workshops, seminars and so on. As such, the most important and empirical implication for the FDP is the provision of one-year long training in order to increase the research and teaching practices in the field of education (Kamel, 2016, p. 64). Furthermore, to make FDP more effective some literature suggests several relevant features to be taken into consideration:

- ✓ The role of experiential learning (putting gained knowledge repertoire into practice);
- ✓ The value of feedback (serves as a stimulus for enhancing teaching performance);
- ✓ The importance of peers (collegial support to exchange experience and knowledge);
- ✓ Adherence to principles of teaching and learning (adults' principles is an organizing structure for FDP).

In the context of Kazakhstani higher education institutions there are a variety of programs, seminars, workshops, scholarships, and trainings that contribute to the professional development of institution actors. The need for that is to increase the quality of education and prepare teaching staff for further educational reforms. Unfortunately, in Kazakhstan they do not use explicitly the term "faculty development program" even if they also provide with such developmental directions for teaching staff. In Kazakhstan, it is fulfilled at the level of higher education institution and at the same time faculties also provide with several learning opportunities for teaching staff. For example, while integrating new or innovative educational policy the leaders of higher education institutions support and provide faculty members and teaching staff with appropriate courses, trainings, resources to prepare them to encounter with this or that challenges (See in detail those training opportunities in chapter II, in the institutions of Orleu (2.1.2), related to multilingual education).

Another possibility for teachers' learning can be universal design for learning (UDL) for further education and training which is mainly studied by Heelan and Tobin (2021). UDL is focused on expert learners who are engaged in providing knowledge repertoire for learners considering learners' needs and necessities. UDL has three basic principles by providing multiple means of:

- Engagement (purposeful, motivated learners);
- Representation (resourceful, knowledgeable learners);
- Action & Expression (Strategic, goal-directed learners).

This core principles are implemented responsive ways for the questions of what, why and how. By utilizing these principles and proposed guidelines in teaching, instruction in order to avoid the barriers and hindrances on their learning path. They are interrelated and connected to each other

supportive welcoming and flexible for learners. Such universal design for learners can be implemented in any of teaching programs since it does not change or modify anything in teaching content of practitioners. One of the peculiarities of UDL is to identify and determine the needs of learners and keep them motivated and focused throughout the learning process (for more details See the book of Heelan & Tobin, 2021).

It can possibly serve as one of the most fundamental ways for teachers' learning and preparation, especially in the framework of a specific educational policy implementation for enhancing and improving in-service teachers' professional development as well as for pre-service teachers and the other programs as well. Likewise, practical implications of UDL may also be implemented by educational or faculty leaders for providing and supporting and keeping motivated their academic staff mainly in learning and teaching process as well as for the contribution to the development and advancement of multilingual education reform in higher education institutions.

CHAPTER IV: RESEARCH DESIGN AND METHODOLOGY

4.1 Theoretical framework. Complexity theory

As the complexity theory together with constructivist one seem to be offering an adequate framework, they are taken as the theoretical frame for this research. Primarily the notion of complexity theory was only used to originate the 'hard sciences' including physics, mathematics but now it is widening its borders and is being applied in the context of "soft sciences" involving education (Walker, 2014).

Figure 22. Integrated theoretical frameworks
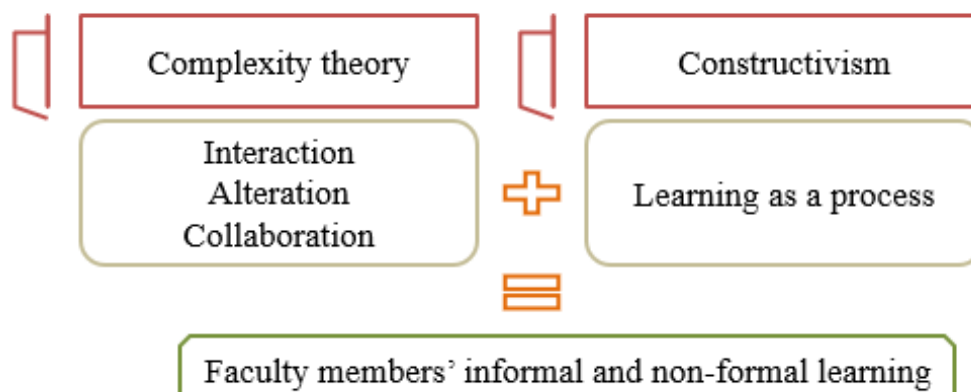
Source: Own compilation

Figure 22 demonstrates the implementation of integrated theoretical frameworks of Complexity theory together with Constructivists theory as a basis for interpretation of results of this research. Both of these theories assist us to determine and understand teachers' learning in a specific education program.

The theory of complexity is regarded as the theory of alteration and change, adaptation with the interest of survival and it is frequently carried out combined with competition and cooperation (Stewart, 1991, Battram, 1999 & Morrison, 2002).

 Stewart (1991) considers complexity theory as an apparent organism reacting and replying to its environment and at the same time altering its environment and this surrounding change the organism again; this is the process of continuous and dynamic shift. This dynamic shift and developmental aspect are also present in the Kazakh educational policy processes (Bridges, 2014). According to Gershenson, (2008) the implementation of the complexity theory has begun to spread and develop in a diverse context involving health, psychology, business, anthropology and in the field of education as well.

In fact, multitude of scholars and researchers have studied the evolving concept of complexity theory together with its domains for several generations (Alhadeff-Jones, 2008; Manson, 2001; Opfer, 2013). Human being, organizations, and social phenomena are understood to be systems and complexity theory is a term that is devoted to the usage of tackling significant queries about

these very systems. CT analyzes the development, change, learning peculiarities and the evolution features of the systems over time (Mason, 2008; Morrison, 2008; Walby, 2007; Wheatley, 2006) as well as CT mainly focuses on the wholes in terms of environment, relationship (Byrne, 1998; Davis & Sumara, 2006) emphasizing a dynamic relationship between organism and its surrounding because they alter each other (Byrne, 1998; Cilliers, 1998; Haggis, 2008).

Fong (2006) implies another aspect of complexity theory indicating that it is holistic and interactionist approach and complexity theory adds staff development process (Morrison, 2006). Complexity theory provides possibilities to wake up educational topics redefining the basics of education. It offers move for development, decision-making and change on education. The theory of complexity does not simply mean the learning content but the process (Ibid). Complexity issues and elements are the everyday stuff in education field, for example networking, communication, creativity and openness, connection, learning development, relationships, diversity etc. (Morrison, 2006). Complexity theory relates to complex in sense surrounding, institutions, organizations, where a great number of agents or constituent elements interact and incorporate in various ways. These constituent elements can be human agents, corporations, institutions, atoms, and molecules. The theory of complexity as a research paradigm warns us not to hang on trivial things because it can be a part of complex systems and it can lead to the emergence of new behaviors. In the frame of complexity theory properties and behaviors develop, new patterns may advance and evolve, and the old ones may alter, and change based on the interaction among them.

4.1.1 Complexity theory and its role in Education & Professional Learning

Complexity theory being a theory of shift and change, growth and culturation which is usually fulfilled through the interactions and relationships, it brings an impression in the field of both philosophy and education. The theory of complexity is exposed to and used for different perspectives and dimensions that helps to analyze and characterize the activity of complex systems or to construe what exactly this or that phenomenon is. In the field of education, it is also taking its height currently. For instance, in accordance with Fullan (1989) emphasizes the meaningfulness of shifting and learning, putting learning as a central focus as in the field of education as in complexity theory with a strong claim that all complex systems and phenomena should learn and be always adaptable, changeable (Mason, 2008).

Considering the most significant inputs of complexity theory is the involvement of emergence that takes place in an environment with a reasonable level of complexity. In that certain environment the *changes and developments emerge in behaviors.*

The basic implication of the complexity theory is *the mutual interrelation among its elements, parts or pieces or actors establishing a definite complex system*. The discernment of the complexity theory from the other theories is that it always keeps being in a dynamic relationship

and interaction among the elements, actors and other factors of a complex system resulting in an alteration or shift in a new environment, behavior or phenomenon. It should be taken into consideration that complexity theory has its own extremely substantial attribute consisting in a possible addition of a new agent or element that is also exposed to the changes in terms of interrelationship with the other features which can also be reflected and depicted in the outcomes respectively (Ibid, p.36).

In the field of education, the role of complexity theory takes hugely important place where the main central focus is given to the roles of educational actors such as teachers, educators, alumni, educational leaders, organizations and its departments, parents. In this case of education as a whole, in order to shift or affect any alteration in the education area, the change in a definite factor is not sufficient despite the fact to what extent it is influential or not for reaching shifting in the complex system (Mason, 2008, p. 53).

The interaction and network are an integral part of complexity theory and therefore in the area of education the focus should be made on the emergence that takes place in the behavior of the phenomena drawing attention to each of the assembled elements and the intervention, connection among the levels of a complex system. Based on the complex, impulsive interaction among the elements and the agents the phenomenon is exposed to change and the old one to develop.

In the framework of education field, complexity theory emphasizes the importance and intrinsic role of the educational actors together with the curriculum. Whilst, from the perspective of the educators, the academics tend to change their roles, for instance, from being an expert to a facilitator, co-learner in order to amalgamate and combine the acquired new knowledge to the subsisting ones. Whereas the learners are also accountable for their self-development, reflection and to train autonomy. That each element has their own responsibilities and actions of execution within the complexity, but the vital feature lies on pervading and transforming the changes which are emerged inside them based on their interrelation, concatenation (Morrison, 2008).

As the complexity theory can be indifferent and describe a range of diverse systems or processes, on contrary to the other scholars' approaches towards CT, Gregory Walker (2014) claims that in terms of education, teaching and learning process is a complex and at the same time strongly emphasizing uncertain and fluctuating characteristics of it. According to Walker (2014) in the field of education complexity theory while describing teaching and learning processes may function as an incomplete procedure because of its continuous exposition and transformation and flexibility.

The main aspects of the complexity theory are the importance of emergence, self-organization, and adaptation as well.

Having researched the peculiarities of complexity theory it is meaningful to focus on the issues of complexity from the perspective of teachers' professional development as one of the main sources

for integrating and analyzing learning process. In any policy or reform, the occurrence of changes that takes place in a particular agent plays an important role in further development. It should be kept in mind that not all the actions despite its level of provision, may impact on the components variously. It is self-evident that teachers' professional development is a complex process that facilitates changes or modifications in the wholes; it can be any complex system including the educational institutions.

One of the paramount aspects of complexity is that it recognizes and acknowledges that all taken transformations or modifications may have either positive or negative effect in practice. In case a particular action or practice is wrongheaded and not as predicted, the most integral direction will be a strong attention on learning experience in a given dimension respectfully. An action taken towards improving a particular work can work positive for an individual, but it does not mean that the same action can fit for others as well encountering a divergence (Ibid, p.385).

The most significant implications of complexity theory in the framework of teacher learning can be characterized with the help of collaboration, reflection, management, and policy methods. Each of them has their own implication and function in pervading actions in complexity that ensures positive effect practices (Phelps., & Graham, 2012, pp. 385-388).

Collaboration being a central focus in terms of interaction among agents, can be conceived as values, beliefs, attitudes, and assumptions of individual and wholes as well. It is about building up special communities for teachers to collaborate and share experiences and knowledge. Management is more akin to the leadership and educational institution administration work which fosters and provides with teacher learning programs and courses keeping in mind that there is no unique or specific, linear approach for teachers' professional improvement. While integrating or putting in practice a particular policy especially in the context of education, it is extremely important to take into consideration teachers training and the role of teachers, their values, beliefs, motivation and attitude towards this or that direction by emphasizing the significance of collective and teamwork and dissemination of learning communities for teachers giving them more opportunity and resources to reflect (Ibid., p.388).

As an upshot, within the complexity, in the context of education and especially in teacher learning, it is necessary to focus on the interaction and interplay among the above-mentioned factors. What the complexity gives us is that the effectiveness of teacher learning can be achieved only with the full acknowledgement of existing discrepancies within a specific educational institution which in its turn may either allow or restrain transformation.

Summary of Complexity theory

Complexity theory being a science of emergence is a well-known pillar which is used by a huge number of scholars to analyze a particular complex system in the field of education. Having

analyzed and researched all the peculiarities of the complexity that the output product of complexity theory is too hard and complicated to track it out and envisage. Even to identify by virtue of the fact that input into it is dependent on a variety of interactions, relationships, among various agents by taking into consideration a myriad of factors such as economic, political, social and educational influencing on and effecting for the development of a complexity under study.

The application of complexity theory as a lens of thought in the field of education particularly in teachers' learning is regarded as a paramount means which allows exploring the interaction, modification in behavior, changing needs and interconnectedness among educators and their relationship with the other agents of the complexity being studied. Complexity contributes to the understanding and construing the essence of the system.

 Out of such interventions and practices it is necessary to notice that this might be a great implication for different studies focused on any educational policy development particularly in the given research.

In the case of integrating a reform of multilingual education in Kazakhstani higher education if to consider it as a complexity, it is necessary to focus on the understanding of wholes as well as on the conception of the interaction of different factors and functions of its parts. Hence, teachers' informal and non-formal learning in multilingual setting is one of the most and leading, supporting parts that constitutes to and facilitates for the development of and successful integration of the whole education reform in the context of higher education. Therefore, complexity theory assists to identify and understand teachers' informal and non- formal learning in multilingual education. While integrating and implementing this educational policy, there emerge challenges and obstacles that leads to the deterioration in some ways if not to consider the understanding of relationship of agents. Especially as a micro level much effort is put on teachers' professional development as well as their informal and non-formal learning procedure. This is considered to be one of the elements constituent components of complexity.

4.1.2. Constructivist theory

Constructivist theory is a learning and mental process of it where people learn from the prior knowledge by creating knowledge in collaborative community (Alanazi, 2016). In constructivist theory the learning is constructed and gained by a learner. Learning is constructed based on or integrated in the existing knowledge and experiences learners have. In this theory, learning takes place by interaction, problem-solving, collaboration and inquiry (Juvova, Chudy, Neumeister, Plischke, & Kvintova, (2015).

Individual cognition of learning is another significant aspect in constructivist theory due to that it relates and influenced by previous knowledge or experience of a learner. Learners should be

involved and proactive in gaining knowledge (Ibid). Individuals build their own new understanding interacting them with already existing knowledge repertoire (Richardson, 2005, p.3). In the frame of constructivist theory, the role of a learner is more fundamental than teacher's role. Due to the fact that in constructivist theory, teachers are always in the role of a facilitator.

As learning is an active process in constructivist theory, teachers learning can be interpreted as an important insight in their professional development. In the context of multilingual education, teachers' learning in constructivist approach serves as supplementary and intrinsically important factor be it informal or non-formal. It also helps them to learn systematically and develop their knowledge, experience as well as skills in a specific domain of professional development. Constructivists approach together with Complexity theory contribute to explore teachers' learning in this study.

4.2 Selection of the approach

From the ontological point of view this dissertation is referred to the realism position. Ontology explores the nature of being related to the belief of the reality. Ontological assumption of realism believes in one existence of the truths which cannot be exposed to alterations and is explored by using objective measuring instruments.

The next important philosophical assumption of our research is epistemological approach. It is a theory of knowledge that describes the relationship between the study and the researcher. The epistemological assumption is concerned on how the research is done. In the framework of epistemology, the researchers postulate that the research studies should be fulfilled objectively, and that the researcher should not be involved or have an impact on the data collected. Such kind of researchers of ontological assumption based on realism keep staying far from the object of research under investigation to have an objective measuring instrument which leads to the objective results respectively. Therefore, ontological, and epistemological beliefs of the research are very significant because these philosophical assumptions and approaches have a great influence on research question typology, research methodology that is utilized by the researcher (López-Alvarado, 2017). Ontology determines epistemology which impacts on the methodology, research methods and the consequences of it (ibid.p.3).

From the philosophical point of view, ontological and epistemological assumptions of this research is illustrated in the "research onion" given below:

Figure 23. "Research onion" implemented in this research
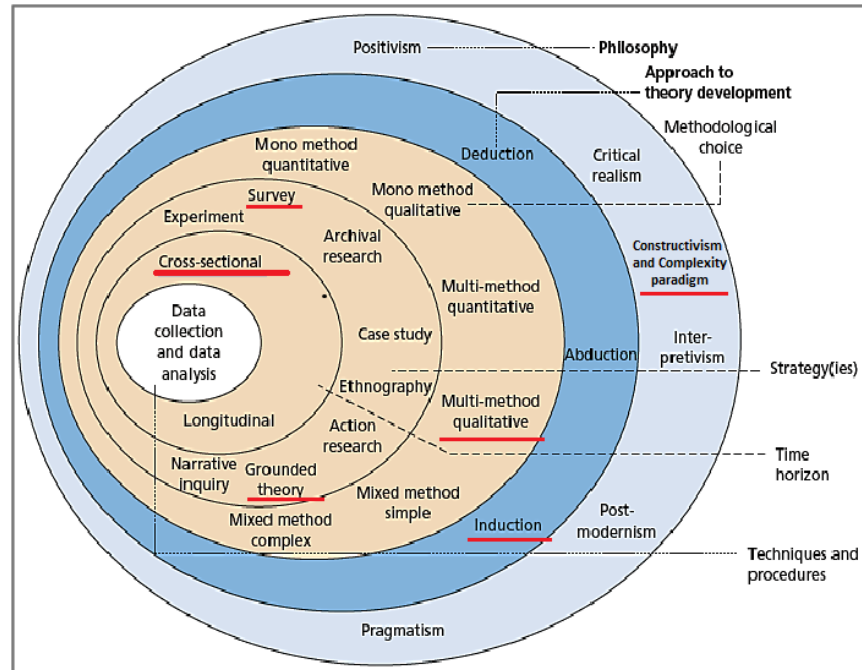
Source: Saunders, Lewis, and Thornhill (2015).

According to research onion, this study is cross-sectional in its time horizon and utilize the grounded theory. From qualitative approach perspective, research diary is also used as survey. This research uses multi-method qualitative approach, semi-structured, face-to-face interviews as well as research diary in (qualtrics) are implemented for data collection procedure. Inductive reasoning is utilized based on qualitative interviews and diary. From the philosophical point of view, this study relates to Constructivist paradigm together with Complexity theory (Morrison (2002a) in order to analyse faculty members' learning formality.

4.3 Research methods

To achieve the goal and gain the responses to the research questions, this investigation resorts to the implementation of qualitative method. Qualitative research is identified as a set of interpretive practices changing the world with the help of interviews, recordings, conversations which is interpreted by qualitative researchers to identify phenomena with the meanings that they obtain from people (Ritchie, 2014). Qualitative approach portrays varied method towards the research inquiry (Creswell, 2014).

This research resorts to the implementation of three different research instruments: semi-structured and open-ended interviews as well as research diary that will assist us to explore the interviewees and participants' learning practices. Interviews were implemented as the main tool for conducting this research. We used semi-structured interview questions in order to gather information and data

about the learning processes of teachers in multilingual education. In addition, interviews involve data accumulation via direct verbal interaction among individuals (Cohen, 2000).

In accordance with Coe et al., (2017) in-depth interviews are regarded to be determined interactions where the researcher strives to find out what a person is aware of or to reveal and record about their experience. It is an exchange of information asking questions and replying for them, sharing opinion, experiences, and perceptions. Semi-structured interviews are characterized as a tool with the help of which the interviewer can get what they want from the interviewee that has the information (p.33). Semi-structured interview is more flexible type of structured interview as "*it allows depth to be achieved by providing the opportunity on the part of the interviewer to probe and expand the interviewee's respond*" (Rubin & Rubin, 2005). In this study the main purpose of the interviews was not just getting responses for the predetermined questions but to get as much information as possible about the interviewees' learning experiences as well. First research tool is devoted to the **<u>interviews with faculty members</u>** who were engaged in the multilingual program with the following topics of questions given in *Table 13*. (See in detail the full list of questions in the Annex 4).

Table 13. Topics of the interview with teaching staff
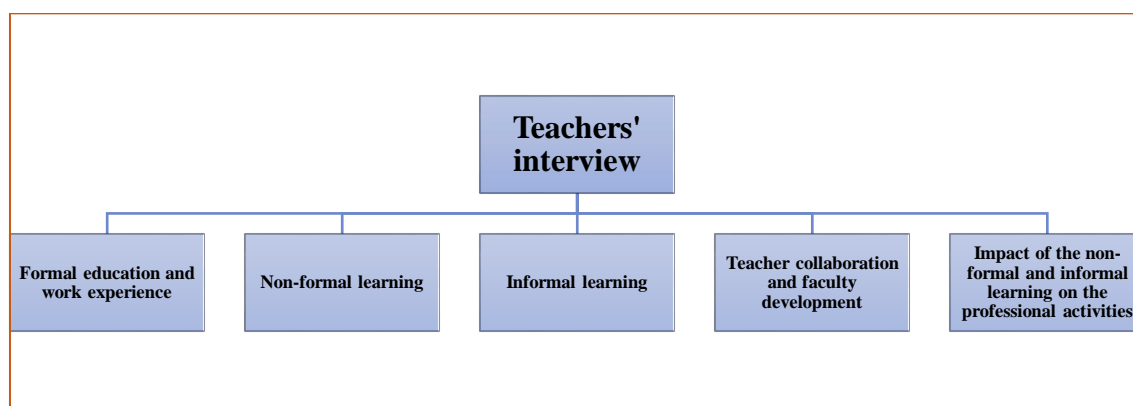
Source: Own compilation

Second research instrument was also semi-structured interviews with the predetermined questions with leaders of the faculties where multilingual education development is integrated. These interview questions with leaders are mainly dedicated to the topics of multilingual education development at the faculties and departments level, as well as to exploring hidden or manifest faculty development process and programs. The goal was to gather data related to the academics' learning experiences and provision supported at the faculty and department level. The gathered data from this interview contributes to analyze the faculty development process as a whole and

multilingual education development as well. The topics of the interview questions with leaders are presented in Table 14 (See in detail the full list of questions in the Annex 6).

Table 14.Topics of interview with leaders
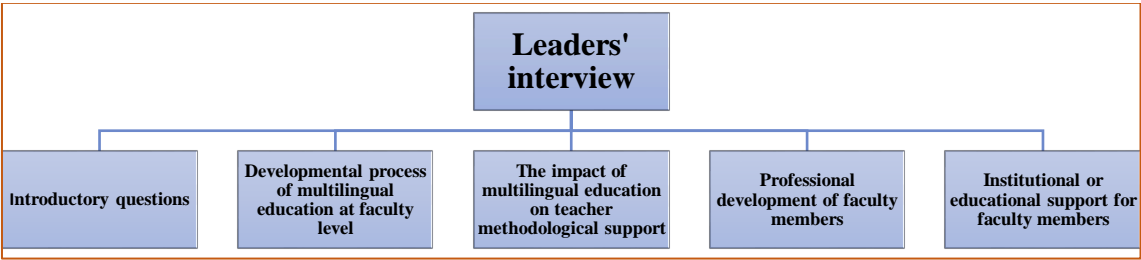
Source: Own compilation

The third tool was the research **<u>diary</u>**. Diaries are usually used in the combination with other data collection methods and research tools (Duke, 2012). As for the research on teachers' informal and non-formal learning in multilingual education it is applicable to implement diary as supporting research instrument for data collection. Duke (2012) argues that diary is an inclusive and collaborative instrument for collecting data. the sample for this research instrument is convenience and self-selecting. We provided the most motivated faculty members among the participant faculties to fill out diaries. The diaries were distributed once. In the process of conducting interviews, the participants were provided with online diary that they should fill in everyday for 5 days (See Annex 8). The diary was organized and presented via Qualtrics software (The topics investigated, and the structure of the on-line diary is annexed at point 8).

Diaries contain the information concerning teachers' everyday performance and commitments. The diary method, as part of the mixed- method research was also implemented in the dissertation research of Gathy-Steber (2018), investigating the informal learning habits of IT specialist. We studied her dissertation, adapted and simplified the tool she applied in her research, taking into consideration typology of Matthews (2013) about informal learning (See in detail in chapter 3.2.1 on page 79). This research instrument assists us to track participants' informal learning events and the topics covered by the teachers in the diary is illustrated below in Figure 22 (See in detail the full list of questions in the Annex 8). The diary data were collected with Qualtrics software under the license of the ELTE PPK Doctoral School

Figure 24. Topics covered by the diary for teaching
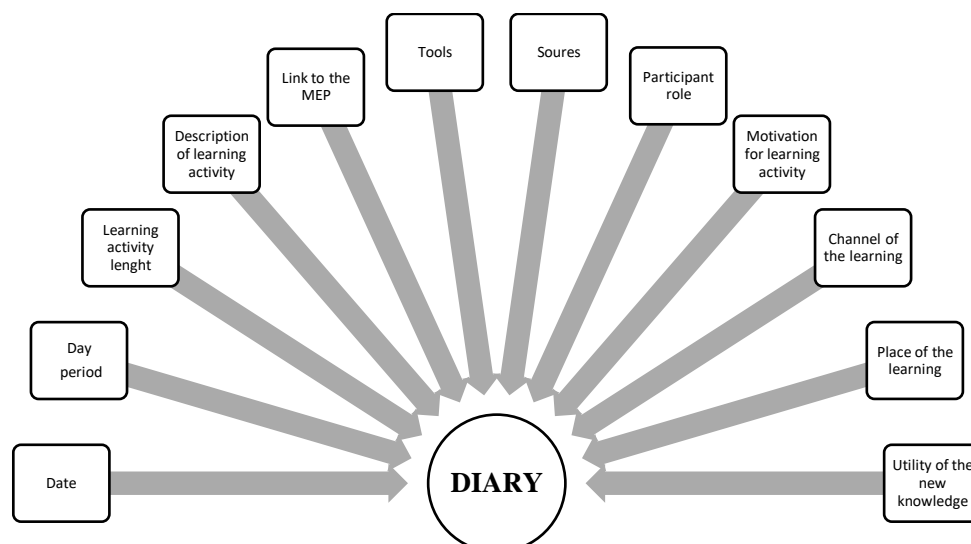
Source: Own compilation based on the diary of Gathy-Steber (2018) and Matthews (2013)

The data obtained from the interviews findings analyzed by the Atlas.ti qualitative data analysis software, and diaries results were analyzed by Excel and SPSS software. The qualitative content analysis has the goal to assist us to identification and creation of typologies of the participants' experiences and (learning patterns) and understand ways of faculty members' thinking and institutional support for the multilingual education program.

The fourth pillar was semi-structured **interviews with Hungarian educational experts** (n=7) specialized in comparative education. The collected data assist us to identify significant contribution and suggestions, insights of the foreign educational experts in implementing educational policy more efficiently. The interviews were conducted and analyzed via Atlas.ti software.

4.4 Ethical considerations

The author of the dissertation presented during Spring semester of the Academic Year 2018/2019, the request to the ELTE PPK Scientific Ethical Board, proposing in detail the ethical consideration and research tools of the investigation. The Ethical Board examined and granted the ethical license under the Reference number: 2019/204 issued May 3, 2019. (See in Annex 1). For the Hungarian educational experts' pillar, the ethical reference number is: 2021/440.

The sample and the topic of the investigation were not sensitive, because the topic itself is situated in the field of the work-based learning. For that reason, we granted anonymity for the participants, and are citing and publishing their thoughts in such manner what cannot be identified.

Before the data collection, the researcher informed the participants about this specific research project and the procedure of interviewing, analysis and the process of the personal data protection (anonymity, voluntary, and deleting audio recordings right after the transcription). This information was told to the participants and respondents in person before the interview conduction. Prior to each interview, every respondent was questioned whether they understood the research procedure and after their agreement they were given an informed consent to be signed by them. Informed consent is regarded as "the procedures in which individuals choose whether to participate in an investigation after being informed of facts that would be likely to influence their decisions" (Diener & Crandall, 1978). The researcher, on the other side gave each participant undersigned "Declaration about data processing method" and "Informed consent" (See in detail in Annex 2-3).

All the conducted interviews were audio recorded to the voice-recorder with the consent of the respondents and collected audio recordings were saved in the secured and coded manner digitally and transcribed accordingly.

In the process of transcription data, all personal information was erased, and the digital sound records of the interviews were deleted. Even in the process of interview transcripts each case of the personal information (names or mention of institutions) were deleted. Personal data will never be published or mentioned saving the anonymity of the participant as indicated in the informed consent throughout the research study.

As for the issues of publishing materials with these collected data, all the information will be anonymous and even the names of the higher education institutions will be concealed. In the cases of the participants, as it is admitted in the ethical concerns of educational research that it is allowed to use pseudonyms, in this research the names of the interviewees were coded.

4.5 Target groups and sample size

The condition of recruitment of the participants for this study was that faculty members were involved in the implementation of multilingual education program. The sample is divided between two different Kazakhstani higher education institutions: a regional state university (RSU) and a regional national university (RNU). The target group of the dissertation comprises three kinds of participants: 1) university teachers engaged in multilingual education; 2) faculty and /or department leaders. 3) Hungarian educational experts.

Table 15. Details of research strands and participants

RESEARCH STRAND	TECHNIQUE	PURPOSE	PARTICIPANTS (N)
1	Semi-structured interviews	Identification of the main issues in terms teachers' informal non-formal learning within multilingual program	27 full-time instructors
2	Research diary	Determination of faculty members' informal learning activities	27 full-time instructors
3	Semi-structured interviews	Interpretation of faculties' impact on teachers learning and its facilitation on the development of multilingual education	6 faculty leaders
4	Semi-structured interviews	Designation of suggestions and important insights on educational policy implementation	7 Hungarian educational experts

Source: Own compilation

To reach the goal of teachers' informal and non-formal learning this study recruited university teachers (n=27). Both universities are situated in the Northern Kazakhstan and train professionals in different scientific disciplines (main field, based on the name of the faculties) both universities are launching and developing multilingual education from the 2017-2018 academic year.

The second layer was the on-line diary survey recorded in total (n=233) different learning events of the faculty members. The participants of research diary were the most motivated ones among the interviewed cohort.

The third layer of the faculty members' sampling were the faculty and /or department leaders or principals (n=6). As it is determined, the principals are one of the main leverages and play pivotal role in the development and implementation of specific educational innovation.

To gain and acquire important data dedicated to the implementation of educational policy in practice and for making it more efficient, (n=7) Hungarian educational experts were interviewed.

This study implemented snowballing sampling method where the recruitment of respondents is reached through informants with others (Cohen et al. 2014). Snowball sampling is used as well for teachers' and leaders' interviews and for Hungarian educational experts group.

In case of the research diary, we implemented convenience sampling method, with the participation of volunteer recruited between the university teacher interviewees. Convenience sampling is used due to the fact that the research diary had to be filled out on a regular basis five consecutive days, and therefore, the researcher recruited the more motivated participants.

The main characteristics of teachers who took part in the research are shown in Table 16. The data are showing the length of their work experiences (between 10-40 year), their gender, their nationalities, and their ages (from 27-57 years old), and the language of interviews (the majority is in English, and 6 interviews in Kazakh).

Table 16.Research participants (faculty members)

№	INTERVIEWEE	AGE	GENDER	NATIONALITY	WORK EXPERIENCE| YEAR	LANGUAGE OF INTERVIEW
1	Interviewee 01	50	Female	Kazakh	28	English
2	Interviewee 02	52	Female	Kazakh	30	English
3	Interviewee 03	31	Female	Kazakh	13	English
4	Interviewee 04	39	Female	Russian	18	English
5	Interviewee 05	33	Female	Russian	10	English
6	Interviewee 06	37	Female	Russian	13	English
7	Interviewee 07	30	Female	Kazakh	8	English
8	Interviewee 08	27	Female	Kazakh	5	English
9	Interviewee 09	42	Female	Kazakh	20	English
10	Interviewee 010	57	Female	Russian	39	English
11	Interviewee 011	36	Female	Kazakh	14	Kazakh
12	Interviewee 012	25	Female	Kazakh	5	English
13	Interviewee 013	49	Female	Kazakh	27	Kazakh
14	Interviewee 014	55	Female	Kazakh	34	English
15	Interviewee 015	27	Female	Kazakh	3	English
16	Interviewee 016	28	Female	Ingush	3	English
17	Interviewee 017	27	Male	Ingush	3	English
18	Interviewee 018	22	Male	Kazakh	1	Kazakh
19	Interviewee 019	33	Male	Kazakh	11	English
20	Interviewee 020	28	Male	Kazakh	3	English
21	Interviewee 021	35	Female	Kazakh	13	English
22	Interviewee 022	34	Female	Kazakh	8	English
23	Interviewee 023	35	Female	Kazakh	10	English
24	Interviewee 024	56	Male	Kazakh	29	Kazakh
25	Interviewee 025	43	Male	Kazakh	15	Kazakh
26	Interviewee 026	32	Male	Kazakh	3	Kazakh
27	Interviewee 027	30	Male	Kazakh	3	English

Source: Own compilation

As it is illustrated in the Table 16, the language of interview conduction utilized two languages Kazakh and English. It was not possible to hold all individual semi-structured interviews purely in English. Even though that the teachers who gave interviews are fluent or excellent English speakers, their preference was to implement Kazakh language.

Table 17. Research participants (Faculty leaders)

№	INTERVIEWEE	GENDER	NATIONALITY	WORK EXPERIENCE AS A LEADER	LANGUAGE OF INTERVIEW
1	Leader 01	Female	Kazakh	2	English
2	Leader 02	Female	Kazakh	2	English
3	Leader 03	Female	Kazakh	2	Kazakh
4	Leader 04	Female	Kazakh	21	Kazakh
5	Leader 05	Male	Kazakh	22	Kazakh
6	Leader 06	Female	Kazakh	3	Kazakh

Source: Own compilation based on interview series

Table 17 represents the characteristics of research participants, mainly faculty leaders from three different faculties. Lengths of their work experience varies and according to their preference, most of them utilized Kazakh language while being interviewed.

Table 18. Research participants (Hungarian educational Experts)

№	INTERVIEWEE	GENDER	WORK EXPERIENCE	LANGUAGE OF INTERVIEW
1	Expert 01	Male	25	English
2	Expert 02	Male	16	English
3	Expert 03	Female	30	English
4	Expert 04	Male	16	English
5	Expert 05	Female	20	English
6	Expert 06	Female	40	English
7	Expert 07	Female	40	English

Source: Own compilation based on interview series

Table 18 depicts characteristics of Hungarian educational experts' sample considering their work experience. It is shown that they have a quite rich work experience in the fiend of comparative education.

4.6 Data collection periods and procedure

The process of data gathering was conducted in three stages.

1. 2019, September (collected number of interviews = 10)

2. 2019, December (collected number of interviews = 3)
3. 2020, January-February (collected number of interviews = 20)
4. 2019-2020, September – February (collected number learning events = 233)
5. 2021, December – January 2022 (collected number of interviews = 7)

Technically, some of the interviewees were directly and personally visited at their workplaces (45%) and some of them were reached by the help of their department heads (55%) and faculty leaders (100%) were reached directly in their workplaces. Individual one-to-one interviews lasted between 35-50 minutes. Interviews with faculty members were conducted in two languages (English and Kazakh languages) and Faculty leaders interviews utilized three languages (English (n=2), Russian (n=2) and Kazakh (n=2) languages). In the fourth pillar of the data collection with Hungarian educational experts, we used on-line interviewing (n=7), because of the pandemic situation.

The research diary created with Qualtrics software was sent only for the most motivated teachers. Printed research diary instructions were disseminated to the participants as a handout to guide them how to fill it out (See in detail in Annex 7). At the end we realized to gather n=233 different learning events, all relating to some aspect of the development and learning of teachers within the multilingual education program.

4.7 Data analysis procedure

The process of data analysis is based on the grounded theory. The exploration of this data was fulfilled in three phases: 1. Systematic content analysis (faculty members); 2. Systematic content analysis (faculty leaders' interviews); 3. Qualtrics data analysis via Excel and SPSS software; 4. Systematic content analysis (Hungarian educational experts).

First, the systematic content analysis of the teachers' interviews (n=27), was accomplished via Atlas.ti software. Primary documents (PDs) were attentively read and codified, which resulted in a list of codes allowing systematically identify the relevant learning patterns, and challenges encountered in the multilingual program, their preparation to the program, their participation in informal activities. The number of codes emerging reached and finalized with 82 and permitted the creation of four code family networks created in Atlas.ti software.

As a result, we identified four clusters for the teacher learning patterns in multilingual education: Active and efficient collaborators; Competitive lifelong learner; Challenge confronter and Passive job-performer.

Figure 25.Teachers' learning patterns in Multilingual education program

Active and efficient collaborators;
Competitive lifelong learner;
Challenge confronter;
Passive job-performer;
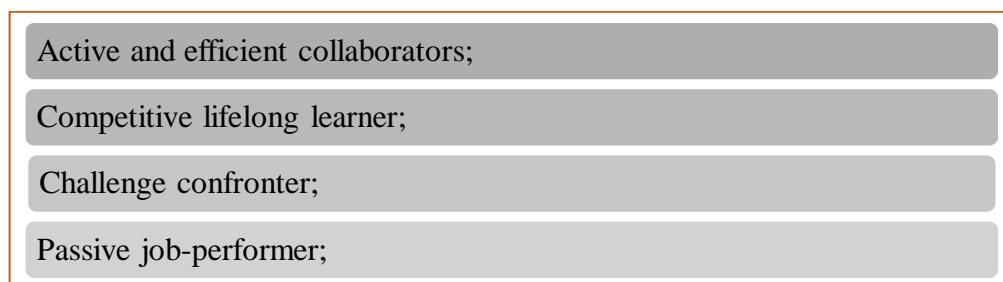
Source: Own compilation, based on Atlas.ti analysis

The second phase was the analysis of online diary which was explored via SPSS program, in order to analyze the frequency rates and the interrelation of the variables about how faculty members participate in informal learning activities.

Third and fourth phase were the systematic content analysis of faculty leaders' interviews (n=6) and Hungarian educational experts' sample (n=7) following the same methodology via Atlas.ti software.

4.8 Limitations of the research

This research has limitations which should also be taken into consideration. Limitations are occurring in the process of data collection through three different research instruments. The research is limited in recruiting participants only amongst the university teachers:

1. Limited number of participants (in total: regional state university n=24 and regional national university n=9), scope focused on institutional level, hard to generalize for a national wide interpretation.
2. Limitation in time: just reflecting the learning activities of teachers in a given period (2019-2020)
3. Few numbers of leaders' interview

One of the biggest difficulties that occurred in the process of the data collection was the recording of research diaries. The diary is organized and made comfortable for teachers to fill out even by cellphone, in order not to make them confused. The researcher prepared a special guideline describing the step-by-step actions of diary recordings and distributed to the participants to fill it out. The researcher also demonstrated the process of filling out via her smartphone as well. However, participants made failures and asked explanation. Only after the second trial they could handle it.

It was also surprising that during the data collection not all the participants agreed to conduct individual semi-structured interviews in English language, however they have been teaching courses in English (see Table 16).

One part of the planned sample was falling out. It is related to the timeline and restrictions with the pandemic (coronavirus COVID-19). The original plan was to collect data from four faculties, the researcher could not have an opportunity to involve other Kazakhstani institutions.

CHAPTER V: RESEARCH RESULTS
5.1 Field of the empirical research: background of the universities of the participants
REGIONAL STATE UNIVERSITY

Regional State University[6] (for the following part abbreviated as RSU) is a higher education institution situated in the Northern part of Kazakhstan. This works as the only State university in this region and makes constant efforts to realize the objectives set by the Ministry of Education and Sciences.

 In the framework of education project "Trinity of Languages", this higher education launches multilingual education in approximately 15-17 educational programs in the fields of education, natural sciences, and engineering. The 8 faculties of the university include the faculty of Philology and Pedagogy, Faculty of Natural Sciences, Faculty of History, Law, Arts and Sports, Polytechnical faculty, Faculty of Medicine, Faculty of correspondence and distance education, Agrarian – Economic Institute, and a Multidisciplinary college. RSU enrolls about 10,000-11,000 students annually offering 53 specialties in bachelor's degree, around 30 in master's degree program and 5 -7 programs of doctoral schools.

The teaching staff is composed from 400 academics: among them 20-25 Doctors of Sciences, 15-20 professors, around 10 PhD doctors, 85-90 candidate of science, 40-45 associate professors. The reward of "The best teacher at the university" was granted to 40 teachers of the RSU. The RSU takes active part in the Bolashak program and participate on postgraduate education in the world's leading universities abroad.

REGIONAL NATIONAL UNIVERSITY

Regional National University[7] (for the following part abbreviated often as RNU) is a prestigious university situated in the capital city of Kazakhstan. It trains students in different fields including educational, natural and social sciences. The RNU is considered as an elite higher education institution.

The RNU enrolls approximately 20, 000 students offering 50 specialties in undergraduate program, 46 specialties for the postgraduate program and around 15 specialties for doctoral school programs. The RNU includes 13 faculties: Faculty of Information Technologies, faculty of Natural Sciences, faculty of Economics, Philology faculty, Faculty of Law, Faculty of Social Sciences, Faculty of

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[6] We are not giving the webpage of the universities here from where statistical data were taken for guaranteeing the whole anonymity of the participants' institutions in this research.

[7] These universities were chosen by using the combination of systematic and convenience sampling method. Due to Covid-19, preliminarily planned other universities could not have been reached. There are classification criteria for differentiating HEIs on https://www.inform.kz/ru/v-kazahstane-utverdili-kriterii-klassifikacii-vuzov_a2843225.

Mechanics and Mathematics, Faculty of Journalism and Political Sciences, Faculty of Transport and Energy, Faculty of Architecture and Construction, Faculty of International Relations, Faculty of Physics and Technical Sciences, Faculty of History, Military Department.

The RNU is an internationally recognized university accredited by national and international authorities. International cooperation is realized with foreign universities and research centers on a regular basis. The implementation of educational and research activities is done by highly qualified academics, more than 60 % of the academics are carrying out research activities in research institutions, laboratories, and research centers. The RNU is employing 900 teaching staff 65% of which are professors and Doctor of Sciences.

5.2 Presentation of the research questions findings

5.2.1 Main clusters of the faculty members
R.Q 2: How do the teachers practice informal and non-formal learning in multilingual program?

R.Q 2.1: What kind of typical teacher cluster can be identified in multilingual education? What is their typical approach to the concept of multilingualism?

R.Q 2.2: What kind of informal and non-formal activities they are engaged in?

To explore collected data from university teachers, the participants of this research project are typologized according to their types of learning in terms of skills and competency-based specificities (see Figure 25 on page 108). Table 19 is presenting the main elements of different clusters. The characteristics were chosen from the learning elements for each category, which demonstrated a strong frequency in Atlas.ti in coding matrix and had differentiating meaning from the other clusters.

Table 19.Typology of clusters and main differentiating characteristics

№	CLUSTERS	DESCRIPTION ELEMENTS
1	Active and efficient collaborators	1. Participation in conferences and seminars (intensively or active). 2. Everyday professional discussions with colleagues. 3. Attendance, observation of senior professors' lessons and getting insights. 4. Sharing knowledge and experience 5. **Use and comparison of three languages in teaching**
2	Competitive lifelong learner	1. Strong research orientation: often involved in research projects

		2. Volunteering in conference to know relevant issues direction and networking
		3. Attending weekly seminars
		4. Networking and interaction with foreigners
		5. Teaching only in English (lack of students' academic English knowledge causes using specific method of teaching)
3	Challenge confronter	1. Low level of English knowledge proficiency
		2. Participation in English language courses (only if institutionally offered)
		3. Lack of using English outside of the class
		4. Language barrier: embarrassment in communicating in English
		5. Limited participation in peer mentoring: rarely asking help from colleagues
4	Passive job performer	1. Participation in trainings due to the university requirement
		2. Strong involvement in administrative task (*Example:* conference organization)
		3. Participation in workshops if only organized by colleagues about multilingual education
		4. Dropping out in halfway from attending programs

Source: Own compilation based on the Atlas.ti analysis

It is interesting to separate the representatives of the clusters, based on the belonging to different university faculties (See Table 20). Necessary to identify the number and allocation of clusters' typology in terms of their university and faculties they belong to. Table 20 demonstrates the number of participants of each cluster indicating the type of universities and faculties.

Table 20.Clusters faculty matrix

Faculties	Pedagogy and Psychology RSU	Natural Sciences RSU	Mechanics and Mathematics RNU	Total number of participants
Cluster typology	Number of participants	Number of participants	Number of participants	
Active and efficient collaborators	2	3	2	7
Competitive lifelong learner	1	1	5	7
Challenge confronter	3	4	0	7
Passive job performer	4	2	0	6
Total:	10	10	7	27

Source: Own compilation

From the Faculty of Pedagogy and Psychology and Faculty of Natural sciences from the same university were recruited n=20 participants and n=7 from another university. Table 20 presents the data related to the number of participants belonging to each cluster: Active and efficient collaborator (n=7); Challenge confronter (n=7); Passive job-performer (n=6); Competitive lifelong learner (n=7) was identified in the sample, with similar proportions (See also the Figure 26 Cluster matrix of faculties).

Figure 26.Cluster matrix of faculties
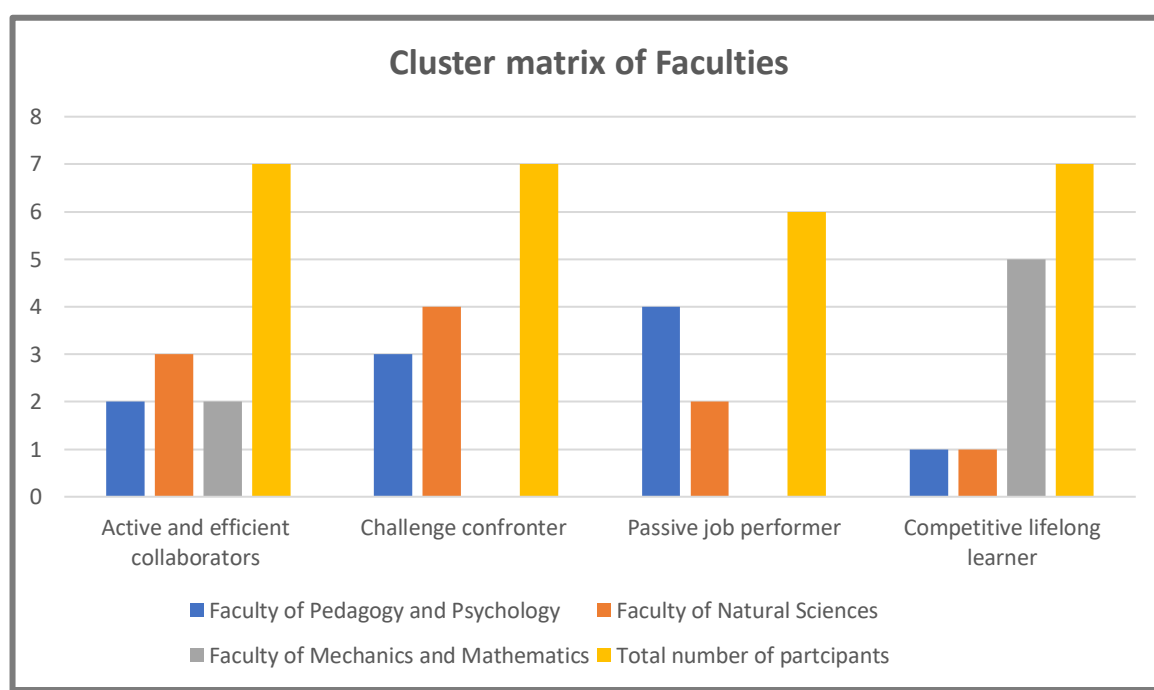
Source: Own compilation based on the Atlas.ti analysis

It is interesting to underline, that there were no teachers belonging to the categories of "Challenge confronter" and "Passive job performer" from the Regional National University (RNU), which can be explicated only partially explained by the lower rate of the participants.

5.2.1.1 Active and efficient collaborators

The group of teachers '*Active and efficient collaborators*' are characterized by intensive or active participation in conferences and seminars, by involvement in professional discussions with colleagues, by sharing knowledge and experience, and by mutual observation (See in detail Table 21). Their behavior could be summarized with the following slogan as well "*collaboration assists us to develop further*".

Their most frequently used learning solution are shown in Figure 27. These seven learning activities are identifying this cluster.

Figure 27. Active and efficient collaborators' learning activities

Source: Own compilation based on the Atlas.ti analysis

However, it should be mentioned that this group of teachers have tendencies to implement innovations and are always seeking for the favorable and positive solutions of existing issues. Even though they encounter with a numerous challenges and difficulties while teaching in multilingual education program. They are attempting to adjust under given circumstances by creating their own teaching methods as well as adapting teaching resources, books, manuals to achieve effectiveness in their work and reach job satisfaction.

The most frequent qualitative codes identified in Atlas.ti software, that were used for identifying this cluster are presented in Table 21. Their average density is around 5. This Table describes the groundedness in numbers of each code belonging to this cluster. Figure 28 shows one of the codes' family networks regarding both groundedness and density (See the Figure 28).

Table 21. Frequency of codes in Text segments

Code	Segments of the Text Associated with Code
NL-012- Participation in conference	29
IL-020- Mutual support with colleagues	15
IL-056 - Collaboration with colleagues	6
IL-037- Writing research articles in collaboration	6
IL-018- Seminars for sharing experience in multilingual setting	4

Source: Own compilation, the chart is exported from Atlas.ti analysis

Sub-topic 1: Participation in conferences and seminars

The first cluster members' main strategy relies on mutual peer mentoring/supporting activities: faculty members frequently participate in seminars and conferences (confer to the Table 21). We can observe that there are some departments, that are organizing such events on a regularly basis, involving academics and PhD Students as well.

'Our seminar is held every week on Thursdays in our department. We participate there and usually every week a professor, or a scientist does the presentation and after his presentation all people discuss and ask questions. Approximately 15 participants take part in that seminar not only teachers but PhD students as well where we also discuss their research topics' (INT 01).

This contributes to the constant updating of knowledge, skills, and competences as well to boost changes of experience and information sharing. Interviewees emphasize beside the conference participation the importance of involvement in conference organization as well.

"The last conference that I participated at was "Turkish mathematical functions" that was here in Astana in our university. It was last year in October (…), I was a participator and an organizer of it as well. As a participant I made a presentation on my research topic about "approximation of function in Mathematics". There were about 50 people participating in that conference. It was my own initiative to participate in this conference. Me and my PhD student whom I am supervising participated together, and we also published a collaborative article there. I met a lot of interesting people (INT 02).

Interviewees also underline the importance of conference organization and conference participation). Participation in educational conferences or seminars (see Interviewee 01 and 02) contributes to the teachers' knowledge sharing where they confide and exchange results of their professional achievement, research results as well as discussing educational problems and challenges. It can also be a platform for learners, teachers, researchers and even for students where they have a chance to share their point of views, research results, yield important inputs and feedback through in-depth discussions among attendees and colleagues. The consequences of such seminars lead to gain new knowledge, to disseminate modern and current issues in the dedicated area of study by sharing and discussing their findings.

"Last conference was in autumn, and it was the conference devoted to the 10th year of our Eurasian Mathematical journal. Our university together with our faculty organized this conference and a lot of people participated in it, approximately 100 people. To this conference came foreign professors from Russia, Italy, Germany. We are generally involved in organizing this conference. We collected the abstracts and papers after the working day we invited the guests to dinner, and I also helped to organize this dinner" (INT 01).

These sequences are also underpinning that those academics are usually engaged in conference participation by their own initiative as well as by the suggestion of their academic unit. Around 50 % of the members of "Active and efficient collaborators" accomplish this activity.

Sub-topic 2: Everyday professional discussion with colleagues & sharing knowledge and experience

Faculty members are frequently involved in regular professional discussions with colleagues. Moreover, there are some departments which create their own way of collaboration through the lens of the so-called *Links*. This is characterizing around 70 % of the members of Active and efficient collaborators cluster.

'We discuss the choice of the books with colleagues for the students as we have different groups, different educational programs. Some teachers teach for Biology students, some teachers teach for mathematics. So, we can discuss the choice of the books and the choice of the examination and the choice of exercises and kinds of work they are planning to organize during the classes' (INT 05).

Teachers claim that:

'Everyday… everyday… Because my colleagues they have the same difficulties… Because we have links. For example, I am working with first year students from Mathematics and my colleagues, they work with first year students from Physics faculty, and we must communicate everyday discussing some tasks and discussing some activities. And it means that we are just boiling in our own pot' (INT 06).

These sequences are underlining how closely those teachers are connected, and how intensively collaborate with their colleagues. Discussions that take place among them contributes to the development of their decision-making and problem-solving abilities in working. Collaboration is regarded as an impetus which assists teachers to be more committed to their professional teaching issues. For instance, if to go back to the integration of new educational reform established in academic units it requires new teaching resources and even new skills and competences of teachers to be able under new conditions. Thus, in this kind of working conditions and circumstances, they face abundance of challenges on their way.

These teachers by being in a close connection and leading negotiation with fellows endeavor to be efficient in their instructional teaching commitment. For them, discussions that are taking place in informal conditions like during breaks or coffee breaks (see INT-02) might be more valuable because it becomes an informal learning opportunity, like in lunchtime when the participants feel relaxed. The informal discussions also allow getting useful insights even from those colleagues who they do not talk with (Matthews, 2013). It is the simplest method of collaboration, asking for some help from fellows in the office or coming up to their desk to pose a quick question. They emphasize the use of the so-called *links* which implies strong collaboration and teamwork. The teachers teaching in the same groups create those *links*[8]. This is quite similar to the "peer coaching"

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[8] where more experienced ones lead discussion about teaching materials, structure, methods, and other teaching issues.

of Matthews (2013) where teachers are involved to give feedback and share advice. The leader in this link acts as a coach or mentor and it is of essential value to get inputs from peers (p.104).

'We practically discuss everyday. Practical discussions related to educational process, we discuss our lessons I ask for an advice and ask how to manage some students if there are some problems, how to make it more effective. The last discussion with my colleague was last year in winter I often discussed my lessons with my colleagues and in February my colleagues were invited to my lesson, and we discussed it after that I ask their opinions about some activities, and they help me' (INT-06).

This discussion can also be an example of a good collaborative activity among teachers that conduces and are more active and efficient in reaching qualitative teaching practices. Although, it cannot be regarded as the appraisal only but as peer support or peer learning or mentoring where more experienced ones guide their less experienced peers. It may belong to the so-called *Flash mentoring[9]* proposed by Matthews (2013). However, it is not limited only with one meeting, but the colleagues may agree to meet again, and the pairing is usually decided informally. This is what these participants coming across with in the process of their work performance.

'I think we support each other all the time. Because as I have said we have sometimes subjects, which we have never taught, and we ask for help. They were greatly to help us. For example, I can help for the teachers in translation of some words or sentences into Kazakh. Because we are teachers of different nationalities in our department. In this way we can support each other all the time. We discuss and help with teaching methodologies, languages and different books. And they suggest us the books which will be appropriate for the students at those ages or the students from higher courses' (INT-04).

Faculty members belonging to the 1st cluster can be supported not only in terms of professional boosting or instructional teaching, but they support each other in regard with their cultural peculiarities.

Sub-topic 3: Attendance of senior professors' lessons.

The attendance and/or mutual attendance of their classes can be considered as a way of mentoring and collaboration through the lens of peer support in the job performance of these teachers. This activity is frequently implemented by the faculties to assess the quality of collegial job execution. On the other hand, it is served as a support and the source of additional mutual experience sharing and attaining insights. This is traced in around 30 % members of the first cluster.

'I attend to my supervisor's lesson for PhD Students every week and I already have the timetable of the open lessons. There I try to get something new and methodological skills from them. My supervisor's lecture is very useful because it is also my scientific and research area' (INT-01).

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[9] which is characterized as 'one-time meeting or discussion that enables an individual to learn and seek guidance from a more experienced person, who can pass on relevant knowledge and experience'

'...as I have just said my colleagues are very supportive, we can discuss everything without any worries or judgement. There is class observation, for example, established in our university in which we are obliged to come to your classes, observe it and give feedback, not just simple feedback, but the constructive and critical one. This in turn helps to improve your teaching skills. I consider this as one of the supports established in our department. Also, there are links in which senior teachers make a group of junior teachers and they work together, I mean they develop for example syllabus, lesson plans, which books to take for classes. This is another example of providing support and I would say it's a huge contribution in the development of teacher's work, in the growth, be it professional or personal. Or in terms of research, as I said previously, we make collaborations in writing research papers' (INT-06).

These interviewees stress on the obligation which is set in their academic unit where they attend each other's' classes (peer attendance). They are obliged to express their opinion and give systematical constructive review by filling out specific piece of document where they indicated scores for each activity and evaluate colleagues' competences. Even though it is an obligation, they are open and always support such kind of activity and learning opportunity to improve teaching skills and getting worthwhile results and feedback from peers.

Sub-topic 4: Implementation and comparison of three languages in teaching

As the consequences of the integration of Trinity program, faculty members have to encounter for the utilization of three languages (English, Kazakh, and Russian languages) in teaching. From the interview sequences we can observe that teachers from the 1st cluster are seeking for different ways of implementing three languages in instructional teaching to reach qualitative results in work performance. In the case of this activity around 30 % of "Active and efficient collaborators" cluster members are engaged in it.

'It is much more intertwined and not concrete information is given. For example, the 1st law of Nyuton: "object at rest tend to stay at rest". In Russian it will be a bit difficult and in Kazakh it is too complicated and wordy to understand (If the world is not affected by any force, the body maintains its state of rest or maintains its smooth movement). In Kazakh students do not understand but in English they understand it very well' (INT-07).

'There are students with different levels of English knowledge. And for those who understand well I am giving them the tasks at once and for those who cannot catch I explain in Kazakh and only after that I give them their tasks. We divide 50 minutes of a lesson: 15 minutes explaining in Kazakh, 10-15 minutes in Russian if there is Russian groups, after that in English' (INT-07).

Participants are underlining the overloadness of teachers and highlighting that the provision of university with teaching resources necessary for the multilingual groups do not meet the requirements of their educational standards, which also leads to the deterioration of teaching quality. However, academics effectively try to do their best by preparing materials themselves using different sources. These teachers support English to use as a language of instruction as it is seen from the example, claiming on the easiness of teaching and internalizing in English.

Although, it is worth to admit that they use three languages parallelly in the class due to the language level discrepancy of students. Moreover, the use of English is easier for the science subject teachers because they have specific definitions, concepts, glossaries. The difficult point for them is to speak and construct sentences. Thus, it is seen that teachers are motivated and attempt to overcome challenges.

"For me, first, it is important to know our own subject of teaching, to be competent in our area of study. I know it in Kazakh language, and I watch and listen much to their Russian and English variants. I spend much of my time for preparing for the lessons until 2-3 o'clock at night. I analyze and prepare all the possible questions that may rise from students and what kind of questions I can pose for them. I must be able to answer in English to any questions that they ask. Mostly students ask about the terminology because the same words may have different meaning in English in Physics. I learn it myself, read, write, translate and check its pronunciation myself in google" (INT-07).

Such teachers' efforts are also reflected on the process of their preparation to their classes by spending lots of time on gathering materials and practicing at home in English. If to look at their preparation procedure, the teacher (INT-05) is very attentive and accountable and efficient to work by trying to self- develop and learn more additionally from different sources.

'It brings more load for the teachers enrolled for this program because it means developing more materials for such students. We have a lot of materials, resources, and literature also in English versions. But not all these books are adapted to the level and to the realia of Kazakhstan and Kazakhstani universities. In relation to this university teachers should develop their own materials and books so that they could adapt and be adequate for teaching their subjects. It is time consuming and overloading, the lack of sources and the need to work and develop more sources. May be the next challenge is the increase of digitalization and probably not all the teachers have the necessary skills of this for producing this digital and informative technologies in their classes' (INT-05).

Teachers underline that:

'In Physics we have formulas and terminology and definitions, so we provide the students in English with such resources. We published a dictionary with terminology on Physics that are frequently used in our lessons in three languages Kazakh, Russian, English. This dictionary contains not only terminology but definitions and formulas as well in three languages. In addition, we also provide students with electronic dictionaries that they use' (INT-07).

The local publication is concerning also simplified manuals, adapted for local teaching-learning activities:

"We published a manual devoted to the "Molecular Physics" in English referenced by the university professors from Karaganda and Aktobe. Now we are using it as a manual for teaching students in polylingual groups. Our university also provides us with books on Molecular Physics published by Oxford and Cambridge, but they have very deep content which is not applicable and easy to understand for our student cohort. However, we advise them to use those books as well if they need to understand better or find additional information. The library possesses the books on Physics in English, and they provide us with them" (INT-07).

These sequences show teachers' engagement and motivation; how active they are in disseminating knowledge. Even in the peak of challenges occurred in the process of integrating multilingual education they do not despond and are always concentrated on their job execution. Being active and effective collaborators, they endeavor to elaborate the needed resources like manuals, guidelines and even dictionary on a specific area in three languages. Such commitments are done in co-authorship and in collaboration with their colleagues from other universities across the country. They are not limited in getting in cooperation with intra university fellows but get in touch and keep network beyond their academic units as well.

"However, all our lectures are in English, all syllabuses are in English, because we have samples and, on those samples, we have books which we edited and wrote together with the colleagues from partner university. We teach on with these books that we write ourselves. All books, teaching resources and experiments we prepare ourselves. We also have Russian books related to mechanics, electricity translated into English (thesis, sorts of lectures) and we use them to teach the students because they are better and applicable with our educational program. Whereas American books (Cambridge, Oxford) or resources are extremely different and therefore they are not appropriate for our educational program. We use the translated version of resources of Russian scholars, and we use these books for teaching. We do not have a possibility to write handbooks in English and even if we have, we are in very early stage of doing it" (INT-07).

Such proactive and motivated teachers who learn anywhere can be efficient and worthy individuals of their occupation.

Figure 28. Graphical representation of code network demonstrating groundedness and density
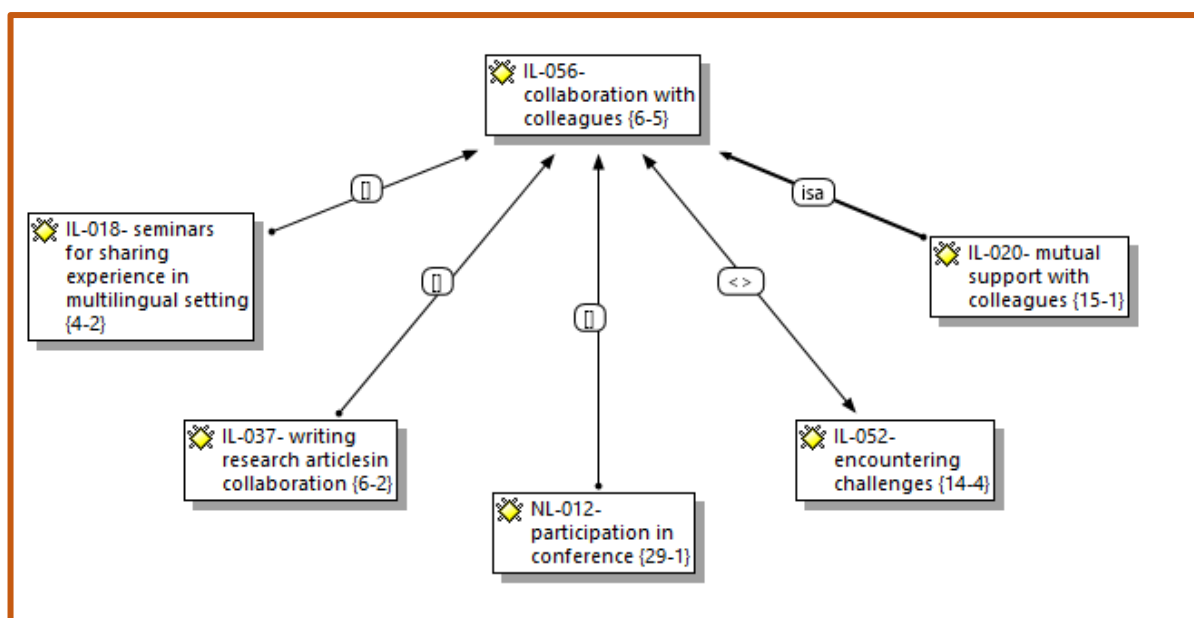
Source: Own compilation based on Atlas.ti analysis

Taking into consideration teachers' learning activities related to Active and efficient collaborators that were presented in the Figure 28 which was analyzed by Atlas.ti software, it is important to depict the codes identified in this cluster. Therefore, this figure describes the groundedness and

density in numbers of most important code belonging to this cluster and for more details related to all codes' network regarding groundedness and density (see Figure 29).

Figure 29. Sample of Atlas.ti analysis and Graphical representation of codes of Active and efficient collaborators cluster
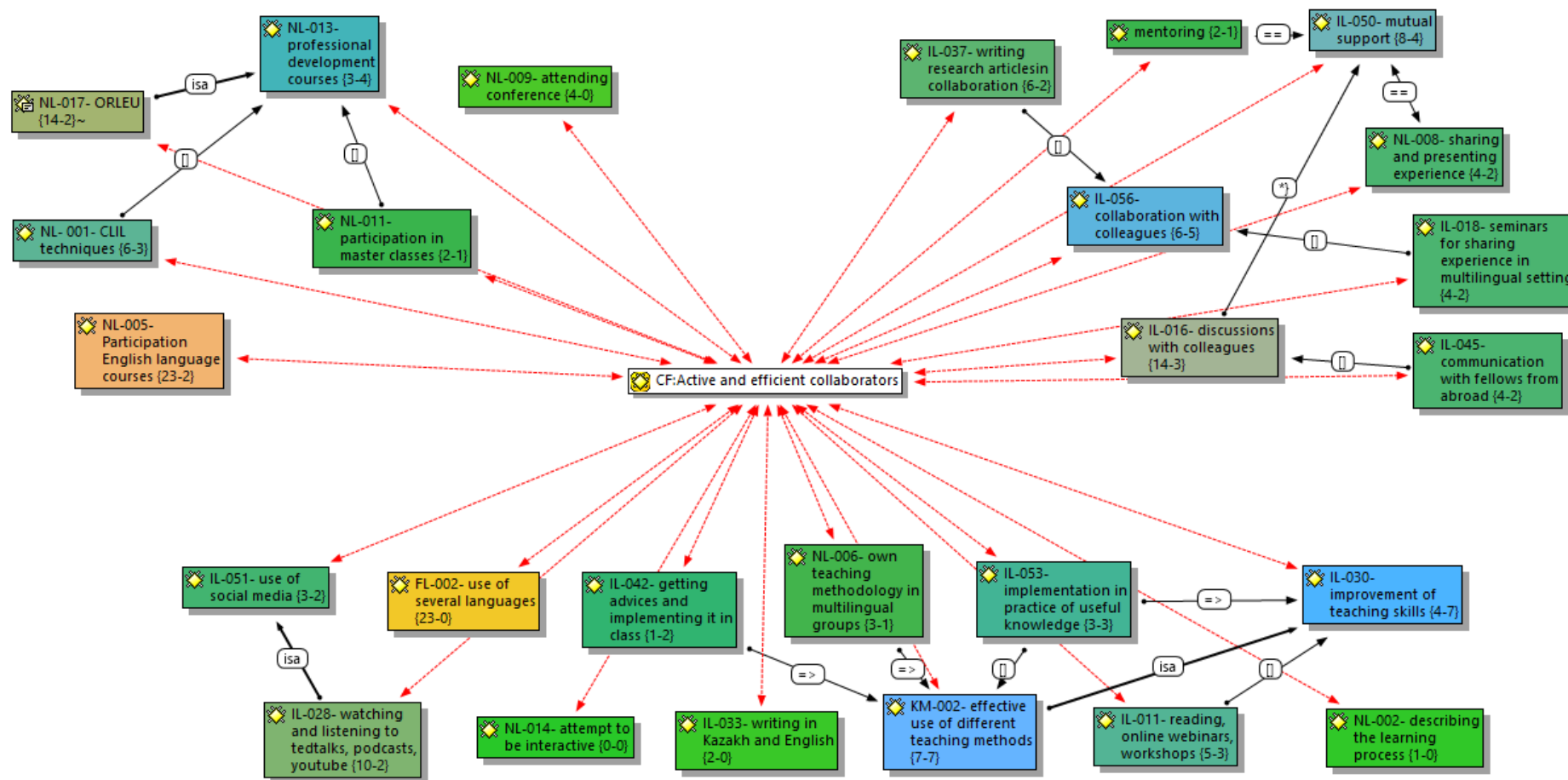
[10] In this case colours do not have any meaning. The first number is the groundedness of codes and the second is the density.

SUMMARY ON 1ˢᵗ CLUSTER

Active and efficient collaborators

Figure 30. SWOT analysis of "Active and efficient collaborators"
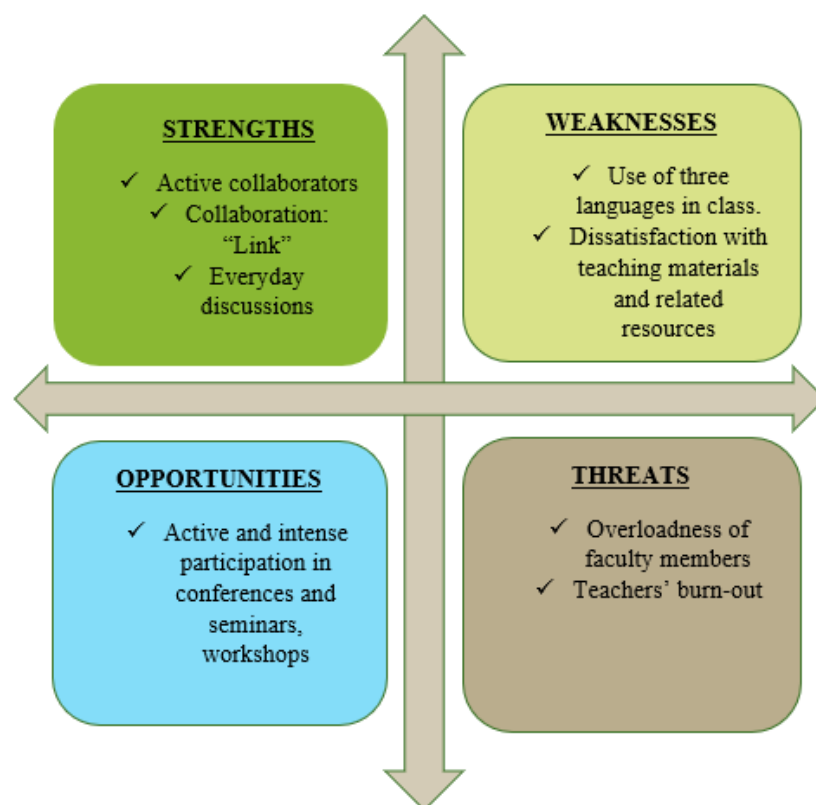
Source: Own compilation

The successful ways of collaboration that were created and organized by the faculty members is called *link*. *Links* being regarded as a driving leverage leads to strengthen and make tighter professional collaboration among teachers. The faculty members of the first cluster are frequently and systematically emerged in everyday practical discussions as well. The implementation and integration of important connecting elements among teachers assist for making them even more collaborative, collegial, open-minded to be effective and foster their professional development initiatives. What the teachers of the first cluster is suffering from is related to the use and the knowledge of English language making them use parallelly three languages in the class. As a result, in the early stage of multilingual program dissemination, teachers were not satisfied with the provision of the teaching resources in English which makes them elaborate manuals, dictionaries in three languages other teaching resources on their own. Such actions may lead to the deterioration of teaching quality as well as teachers' burn-out. Organization of a range of various conferences and seminars would extremely be helpful for the faculty members of this cluster. From

the quotations we can observe that some of the teachers participate in weekly seminars organized by their departments. They are also indulged in organizing conferences on a regular basis as well as participating in them. This can be regarded as an opportunity for them organized by their academic unit. Such active and intense participation in conferences and seminars contribute to teachers' further professional development as well as their knowledge and competence improvement and renewal. Due to the lack of teaching resources and materials, faculty members are to prepare the materials themselves which may result in overloadness and teachers' burn-out.

5.2.1.2 Competitive lifelong learners

This part is dedicated to the analysis of the second cluster of faculty members *Competitive lifelong learners*. This category of teachers is familiar with learning activities that includes strong orientation in research projects, regular seminar attendance, network building as well as implementation of specific teaching methods which was fulfilled and elaborated by these teachers themselves (for more detail see the Table 22). The faculty members who belong to this cluster can be associated by the following slogan *know-it-all dogma*.

Competitive lifelong learners are frequently and mostly engaged in the following specific learning activities as indicated in the Figure below. These learning activities are peculiar only for characterizing *Competitive lifelong learner* cluster (see Figure 31).

Figure 31.Competitive lifelong learner's learning activities
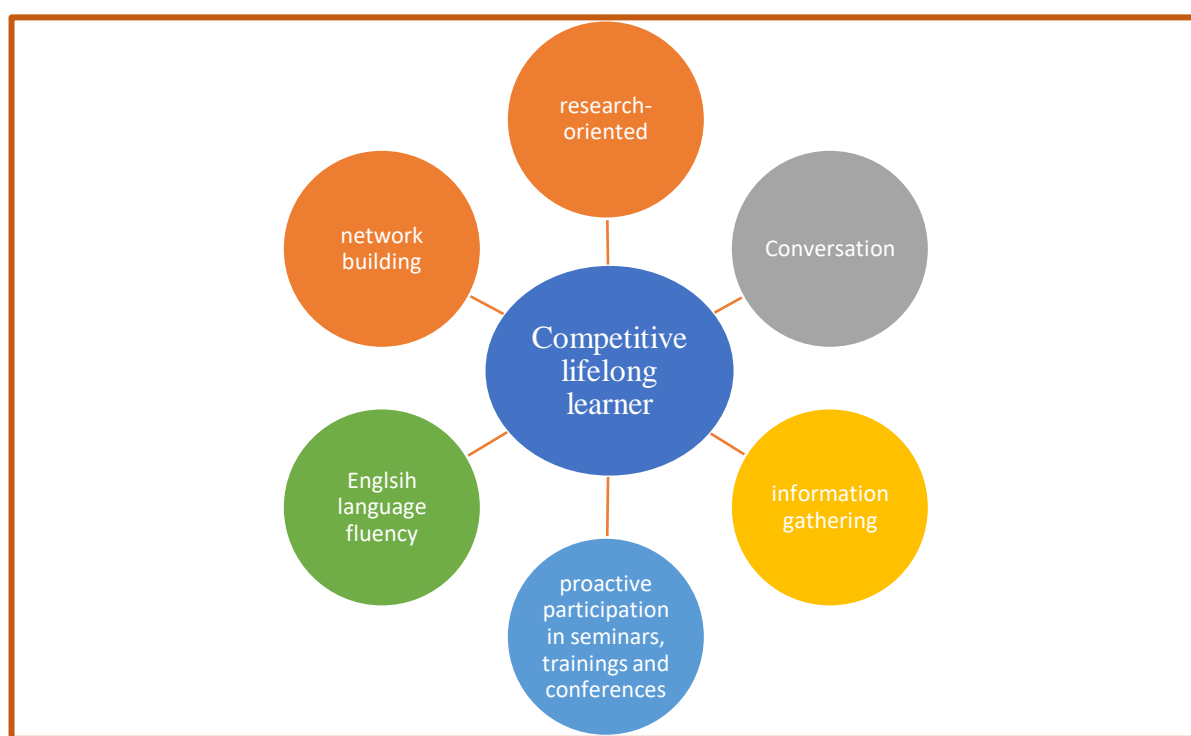
Source: Own compilation based on the Atlas.ti analysis

As it is indicated in Figure 32 analyzed by Atlas.ti software, this category of teachers is characterized to be proactive and frequently involved in different learning activities even if it is voluntary or not. The most specific qualitative codes that characterize the cluster of Competitive lifelong learners are as follows:

Table 22.Frequency of codes in Text segments for competitive lifelong learner

Code	Segments of the Text Associated with Code

NL-010- Participating in training and seminar	17
IL-031- Implementation of the gained knowledge	8
IL-012- Finding additional information on science subjects	6
IL-010- Developing skills and competence	5
IL-049- Participation in English speaking clubs and activities	3

Source: Own compilation based on Atlas.ti analysis

Figure 32. Graphical representation of code network demonstrating groundedness and density
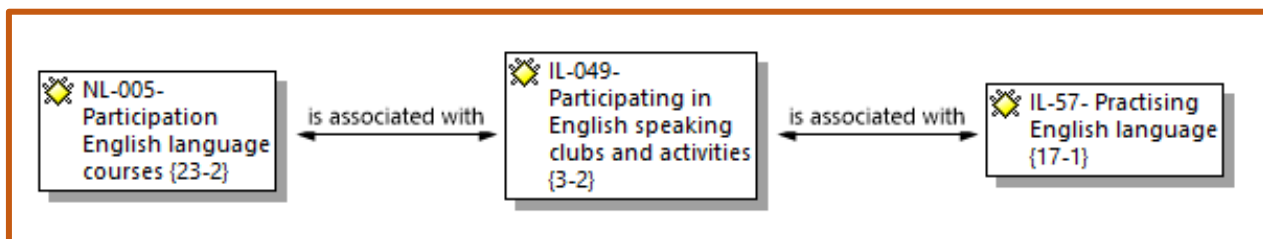
Source: Own compilation based on Atlas.ti analysis

Aforementioned Figure 32 describes the graphical representation of the most qualitative codes taken from Atlas.ti analysis which is dedicated to the Competitive lifelong learner cluster demonstrating its groundedness and density. For more detailed description of the frequency and density of all codes belong to this category of teachers (See the Figure 333).

Sub-topic 1: Volunteering in conference to know relevant issues direction

The participation in conferences is used also for promoting research results and expressing research interests. The teacher belonging to the second cluster emphasizes the relevance of searching for potential sources for proceeding their research results. The intention of this faculty members is to seek valuable information and be aware of educational trend developments. In the case of the members of the Competitive lifelong learners cluster, it happens mostly around 30 %.

"The last participating conference was the international conference in October, dedicated to the 10th anniversary of our mathematical journal. This conference was organized by our university. At international level, is included in the Scopus database. Outstanding mathematicians from over 15 countries participated in the conference. I volunteered for this conference because it is a great opportunity for us. In this conference I was the organizer because I handled the main set of materials (INT 017).

Teachers also emphasized that:

"I am often involved in those projects where I have research projects. Once every two years or once a year. Last time I visited this Eurasian National University in October. There was an international conference dedicated to the 10th anniversary of the journal "Eurasian Mathematical journal ". The purpose of that international scientific conference is to reveal and discover what we have discovered" (INT 015).
The representatives of the second cluster claim about the frequency and intentions of being involved in such scientific congregations, and their contribution is extremely productive, and is

counted as a beneficial learning opportunity. This category of teachers participates in such learning events on voluntary basis which is reflected in their initiation.

Participants noted the constant engagement in research projects as well as systematic attendance and participation in international conferences in their field of interest. The upgrading process of knowledge and skills happen formally but it also happens informally in conferences. The dissemination of the research results in scientific journal, or the organization of conferences, are occupying a central place in their work. The segments underpinned the activities described in relation with conference organization can be paralleled to information gathering activity described by Matthews (2013). Information gathering activity is more inclined to the informal learning. Information hunters seek for the data they needed not only to learn or study it, but it is necessary to fulfill a specific task. Such hunters usually search for the needed information in an acquainted place, and it can be accomplished in different sources like books, journals, programs, internet sources (Matthews, 2013, p.79). This is what happened with these interviewees whose intention is to look for new trends in research field as well as important journals to publish research findings.

Sub- topic 2: Participation in trainings and attending seminars

Active and autonomous participation in various trainings as well as seminars is also peculiar to the representatives of *Competitive lifelong learner's* cluster. Apparently, their academic units systematically contribute to the organization of trainings by attracting faculty members. Such occurrence of training happens not only within the wall of their university but beyond it, in different regions as well. Around 45 per cent of members who belong to this category resort to visit such learning activities regularly.

'We have a kind of contract with Kazakhstan Atomic Agency. I went there to give lectures for young people like for school children who are almost graduating high school in Kurchatov in Pavlodar region… The university was interested in who can give the lectures and I agreed as I am interested in it. Why not?! There was a Kazakh group and after came the Russian groups. So, I needed to teach in two languages. The number of participants was about 40 or 50 people and it lasted for three days' (INT 018).

From the interviews of these faculty members, it is obvious that they are engaged in conducting trainings as expert. Such actions are performed on voluntary basis by expressing high interest for the field. The involvement in weekly seminars is also underlined by the faculty members where they have an opportunity to share knowledge and experiences with different researchers and academics.

"In our university we have several seminars: one of them is called "functional analysis and its application" and it is held on Tuesday at 5 o'clock PM every week. In this seminar we talk about main questions connected with modern research questions of Mathematics. The second seminar is called "Modern questions of Mathematics" and it is held on Wednesdays every week" (INT 015).

Frequency of seminar organization and participation conduces to the intrinsic ongoing upgrading of teachers' knowledge. As pointed out in the quotations, the faculty organizes two seminars in a week. Seminars are usually held and reigned by experts in the field who motivate participants and encourage them to discuss and consider the hot topics of their interest and cutting-edge research questions (Basu, 2018).

We noticed that they indicate the participation of their colleagues from other universities or educational organizations. By participating in seminars not only teachers update their knowledge, although their colleagues may acquire something new from them for further investigations or teaching and research practices.

Sub-topic 3: Strong research orientation: involvement in research projects and networking

Strong involvement in research projects is also linked to the cluster of Competitive lifelong learners. Their interest attracts their attention of conducting research as well as participating in conferences to share with their research findings. Besides that, teachers highlighted the importance of quest and networking. The interviewees illustrate the way of network building and finding connections to promote research further in a university abroad.

'This year I have the opportunity to study in Belgium for three months. Thanks to my participation in these past conferences, I have found new connections through those contacts that are intriguing to my subject matter. So, their topic was close to my own, and they wanted to connect their topic with my research. Because in their research my subject has not yet been studied. It is funded by the same university. Only they have won three-four-year projects and they were collecting a team for that project. My main goal was to work with them and publish in the top-rated journals' (INT 017).

Teachers underline the importance of networking with colleagues from foreign universities as well as network building capacities. As from the experience of this teacher, networking is mainly built through the participation in conferences. Such networking is beneficial, in one hand for disseminating new aspects of research in their sphere and on the other hand for the participants to investigate further a topic or to join research groups and publish his research findings. Investigations on new innovations in teaching and research as well as teacher networking is fundamental aspect of their professional growth (See for more detail Gerdeman et al (2018); Niesz (2007.p.606); Matthews (2013); Vuorikari (2012)).

Sub-topic 4: Boosting communicative skills

The Competitive lifelong learners demonstrate active participation in different kinds of English-speaking clubs or other learning events. Competitive lifelong learners are not satisfied only by attending language courses organized by their universities, but they continuously attempt to search

for additional learning possibilities and master their skills. Almost thirty per cent of teachers of that cluster are participating in such learning opportunities.

'This is a tricky thing because there are in the city English- Speaking clubs I attend. On Saturdays the Library hosts two hours of English-speaking clubs. I also attend free Speaking clubs in the National Library. In the Speaking club, they bring in a native speaker for talking. All this is organized by the national library and by our university library. The reason for that is our library has as specialty an American Corner, so you can find literature and books related to the language' (INT 017).

For boosting communicative skills in foreign language, the participants revealed their participation in English speaking clubs. They had an opportunity to merge into the conversation and communication with native speakers and such speaking activities contributes to foster conversational and communicative skills that in turn assists in their professional development. Whereas other faculty members highlight a special English-speaking developmental method:

"It was maybe a month ago and it was about transformative leadership on boosting your communicative skills in English. It was really exciting and instead of planning a course we were rolling and there were six steps and each part of them had dealt with specific communicative skill. They had a professional trainer coming from Astana and they arranged that training course and wrote it to anyone who wanted to participate. It was about four hours and we played more than 4 hours. We finished at eight hours, we played together seven people four hours. Seven of us, can you imagine?! You get something, you get a question, and you need to respond for one or two minutes for each of us. So, for each of us we had a round like one by one. And every ten minutes you get something to tell and answer and receive feedback. For us it was very engaging" (INT 020).

They noticed the way of communicative skills development in English by emphasizing the particular ways of conducting attractive and useful competitions for boosting conversational competences of the learners. It is organized by the center of excellence especially for teachers to get them involved in such situations where not only their language proficiency will grow but their critical thinking and reflective abilities are to be fostered. Considering such decision-making skills of the learners, these kind of examples and utterances proves how competitive they are and always ready to learn something new.

Such meaningful and authentic collaboration and interactive opportunity to practice foreign language is the most motivating for learners. It should also be mentioned that these competitions are held on paid basis. Thus, it was from the learner's perspectives to participate on their own initiation.

Sub-topic 5: Teaching only in English with specific methodology

The Competitive lifelong learners are proactively exposed to implement the acquired competences in teaching practice. In the framework of multilingual program, this category of teachers deals

with the implementation of effective ways in instructional teaching. It is shown from the following segments of the interview where the application of necessary teaching methods is fulfilled from teachers' observation. That ways of teaching mostly require the use of three languages (Kazakh, Russian and English) in the process of teaching and preparation

"In Almaty Kazakhstani Nuclear Institute, they did a kind of practice, and they hide reductive course in the class. And we were trying to detect where they are hidden. It was a kind of experiment and now I saw this. I teach my classes this way with different detectors and different sensitiveness. It is like one detector cannot see but the other can detect the reductive spot because of the sensitivity. I needed to study there for ten days. The number of participants was between 10 to 15 but they were from different companies like from Metallurgic company and the oil company. I have two jobs apart from this university I also work in a company" (INT 018).

They share acquired knowledge from those conferences and trainings. They try to implement the gained competences in teaching practices with student groups. Such collaboration and combination of theoretical and practical implications at work leads to the improvement of professional achievements.

'First of all, I prepare the piece of information about Chemistry, the basic information and after that I try to explain that in English. I make it easier because I teach one subject general chemistry year by year and I just make it easier. I prepare my classes not only in English in Russian as well. I always just try to make information easier, in the simple way' (INT 019).

Teachers resort to different teaching methods and they themselves scrutinize at the same time what methods to use, what resources to use which is appliable for their studies and for the effectiveness and productivity of their teaching. These examples prove that teachers make choice on teaching resources based on their own learning practices and knowledge repertoire as well as regarding the peculiarities of their target groups. The implementation of books of well-known professors and use of two languages in teaching is beneficial for their job.

'Translation of Math's theorems, proofs, programmers into Kazakh are necessary. I wonder how they understood that word. For example, if we say the suffix in the theorem, the words "if and only if" in Kazakh. What I learned from this is that students lack the scientific and academic language. Some students are learning, but there are terms within the scientific language, such as how to ask in Russian. Learning by comparison, it becomes a resource to them' (INT 016).

Therefore, teachers decided to point out most important terminology for them suggesting it in both languages. Teachers emphasize on the necessity of indicating the terms of English into Kazakh which may not have any equivalence in the targeted language and is not possible to give direct translation.

'It's hard to write Math on a blackboard with chalk and by a projector. There is still a formula to be taken and mathematical proof is required. When they come out and present a report, I know what a student understands. As part of the trilingual program, I teach undergraduates whose research background is already established and has research experience. I usually load my

students on their own, and if they don't know anything, they ask help from me. I give them my, papers and they do the writing and present themselves. At first, the students suffer for about five weeks, and then I'm surprised on the outcomes' (INT 017).

Faculty members are underlining the language problems in filling out documents:

'Some paper documents in English in the university, you need to make a syllabus for our class. Since the class is in English you need to do it in English, but the university is giving it in Kazakh or in Russian. So, I was like how I supposed to do it, I mean you need to write whole explanation etc. and everything is in Russian, and you have the part with the already drawn table where you have to write the names of lectures and etc. "I ask how I supposed to do this? It is in Kazakh. Give me in English?" it is like a paperwork half in Kazakh and half in Russian and half in English. The university doesn't give any… maybe they have but I am not using, and the university is not too much giving resources, and I am sure they don't have any books on nuclear physics in English. I am trying to find the books myself and sometimes I buy books for myself to teach the classes. Of course, the university can give but you need to write a paper and wait years and once your class is done and you have your book and I say I don't need it and I passed it' (INT 018).

Academic unit has the scarcity of teaching resources, and their document flow is not functioned entirely in English language. As for the paucity of necessary textbooks, teachers provide on self-paid basis. Such contribution to work and accountability leads to the efficient professional development of teachers as well as productive professional achievements.

Faculty members put an emphasis on the benefited motivation provided by their educational institution that: *"It helps a little bit materially. For example, I get extra pay for teaching in English. I have to watch a lot of English material and it certainly helps me to improve my English. This side is great" (INT 015).*

Participants emphasize that they received extra payment since they teach in multilingual groups. This kind of bonuses or cash prizes and in the view of extra payment are one of the fundamental and widely used motivations rewarded for teaching staff (Telle et al., 2017).

Figure 33. Sample of Atlas.ti analysis and Graphical representation of codes of Competitive lifelong learner.

Own compilation based on Atlas.ti analysis

SUMMARY ON THE 2nd CLUSTER

Competitive lifelong learners

Figure 34. SWOT analysis of Competitive lifelong learner cluster
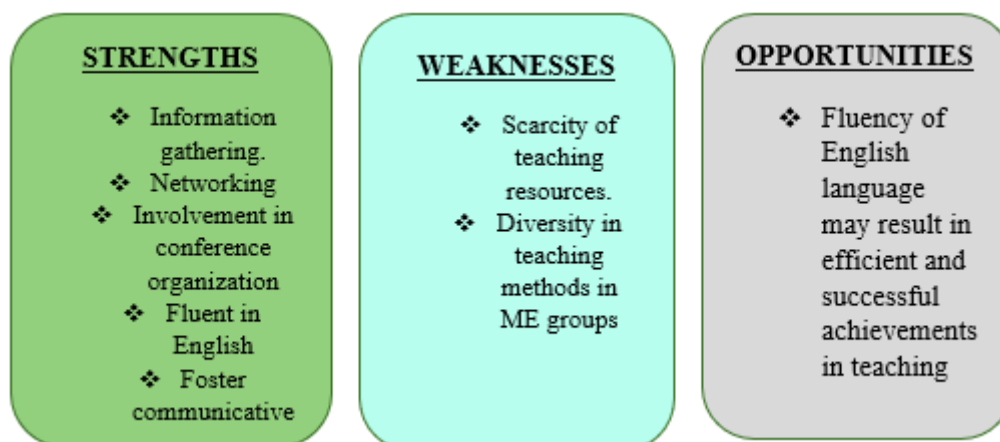
Source: Own compilation

Competitive lifelong learners are engaged in a range of activities in and out of their academic unit whether it depends on their university requirements and job execution. These learning activities embrace information gathering in an important manner. The participants are underlining the involvement in conference organization. Networking is another strong point of teachers belonging to this cluster. Competitive lifelong learners also encounter problems with the scarcity of teaching resources provided by their educational institution. The use of individual teaching methods in multilingual groups is depending on students' knowledge. Some of them are inclined to use the handbooks of well-known professors in the specific field which is applicable for their target groups and if needed they adapt it. Some tend to use their own research to teach in multilingual groups as well. Teachers of (CLL) provide teaching resources themselves; as a result, it causes teachers' overloadness. Competitive lifelong learners are fluent users of English language, and it leads to the successful job performance. In order to enhance and practice their foreign language skills, they take part in English speaking clubs beyond their university activities. They participate in different learning opportunities for boosting and fostering their communicative skills on self-paid. Competitive lifelong learner buys textbooks for teaching on self-paid basis.

5.2.1.3 Challenge confronter

The *Challenge confronters* are involved in learning activities that are mainly dedicated to the English language knowledge level and practice, and as well as in limited participation to collegial collaboration and peer mentoring. Their behavior could be summarized with the following slogan *learning through trial and error*. The most significant and qualitative codes identifying the cluster of Challenge confronter include (See Table 23).

Table 23. Frequency of codes in Text segments for Challenge confronters

Code	Segments of the Text Associated with Code
IL-09- Lack of possibility to use English language in everyday life	16
IL-052- Encountering challenges	14
IL-027- Lack of time	11
IL-026- Overloadness of teachers	9
IL-054- Facing difficulties in understanding the exact theme	3

Source: Own compilation based on Atlas.ti analysis

Figure 35. Graphical representation of code network demonstrating groundedness and density
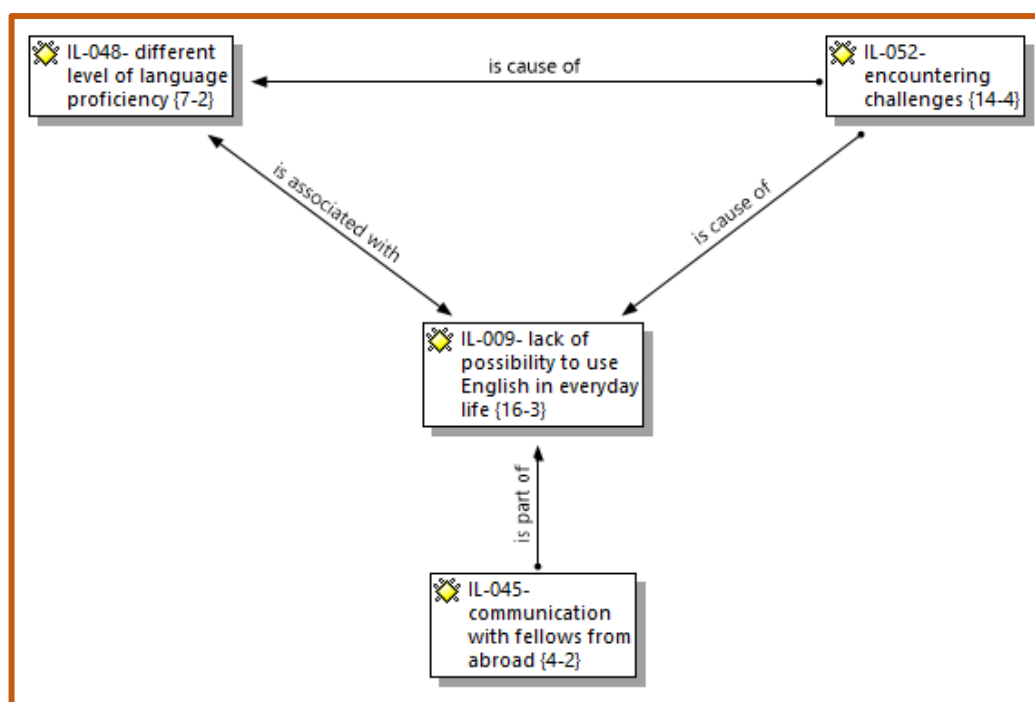
Source: Own compilation

Figure 35 provides with the codes (elaborated in Atlas.ti software) belonging to this cluster groundedness and density also representing the code networking linkages (For more detail, See the Figure 36).

Sub-topic 1: Language barrier: embarrassment in communicating in English

This section explores the learning activities of faculty members belonging to the category of Challenge confronter. This category of academics demonstrates learning events mainly devoted to foreign language for overcoming language barriers. This cluster finds almost everything challenging on their way. Around 72 per cents of faculty members belonging to the cluster of Challenge confronter encounter obstacles related to foreign language practice. All of them underlining their weaker level of English knowledge. Teachers emphasize that it was occurring during a foreign study visit:

"*I had a situation when I went to America I could not explain until I enrolled in the courses and met my friend. But in the end, I started bargaining in English with a salesman. ...since we are Chemistry teachers, we mainly work in the laboratory; conduct experiments; conduct reactions"* (INT 014).

Teachers stated that special preparation courses helped him to overcome the barrier:

"My level of English was low and when you study intensively for one month, it gives good results. And already at Satpayev University, my level of English has risen. These courses were not only English language but English for teaching Chemistry, Biology, Physics, etc. We studied certain words in Chemistry and terminology in English" (INT 09).

These interviewees highlight difficulties with the use of English language in everyday life situation also. The lack of English language knowledge led the learner to improve competence by attending language courses. It became underpinned that for several science subject teachers, it is to some extent easier to teach in English because they are used to implement specific terminology, equations and experiments to handle everyday situation. What makes more difficult the competence development, it is related to the English language practice: *"...as we are learning something", we have tasks we have homework and just spend time on preparing for lessons, I mostly do not practice English and help my children. I use English only in the lessons"* (INT 08).

Teachers complain on the paucity of time for practice assuring that:

"It's difficult to answer because as you know English is not well-known in our small town. Even between us, teachers, in the department we don't speak to each other in English, and I understand the reason for it, because every teacher has a big teaching load and imagine after talking English for a whole working hour. After the workday we need maybe just to rest and talk in those language, which is everyday language, in Russian for example" (INT 012).

"...well, good question because when you are overloaded, especially these days with this trinity program I don't have pretty much free time for taking part in any workshops and seminars" (INT 012). These sequences highlight the lack of English language practice opportunities in different conditions. Teachers complain on the huge workload and being tiresome they do not exert any efforts and endeavors to practice language, or even to search for the opportunities to practice it outside classrooms. Extreme workload does not allow them to do any other activities beyond.

"But now in our staff we have fellow from the USA and of course we speak only in English with her. At the lesson we try to speak only in English. In our everyday life especially together with my staff sometimes we can speak English with our fellows. As I already said we have a fellow from Texas, and she teaches English to our students especially to third year students. I meet and communicate with her almost every day. Because she has got classes every day with our students" (INT 011).

In some case, there is an opportunity in the department to practice foreign language with colleagues from abroad. Whereas other participants stress on language barrier they face as follows: *'My knowledge of English is not so good and my language barrier, I am afraid to make a mistake in front of students during the class'* (INT 014). *'I don't know maybe it helps you to be freer. When you talk to native speakers and you became freer, and you are not shy may be to speak in English. For example, in our city in Kazakhstan'* (INT 011).

Teachers complete that with the aspect of the desire to participate in programs abroad:

"I love learning foreign languages. But, you know, we don't have much enough free time for our personal growth [laughing]. Because the teaching overload is always big and consequently the amount of job is extremely high. But notwithstanding of these facts I try to participate in the programs which are held abroad. You know, for broadening your horizons or for better understanding other cultures and cultural awareness and sensitivity (INT 05).

These interviewees emphasize the issues of embarrassment while speaking in English. As they are science teachers and due to their low level of foreign language proficiency, they are embarrassed to do mistakes teaching in the classroom. It is possibly be related to the paucity of foreigners or native speakers in their hometown. Another reason is the absence of English-speaking community in their city. These are the challenges that they constantly encounter.

Sub-topic 2: Participation in English language courses only if institutionally offered

Faculty members belonging to the category of Challenge confronter, participate in seminars, workshops, and conferences only if it is offered by the educational institution. Such learning activity concerns around 30 % of teachers belonging to this cluster.

"But, you know, workshops and seminars are included in our individual teaching programs. I mean each academic year workshops and seminars are organized by the teachers of our department. Also, there are workshops and seminars which are held by those teachers who have gained knowledge and experience during their professional development courses organized by Orleu. So, it's a good opportunity to see the latest news in education, to better understand the educational reforms, to enrich your professional knowledge" (INT 012).

Teachers underline the obligatory character of the trainings and conferences at local level:

"At our university, it is necessary to participate in conferences. What is being done at our university is that we all try to participate. We all participate in the conference and try if newsletters come to us, mainly we try to participate three times a year. The last conference was associated with the Almaty University, where they had a conference on Innovative Technologies in Education.

They established a conference at the Almaty Pedagogical University named after Abai. I learned about the updated program, there were also master classes with teachers from the NIS (Nazarbayev Intellectual School) and showed assessment" (INT 09).

Teachers indicate their overloadness claiming that with the establishment of multilingual education, their work performance became more tighter than before. They are often noting that participation in seminars and workshops are documented in and enrolled in their teaching program. It means that it can be done or conducted not only by their initiative but considered as a requirement or job obligation. Thus, even though they are intensely overloaded they have opportunity to be in the know of new trends in their field of education from their colleagues and fellows who share knowledge and skills acquired from the organized courses. This can also be considered as a knowledge sharing method (Matthews, 2013) among colleagues.

Sub-topic 3: Limited participation in peer mentoring and professional loneliness

The collaborative skills of teachers belonging to this cluster are somehow tightened. They have discussion only at the beginning of an academic year and then they continue to work on that basis. Whereas the others stress on that they prefer self-problem-solving approach rather without turning to colleagues for consultations or advice. Such approach may possibly bring challenges for them if they are not communicatively open for colleagues. Approximately 30 percent of teachers resort to asking help from colleagues and fellows. Teachers emphasize on the rare collaboration possibilities:

"...very seldom. Because I have working experience, I have been working here for ten years and I can confidently say that I know the system of the university well, it doesn't matter whether in terms of teaching or research. So, there won't be any kind of problems in this regard. Maybe it can be personal problems, but again I try to solve problems by my own. Let's say, my problems are my problems and I need to solve them myself" (INT 012).

It can be compared to the learning activity that Matthews (2013) qualifies as learning through *Trial and error*. The crucial way of learning through trial and error is to draw attention to the reflection and feedback of cycle (Matthews, 2013) and it is more productive while putting it into action.

Figure 36. Sample of Atlas.ti analysis and Graphical representation of codes of Challenge confronter cluster
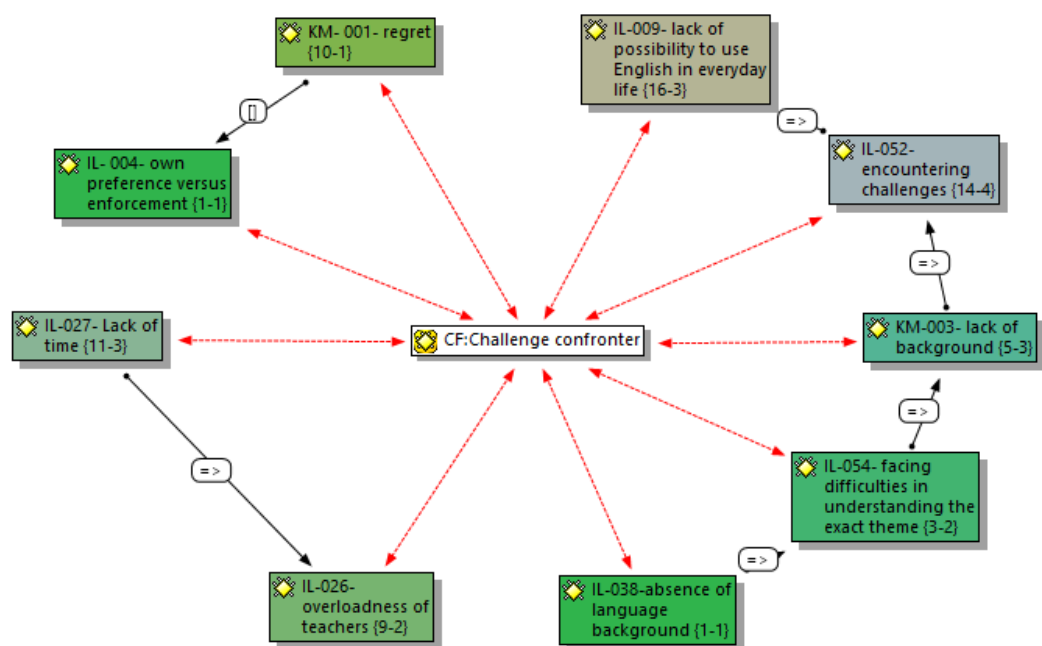
Source: Own compilation based on Atlas.ti analysis

SUMMARY ON THE 3RD CLUSTER

Challenge confronter

Figure 37. SWOT analysis on cluster "Challenge confronter"

STRENGTHS
- Possess an elastic temperament.
- Ongoing professional development
- Inclined to self-problem-solving

WEAKNESSES
- Struggle with feeling of embarrassment in teaching in English.
- Occurrence of language barrier

OPPORTUNITIES
- Their preserving and persistent traits assists them to continuous development.

THREATS
- Weak collaboration.
- Self-confidence may cause some gaps in their professional activity

Source: Own compilation

Challenge confronter involves the potential and motivation to move forward in garnering useful learning opportunities. Even though they are encountering a range of difficulties in their work process. The presented learning opportunities was not refused by them. Challenge confronters are following the logics that each failure is a trial to learn and put acquired knowledge into practice. Despite the struggling and obstacles, this category of teachers continue to develop, updating their professional skills. It is characteristic for their engagement in learning foreign languages that they attend at necessary learning programs. Challenge confronters struggle with the feeling of embarrassment in conducting lessons in English languages. First, they claim on the language barrier that occur in foreign language speaking practice. Whereas next hindrance is the scarcity of possibilities for language practice. Challenge confronters seems to be self-confident, without feeling the need of any support or collaboration. They conduct discussion related to the teaching process with colleagues only rarely. As for the collegial collaboration, they incline to self-problem

138

solving. Such weak collective collaboration may lead to the slowdown in professional growth. Instead of being so confident in their work capacity, it would be better and beneficial for them to be more open for collaboration so that they could remove gaps through the participation in more learning events.

5.2.1.4 Passive job-performer

This section explores the last cluster of teachers *Passive job-performers*. This category of faculty members is described by the following elements: participation in trainings or workshops only if it is required by the educational institution and if it is organized by their colleagues; involvement in administrative tasks; conference organization; dropping out from attending programs in a halfway (See Table 24). This category of teachers can be characterized by the following slogan *pro forma learner*.

Table 24. Frequency of codes in Text segments

Code	Segments of the Text Associated with Code
IL-058- Lack of specific teaching materials	17
IL-015- Unsatisfaction with teaching resource provision	7
IL-048- Different level of language proficiency	7
NL-015- Less motivated	2

Source: Own compilation based on Atlas.ti analysis

Figure 38. Graphical representation of code network demonstrating groundedness and density
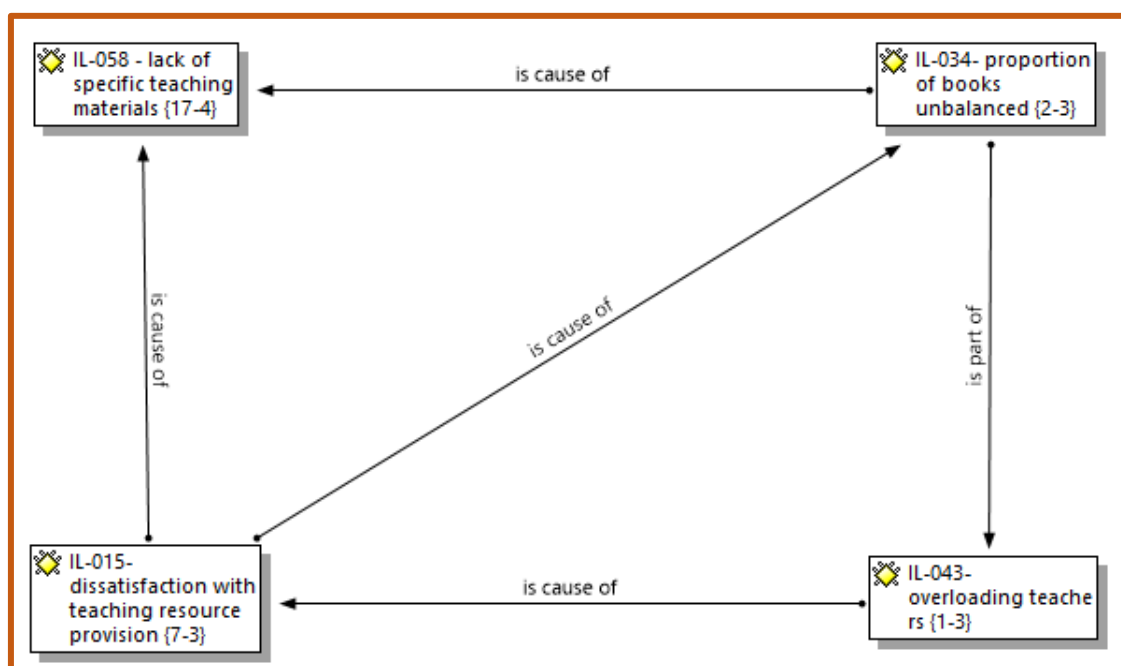
Source: Own compilation based on Atlas.ti software

Figure 38 depicts the graphical presentation of one of the most important and qualitative codes' frequency and density (analyzed in Atlas.ti software) describing the category of Passive job-performer. For more details related to the code types (See Figure 39).

Sub-topic 1: Limited foreign language practice

Passive job-performers are not very active in practicing foreign language in their everyday life, within or outside their educational institutions. We can witness the specifities of this teacher category identifying their behavior in learning process. This happens with around 35 % of teachers. Some of those teachers have more traditional thinking about communication patterns and on lack of active international connections:

"Not so close friends but I know some people who live abroad in Africa and in England, but we don't chat we don't talk we just like our pictures and posts and sometimes. They write sometimes comments and I also write comments" (INT 022).

As participants noted on the use of social websites and mobile applications and they also have international followers with limited communication. They are missing an opportunity to communicate and practice the language. In contrast, the activity what Matthews (2013) noted about *Mobile learning[11]* has more potential. One of the most flexible options of mobile learning is the possibility to collaborate from any distance and get the needed information in time. It is on the learners' initiative how to use it and for what purposes. Yet, these participants do not show any interest in applying to the usage of mobile learning opportunities.

They complain about the lack of opportunity for language practice outside the university:

"Unfortunately, I can't use it anyway because for example, when I leave the university, I forget that I am a teacher of the English language because there is no one to communicate with. But this year we had some volunteers she is from the USA that's why sometimes after classes we have to communicate" (INT 023).

The absence of English-speaking community forms a barrier for their development. Sometimes volunteers can break this situation, but the expression of teachers ("*have to communicate*") expresses the unwillingness to practice if it would be an enforcement. Some teachers did not appear to master the foreign language skills and competences.

Some interviewees highlight the same way by saying that even if they have opportunity to practice English with colleagues who speak well, they do not even attempt to do that and keep

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[11] This type of learning is devoted to the collection of information through the usage of mobile devices, and it is more personalized and can be reached by different electronical devices.

communicating in their native language. It shows that these faculty members are not in a position to grow and strengthen professionally.

Sub-topic 2: Participation in conferences, trainings due to the university requirements

Participation in conferences, and workshops, for the teachers belonging to the cluster of Passive job-performers is explicated as one of their job requirements or obligations and professional responsibility. It implies that this category of teachers participates only in those learning events if they are required to. It is widely spread for all the activities, due to the fact that they do not express any attempt and endeavor to seek for additional learning activities to be indulged in.

'Well, let me think. I guess at least we try to participate in two conferences each academic year. It's one of the requirements of the research part in the university. The last conference where I have participated was "Valikhanov Readings". This is an annual conference held in our university. I presented my research in the area of teaching methods and methodology. But, as for other conferences held in other cities in Kazakhstan, it's difficult to say or indicate specific conferences. Because it takes time and money and as you know we don't get any financial support from the university' (INT 027).

Teachers stress on the necessity of participating in conferences as the requirements in the research activities of the university. Some of them only participate in an annual conference which is organized by their academic unit. However, at the same time they emphasize that there is no opportunity for them to take part in other conferences because of the absence of financial support. The research of Tehseen, & Hadi (2015) revealed that teacher's job satisfaction and financial motivations are closely and positively interrelated.

"The name of the training is "Enhancing teaching and learning for the university teachers" and it took place in this university and lasted for two weeks. According to some positions you know the teachers must participate in these workshops because every five years we must enhance and upgrade our knowledge especially in teaching methodology. There were about 20 people participating there from different departments of our university" (INT 022).

These teachers also prove that they are engaged in those seminars, workshops and conferences which take place in their educational institution. It implies that they participate in such event when it is institutionally offered to meet the requirements and obligations of their work. Teachers highlight that the workshops are often related to practical issues, without professional growth or the use of English:

"As a rule, once or twice a year we have special events together with teachers from secondary school because we work together. Because our students every year have their pedagogical practice at this school and every year as a rule, we have such workshops and where we discuss all the problems we have in this sphere' (INT 022).

This category of teachers is inclined to the participation in workshops organized by the faculty or departments parallelly, others demonstrate workshop participation only as a part of job execution and work requirement. *"As a rule, every year. My tasks are to invite teachers and I must prepare the program and of course I take part in the discussion of the problems" (INT 024).*

"As for the conferences I am responsible for conducting such seminars in our university at our department. We organize for example three times or two times international seminars and the first one was last year "Polylingualism in higher education: challenges and effects" where we discussed the effects of polylingualism on content knowledge and current findings and implications for practice of polylingual education, CLIL as a way to polylingualism. Training of polylingual teachers of priority disciplines: Physics, Math's, Chemistry, Biology and Exploring Pedagogical and social cultures and this one was in 2019 in April" (INT 025).

Other examples accomplished by these teachers evoke their unwillingness to develop by neglecting other learning opportunities. The frequent use of expressions as *"as a rule, I am responsible", or requirements*" show to what extent they are entirely engaged in only those learning activities that are linked to their job execution. This behavior is in relation with the higher education teachers' autonomy who has a possibility to be involved to conduce for decision making or assisting for the planning in the frame of educational institution (Boyd et al., 2011).

Sub-topic 3: Dissatisfaction with teaching resource provision

Faculty members emphasize on the paucity of equipment as well as absence of financial support from their academic unit for conducting research or participating in conferences. Around 35 percent of teachers are not satisfied with teaching resources provided by their academic unit. Teachers are stressing on the scarcity of equipment:

"We do not have modern devices and modern equipment and we don't have any possibilities to do research work in modern Biology. Because of this I don't participate in conferences. We don't have the opportunity to do experiments and experiences. The level of our research work is not enough to participate in such conferences, and we don't have money. In this university I participate in our annual conference "Valikhanov Readings" (INT 026).

Teachers are underlining the shortage of the necessary equipment, financial resources as for research or for publication of research findings. Those are the main reasons for performing and learning only from what is institutionally offered. This issue is appearing also in the literature: facilities are another motivation for teachers when teachers are provided with necessary resources for physical workplaces (Boyd et al., 2011).

This case is also described by the following participants also explaining some good examples of collaboration:

"It is so sad, but we don't have such possibilities and have no time because we have many lessons. And we had to prepare these lessons and to write many papers. Bureaucracy is the highest in our universities of Kazakhstan, I think. We have a curriculum of organizing and participating in seminars, but our seminar is only in Russian or in Kazakh not in English. These seminars are related to polylingual education. Last year teachers of our department discussed some problems of polylingual education. They invited teachers from the schools to participate in this event because there are many problems in university as well as in school with teaching in English" (INT 024).

In the same vein, challenges that they face in the process of teaching in multilingual groups like tight workload, lack of time, also the flood of functional work in the department are put on their shoulders.

"There are many problems in teaching in polylingual groups for example, students have different levels of English. Some of them have IELTS level but some of them do not understand simple English sentences. This is the first problem. And the second problem is that we have no proper manuals in English and the manuals which are in our library, they have poor English. There are many mistakes in them, and we cannot use it in our lessons. Because of this we prepare lectures, searching definitions on internet. But the manuals for example of Britain and the USA they have other structure other approach to teaching our subjects. It's very difficult to construct normal educational process we need help how to improve our educational process is interesting part" (INT 024).

The occurring challenges in the process of implementing multilingual education are multi-leveled, and the members of the last clusters adapt the more difficulty to it. The educational turnover put high impact on teachers' work performance. Complains may be considered as results of demotivation factors influencing on teachers' job performance. These demotivating factors include overloadness, large class groups several students, changing in courses to teach (different topics or educational programs), transformations in curriculum.

Among these demotivators the most influential are high workload and overloadness. Those prevents teachers to develop further and gain innovations in the field of teaching (Maicibi, 2003). There are several demotivating factors impacting on teachers' job dissatisfaction (Tehseen, & Hadi, 2015.p.236) by leading them to regression in work. The other intrinsic factor is working condition of teachers, Ingersoll and Smith (2003) argue that teacher's retention is mainly concerned to the consequences of unfavorable working conditions whereas Tickle, Chang and Kim (2011) emphasize that teachers' job dissatisfaction and turnover is usually caused due to their working condition.

Figure 39. Sample of Atlas.ti analysis and Graphical representation of codes of Passive job-performer
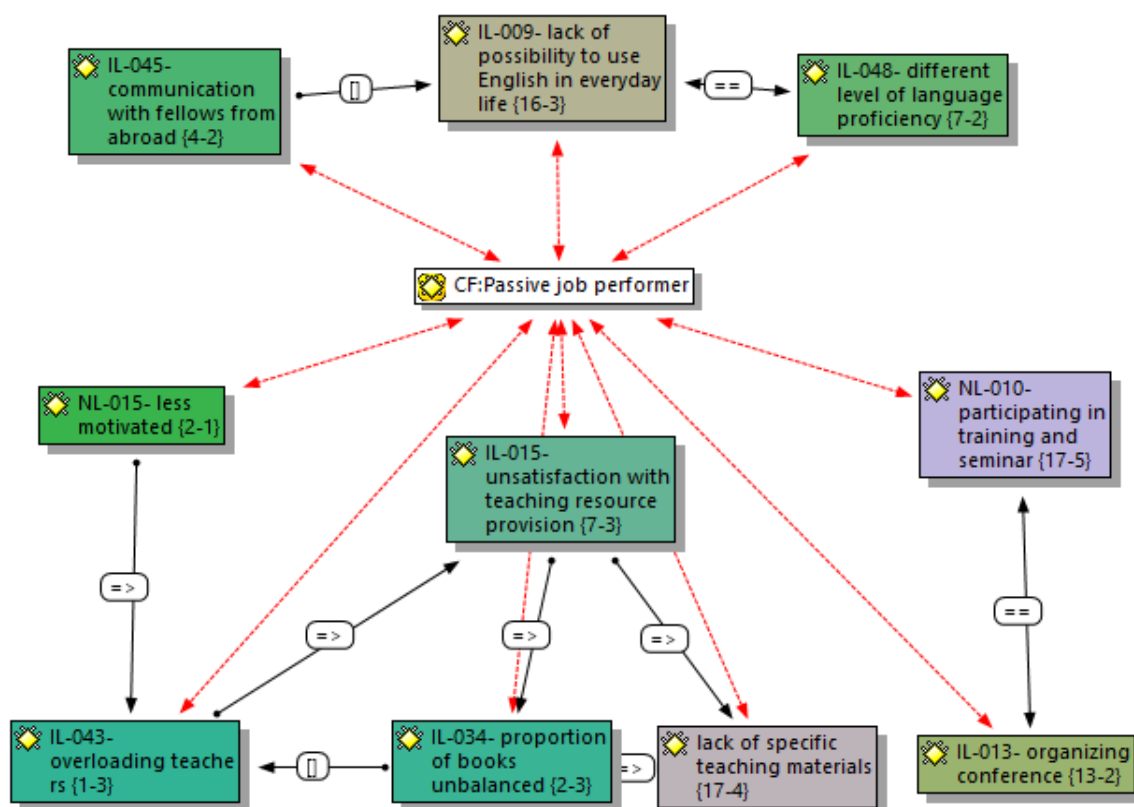
Source: Own compilation based on Atlas.ti analysis

SUMMARY ON THE 4TH CLUSTER

Passive job-performer

Figure 40. SWOT analysis on the cluster of "Passive job-performer"

WEAKNESSES

➢ Not using opportunities for practicing foreign language.
➢ Claim on the absence and paucity of needed equipment for research and resources.

THREATS

➢ Teachers' overloadness and burn-out.
➢ do only those activities they are required to do only without searching for other learning opportunities
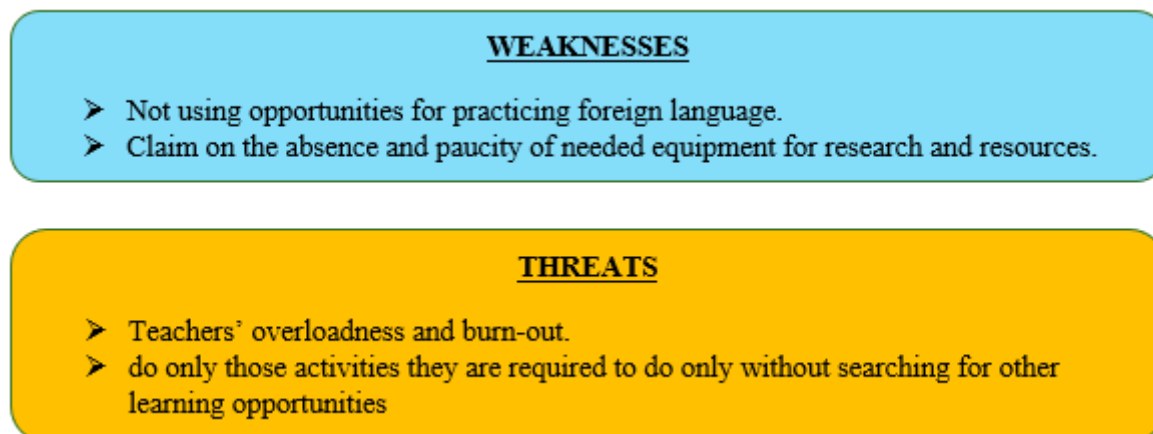
Source: Own compilation

Passive job-performers are totally ignoring learning possibilities. Neglection of existing foreign language practice opportunity such as communication with fellows in English or conversation with foreigners through different tools and channels may lead to the decadence in mastering their language skills which in its turn influences on their work performance as well. The faculty members were claiming on the absence and paucity of necessary resources and equipment, which resulted in their limited participation in conferences. Although, in relation to the conference participation, passive job-performers only attempt to participate in their annual conference organized by their academic unit. Next important factor was the overloadness of teachers' causing their lack of time. Those factors are biggest important cause for teachers' demotivation and passiveness in their professional development which may also bring to the teachers burn out. This category of teachers is not so active in the process of their professional development and learning activities. We can notice that passive job-performers are always complaining to the provided conditions and are not satisfied with them. Even though considering these drawbacks they do not attempt to find a solution or opportunities to make their bests. From such expressions of the interviewees, it is obvious that they have tension to do only those activities they are required to do only without searching for other learning opportunities or demonstrate their specific knowledge and experience with their fellows.

5.2.2 Ways of teachers' participation in multilingual education program

R.Q 1: How do the teachers participate in the multilingual education program in Kazakhstani higher education institution?

R.Q 1.1: How do the teachers get prepared to participate in the multilingual education program?

Considering the interview analysis of the participants, teachers' participation in the program of multilingual education is provided from two important perspectives: by teachers themselves and by the educational institution (See the Table 25).

Table 25 Main ways of teachers' preparation for multilingual program

BY SELVES	BY EDUCATIONAL INSTITUTION
Involvement in discussions	Providing by workshops, seminars
Use of three languages in the class	Participation in conferences
Preparing teaching materials form different sources	Participation in English courses
Boosting communicative skills	Interinstitutional training attendance
Use of their research in the class	Directing to "ORLEU" courses

Source: Own compilation based on interview sequences

All of the interviewees mentioned a variety of ways in getting prepared for working in the framework of multilingual education program that were provided not only from teachers' side but from the universities' perspectives as well. The most frequently mentioned activities they are engaged in are depicted in the table above. Most of the faculty members emphasized on the involvement in discussions with colleagues, *"...according to work, we have some discussions when we have problems in teaching or if I have some new discipline which I do not know how to teach. Then of course I ask for help. A lot of discussions we have, maybe but approximately ten times a day let's say. We discuss during the breaks, coffee breaks" (INT 02).* Other interviewees underline on the discussion related to the choice of books, *"We discuss the choice of the books with colleagues for the students as we have different groups…".* For reaching the effectiveness in teaching in this program teachers come across the use of three languages in classroom, if necessary, *"In polylingual groups the students have different levels of English knowledge proficiency and therefore some of them understand quickly and some do not understand. For them it is necessary to explain in Kazakh, in Russian and in English as well. Only after that they understand the content... (Int 07).* They highlight the utilization of their own research while conducting classes in multilingual groups. This research-based teaching approach contributes to the development of

students' research skills as well: *"When teaching trilingual groups, I first pass my lessons on the subject of my research and take materials from my own study. Now, after years of experience in this area, I don't need much training. My main goal is to convey the basics of the dissertation and to apply the research findings I've written in practice" (INT 017).*

In higher education institutions, teachers are participating in several educational programs such as participation in workshops, seminars and conferences provided by the universities.

"Usually, we have some workshops at the university. And last year we had some workshops prepared for us by our teachers from our university in Almaty which aims at enhancing teachers training especially for university teacher. We had a workshop for enhancing learning and teaching according to new program. Especially connected with some changes in the education system on higher education" (INT 022).

One of the most significant inputs from the perspective of educational institutions is the provision of English language courses for enriching teachers' language proficiency by offering IELTS classes as well.

"Now I go to the English courses. English course began in July last year and I go there three times a week and it was organized by our university. Before going to the English class, we passed test and, in the end, we need to pass IELTS. Of course, go to Barcelona helped me with my research because in that center the professors do the activities related to my research topic. ORLEU courses helped me also to improve my teaching skills, and the English course is improving my language level for teaching in polylingual groups [laughing]" (INT 02).

They highlight the attendance of foreign language courses as well as participation in courses for professional growth. Since 2011, by governmental decision, teacher training universities organized Centers for teachers' professional development called "Orleu" (which means in Kazakh language "climbing mountain"). It also leads to a certification in the end and were of different length (from 2 weeks to 3- 6 months or to even a year). "Orleu" courses are available only for those teachers who meet specific requirements of their educational institution and are financed by the MoES of RK. These courses are held with different methodology (workshops, seminars or lectures) where teachers are involved in doing activities devoted to their area of study. They emphasize the need of IELTS (International English Language Testing System) while working in multilingual groups. Therefore, they are fully engaged in taking foreign language courses and be certified[12].

"Now I am taking English course which is organized by our university. I was participating in it from June of last year (2019) until June of this year (2020). It is my own initiative to take this English language course. There are about 8 people in one group because we are divided in groups according to our English language level. Now we are in Upper intermediate level we will finish this level by the end of March and then we will prepare for taking IELTS. These courses are taking

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[12] For the detailed information on this issue please go to the section of 5.3

place here in our university. The teachers are those who are invited from our English school"
(INT 01).

5.2.3 Main challenges teachers encounter in multilingual program
R.Q 1.2: What challenges do the teachers and professors encounter while working in multilingual education program?

Taking into consideration that Kazakhstani higher education is in the early stage of integrating and implementing multilingual education program, several challenges influence mainly on faculty members.

Figure 41. Main challenges teachers encounter
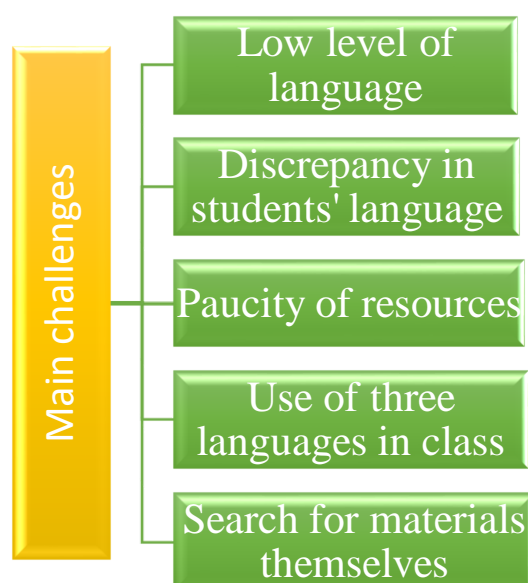
Source: Own compilation based on interview sequences

Figure 41 depicts several main challenges (analyzed in Atlas.ti software) that the teaching staff encounter while working in multilingual program.

- Some of the participants of research indicated their low level of foreign language proficiency, they stress *"My level of English was low…"*. Such weakness in foreign language proficiency brings about the consequences in the appearance of barriers, for instance, emphasizing that *"My knowledge of English is not so good and my language barrier, I am afraid to make a mistake in front of students during the class" (INT 014)*. The consequences of the low level of foreign language are the paucity of opportunities to practice it, *"… And as a rule, with my colleagues we just speak only using our native language" (INT 022)*.

- Another issue is dedicated to the language discrepancy of the students participating in multilingual program in order to reach the effectiveness in teaching. They solve that situation in the following way: *"In polylingual groups students know a little bit English so I explain them in Kazakh and Russian and English as well. For example, 20 min in Kazakh, 20 min in Russian and 20 min in English" (INT 07).* For avoiding misunderstanding of subject content knowledge in classroom, teachers endeavor to adapt accordingly and create their own strategy for teaching by allocating the time for each language.

- The paucity of teaching and methodological resources which makes creative the participants: *"In Physics we have formulas and terminology and definitions, so we provide the students in English with such resources. We published a dictionary with terminology on Physics that are frequently used in our lessons in three languages Kazakh, Russian, English. This dictionary contains not only terminology but definitions and formulas as well in three languages. In addition, we also provide students with electronic dictionaries that they use" (INT-07).* Teachers attempt to find the needed materials and organize it themselves according to the appropriateness to the educational program.

- Teachers claim about the lack of teaching books and manuals, even necessary equipment for conducting research that university is not providing them with. However, they emphasize on purchasing the necessary books themselves. *"…The university doesn't give any resource… Maybe they have but I am not using, And I am sure they don't have any books on nuclear physics in English. I am trying to find the books myself and sometimes I buy books myself to teach the classes" (INT-018).* They also underline that *"We do not have modern devices and modern equipment. And we don't have any possibilities to do research work in modern Biology. Because of this I don't participate either in conferences. We don't have opportunity to do experiments…" (INT- 026).*

5.2.4 Teachers' participation in informal learning activities
RQ: 2.3 How do the teachers learn informally in the frame of multilingual education program?

This part of the study aims at revealing how teachers in multilingual groups are involved in a range of different informal learning activities. The questionnaire consists of 14 queries in total and twelve important variables are analyzed via SPSS software from different perspectives. First, it is important to demonstrate descriptive analysis of each significant variable after the analysis through crosstabulation is used to show the connection between the variables and correlation is used to show the significant correlation between variables. All the variables utilized in this survey organized in the way to identify their ways of informal learning activities. In some of the variables

there are several missing data. For example: Day period (7.3 %); Type of new knowledge (1.7 %); Tools (0.9 %); Motivation for the learning activity (1.3 %); My role in that activity (7.3 %) and Collaborators' role[13] (15.5 %). Place of the learning activity (2.1 %) and Utility of the learning activity (2.1 %). According to Hair et al (2010) missing data for each variable it is acceptable if it is under 10 percent and may possible be ignored while analyzing.

Figure 42. Frequency of day period variable
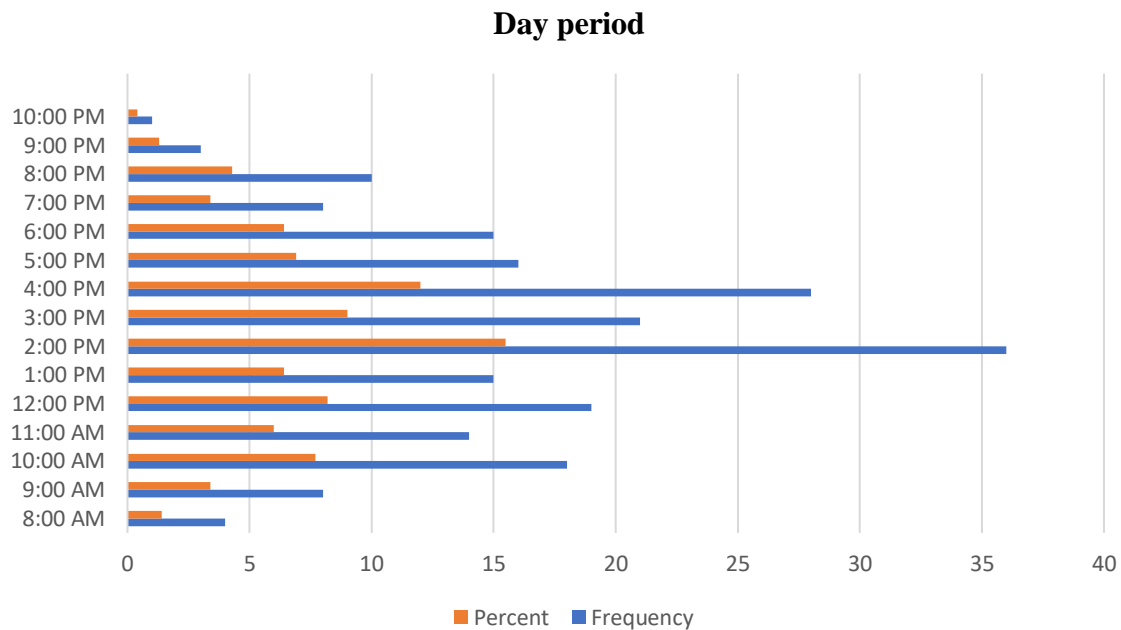
Day period

Source: Own compilation based on SPSS analysis

Figure 42 depicts the frequency details analyzed by SPSS software on the variable of day period (*M*= 14.38, *SD*=3.1). In total, there are 233 responses and 7.3 % missing systems in this individual case 216 and data was estimated with out of 100%. Based on the statistical analysis, it reveals that 2:00 PM is the most applicable and effective day period for teachers to be involved in any learning activities. Also, it is important to indicate that in general, noon time between 2:00 PM (15.5%) and 3:00 PM (9.0 %) and 4:00 PM (12.0 %) are the most frequently used day period.

Table 26. Frequency of Length of activity

Length of learning activity?		Frequency	Percent
Valid	Less than 10 minutes	36	15.5

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[13] However, in this research results, there is an individual case which exceeds the acceptability of missing data threshold (Collaborator's role: 15.5 %). In this case it will be analyzed by using data imputation with Expectation Maximization method.

		Frequency	Percent
	10–30 minutes	123	52.8
	1–2 hours	64	27.5
	more than 4 hours	10	4.3
	Total	233	100.0

Source: Own compilation based on SPSS analysis

SPSS data analysis demonstrates the frequency details related to the length of the learning activity (M=2.21, SD=0.7) (See Table 27). According to descriptive statistical analysis, the most important and preliminary length is 10-30 minutes with around 52.8 %. Next 27.5 % of responses are dedicated to the length of 1-2 hours and 15.5 % of responses went to the lengths of less than 10 minutes of learning activities where faculty members participated. Whereas the lowest amount percentage 4.3 % is dedicated to the length of learning activity which lasted more than 4 hours.

Table 27. Description of learning activity

Description of learning activity. Please briefly describe the activity which resulted in learning?			
		Frequency	Percent
Valid	Information gathering	68	29.2
	Online consultation	18	7.7
	Knowledge sharing	66	28.3
	Job execution	40	17.2
	Conversation	41	17.6
	Total	233	100.0

Source: Own compilation based on SPSS analysis

Table 28 is devoted to the details of learning activity description (M=2.86, SD= 1.4). SPSS data analysis shows that the most percentage with around 29.2 % is dedicated to the Information gathering and knowledge sharing activities where faculty members participated in multilingual program. Whereas 17.2 % and 17.6 % responses on frequency are dedicated to the engagement in Job execution and conversation. The less percentage of around 7.7 % responses goes to the participation in an online consultation.

Table 28. Type of new knowledge

Type of the new knowledge			
		Frequency	Percent
Valid	Professional knowledge	114	48.9
	English language knowledge	49	21.0
	Methodological knowledge	52	22.3
	Ability / skill to perform well in the everyday work of the MP	14	6.0

	Total	229	98.3
Missing System		4	1.7
Total		233	100.0

Source: Own compilation based on SPSS analysis

Table 29 identify the frequency of the variable devoted to the type of new knowledge (*M*=1.85, *SD*=0.9) in which academic staff take part mostly. It is significant to indicate that the most percentage in this variable composes 48.9 % of responses on professional knowledge and 21.0 % of faculty members are engaged in English language knowledge and Methodological knowledge 22.3 %. Whereas the less percentage 6.0 % is dedicated to acquiring ability / skill to perform well in the everyday work of the multilingual program activity.

Figure 43. Frequency of Source of learning activity
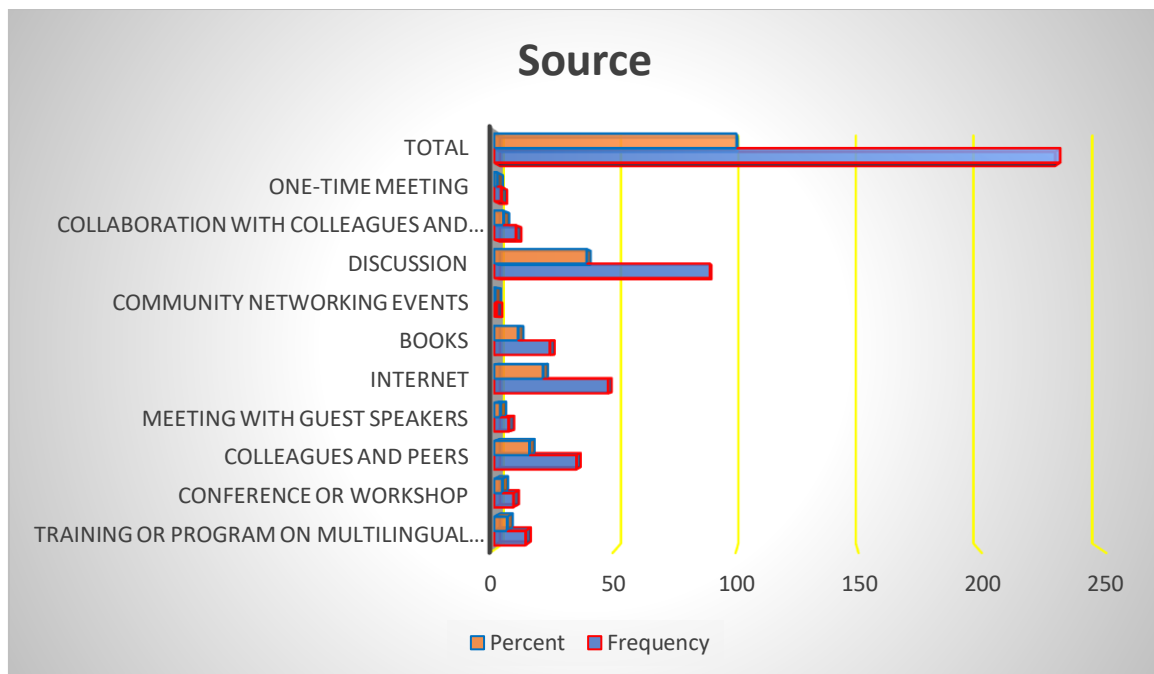
Source: Own compilation based on SPSS analysis

Based on SPSS analysis results, Figure 43 determines the frequency rate of the variety of sources (*M*=5.83, *SD*=2.3) through which faculty members participate in informal learning activities. One of the most frequently used typologies of sources by teaching staff is discussion which composes of 38.2 %. Whereas 20.2 % of responses emphasized the usage of internet as a source of learning. 14.6 % is acquired through colleagues and peers. Teaching staff acquire new knowledge through books (9.9 %), training or program on multilingual education (5.6%), Collaboration with colleagues | Professional groups (3.9 %), Conference or workshop (3.4 %), Community networking events (0.4 %). Meeting with guest speakers (2.6%) and one-time meeting (1.3 %) give low indicators of usage as a s source of learning.

Table 29. Frequency indicator of channel of learning

	Channel of the learning?		
		Frequency	Percent
Valid	Interaction with a person	132	56.7
	Reading	29	12.4
	Media or Internet	42	18.0
	Observation	8	3.4
	Experience	11	4.7
	Self-regulated learning	4	1.7
	Lunch gathering	4	1.7
	Social websites	3	1.3
	Total	233	100.0

Source: Own compilation based on SPSS analysis

Table 30 demonstrates the frequency rate of the variable related to the channel of the learning (M=2.06, SD=1.5) through which academic staff gain new knowledge. According to the descriptive statistical analysis, the results show that the "interaction with a person" is in the highest place composing around 56.7 % through which teachers learn informally. Next as a channel of learning activity, participants place "media or internet" with (18.0 %) and "reading" with (12.4 %). Less level of use is given to the channel of "Experience" (4.7%) and "Observation" (3.4 %). Whereas the least channels they resort to are "Self-regulated learning" and "Lunch gathering" both compile 1.7 % and through "social websites" 1.3 %.

Figure 44. Frequency of Tools
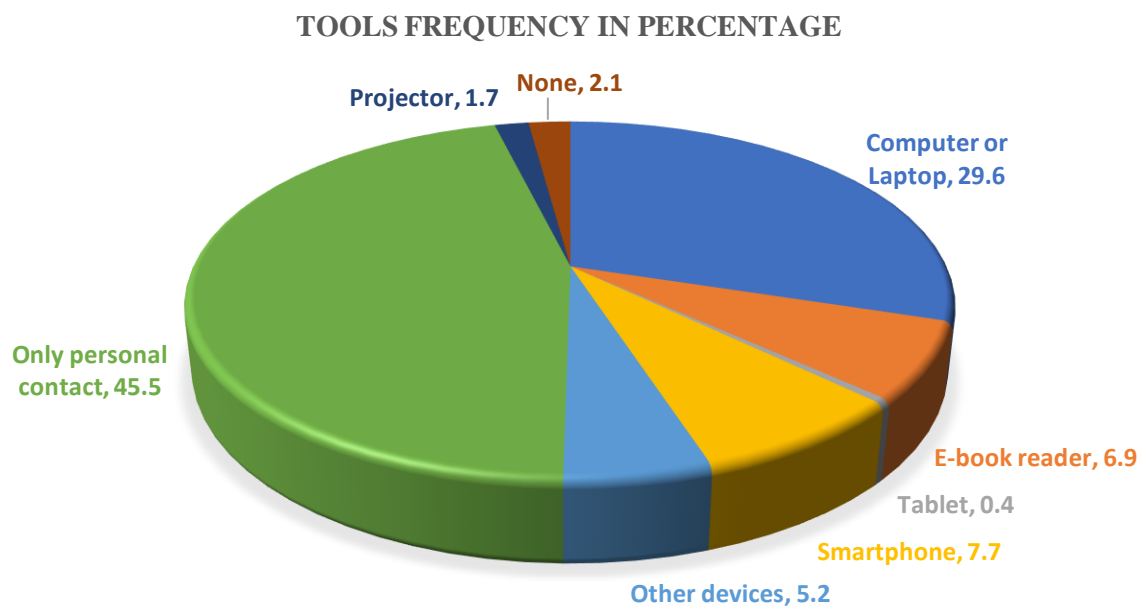
Source: Own compilation based on SPSS analysis

Based on the descriptive analysis, the consequences of which depict the tools (*M*=5.12, *SD*=3.2) through which they are mostly engaged in learning and acquiring new knowledge. In total, there are 231 responses and 0,9 % missing systems in this individual case 231 and data was estimated with out of 100%. As a result, the highest value is given to the tool of "Only personal contact" which in percentage is 45.5 %. Then the participants give advantage on the use of "computer and laptop" in percentage is 29.6 % while acquiring new knowledge. Around 7.7 % percent of participants apply to the usage of "Smartphone" on learning (See Figure 44).

Table 30. Frequency rate of My role in that activity

My role in that activity?		Frequency	Percent
Valid	Tutor	13	5.6
	Mentor	3	1.3
	Counsellor	16	6.9
	Coach, peer coaching	3	1.3
	Learner	83	35.6
	Presenter	11	4.7
	Teacher	76	32.6
	Mentee	2	0.9
	none	9	3.9
	Total	216	92.7
Missing System		17	7.3
Total		233	100.0

Source: Own compilation based on SPSS analysis

Table 31. Frequency rate for Collaborator's role

Collaborator's role in that activity?		Frequency	Percent
Valid	Tutor	6	2.6
	Mentor	6	2.6
	Counsellor	6	2.6
	Technical specialist	8	3.4
	Coach, Peer coaching	1	.4
	Learner	62	26.6
	Presenter	24	10.3
	Teacher	53	22.7
	Mentee	3	1.3

	none	28	12.0
	Total	197	84.5
Missing System		36	15.5
Total		233	100.0

Source: Own compilation based on SPSS analysis

According to descriptive statistics analysis, Table 31 demonstrates the frequency rate of the variable "My role in that activity" (M=6.36, SD=2.1) in which the role of a "Learner" with 36.6 % and the role of "Teacher" with 32.6 %. The less played roles are the roles of "Mentor" with 1.3% and "Mentee" with 0.9 % as well as "Coach and peer coaching" with 1.3 %. Almost the same results can be traced in the analysis of the variable of "Collaborator's role" (M=6.81, SD= 2.0) where the collaborators' role also indicated to be the "Learner" with 26.6 % and "Teacher" with 22.7 % (See Table 32).

Figure 45. Frequency rate on Motivation for the learning activity
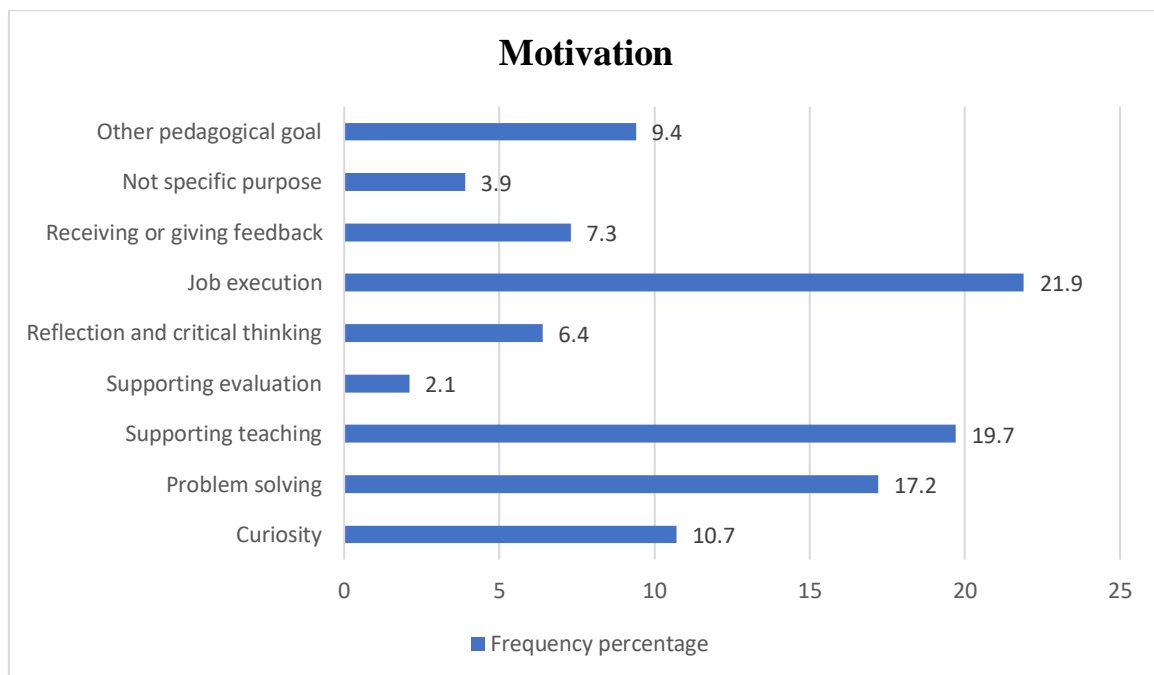
Source: Own compilation based on SPSS analysis

Based on SPSS analysis Figure 45 determines the frequency rate of motivation (M=4.49, SD=2.5) for the learning activity of teaching staff. In accordance with the descriptive analysis results, it is important to emphasize that there are three main directions of motivation for academics to learn. In total, there are 233 responses and three missing systems in this individual case 230 and data was estimated with out of 100%. The most meaningful and significant is the motivation for "Job execution" which composes 21.9 %. It means that job execution serves as the main motivation for them to learn something new for work accomplishment. Next is "Supporting teaching" with 19.7

% which serves as a motivation for learning and "Problem solving" with 17.2 %. These three fundamental aspects serve as a main motivation for the teachers to be engaged in learning.

Figure 46. Frequency rate of Place of learning
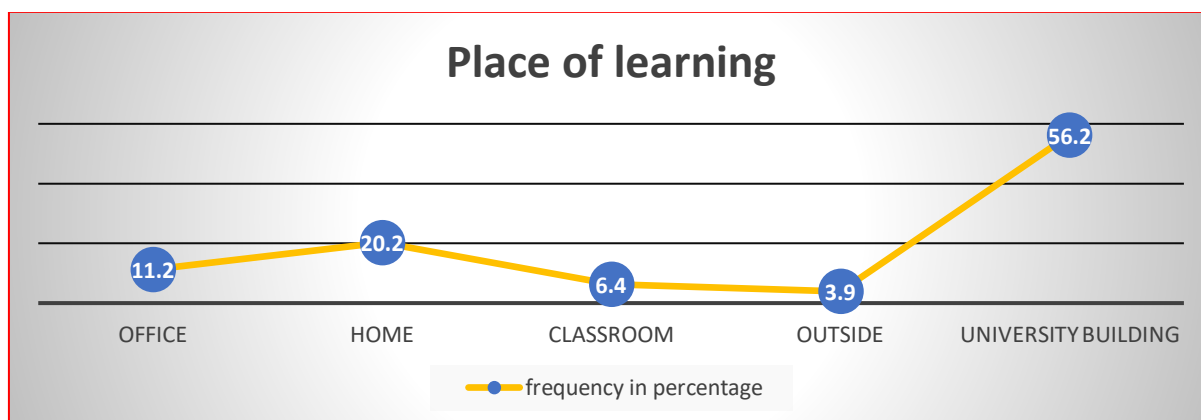
Source: Own compilation based on SPSS analysis

One of the essential aspects in learning is the place[14] (M=3.75, SD= 1.5) where it takes place. According to the descriptive analysis, the results in total with 233 responses and with 5 missing system out of it equals responses 228. It shows that academic staff mostly learn in the university building (56.2 %). As a second place the participants indicate "Home" (20.2 %) as a place for learning. The least amount of learning is accomplished outside which is indicated with around 3.9 %.

Table 32. Frequency rate for the Utility of the new knowledge

Utility of the new knowledge?			
		Frequency	Percent
Valid	Irrelevant	6	2.6
	Useless	18	7.7
	Unsatisfied	41	17.6
	Imperfect	25	10.7
	Satisfied	46	19.7
	Good	14	6.0
	Useful	14	6.0
	Relevant	13	5.6
	Excellent	13	5.6
	Perfect	38	16.3
	Total	228	97.9
Missing System		5	2.1
Total		233	100.0

---

[14] Learning can take place in classroom with students, in the office with colleagues and also in other parts of university building. Therefore, we cannot consider it as a whole.

Based on SPSS data analysis the most significant dimension in learning process and result is the effectiveness of the gained knowledge in practice. The result of this descriptive analysis determines that the highest level of the utility of new knowledge (M=5.61, SD=2.7) is indicated as satisfied" with the percentage of 19.7 %. Whereas 17.6 % of the participants reported that they were unsatisfied with the effectiveness of the learning activity while utilizing in practice. However, 16.3 % of the teaching staff emphasized on the perfectness of utilization of new knowledge in practice. Only 2.6 % of participants considered as irrelevant the effectiveness of the gained knowledge (See Table 33).

Having analyzed the descriptive and frequency statistics of all the variables, it is determined what elements and factors are most importantly used and significant for the learning of faculty members. Furthermore, it is necessary to reveal the connection between the elements with the help of crosstabulation method as depicted below.

Table 33. Description of learning activity and Channel of the learning activity

Description of learning activity. Please briefly describe the activity which resulted in learning? * Channel of the learning?											
			Channel of the learning?								Total
			Interaction with a person	Reading	Media or Internet	Observation	Experience	Self-regulated learning	Lunch gathering	social websites	
Description of learning activity. Please briefly describe the activity which resulted in learning?	Information gathering	Count	20	24	23	1	0	0	0	0	68
		% of Total	8.6%	10.3%	9.9%	0.4%	0.0%	0.0%	0.0%	0.0%	29.2%
	Online consultation	Count	5	0	6	0	2	2	2	1	18
		% of Total	2.1%	0.0%	2.6%	0.0%	0.9%	0.9%	0.9%	0.4%	7.7%
	Knowledge sharing	Count	47	1	7	3	5	1	1	1	66
		% of Total	20.2%	0.4%	3.0%	1.3%	2.1%	0.4%	0.4%	0.4%	28.3%
	Job execution	Count	29	2	6	0	2	1	0	0	40
		% of Total	12.4%	0.9%	2.6%	0.0%	0.9%	0.4%	0.0%	0.0%	17.2%
	Conversation	Count	31	2	0	4	2	0	1	1	41
		% of Total	13.3%	0.9%	0.0%	1.7%	0.9%	0.0%	0.4%	0.4%	17.6%
Total		Count	132	29	42	8	11	4	4	3	233

| | % of Total | 56.7% | 12.4% | 18.0% | 3.4% | 4.7% | | 1.7% | 1.7% | 1.3% | 100.0% |

Source: Own compilation based on SPSS analysis

Based on SPSS data analysis results, while being engaged in knowledge sharing (20.2 %), Conversation (13.3 %), Job execution (12.4 %) and information gathering (8.6 %) (learning activities), their learning are effectively taken place through interaction with a person. Whereas information gathering happens through reading (10.3 %) and media or internet (9.9%).

Table 34. Crosstabulation of Type of new knowledge and Motivation for learning activity

Type of the new knowledge * Motivation for the learning activity?												
			Motivation for the learning activity?										Total
			Curiosity	Problem solving	Supporting teaching	Supporting evaluation	Reflection and critical thinking	Job execution	Receiving or giving feedback	Not specific purpose	other	
Type of the new knowledge	Professional knowledge	Count	16	20	18	2	7	28	7	6	10	114
		% of Total	7.0%	8.8%	7.9%	0.9%	3.1%	12.3%	3.1%	2.6%	4.4%	50.0%
	English language knowledge	Count	6	4	12	3	2	12	2	2	5	48
		% of Total	2.6%	1.8%	5.3%	1.3%	0.9%	5.3%	0.9%	0.9%	2.2%	21.1%
	Methodological knowledge	Count	3	12	12	0	4	8	6	1	6	52
		% of Total	1.3%	5.3%	5.3%	0.0%	1.8%	3.5%	2.6%	0.4%	2.6%	22.8%
	Ability skill to perform well in the everyday work of the MP	Count	0	4	4	0	2	2	2	0	0	14
		% of Total	0.0%	1.8%	1.8%	0.0%	0.9%	0.9%	0.9%	0.0%	0.0%	6.1%
Total		Count	25	40	46	5	15	50	17	9	21	228
		% of Total	11.0%	17.5%	20.2%	2.2%	6.6%	21.9%	7.5%	3.9%	9.2%	100.0%

Source: Own compilation based on SPSS analysis

Based on SPSS data analysis results table 35 depicts the interconnection of the type of new knowledge with the motivation for the learning activities. For gaining professional knowledge, "Job execution" (12.3 %) was the main impetus for the academic staff and "problem solving" (8.8 %) as well as "Supporting teaching" (7.9 %). Here, strong connection is only between professional knowledge and the aforementioned three types of motivation for the learning activities.

Table 35. Connection between the Type of new knowledge and Place of learning

Type of the new knowledge * Place of the learning?

			Place of the learning?					Total
			Office	Home	Classroom	Outside	University building	
Type of the new knowledge	Professional knowledge	Count	11	26	4	4	67	112
		% of Total	4.9%	11.6%	1.8%	1.8%	29.9%	50.0%
	English language knowledge	Count	9	10	5	1	22	47
		% of Total	4.0%	4.5%	2.2%	0.4%	9.8%	21.0%
	Methodological knowledge	Count	3	10	4	2	33	52
		% of Total	1.3%	4.5%	1.8%	0.9%	14.7%	23.2%
	Ability skill to perform well in the everyday work of the MP	Count	2	1	2	1	7	13
		% of Total	0.9%	0.4%	0.9%	0.4%	3.1%	5.8%
Total		Count	25	47	15	8	129	224
		% of Total	11.2%	21.0%	6.7%	3.6%	57.6%	100.0%

Source: Own compilation based on SPSS analysis

According to the types of new knowledge: professional (29.9 %), methodological (14.7 %), and English language knowledge (9.8 %) are mainly acquired in "university building" in accordance with the statistical analysis. They are mostly engaged in professional knowledge also at "Home" with 11.6 %.

Table 36. Connection between Type of new knowledge and Utility of knowledge

Type of the new knowledge * Utility of the new knowledge?

			Utility of the new knowledge?										Total
			Irrelevant	Useless	Unsatisfied	Imperfect	Satisfied	Good	Useful	Relevant	Excellent	Perfect	
Type of the new knowledge	Professional knowledge	Count	3	7	17	15	24	8	8	5	4	18	109
		% of Total	1.3%	3.1%	7.6%	6.7%	10.7%	3.6%	3.6%	2.2%	1.8%	8.0%	48.7%
	English language knowledge	Count	0	4	9	3	8	3	3	5	4	10	49
		% of Total	0.0%	1.8%	4.0%	1.3%	3.6%	1.3%	1.3%	2.2%	1.8%	4.5%	21.9%
	Methodological knowledge	Count	2	6	11	4	10	2	2	1	4	10	52
		% of Total	0.9%	2.7%	4.9%	1.8%	4.5%	0.9%	0.9%	0.4%	1.8%	4.5%	23.2%
	Ability skill to perform well in the everyday work of the MP	Count	1	1	2	2	3	1	1	2	1	0	14
		% of Total	0.4%	0.4%	0.9%	0.9%	1.3%	0.4%	0.4%	0.9%	0.4%	0.0%	6.3%
Total		Count	6	18	39	24	45	14	14	13	13	38	224
		% of Total	2.7%	8.0%	17.4%	10.7%	20.1%	6.3%	6.3%	5.8%	5.8%	17.0%	100.0%

Source: Own compilation based on SPSS analysis

According to the results of SPSS analysis, professional knowledge among the types of new knowledge is leading forward comparing with the others. The results show that the effectiveness and utility of new professional knowledge is "satisfied" (10.7 %) and "perfect" (8 %); "unsatisfied" (7.6 5) and "imperfect" (6.7 %). The utility of the methodological knowledge is mostly "satisfied" with 4.5 % and "perfect" with 4.5 %. It is obvious from the results, that ability or skill to perform well in the everyday work of the multilingual program is not so well popular in their learning activity and they were rather to gain professional knowledge instead of acquiring any capability in a specific program.

Based on correlational analysis, it is necessary to analyse if there is any significant relationship among or between these variables and to identify their level of significance by using Pearson's correlation (See Annex 9). We consider only those variables which have moderate significant correlation being either positive or negative.

- The variable of "Day period" between "Utility of the new knowledge" showed negative moderate significant relationship with $r= - .353$ and $p < .000$.
- The variable of "Description of the learning activity" has positive moderate significant relationship with the variable of "Tools" with $r= .349$ and $p< .000$.
- The relationship between the variables of "Channel of the learning" and "Tools" shows negative moderate significant relation with $r= -.342$ and $p< .000$.
- The variable of "Channel of the learning" and "Place of the learning activity" has negative moderate significant correlation with $r= -.351$ and $p< .000$.
- "Tools" and "Place of the learning activity" determine positive moderate significant correlation with $r=.490$ and $p< .000$.

Correlation analysis also showed considerable amount of weak positive and negative correlations among other variables and no strong correlation among them are indicated (For more detail, See Annex 9).

SUMMARY

In response to the research question of how teachers learn and participate in informal learning activities in the frame of multilingual education program, the results of the following statistical analysis (SPSS) show the main and essential ways of their performance. The descriptive analysis of twelve important variables determines significant factors and features of faculty members' informal learning activities (See Table 38).

Table 37. Results of descriptive statistical analysis

	VARIABLES	MOST FREQUENT ANSWER
1	Day period	2:00 PM
2	Length of the learning activity	10-30 minutes
3	Description of the learning activity	Information gathering
4	Type of new knowledge	Professional knowledge
5	Source	Discussion
6	Channel of learning activity	Interaction with a person
7	Tools	Only personal contact
8	My role in that activity	A learner
9	Collaborator's role in that activity	A learner
10	Motivation for the learning activity	Job execution
11	Place of the learning activity	University building
12	Utility of the new knowledge	Satisfied

Source: Own compilation based on SPSS analysis

These results of the given descriptive statistical analysis are also supplementary proved by supporting crosstabulation analysis. Crosstabulation presents the connection mainly between the variables of "Description of the learning activity" with * "Channel of the learning" "Type of new knowledge" with * "Motivation for the learning activity", "Place of the learning activity", "Utility of the new knowledge" and as indicated and demonstrated in the tables above.

In the correlational analysis, the variable of "Day period" was explored in detail and the results showed that it negatively and moderately correlates and has significant relationship with variables involving Utility of the new knowledge. Whereas "Description of the learning activity" has positive moderate significant relation with "Tools. "Channel of the learning" has a negative moderate significant relation with "Place of the learning". The variable of "Tools" has positive moderate significant relation with "Place of the learning" (See Annex 9).

5.3 General description of sample

This section is dedicated to the general description of the teacher sample characteristic for all the clusters. Analysis of only those statements that are specific for all the clusters. There are several learning activities which are common for all teacher categories. The most frequently of them involve participation in seminars, and foreign language learning courses. Table 39 presents different formal, non-formal and informal learning activities in which the participants were engaged.

Table 38. Teachers' formal, non-formal and informal learning in ME based on the interviews

Formal learning cases / types	**Non-formal learning cases/ types**	**Informal learning cases / types**
• Orleu courses[15]	• Workshops	• Professional discussion
• CLIL courses	• Conferences	• Meetings
• English language courses with certificates	• Participation in research projects	• Experience and knowledge sharing about ME
• Bolashak program[16]	• Scientific paper writing in collaboration	• Watching television channel BBC
	• Participation in weekly seminars	• Following specific methodological webpage or social media channel
	• Writing manuals with colleagues	• English language practice with guest speakers
		• Mutual collaboration with colleagues
		• Networking
		• Participation in English – Speaking club
		• Mentoring

Source: Own compilation

Sub-topic 1: English as a foreign language learning and practice

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This part is devoted to the exploration of participants foreign language learning and practice. Many of the participants emphasize the attendance and participation in English language courses, may it be institutionally organized or on self-paid basis. As one of the fundamental issues of multilingual education development is the proficiency of foreign language, faculty members are required to take language courses and the participation varies from the perspective of a learner or university administration. Participants emphasize active and intensive foreign language learning, which reflect their engagement. Teachers actively participate in English language courses not only with institutional support but also on a self-payed basis. Such learners are always ready to invest on their professional development despite financial drawbacks as well as lack of time.

"It is a big responsibility because it is not my native language. And I also know that all my master students know Kazakh language and it is very difficult to talk to them in English. But I try and I everyday prepare to my lectures. This semester I have fewer classes, so I try every day to revise. I usually surf the internet and I use Russian books. I translate and check, and I also have English books to compare with many mathematical terminologies. Mostly I use Russian books because when I am teaching in Kazakh, I use these books and they are more comfortable for me" (INT 01).

Taking into consideration the issues of multilingual education implementation in Kazakhstani higher education institutions, we can observe academics who teach in multilingual groups are challenged. They prepare for the lessons to be productive and effective teachers. Yet, they strive to find applicable teaching resources themselves and preparing it in English and even translating from one language to another. *"I usually watch in Russian. But when I do some housework and when I am free, I watch BBC channel in English and "Kazakh TV" channel in English"* (INT 06). They learn foreign language also by informal learning channels. They tend to listen to various TV channels like BBC channels in English. Foreign language proficiency and its acquiring issues are fundamental problems for these teachers, especially, because they are feeling the need of language practice, and they have few opportunities for it: *"I am afraid my husband does not know English so sometimes I meet with my friends and colleagues here and we speak in English"* (INT 02).

"Last year they also had a fellow from America. Also, we had a teacher of Chinese last year. He also spoke English. When I see him, so we talk, we speak only in English. This year one man from China will come this semester. Usually, we discuss work. We talk about timetable, students. Sometimes also about our city, and the practice abroad and ask questions about studying abroad" (INT 05).,

There are limited opportunities for them to learn and practice their language skills in this particular community and environment. Constant practice of foreign languages could contribute to the improvement of their teaching competences in multilingual groups. For solving this situation, teachers attempt to communicate in English and foster conversation even with their family members and if they have opportunity, they are always ready to practice it with their foreign

fellows. Deficiency of sufficient motivation evokes such obstacles and barriers in learners. Sometimes the communication with an old friend who lives abroad, offers possibilities to practice English:

"Yes, one of his friends is my foreign leader. He considers me a friend and we go fishing together. I am in close contact with him now because I am currently preparing PhD students and their overseas supervisor is the same person. And now one of my doctoral students is completing a two-month internship at the university where I was in Sweden. We communicate weekly and more often" (INT 017).

We can observe the effects and level of their language proficiency as well as the challenges or advantages they face while teaching science subjects in English.

"It is easy to teach Physics in English, but it is difficult while constructing sentences. In English I can explain Physics' laws, experiments and so on, but I am not so good in constructing whole sentences. I use terminology and glossaries. And I also listen to the lecturers how they teach in English. It is a big diversity, for example, American and English teachers teach differently and that is why I encounter some misunderstanding or discrepancy. I understand some words differently, but when I sit and learn each terminology, reading books or watching lectures on YouTube. Physics is not a difficult subject while teaching in English and to my mind, it is very easy to teach, to learn and understand Physics in English. It turned out that while translating the books into Kazakh, there were some omissions in the content, in Kazakh" (INT 07).

Teachers who are weak in foreign language suffer more in teaching than those who are competent in foreign language knowledge. Some participants noted that they are competent in language proficiency because they are also more research-oriented teachers who promote their research papers and findings in three languages. Faculty members also emphasize the obligation of publishing research papers in high indexed journals, and it can be reached only in English language. This is another pillar for their motivation to learn more by mastering their professional advancement. *"We mainly use English. I teach all my Math's subjects in English. Because most of the lectures are in English, so all of our study guides are in English"* (INT 016). These teachers underline their fluency in English language and other languages too. It does not bring them any problems while teaching in multilingual groups. The same is stated by teachers, expressing the importance to use the original sources:

"I study in my areas of study. I mainly study Math in 95% of English. Because all the information, both new and basic, are in English. The other five percent can be said in Russian because there is no information available in Kazakh. In my area, too, there is little literature in Russian. The materials on the quantum computing are translated from foreign to Russian, it is better to read the original, rather than to read the translation" (INT 016).

In some cases, the development process is closed with a formal examination (IELTS). Those teachers are almost 100 per cent English language users in the classroom. Even all their teaching materials are done in English, furthermore, they emphasize the need of reading sources in original language to acquire it better. Another benefit of English language for such teachers is usefulness

in searching literature and resources needed for research. As indicated by the practitioners above, there are extremely limited numbers of sources in Kazakh language and little in Russian and almost everything can be found in English. The use of original sources leads to the effective and productive work performance of professionals. Self-directed learning of teachers engaged in multilingual program allows them to apply to different teaching methods in the classroom as well as strives them to arrange learning individually. There are older adults among the participants of this study who showed active participation learning foreign languages in different clusters. The matter of age of faculty members support and prove the idea that older citizens are akin to increase their participation in a variety of educational programs and events[17] (For more detail on self-directed learning, See pp. 76-78).

The participants of the current research were from a variety of nationalities such as Kazakhs, Russians and Ingushes (minorities). Taking into account that there two official languages as Kazakh as state one and Russian as an official, participants may or may not be fluent in both or in three languages. Officially, Kazakhs who are in multilingual program confess the knowledge of English and the same with the Russians. However, it is not an exception for that they do not know the Russian\Kazakh language. Likewise, in the capital city, there are a flood of people from the Southern part of the country who may speak purely in mother tongue do not possess Russian. Ingushes used to use Russian language in society, but Kazakh language cannot be the exception for them to know. Kazakhs use Kazakhs and English as languages of instruction, Russians use Russian and English as languages of instruction in the frame of multilingual program. As for the work experience of the participants, most of the faculty members are more experienced than the younger ones. Nevertheless, there isn't any teacher among the participants of this study who has already specialized in teaching in multilingual education yet.

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[17] Schiller Emese and Dorner Helga (2021) in their study of learner autonomy, motivation, and self-regulated learning highlight the aspect that elder academics are motivated to learn for example, foreign languages.

CHAPTER VI: FACULTY LEADERS' SUPPORT FOR THE TEACHING STAFF

6.1 Faculty leaders understanding on multilingual program

R.Q 3: What kind of views do the faculty leaders have on multilingual education?

While answering to the interview questions related to faculty leaders' general approach towards the multilingual education program, they indicated following important elements:

- ❖ Necessity of multilingual program for students;
- ❖ Program implementation started since 2012;
- ❖ Elaboration of educational program is accomplished considering the demand of labor market;
- ❖ Students' foreign language level;
- ❖ Bolashak program;
- ❖ Importance of IELTS for faculty members;
- ❖ CLIL method.

Faculty leaders support the necessity of multilingual education program implementation and assess it as a key indicator for educational improvement. Faculty leaders underline that multilingual program is influential for the development of students' foreign language skills as well (Leader 01, 03). The implementation of this program started since 2012 in the academic units. For elaboration of the educational program, they consider the demand of labor market to build the necessary key competences, after it is usually discussed with local schoolteachers during the seminars and round tables. Such actions are fulfilled so that the students of this program could be competitive employers in the educational market and services after graduation (Leader 04).

Another significant mechanism in multilingual program is related to the discrepancy of students enrollment according to their foreign language level proficiency. For, the graduates of the so-called pilot and intellectual schools like BIL and NIS usually have good level of English language or even IELTS. Whereas students from the mainstream schools are weak at English. For that reason, the latter ones first enroll to the foundation year where they are trained in English and only after that they are allowed to enroll for multilingual program.

Furthermore, there is not any strict and definite requirement or official document for recruiting teachers to participate in multilingual program. The only need is the knowledge of English language proficiency (in the beginning teachers were enrolled to the foreign language courses and only after that they started to require IELTS certificate). As multilingual education program was launched, the universities started to train faculty members for enhancing and improving English language knowledge and other necessary and related skills. Some of them even participated in

language courses on self-financial base. The main focus was on Bolashak program graduates and those who has diploma from foreign universities. Universities trained teachers for the IELTS courses. Teaching staff from English department conducted a course for science subject teachers on the peculiarities of CLIL (Content and Language Integrated Learning) method of teaching (Leader 02).

6.2 Faculty leaders' provision of support and motivation for the teaching staff in multilingual program
R.Q 3.1: What kind of support and motivation faculties are providing to the teaching staff?

The most important and qualitative list of codes among the leaders interviews based on their frequency are including: *PD-001- Professional discussions and meetings; PD-003- motivation to involving into different learning opportunities; PD-004 - organization and participation in the seminars; PD-005- department meeting; PD-006- discussing occurred problems; PD-007- sharing useful information; PD-008- mutual collaboration and support; PD-010- close network and collaboration (links); PD-015- mutual appraisal of work; PD-014- Bolashak program; PD-013- participation in English language courses; PD-017-extra payment and bonus; PD-016-mentoring* (For more details see the Table 40).

Table 39. Frequency of codes in Text segments and Primary documents (PDs=6)

Code	Segments of the Text Associated with Code	Total Number of Primary Documents Containing Content Related to Code	% Of Primary Documents (Faculty members) That Demonstrated Attainment of Code
PD-008- Mutual collaboration and support	14	6	100
PD-010 – Close network and collaboration (links)	9	5	83.3
PD-004- Organization and participation in the seminars	8	4	24
PD-013- Participation in English language courses	8	5	83.3
PD-001- Professional discussions and meetings	8	3	50
PD-007-Sharing useful information	5	2	12
PD-017-Extra payment and bonus	5	3	50
PD-015- mutual appraisal of work	5	3	50
PD-005-Department meeting	5	3	50
PD-006-Discussion of occurred problems	4	4	24
PD-003-Motivation to involving into different learning opportunities	4	3	50
PD-016- mentoring	3	3	50

| PD-014- Bolashak program | 3 | 2 | 12 |

Source: Own compilation based on Atlas.ti analysis

Figure 47 represents the most significant and frequently implemented by faculty leaders tools for increasing the motivation for the faculty members provided. Extra pay is an important motivation but not he unique one. Collaboration and different activities for professional development are key aspects for motivation.

Figure 47. Faculty leaders support and motivation for academic staff
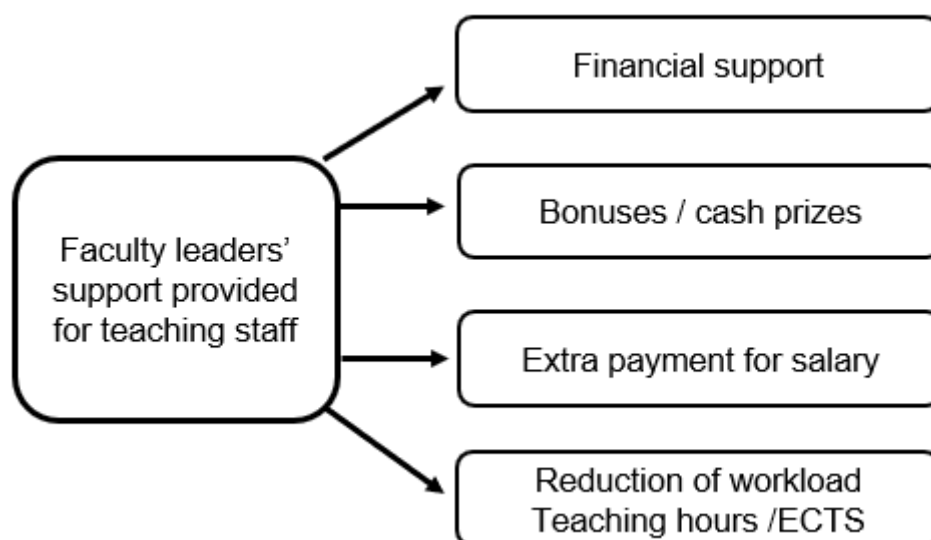
Source: Own compilation based on the faculty leaders interview series

Leaders' interview analysis explores the essential aspects of providing faculty members with fundamental support and motivation to reach the effectiveness in work. Taking into consideration the challenges that new educational policy is bringing to the faculty members they attempt to motivate in the following ways:

"Teachers who teach in foreign language will be paid extra as a bonus, which means they have extra pay. So, we tell them that extra pay will be given if you teach them in English. Then, at the end of the year with called KPI (key indicators of activities), we attach our documents to it through a point system on our year-round work. The best ones get a reward. Cost of teaching English is high, as many teachers cannot afford it" (Leader 1).

Leaders emphasize that academics who are engaged in multilingual education are financially rewarded for teaching their subjects in English. Secondly, the faculty created KPI (key indicators of activities), it is a specific document for teachers' individual work assessment. Extra payment and salary are considered as fundamental means for motivating teaching staff. Such actions were theoretically proved by Tella et al (2007) emphasizing that such monetary support according to their job execution encourages personnel and faculty members.

"Teachers have less workload. For example, teachers who teach in normal classes, if they have 700 hours, then those who teach in multilingual groups have 500 hours. Their wages are the same. They just have more time to prepare" (Leader 2).

"Motivation by decreasing teaching hours. Teachers of multilingual groups have less workload than main teachers. We encourage awards for the holidays and the administration in the form of cash prizes and certificates gives" (Leader 2).

Leaders also underline the bonuses for academics to encourage them in their work performance. Such bonuses can be not only financially but also diminishing teachers' workload at the same time preserving their fixed salary. This is also a kind of motivation which is theoretically claimed by Akintoye (2000) that "money remains the most significant motivational strategy".

"Firstly, for those who teach in English, their workload doubles, that means, if the teacher has three credits planned, then he spends three credits in fact and 6 credits are recorded in the load. This is a good support, teachers who teach in Kazakh or Russian can enter the classroom 36 times a week, and the same teachers, conducting the same disciplines in English, enter the classroom 18 times" (Leader 6).

Monetary support is used as one of the key impetuses for driving the motivation of teaching staff in the multilingual education. The key point is the privilege of English language proficiency. Different faculties utilize various types of bonuses for improving effective participation.

6.3 The provision and contribution of faculty leaders towards the development of academic staff
R.Q 3.2: How do faculty leaders interpret faculty members' informal and non-formal learning activities in the process of Multilingual education program?

One of the most significant directions in the academic world especially in the sphere of education system is the role of leadership. The concept of leadership is researched in all aspects and levels of education. Moreover, it plays a pivotal role in introducing the implementation and integration of new educational reform.

Figure 48. The interpretation of learning activities by faculty leaders
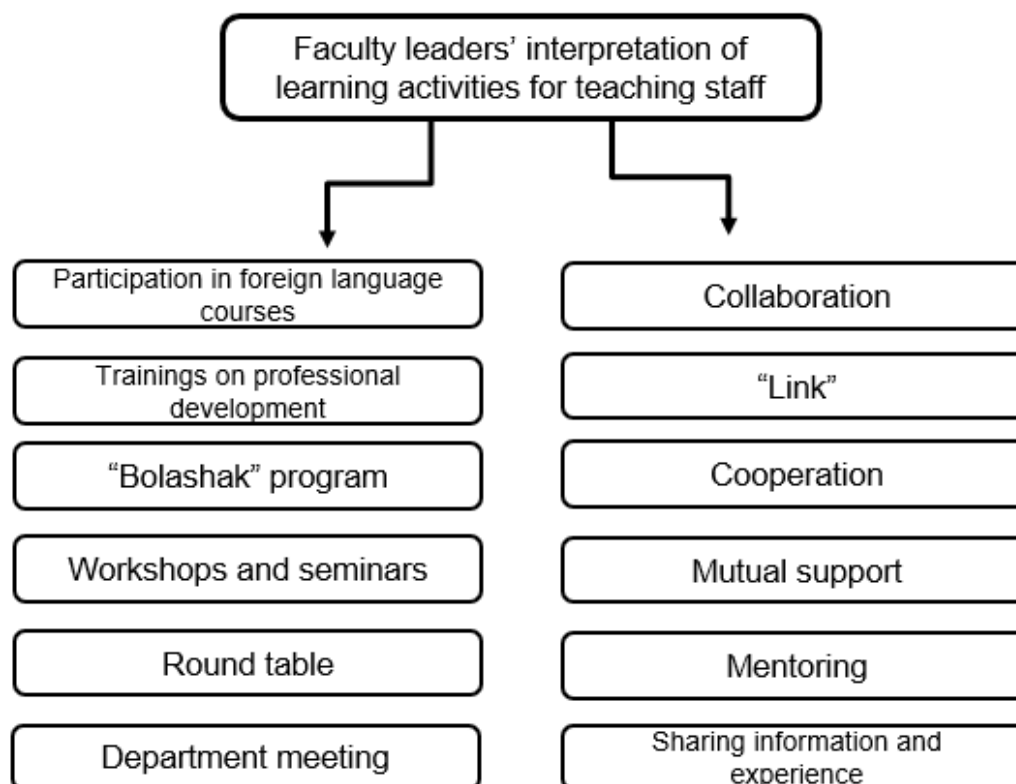
Source: Own compilation

Figure 48 depicts several informal and non-formal learning activities for the faculty members in multilingual program which can be divided into two directions: provision of necessary courses, seminars and workshops, and the latter one is devoted to the collaboration.

The faculty leaders' interviews will be analyzed in the following sub-topics:

Sub-topic 1: Provision of language courses

In the frame of multilingual education in higher education, the universities strive to organize different kinds of foreign language courses for faculty members. Originally, they were free of charge, but in the meantime became on paid basis. Faculty members are fully involved in it for becoming proficient and effective at work.

"Lately teachers' desire to learn the language has been growing. In addition, they attend courses organized at universities. There are also those who pay for their education. We have a department in the English language who runs courses and gives announcements. Free courses are offered, but they also include lessons on whether our teachers have time. But there are those who are going there, and I think, there is an opportunity within the university for anyone who wants to study." (Leader 1).

Leaders also emphasize the importance of international training possibility offered partially by Bolashak program, and TOEFL courses and examination.

"Then the focus is on the teachers who have been trained under the "Bolashak" program. We also have such teachers at the faculty. In the beginning there were free courses, now they have become paid. Teachers of multilingual education must have a level of foreign language, and since last year they have been taking TOEFL with us. Last year, we had courses two times, many teachers who are involved in these multilingual groups, they took these TOEFL courses on a paid basis at their own expense" (Leader 2).

The supporting role of the university is acclaimed by all leaders:

"The university organizes courses for all the teachers at the university. And those who would like to participate attend these courses and improve their English language proficiency. They can just attend the courses, where the teachers and students can also get some knowledge to take this TOEFL and IELTS tests. They participate in Bolashak program and in many other different programs. We have some American programs like "English language programs". If to speak about the university, we have about 36 "Bolashak graduates" and if to speak about our faculty we have about 12 "Bolashak graduates" (Leader 4).

Leaders highlight the importance of teachers' participation in Bolashak program. This program consists in supporting academic staff to study in worlds' leading universities: faculty members have their internship in foreign universities. However, the main condition of the participation in this program is that Bolashak scholarship holder must return to the country and work in higher education for 3 -5 years. It is financed by the fund of the first president of Kazakhstan. This program includes bachelor, masters, and doctoral studies opportunities for youngsters to develop further and the principal purpose of this program is to train academics and provide educational institutions with job rotation by highly qualified and competent professionals (For more detail See Chapter 2.1.2). To be able to conduct lessons in multilingual education, faculty members are required to have IELTS or TOEFL certificates.

"At the beginning the university helped in organizing language courses for teachers. And in summer, the teachers understood the need themselves, at their own expense, attended courses. So, I was one of those who was attending courses. And now they raise their language skills. Since 2015, the Ministry of Education has organized English language courses at KarSU (Karaganda State University) and in Almaty and 5-7 teachers go there… Young teachers take IELTS, that means that all young teachers are IELTS certified. Those teachers who have more experience, they and I personally took TOEFL" (Leader 6).

In the same vein, the demand for foreign language certification is high and in order to train teachers the universities organize language courses or send academics to different universities to participate in language courses where they have an opportunity to study language and to practice teaching specific subjects in English. KarSU university is considered as a fundamental platform for practicing and fostering multilingual education. In 2008, this university elaborated a "*Framework for multilingual education development in Kazakhstan*". This framework contains theoretical and

methodological, scientific support for disseminating trilingual education by indicating the phases of its implementation process (Irsaliyev et al., 2017, p. 134). Therefore, teaching staff from other mainstream universities visit this university to increase their professional skills to be more efficient in teaching multilingual groups.

"... With full immersion, these courses were from 8 am to 6:30 am for a month with an entry and exit cut. And then, of course, they were given certificates, courses that go on-site, they go for at least six months. My teachers began to participate from last year, first of the academic year from September to March and then they had a break and this year they started again in September" (Leader 6).

Considering the necessity of foreign language proficiency in the framework of multilingual program, the universities conducted language courses on an intensive basis for training teachers as well as with the breaks in time.

Sub-topic 2: Organization and involvement in conferences and workshops

Leaders are highly promoting participation in conferences, seminars and trainings, because of its importance for professional development. Participation in conferences is beneficial not only for academics but for the perspective of the leaders as well.

"One of the largest conferences which was in spring in Almaty that was CATEC – 2019 (Central Asia Teachers of English conference) organized by again by American Embassy in Kazakhstan. This is the conference for English language teachers. And there were all English language fellows from central Asia participated in it. That was one of the biggest conferences and it was for 3 or 4 days. It was in a building, and it was just rented by the organizers. We applied and they invited us, and it was like selection process and three of our teachers were selected as the facilitators of their workshops" (Leader 4).

Professional autonomy of the academics is another indispensable impetus for them to get involved in their work. Because in case they have a right to make decisions, they put much effort in work for reaching successful achievements. As it is seen in the sequences above, faculty members are constantly involved in different kinds of round tables, seminars, and language courses which contribute to their adjustment and adaptation to new professional changes. Tella et al (2007) proves it by claiming that participation in such workshops, conferences and research conductions, publications facilitate to the knowledge and competency development. Training is regarded as one of the substantial and influential factors of motivation conducing to update and renew their skills as well (Tella et al., 2007). Access for and existence of information is also a motivation strategy (Olajide 2000).

"And we need a ratio of 50:30:20. For those who are in multilingual groups, the language is very difficult for them. We follow the model proposed by the Ministry of Education and Science of the

Republic of Kazakhstan. Suppose if a student of multilingual education is studying in the Kazakh group, then 50% Kazakh language, 30% in a foreign language, that is, in English and 20% is already studying in Russian" (Leader 2).

Leaders underline the implementation of multilingual education model created and introduced by the Ministry of Education and Sciences of the Republic of Kazakhstan. From 2016 Ministry of Education and Sciences of RK disseminated a new model for the trinity program which is called "50:20:30" meaning that 50 per cent of their subjects are in L1, 20 per cent in L2 and 30 percent in L3 (Irsaliyev et al., 2017 also given in the theoretical part of this research). This model is being implemented in the universities to develop trilingual education policy.

Sub-topic 3 Collaboration

The collaboration is one of the fundamental ways of sharing knowledge, experience, and skills. Collaboration characterizes not only teaching staff also faculty leaders. The most frequent form of collaboration is the peer learning, by visiting each other's in teaching situation:

"They are attending classes for example, teachers who work in multilingual groups they attend each other's classes. And when the mutual attendance of classes is going on, then the visiting teachers can name the strengths and weaknesses, analyse the swot analysis" (Leader 2).

This activity may bring something new for their peers in terms of teaching methodology or implementation of useful approaches. At the same time, it may assist to discover their weaknesses as well by revealing their work performance. This professional visit can turn into mentoring relationship as well:

"And I give an example that the more experienced lecturer and the less experienced assist them. Let's say young people attend classes of more experienced teachers to see the teaching methodology, and our experienced ones go to young ones to see what is called an informal mutual visit. We also have informal mentoring, we have two or three teachers who are mentors, and they have young teachers, but we have it purely at the initial stage" (Leader 6).

They emphasize significant aspects by supporting mentoring system existed in their faculty. The effect of mentoring is extremely influential on beginner teachers' development. It also assists to the adaptation to the academic unit standards. As it is indicated they support mentoring[18] only in the initial stage, that is during induction period. It may also lead to the enhancement of not only mentees' professional development but to the mentors' learning as well due to the fact that mentors also learn much from their mentees. Mentees help them to boost mentors to improve their skills, to reflect on new updated teaching styles, use of ICT, and foster self-reflection (Hobson., Ashby.,

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[18]Kairat, G. (2019). Informal faculty mentoring practices in higher education in Kazakhstan. Journal of Education in Black Sea Region. 4(2), 85-95

Malderez., & Tomlinson, 2009). Therefore, the spread and support of mentoring system among academics is constantly fostered by faculty leaders to promote teachers to be effective and successful during induction period. *"They are constantly working on themselves; they publish articles in Scopus indexed journals. And we have collective releases of articles where we can write an article in a group of teachers" (Leader 2).* Other way of strong collaboration among teachers perceived by the leaders is the mutual involvement into research projects and publications in co-authorship. This collaboration[19] results in collaborative learning. In the process of collaboration, the quality and level of interaction and negotiation is extremely important (Dillenbourg, 1999). Collaboration may also imply cooperative learning where the individuals hold the responsibility for accomplishing their parts of work to solve the problem under question (Lai, 2011).

"Sometimes when they have interesting information when they go somewhere to some conferences, and they want to share, we just gather. And they share this information in seminar. But sometimes we need to do it, and nobody resists we decide before the young teachers prepare these seminars and now, we decided that young teachers with experienced teachers should share" (Leader 3).

In the same vein, sharing knowledge and implication for learning possibility to their faculty members take place in their faculty or even at the university level. Sometimes, it is organized with a more professional management, which the help of units responsible for faculty development (See chapter 3.3 in the theoretical part):

"We have the Center for Professional Development. And they always organize different courses. And that depends on the demand for example: 10 teachers applied, and there is a group of teachers gathered. And so, they start courses and for our teachers for example I like to share my experience in intercultural communication, and I go to that center and say that I have this course and I'd like to share my knowledge and share my experience. It is available not only for the university teachers but also for teachers at other schools or educational centers" (Leader 4).

We notice that this faculty has its own unit for faculty development. This method of disseminating new information sharing seems to be efficient for them. Taking into consideration the fact that not all the academics may have an opportunity to participate in conferences. This is a useful way of sharing information with each other in order to refresh knowledge repertoire. Information accessibility may be an engine for bearing the pressure between the peers that is information sharing generates competition among colleagues and by being aware of others professional steps (Tella et al., 2007).

Leaders stress on a specific way of collaboration and interaction of faculty members. They create certain fixed groups of teachers engaged in conducting the same classes within the same specialty.

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[19] "a situation in which two or more people learn or attempt to learn something together" and it is usually oriented to problem-solving (Dillenbourg,1999).

They choose one of more experienced teachers among them to coordinate and lead this group. They call it *links*. This can be estimated as one of the most optimal and valuable ways of collaboration and cooperation among teachers. The planification of their activity is underpinned with their annual "strategic" plans.

"We have groups, links. For example, some teachers who work with the first-year students, so they work together, and they discuss what are they going to give the students and they work with different groups, but the teachers discuss what they are going to do. They work together and they discuss what they are going to do. To my mind this is the system each group of teachers with this or that year of students they discuss what they have, their own plan, strategy for the year" (Leader 3).

Leaders (from the same university) also highlight this mutual peer learning working groups and their method of knowledge sharing:

"Every day. Every hour. Even after work because they talk and there is a good practice in the English department, they call it "links". For example, if we have three groups of first year students of the same specialty, all these three teachers make one link. So, they discuss what resources to use, what books to read, methods, textbooks and usually there is one leader (a more experienced teacher who shares her knowledge who supervises younger ones) among them in this link" (Leader 4).

Collaboration and network of the faculty members are not limited within but beyond its doors as well:

"We attract our graduates and the methodology and basic textbooks of Bilim Innovation Lyceum helped us a lot, and before it was KTL (Kazakh-Turkish Lyceum). We attracted the teachers of Chemistry from the Nazarbayev Intellectual School and naturally they helped at first, and they gave us their resources whenever possible. And then, on the basis of this, we worked out material and textbooks, we have not yet developed textbooks, but manuals or we have taken some we have developed ourselves and we already have that have been tested not in the first year and in principle" (Leader 6).

Faculty leaders underline the point that they have a strong cooperation with BIL and NIS schools[20]. That is why, by the cooperation of faculty leaders, they provided teaching staff with the availability of teaching resources adapted and from external partners. Kelchtermans (2006) claims that learning communities should be cultural and political space in which collaboration and collegiality should be beneficial for students, teachers' professional learning as well as for the improvement of an academic unit.

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[20]BIL and NIS (Nazarbayev Intellectual Schools) are the piloting schools practicing multilingual education and exploring it. There are 20 NIS and 33 BIL schools that hold a rigorous model of trilingual education where three languages are used as the languages of instruction (Irsaliyev et al., 2017. p.135).

Figure 49. Graphical code family network linkage
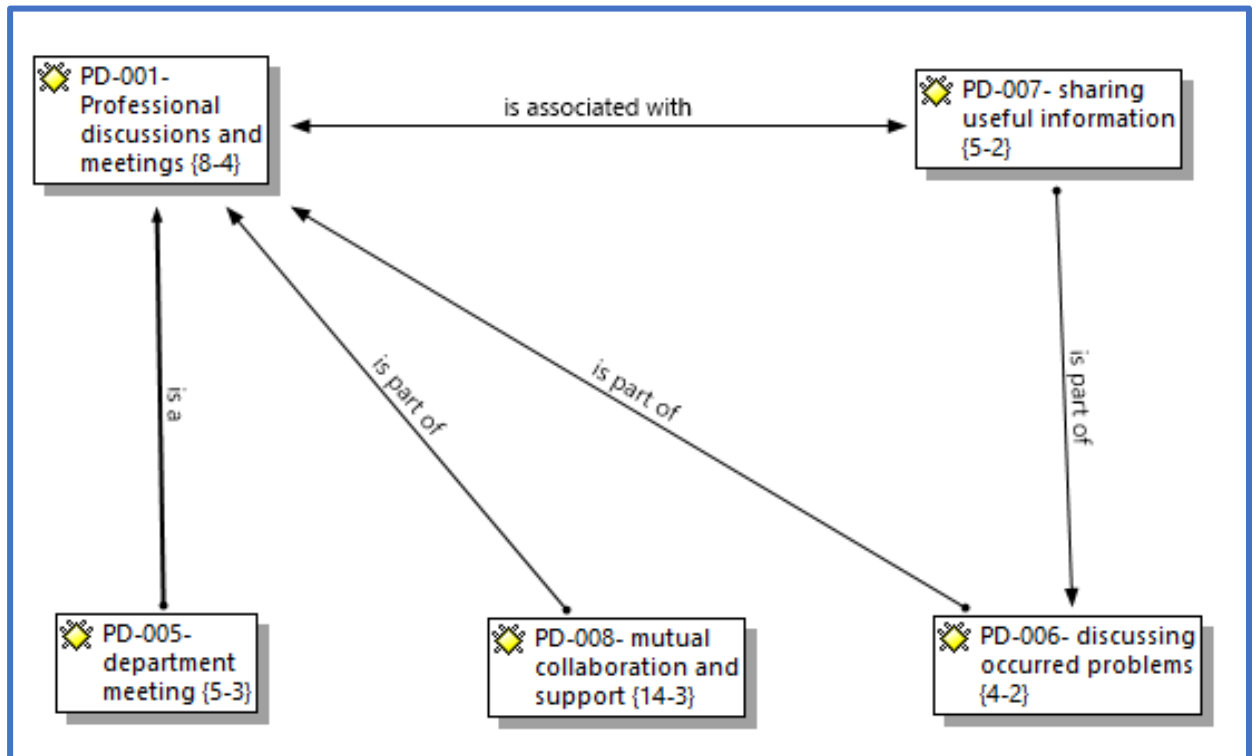
Source: Own compilation based on Atlas.ti analysis

Figure 49 demonstrates codes family network extracted out of all six faculty leaders' interviews and divided into two strong aspects which depicts collaboration and discussions among colleagues supported also by the faculty leaders to the teaching staff. Based on the interviews, we can state with some limitation, that those are the most frequently used activities that are supported and delivered by the faculty leaders in order to keep the faculty members efficiently develop in the process of their professional growth.

SUMMARY

Having analyzed the actions of the faculty leaders towards the implementation of the multilingual education in higher education, faculty leaders approve, and support as well as consider the program to be significant. However, they indicate some challenges related to the foreign language knowledge. We were giving an overview about supports faculty members are provided. Three faculties (Faculty of Pedagogy and Psychology; Faculty of Natural Sciences; Faculty of Mechanics and Mathematics) have some common characteristics: as the need of IELTS or TOEFL language certificate for those teachers engaged in multilingual groups; or organization of seminars, round tables, workshops, language courses, conferences and participation for them; constant department meetings for professional; collaboration of teaching staff and mentoring system; Bolashak program holders. Nevertheless, the strong points of these three faculties may also be found out in terms of supporting academics to be efficient in work performance. Educational leaders attempt to sustain and promote teaching staff not only at the faculty level but at university level as well. For that reason, university leaders put much effort on teacher's professional development. They take into consideration all aspects of research and teaching activities, administration, internal and external factors of motivating teachers, students' achievements and faculties' job satisfaction Siddique et al (2011) claims also about.

Important motivations for teachers are the bonuses in the form of supplementary payments or the decrease of their workload (cash prizes, teaching hours, ECTS). Such rewards are administered to maintain teachers' motivation leading to the efficient work commitment. Likewise, several teachers intensively participate in language courses, conferences. It may serve as a strong point for teachers' professional development and efficient teaching practice.

Still, in the initial stage of the implementation of multilingual education, intensive language courses organized by the MES of RK, or the universities were free of charge. Provided those free language courses lasted for determined short period and after they became self-financed by teachers, especially in the Faculty of Natural Sciences. Whereas Faculty of Mechanics and Mathematics continue to organize free language courses with IELTS certification at the end.

Next significant support of the faculty management is the promotion collegial collaboration. In order to avoid the ambiguity in collaboration, as one of the leaders emphasized the use of *links* which is regarded as one of the strong pillars in collegial cooperation in their department. Such collaborative *linking* activities are including close cooperation among colleagues. An informal mentoring relationship where senior or more experienced teacher leads. Mutual attendance of each other's classes is another spread cooperative practice as well as writing research papers in co-

authorship. It is a successful way of cooperative learning between faculty members. Another collaboration engine refers to the interschool cooperation among teachers, for example, the assistance and support of BIL schoolteachers for providing the university colleagues with teaching resources. It implies that faculty members hold strong connection with other colleagues to be of mutual usefulness. Leaders of all faculties highlight the fact of mutual sharing knowledge and experience as an important factor of cooperative learning.

Leaders' commitment on remaining academics focused and consists in supporting close, strong collaboration to be more efficient in their work.

Table 40. Strengths and weaknesses of the faculties supporting mechanisms

STRENGTHS	WEAKNESSES
Rewards	Lack of teaching resources
Sharing knowledge and experience	Teachers' overload
Collaboration	Discrepancy in teaching in English

Source: Own compilation

All the above-mentioned faculty supporting activities are accomplished to reach successful results. In the initial stage of multilingual education development all challenges emerged in the process have a huge impact on teachers. Table 41 shows the strengths and weaknesses how faculty leaders facilitate to the teachers' professional development. Teachers in their turn, without formal education for multilingual education, encounter a range of challenges in learning informally and non-formally as it was analyzed in the previous chapters.

CHAPTER VII: HUNGARIAN EDUCATIONAL EXPERTS' SAMPLE

7.1 Suggestions and implications of Hungarian educational experts on educational policy implementation

According to the research findings, it is determined that multilingual education policy in the context of Kazakhstani higher education institutions brought a range of challenges especially for faculty members participating in that program. Considering the consequences of multilingual program implementation in Kazakhstani university contexts, this research part aims at exploring the experience and suggestions of the Hungarian educational experts of comparative education. It can contribute to improvements in this reform practice. Interview questions were related to the educational policy implementation consisting of introductory questions and three main levels in education: macro, meso and micro levels (See Figure 50) in general and if such policy is implemented in Hungary (See in detail in Appendix 13.).

Figure 50. Interview topics covering educational experts
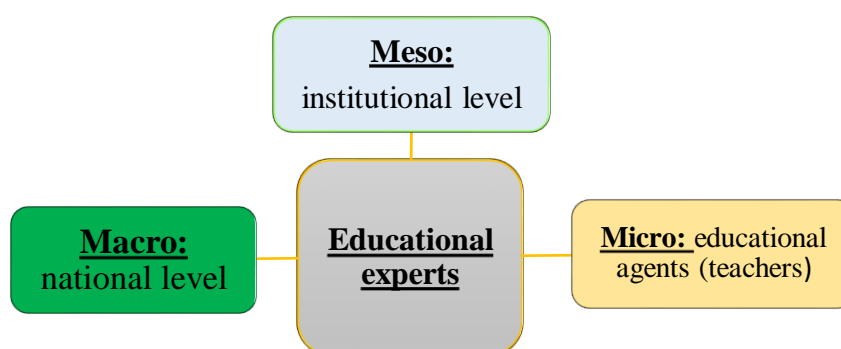
Source: Own compilation

RQ 4: How to make more successful and efficient the implementation of multilingual education program in Kazakhstani HEIs?

RQ 4.1: What kind of important elements should be accomplished at Macro, Meso and Micro levels in policy implementation?

Considering the interview analysis, we found out important pillars that may contribute to successful and efficient development of the policy in practice. The interview sequences can be analyzed from three important perspectives: national level, institutional level and level of faculty members.

Figure 51. Important actions for educational policy implementation by Hungarian experts
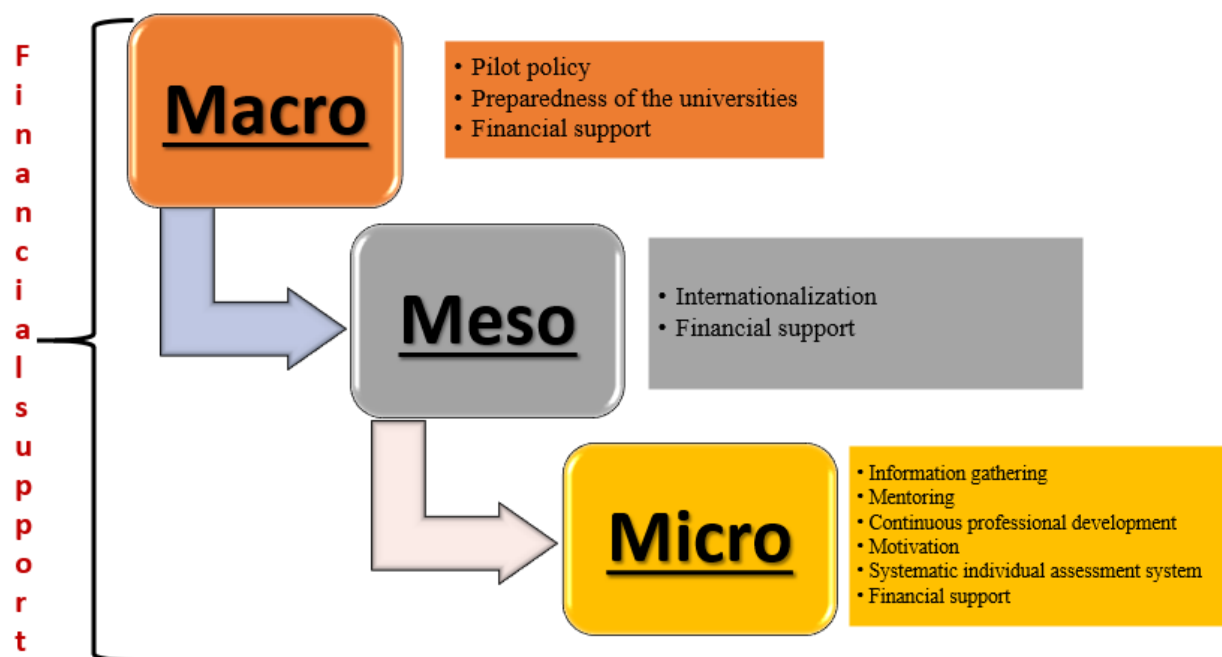
Source: Own compilation based on Interview sequences

In general, in the thinking of Hungarian education experts concerning multilingual education, they always touch on minorities' language issues just as also underlined in the theoretical part of European experience on multilingual education[21].

Broadly speaking at the national level, Hungarian educational experts emphasized the significance of piloting the policy before its implementation in order to determine the strengths, weaknesses, opportunities and threats. Another important point is the preparedness of the universities towards the implementation of the specific educational policy: availability of resources, preparedness of faculty members, local capacities and so on.

At the institutional level in the context of Hungary, experts underlined two important aspects: Internationalization and financial support. They assume that in the frame of multilingual education the universities should be internationalized and develop and extend this domain by considering the international experiences and even by building cooperation with Kazakhstani HEIs. At the individual level several necessary elements for the case of Hungarian teachers were indicated such as: Information gathering, mentoring, continuous professional development, motivation and assessment system for the faculty members. Financial support is the only aspect that is related and considered as significant aspect in all levels (See Figure 51).

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[21] See sections 2.2.2 and 2.2.3 on pages 45-47

Macro level: Experts highlights the importance of piloting educational policy before its practical implementation in general saying that:

"The state universities may be directly involved to make pilot projects to be outlined to discover some potentials and possibilities and implication where to apply such structure. And then based on consequences, messages and conclusions upon this project potential. To test and to prepare for piloting and then to share it with some wider scale of universities across the country. And as a step two is to discuss about the wider implications. First, you have to very carefully plan and have a good environment where to pilot things and then step by step have a good look on implication what could be the directions of applying any of the results. it should be very good planned and monitored with some specific tools" (Expert 2).

Experts underline the significance of the discussion and piloting educational policy before putting it in practice to identify its strengths, weaknesses, opportunities and threats. Also emphasized the importance of financial support for the structural development stating that *"Financing is another matter around how to relate to this and that structural development"* (Expert 8). Another aspect that should be considered is the preparedness of the institutional units, Experts stress that:

"One aspect is how universities are prepared at the methodological levels to make use of languages. We also have university lifelong learning where there are a lot of initiative which are project-based mainly where we discuss university lifelong learning how to make universities prepare for non-traditional learners and learning environments" (Expert 2).

Experts determine the necessity of university preparedness for the multilingual program regarding methodological, language issues. Such implications should be thought and considered at national level by policymakers before the launch of the policy. Sufficient financial support and internationalization aspect from the national level is also significant for policy practice as underlined below:

"So, we have to give much better salaries and much better passion. Plan for the future, which could be quite expensive for the institution. Uh, and that should be something where the state could help with proper taxation policies or proper funding policies. I think that could be a challenge, but of course if you pay a lot of some or pay a lot of money to your normal academics that won't be a problem. So that depends on the on the salary levels" (Expert 4).

The balance in financial provision for domestic and international academics is also fundamental for supporting faculty members.

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1. Was any pilot program in Kazahstan preceding the Trinity program's introduction?
2. Were / are the universities suifficiently prepared fot the tasks?
3 How the program contributed tot the kazah Higher Education's intertnationalisations?
4.The salary level seems to be enough attratctive in Kazah Hei's for motivate teacher's particiapation?

Meso level: All the interviewees underlined the importance of the _financial support_ and _internationalization_ process at institutional level for developing and improving multilingual education program. Experts also underline the importance of academic units' funding highlighting that:

"University funding is important and the and the way of working in international projects. Yeah, I mean they have to pay for the conference. They have to build the regional or international connections, partnerships, projects with different universities together. So practically even the teacher, lecturer, the professors have to get used to work in an international platform" (Expert 1).

Experts emphasize on the internationalization aspect of higher education institutions determining that: _"But to have a multilingual program, it usually requires having some kind of or some level of international stuff as well, and that's not always easy to attract"_ (Expert 4). _"...the efforts to make the university more internationalized"_ (Expert 3).

"I think we need to develop our HEIs system to be compatible with international bodies. We have to show that we are engaged in the development of different skills within HEIs: one is a good level of communication and research. But I also think it is very much important to develop our international relations and make use of it at the level of organizational and methodological development for the sake of competitiveness, quality improvement to attain more learners but also to exchange good levels" (Expert 2).

Internationalization is considered as a key aspect of the implementing this educational policy in practice. It may contribute to the program development in terms of teaching and research as well as in exchanging foreign experiences to reach the efficient results. Financial support is another supportive and important component for it.

> 5. Do the teachers and academics have the possibillity form Kazahstan sufficiently to go particiapating at conference abroad?
> 6. Is the prorgam in Kazahstan enough attracitveand supported to allow inviting guest professors from abroad for stable position?

Micro level: All the interviewees underline the importance of support provided for faculty members including monetary support, information sharing, mentoring, and continuous professional development. Experts underline the need of monetary support stating that _"...direct motivation for teachers to get maybe more salary as well"_ (Expert 1).

"When we did have a lot of partners coming to us, that's a lot of money because we paid for the dinner. So, I mean the social life. Even that is a little bit costly for a teacher. But of course, you do it. You invite them. But so, I mean a little bit of the financial rewards should be done, I would suggest" (Expert 7).

"We need more time. We need more financial settings to be motivated to do in a better way. Be respected and rewarded in a different way. I think this is very much related to motivation" (Expert

2). Experts highlight that university should provide with some monetary support for teachers to participate in conferences and research:

"Professional development is a must because there were years in my career when we have had to pay for conferences, and we had to even publish. So practically in order to get a professional career and degree or whatever you should have fulfil certain requirements which are costly even for you. So at least your university should pay those things even if the salary is not much enough" (Expert 1).

Another important aspect underlined by Experts is related to the significance of information sharing especially involvement in research with foreign partners:

"There should be a system of sharing the information, but so everyone has got to experience this. So practical experience or practice-oriented way of doing joint research, doing real academic work which involves several partners in foreign countries" (Expert 1).

Experts also highlight that supporting mechanism is fundamental for faculty members especially for the novice and young ones:

"When even I was a young teacher, not even my head of department once came in and asked me do I need something or do I, you know so not the control element that was important, but the helping element, The support element" (Expert 1).

Teachers' continuous professional development is another important aspect as indicated by Experts which should be one of the main priorities:

"I think there ought to be kind of motivations coming from leadership of university in a certain way to prioritize multilingual development and it just to go hand in hand with the quality improvement of the institution itself. It can be a good example to indicate that kind of innovation of university may be related to the development of professional skills. In my own understanding this is a kind of CPD (continuous professional development) aspect that has to be prioritized. If it is a priority, if it is supported then I think with a proper time management reconfiguration of managing time, advocacies these can be beneficial for the people who might be potentially involved" (Expert 2).

In addition to the professional development of teaching staff, time management and flexibility is also substantial:

"*I think ME program can only be developed if educators are motivated enough and motivation comes with more flexibility in time, time managements rewarding systems to be built up, personal advancements planning. It is also about how to develop mutual engagements and professional development of staff*" (Expert 2).

"Management of institutions should motivate academics to participate in such programs, so you know. The reward to participate in this program could be higher, so if you have an individual assessment system, assess the performance of each academic from year to year or from period to period. Of course, you can attach higher rewards to do activities which are tide trial, tide to multilingual programs. Academics to participate in such programs so that they can move further in their carriers" (Expert 4).

The interview sequences show that in addition to the aforementioned dimensions of teacher's professional development and support, it is also necessary to create or organize a kind of

systematic individual assessment system for faculty members to be rewarded and motivated for further professional growth.

> 7. Are the university teachers rewarded and respected in Kazahstan?
> 8. Is there any support mechanims put in practice for the novice and the young teacher for matching efficiently the requirements of the Trinity prorgam?
> 9. Are the professionnal/faculty development program involving indivuiduals enough efficient to help universiy teachers to confornt the challenges of the program?

SUMMARY

Hungarian educational experts' sample results are underlined in three levels: macro, meso and micro. In general, at national level, they emphasize that any educational policy should be preliminary piloted before implementing it practice. This may allow to avoid unnecessary obstacles in reaching the effective results. Second influential aspect is that the preparedness of the universities should be discussed and considered beforehand as well.

At Institutional level, in Hungarian context, experts underlined the significance of the internationalization of the educational unit where multilingual program takes place. In micro level, experts highlight the importance of information gathering, mentoring system, continuous professional development, and motivation of faculty members as well as the necessity of integrating systematic individual assessment system. Financial aspect is touched upon all these three levels as a fundamental pillar for multilingual program development.

The interviews with Hungarian experts helped us to identify 9 important questions for the implementation of that national wide reform, which help us to assess the effectiveness of the program. Many of them (questions number 2, 4, 5,6,7) were answered earlier in chapters 5.2.1, 5.2.1.4 and chapters 5.3, 6.2, while other questions will be left open (questions number 1; 3 and 8, 9), and it could be based the fundaments for a following investigation in that field.

In the theoretical part (See section 2.2.2), it is stated that pilot program on multilingual education is spread at specific schools but not related to the university level[22] (question 1). There is a provision of supporting mechanisms for faculty members in general, but not specifically for novice teachers (question 8). At institutional level, faculty members are somehow rewarded, but their respect and salary satisfaction are still an open question to be investigated further (questions 4,7).

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[22] The involvement of Kazakhstani educational experts into this research was taken into consideration after the pre-defence, however their investigation did not produce the expected results.

CHAPTER VIII: DISCUSSION OF THE FINDINGS

The purpose of this study was to explore how teachers participate in the multilingual education program in Kazakhstani higher education institutions; what kind of main challenges they face and how they learn in informal and non-formal ways. This research also attempts to investigate how faculty leaders support the development of multilingual education program in Kazakhstani universities.

In this chapter of the dissertation, the author endeavors to present the main findings of the research and interpret them in relation to the research questions.

8.1 Discussion of the findings related to the research questions

The main findings of the research are dedicated to the issues of teachers learning and their preparation for implementation and further development of the educational policy under question. These findings are taken from the interviews of faculty members from two different universities in the Northern part of Kazakhstan. Educational leaders started to train and prepare teaching staff involved in the implementation of this educational reform parallelly during the reform practice.

There are several hypotheses to each research question, it can be noticed if they are approved or not from the following parts.

Hypothesis 1: Teachers' participation at regional state and national universities level's multilingual education is ambiguous and it is possible to discover different attitudes and mentality towards it. (As we are investigating the activities of teachers belonging to different scientific disciplines).

The research results showed that faculty members get prepared from two perspectives: by the academics themselves and by the educational institutions.

The academic staff is usually involved in the following activities: *professional discussions, use of three languages in the class, preparing teaching materials from different sources, boosting communicative skills, use of their research in the class* (See Table 23). Whereas educational institutions provide them with *organizing workshops, seminars, conferences, English courses, interinstitutional training attendance, and directing to "Orleu" courses.* The main informal learning activities accomplished by teachers is discussion which is considered as a main source of acquiring knowledge, and it is based on learners' initiation. While being engaged in multilingual program, university teachers have to use three languages in the classroom and prepare several materials themselves due to the paucity of resources. However, in the process of participating in multilingual program, the academic staff is the main educational agents who encounter challenges

(See Figure 39): discrepancy in foreign language proficiency, paucity of teaching resources, use of three languages, preparing and searching for teaching materials causing overloadness.

Hypothesis 2: At regional state and national universities level teachers participate intensively, at daily level in informal learning activities for making better the ME and is possible to explore different learning patterns as we are investigating the activites of teachers belonging to different scientiffic disciplines.

While analyzing the interviews we've identified four main clusters of the academic staff who were involved in multilingual education policy at Kazakhstani universities such as *Active and efficient collaborators, Competitive lifelong learners, Challenge confronter and Passive job performers*. They are encountering different challenges (as it can be seen in detail in chapter 5.2.3) teachers from these clusters encounter and what kind of support the leaders provide them with. The belonging to the different clusters cannot be directly linked to the belonging to different academic disciplines.

Cluster 1 – Active and efficient collaborators: The main characteristics of this group of teachers involve intense participation in conferences and seminars as well as in professional discussions with colleagues by sharing knowledge and experience.

The academic staff belonging to this cluster were distinguished from the other clusters by claiming on frequent, and trusted collaboration. Another important activity expresses their strong collegial work while they attend each other's class. Teachers from the 1st cluster are seeking for different ways of implementing three languages in teaching to reach qualitative results in work performance. Such difficulties that they face emerged from the paucity of educational resources that university provides. Another problem is discrepancy in the level of English language proficiency of both students and teachers. Due to the fact that those manuals or books that university provide them were dedicated to the native English speakers. Teachers try to adapt these materials themselves and also produce a manual and a dictionary on a specific subject.

Cluster 2 – Competitive lifelong learners: This category of teachers is known with the following learning activities: strong orientation in research projects, regular seminar attendance, network building as well as implementation of specific teaching methods which was elaborated by themselves. Teachers form the 2nd cluster voluntarily strive to participate in conferences and other learning events for acquiring new knowledge. Important way of their collaboration is fulfilled in weekly seminars held in their department. This type of cluster is determined by their strong involvement in research activities with high interest. This cluster was also distinguished by an important action in which they use 100 % English language while conducting classes in a

multilingual group. Competitive lifelong learners voluntary participate on self-paid basis in various kinds of English-Speaking clubs and other events for fostering and boosting their communicative skills in English. One of the challenges they come across was the low level of students' language proficiency. They claim that the university provide them with the multilingual documents as well and for that reason the administrative work takes additional time. The reward from the university in favor of these teachers is the extra payment as motivation for these teachers.

Cluster 3 – Challenge confronter

This category of teachers is involved in the learning activities mainly dedicated to the English language as well as limited participation in collegial collaboration. In case of this cluster main issue is in learning and practicing English language and related problems of communication and use of foreign language. Another issue of this cluster is overloadness of the academic staff, and for that reason, teaching staff suffers from the lack of participating in diverse conferences and seminars.

Teachers of this category have to cope with language barriers and shyness occurring in the process of teaching in English. Challenge confronters are usually indulged in different educational events (conferences, seminars, master classes, workshops etc.) only, if they are offered or are part of requirement of their work.

It was evidenced in the analysis that Challenge confronters are not used to ask for a help or to make intensive collaboration with colleagues. They claim on their confidence of knowledge of their particular scientific discipline and insist that there is no necessity on constant discussions.

Cluster – 4 Passive job-performer

Passive job-performers are determined by their non-active attitude towards the fulfilment of different learning activities. They participate in educational events only if it is required by their head or institution. Even this cluster refuse to use the opportunity which is ready and handy. For instance, they were not involved in communication with foreign friends. This data also shows that teaching staff who knows English well use their native language in-between during communication. Another issue of this cluster is dedicated to the institutional requirements where teaching staff is accomplishing only those tasks that were pre-set by their heads or university leaders.

Further, the challenges concern the teaching resource provision from the universities' perspective. Faculty members are dissatisfied with the equipment that were not coinciding for them to conduct research works. Lessons, bureaucracy plus overloadness of teachers are another burden for this cluster. One of the negative aspects related to the fact that much of their time they spent on

preparing for classes. This cluster also emphasize the discrepancy of language levels of the students.

The results of descriptive statistical analysis assisted to identify the ways of how faculty members participate in informal learning activities. The consequences evidenced that teachers are predominantly engaged in learning activities in the noon time between 2:00 PM and 4:00 PM with the lengths of mainly 10-30 minutes being engaged mostly in information gathering related to their professional knowledge via discussion and interaction with a person, mainly through only personal contact. The respondents played mostly the role of a learner and teacher whereas the same roles were played by their collaborators in the process of the learning activities. Relevant motivation for learning was job execution as well as the results emphasized that their learning activities predominantly occurred in the university building. The participants indicated the effectiveness and utility of the acquired new knowledge as mainly as satisfied. As the results of correlational analysis, we found out several positive and negative moderate correlations among the variables. Weak correlations are also identified which is available in the Annex 9.

As for the effectiveness of the organizational innovation happening in these two universities, we relate to Halász's (2021) determination of different individual working clusters (routine man, dreamer, manager and innovator) as well as clusters (Horse cart, Truck, Glider and Rocket) related to organizational innovation measurement (p. 203). These clusters are not identical but similar to the clusters identified in this research. However, considering that multilingual education program is an innovation, and taking into account the clusters of this research taken from two different universities, we can compare them to the clusters of Truck (Regional national university) and Glider (Regional state university) according to their effectiveness and dynamism of organizations.

Hypothesis 3: Faculty leaders at the regional state and national universities level intend to support multilingual education development but, in some cases, they are lacking tools for greater effectiveness. In conjunction with investigating how faculty leaders support university teachers in multilingual education, the results of this research indicate several fundamental supporting tools.

The interviews with the leaders push us to conclude that predominantly their employers are engaged in language courses, round tables and department meetings. Faculty leaders strive to indulge teaching staff in participating in Bolashak program. Leaders' interview analysis evidences the motivation of academic staff (only for those who teach in English) in regard with financial support or reduction of workload depending on the university type. Additionally, supporting collaboration and peer learning is another important aspect by faculty and department leaders. It

consists of such collaborative activities as: *Link*[23], cooperation, mutual support, mentoring and sharing information and experience.

The analysis of the interviews with teaching staff engaged in multilingual groups shows in what specific dimensions it should be worked intensively. Academic staff admit that the provision of methodological and teaching resources from the university leaders' perspective is the main issue for all the categories of teaching staff indicated in this research. Another important point is the level of English language proficiency of both teachers and students. The improvement or the preparation of foreign language skills of them is a necessity for making educational reform more effective and for avoiding academics from overloadness. Consequently, it is needed to train teachers effectively to be oriented and adapted to the new reform beforehand.

Hungarian educational experts underlined several important elements that impacts on the effective development of multilingual program in general. Revisiting or piloting any policy is crucial for revealing pros and cons as well as the consideration of preparedness of academic units for that reform. In multilingual program, experts emphasized internationalization of universities as a significant aspect. Faculty members should be involved in several informal learning and supporting activities. Financial support is generally fundamental in all levels to reach success in practice.

8.2 Discussion of the findings related to the literature

In terms of literature the results are considered reflective towards multilingual education as an innovation in Kazakhstani higher education, the ways of teachers getting prepared for participating in this policy; challenges that faculty members encounter as well as teachers' learning in terms of informal and non-formal learning conditions; Hungarian educational experts sample. Furthermore, faculty leaders' support and view on multilingual reform. In addition, the findings of this research also made a fundamental contribution to the knowledge body in the framework of this subject.

First of all, it corresponds to the literature in the field of educational policy that it is highlighting educational agents' role, beliefs and values, motivation while implementing new educational policy. As the research findings underline social, political and financial aspects play pivotal role in in the policy implementation process. The same aspects were specified by Viennet and Pont (2017). The research findings determine several significant challenges that teachers encountered in the multilingual program practice. Similitudes are indicated in the studies of McLaughlin (1990). Especially the paucity of teaching resource is underlined parallelly by (Sagyndykova,

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[23] "Link" is identified as explicated by the leaders, a group of teachers (2-3 teachers) one of them more experienced lead and organize methodological and pedagogical discussions on related themes.

Svinarchuk and Kubrina (2017). Research findings demonstrated that faculty members elaborate the necessary manuals and other methodological and teaching handbooks themselves and the main issue results in the lack of English language knowledge (both teaching staff and students) which were also indicated by Sagyndykova et al (2017). The research results also emphasized that higher education institutions provide with different trainings, interinstitutional trainings for ("Orleu" courses, "CLIL" courses "Bolashak" program, foreign language courses for the preparation) faculty members (Nessipbayeva, 2014; Irsaliyev *et al.,* 2017; Hillyard, 2011).

According to literature on teachers' learning opportunities, teachers' learning is highly emphasized where they are usually engaged in a range of different professional activities and learning events which may also be on ongoing process (Stewart, 2014; Kennedy, 2009; Yates, 2007; Grodsky & Gamoran, 2003; Kennedy, 2005; Cole, 2012; Desimone, 2009; Smith, 2010). However, none of these literatures emphasize different categories and clusters of teachers' learning performances and on learning specities in multilingual program.

Literature on informal and non-formal learning made an attempt and contribution in determining significant ways of informal and non-formal learning especially from teachers' perspectives. The results of this research revealed a variety of fundamental informal and non-formal learning events in which faculty members are engaged such as collaboration, discussions with colleagues, asking help, trial and error, task accomplishment, participation in different professional events (See Table 37). Those are reviewed in the literature part of based mainly on Paul Matthews (2013). Most basically these learning activities are very similar to those realized in the enterprises.

In the framework of multilingual education program, university teachers acquire most part of their knowledge and competences through informally and non-formally for enhancing as is indicated also in the study of Rogers (2014). Rogers underlined that most of knowledge is acquired through informal learning.

The analysis of literature and the data collected in this research from the faculty leaders acknowledges the fact that financial support for the academic staff from the university is the most effective and frequently implemented type of motivation, also demonstrated earlier by Tella., Ayeni and Popoola, (2007); Rowley (1996). In faculty leaders' perspectives, frequently implemented support for faculty members are collaboration, mentoring, cooperation, mutual support, sharing knowledge and information as well as provision of different kind of educational event for enhancing their professional development. Those dimensions indicated by Siddique, Aslam, Khan, Fatima (2011).

9. CONCLUSIONS

It has been signified that in the process of implementing any educational reform, it is significant to consider the roles of the main educational actors (teaching staff). The preparedness of faculty members for the integration and implementation of the policy is essential in order to reach an effective and successful results in practice. Due to the fact that, faculty members are those educational actors who usually and always encounter the occurred challenges and obstacles in the framework of a new reform at educational institutions.

The main goal of this dissertation consisted in exploring the teachers' informal and non-formal learning who are engaged in multilingual program in Kazakhstani higher education institutions. Since multilingual education program started to be implemented in the Kazakhstani universities, the faculty members were not prepared for the new educational policy beforehand. The faculty members engaged in multilingual program were neither theoretically nor practically trained in formal conditions for participating in that program. Therefore, this research is dedicated to study teachers' learning in multilingual program through the lens of informal and non-formal learning conditions considering relevant and existing research questions of this study. All the participants of this research experienced bilateral preparation for multilingual program participation: preparation by themselves and by the educational institutions. Teachers' training and preparation for the multilingual program started to function only in the process of policy practice and faculty members were also exposed to express initiation for additional learning and professional activities.

Main challenges that faculty members encountered in the practice of working in multilingual program were mostly dedicated to the low level of foreign language proficiency and paucity of the related teaching materials and resources which in its turn resulted in teachers' work overloadness and lack of their time. Moreover, the fundamental result of this research was different typology of clusters: Active and efficient collaborators, Competitive lifelong learners, Challenge confronters and Passive job-performers, each of these clusters is characterized individually. Their participation in a variety of learning activities through the informal and non-formal learning conditions are diverse.

The ways of teachers' participation in informal and non-formal learning activities are indispensable. The participants of the online diary experienced that they are mainly engaged in learning activities in the afternoon with the length of mostly 10-30 minutes where they are involved in mainly information gathering dedicated to their professional knowledge through the source of discussion. Teachers' informal learning activities are fulfilled through interaction with a person and in the form of only personal contact where they play the role of the learner or teacher. Job execution served as an important motivation for their learning activities which mostly took place

in the walls of the university building, and they indicated the effectiveness of their learning activities mostly as almost good.

From the perspective of educational leaders in the framework of multilingual education, they provide support for the teaching staff in the form of provision of foreign language courses, organization of conferences, workshops and seminars and collaboration. These are the main elements for the teaching staff to be professionally advanced and promoted. As for the main source of the motivation for the faculty members, educational leaders provide teaching staff with financial support by diminishing their teaching hours (credits).

Complexity theory is implemented as an integrated theoretical framework for this study to explore teachers' learning in multilingual education as a complex system. With the help of complexity theory, it was possible to identify teachers' learning peculiarities through the interaction and relationship among the complex systems which brings change and alteration in teachers learning and behavior as an important input of the complex system. It offers move for development, decision-making and change on education. From the perspective of teachers' professional development and teachers' learning, complexity theory assists us to analyze and identify the changes and modifications in systems.

The findings of this research study will have important implications and valuable, fundamental insights for the development of educational policy, mainly in implementing multilingual education program in the context of Kazakhstani higher education institutions.

Potential implications for Kazakhstani context

Based on the research results of this study, it is necessary to indicate that possible important actions can be taken in the process of university teachers' learning in the framework of multilingual education program. For the *Educational research* perspective, the findings of this study may contribute to the detailed theoretical insights related to the multilingual education program mainly and teachers' learning peculiarities. *Policymakers* may acquire important and useful practical contributions from this research results to make revisions before putting in practice any educational reform for avoiding challenges and obstacles for the educational agents. Policy makers should modify and revisit or revise the reform considering the local capabilities as well as the preparedness of the university and necessary resources. From the findings of this research, policy makers as well as the educational leaders should consider the role of teachers' learning, teacher training before implementing specific innovation in practice. For the perspective of teachers, the main findings concern teachers' informal and non-formal learning in multilingual program. The *faculty members* may conceive the significance of their invisible learning activities which may

possible be neglected in the process. As the research findings indicated, *faculty or institution leaders* may determine what challenges and obstacle their teaching staff is encountering and what kind of support and motivation should be provided for their employees. Educational leaders may possibly use the faculty development program contributing to the enhancement and improvement of teachers' professional development in the related field to maximize the potential of their efficient professional preparation and training in the context of Kazakhstani higher education institutions. It is also significant for reaching the effectiveness of implemented educational policy practice.

Recommendations for future research

According to the nature and scope, this research achieved the goal and managed to answer all the research questions related to the teachers' informal and non-formal learning as well as the question on educational policy implementation. It should be indicated that, in the frame of this research, several recommendations can be made up for the future research.

Since the topic of teachers' informal and non-formal learning is a relatively unknown in the context of Kazakhstan, it requires to investigate further considering more universities for the sample from different regions. Current research results also indicate implications in the field of multilingual education and teachers' learning peculiarities. Teachers' informal and non-formal learning can also be explored in the field of other educational polices.

Special recommendation can be given to the faculty or institutional leaders for implementing faculty development programs for monitoring and observing and directing teachers' learning to identify what kind of support and motivation should be provided for them to reach effectiveness in their professional development and job execution.

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11. APPENDICES
Table of Appendices

Appendix 1: Ethical permission approval for the research

Appendix 2: Interview consent form for teaching staff

Appendix 3: Permission to data processing for teaching staff

Appendix 4: Interview questions for the teaching staff

Appendix 5: Informed consent for educational leaders

Appendix 6: Interview questions for educational leaders

Appendix 7: Diary guideline for filling out the survey

Appendix 8: Diary questionnaire

Appendix 9: Correlation of variables

Appendix 10: Ethical permission for the study of Hungarian Educational experts

Appendix 11: Permission to data processing for Hungarian educational experts

Appendix 12: Informed consent for Hungarian educational experts

Appendix 13: Interview questions for Hungarian educational experts

Appendix 1. Ethical permission approval for the research

EÖTVÖS LORÁND TUDOMÁNYEGYETEM
PEDAGÓGIAI ÉS
PSZICHOLÓGIAI KAR
KUTATÁSETIKAI BIZOTTSÁG

E·L·T·E

EÖTVÖS LORÁND UNIVERSITY
FACULTY OF EDUCATION
AND PSYCHOLOGY
RESEARCH ETHICS COMMITTEE

Reference number: **2019/204**

Research Ethics Application Approval

Name of the Principal Investigator (PI)	Balazs Benkei-Kovacs
Academic degree of the PI	PhD Degree
Place of work of the PI (Faculty/Institute/Department)	Institute of Research for Adult Education and Knowledge Management Eötvös Loránd University, Faculty of Education and Psychology
Job title of the PI:	Senior Lecturer
E-mail address of the PI	benkeikovacs.balazs@ppk.elte.hu
Title of the research:	Teachers' informal and non-formal learning in multilingual education: A case of Kazakhstani higher education
Research fields related to the topic of the present research (e.g. cognitive psychology, etc)	Informal and non-formal learning of adults
Other researchers involved (e.g. students, etc.)	Bakhyt Aubakirova, , a second year Ph.D Student at Adult learning and education programme, Doctoral School of Education, Faculty of Education and Psychology, ELTE
Expected dates of the beginning and the end of the research	1th of July. 2019- 1th of August 2021

The condition of the ethical clearance issued by ELTE Eötvös Loránd University is that the applicant(s) assume(s) full responsibility for securing permission, respecting local laws and regulations and, if necessary obtaining local ethical clearance, for conducting the study in the proposed country.

Budapest, 03. 05, 2019.

....

Research Ethics Committee
Chair or Acting Member

Eötvös Loránd University
Faculty of Education and Psychology
Research Ethics Committee
H-1064 Budapest, Izabella u. 46.

Appendix 2. Interview consent form for teaching staff

Informed Consent and Description of Research for teaching staff (online study)

Teachers' informal and non-formal learning in multilingual education: A case of Kazakhstani higher education

You are invited to participate in a research coordinated by Balazs Benkei-Kovács PhD and Bakhyt Aubakirova. The aim of this study is to explore teachers' informal and non-formal learning in the frame of multilingual education. This study also investigates how teachers' informal and non-formal learning can facilitate for the development of multilingual education in Kazakhstani higher education institutions. The interview questions are harmless without any detrimental after-effects.

Participation is utterly **voluntary and anonymous**. First you will be engaged in a 50–60-minute semi-structured interview. The interview questions are related to the research questions. With your permission the interview will be conducted by a voice recorder and taking noted for the research aim. Second, right after the interview you will be provided by the diary in electronically version that should be filled out within five working days. In the diary you should indicate required points related to the research topic. This diary involves the parts where you should indicate your everyday learning activities and the process happened during the day. All the personal information will be anonymous and will be identified only by pseudonym throughout the study. Performing answers to the interview questions is harmless and it is without any foreseen risks. It is possible to suspend participation so that it should not be tiresome. It is also possible to withdraw consent and terminate participation at any time without any reason and without any consequences.

The results of this study will be used in publications and will also be presented at scientific conferences. If requested, written overall information will be provided on these events.

All information collected during this research will be handled with strict confidentially. Data obtained during the research is stored as coded information on a secure computer and paper-based material (e.g. questionnaires) is kept in a safe or a locked office also in a coded format. All computer documents related to the project will be kept in a secure password-protected computer of the principal investigator. Moreover, the interviews will be conducted only in places where nobody could see or hear our conversation. The individual codes are provided by the assistant in charge, and these are accessible and known only to her/him.

The main benefit which reasonable expected to result from this study is the opportunity to express your opinions, attitudes towards current multilingual education and your experience in the frame of this program in Kazakhstan as well as the influence of faculty members learning on the development of multilingual education. It can be carried out by telling stories, expressing ideas and your opinion, attitudes and beliefs of your teaching and learning practices.

Another benefit of this study is that in the process of interview you will be able to self-reflect on what you do currently as a professional, what challenges you encounter. Your reflection could be helpful and useful in analysis of this research.

No medical or laboratory report will be prepared about the results of the study. I am not (and have not been) treated for any kind of neurological or mental disease. I am not (and have not been) treated for any kind of neurological or mental disease.

Please sign the agreement below if you agree with the conditions outlined above and endorse participation in the study. We thank you for your collaboration.

CONTACT INFORMATION:

Questions: If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact the Research Supervisor, Dr. Balazs Benkei-Kovacs, e-mail: benkeikovacs.balazs@ppk.elte.hu, mobile: +36 303 288 068

Please sign this consent from 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.

ELTE FPP as data processor handles my above personal data confidentially and does not allow access to these for other data processing or data analyzing organizations of any kind. Details of this statement are found in the "Information of Processing of Data (GDPR)" which I agree with as proven by my signature.

(IMPORTANT: at this point by providing the appropriate link the Applicant must allow the access to the document" Permission to Data Processing" which had to be filled out before)

I read and signed the" Permission to Data Processing" document.

O I agree and accept   O I do not agree, do not accept

By proceeding you agree that data collected on your person - which cannot be identified as those belonging to your person - may be used for research purposes and that these will be accessible to other researchers.

I declare that I am over 18 years of age. I have received full detailed information concerning the conditions of my participation of the study. I agree with these conditions and I am willing to participate.

O yes   O no

Appendix 3. Permission to data processing for teaching staff

I, as undersigned data subject,

hereby expressly give my consent to the following data controller:

Eötvös Lorand University (HU 1053 Budapest, Egyetemtér 1-3.)

Adult learning and Education
1075 Budapest, Kazinczy u. 23-27.
+36303288068

to process my following data:
This research includes in conducting interviews with teachers and leaders as well as diary for data collection

for the following purposes:
To conduct research dedicated to the teachers' informal and non-formal learning in multilingual education in the context of Kazakhstani higher education. This research will be conducted in order to get more data from the participants in order to analyse the given research problem.

Legal basis of the processing of my data: my consent, given with this statement.

Data processor:
- Bakhyt Aubakirova, PhD Student
- 11-35 Budapest, Kerekes u. 12-20
- +36 202 679 485

The duration of my data processing is according the Rules of Document Management at Eötvös Lorand University:
- My data will be discarded after 5 years.

My rights (in details bellow in Appendix):
1. Transparent information, communication and modalities for the exercise of the rights of the data subject – **I can ask for information concerning my data, at any time;**
2. Right of access by the data subject – **I can access my data at any time;**
3. Right to erasure ('right to be forgotten'), right to restriction of processing – **If I have found a mistake, data controller will correct as soon as possible.**
4. Information to be provided where personal data have not been obtained from the data subject – **I will be informed if my data are forwarded to third party**;
5. Right to data portability (if data controller processmy data onthe basis of my consent/contract the processing is carried out by automated means.) – **if I need, data controller will give me my data;**
6. Right to object - **I can object, at any time to processing of my personal data ;**
7. The right not to be subject to a decision based solely on automated processing, including profiling – **it does not concerns me, nevertheless I can tell if still I am.;**
8. The right to legal remedy: in the case of breach of my rights, I can turn to the data protection officer, to the **National Authority for Data Protection and Freedom of Information, or you can sue a claim to the court.**

Data protection officer of the University:
Dr. Kinga Rigó
Rector's Cabinet
1053 Budapest, Ferenciektere 6.
Tel.: +3614116500/2855.
Email: strategia@rk.elte.hu

National Authority for Data Protection and Freedom of Information
1125 Budapest, SzilágyiErzsébetfasor 22/c.
www.naih.hu
Tel.: +36-1-391-1400

The court:
I can sue for a claim according to my place of residence.

I hereby expressly declare that I have understood the information given above and in the Annex of this declaration,

and I give my consent to the data processing with regard it.

....

        location (site)   date   signature (participant)

(name):_____

address (availability): _____

identification number according to the choice of the data subject (e.g. date and place of birth, number of ID card): _____

Appendix 4. Interview questions for the teaching staff

Name:		**Code of the interviewee**	
Nationality:		Age:	
Civil Status:		Gender:	

Formal educational background	Diploma:	
	Doctoral degree:	
	Language certifications:	

Position in higher education	

Year of general work experience:		Year of work experience in higher education:	
Research area		**Main teaching area:**	

Strong point at the University: (Research or Teaching)	R	T

Teaching experience at the University (years)		Teaching experience in the multilingual education program (years)	

What kind of subjects were you teaching in the past 2 years in the multilingual program?

Subjects taught in Kazakh language		
Subjects taught in Russian		

Subjects taught in English		
Place and date of the interview		

The dissertation analyses how teachers' informal and non-formal learning can facilitate for the development of multilingual education in higher education institutions in Kazakhstan. This study and knowledge will assist to orient the development of teachers' professional development and their contribution to the multilingual education development. Therefore, we would like to ask your active participation in the interview. The interview will take approximately 20-30 minutes. Thank you!

Topics	Interview questions
Formal education- work experience and the Trinity program	
• Professional background in formal education/ • English language teaching's experience • Formal English learner experience	• Before the program, have you participated in foreign / English language teaching? • Have you visited any foreign university? For what purposes? • Do you have any university subject you teach in more languages?
Non-formal learning related to the university's multilingual education	
• Conference participation and organization; seminars; language course participation, all within the aspect how they serve the teaching activities of multilingual education program.	• How often do you participate on conferences? What was the last conference you participated at? What did you learnt from it? • What kind of trainings did you take part in the past 3 years? How did they help your job / teaching or research activities? • When did your academic unit organize your last conference? How often do you organize such events? How often are you involved in conference organizing? Usually what are your tasks? How do this activities influence your teaching? What was their relation to the multilingual education program? • What kind, if yes, language (proficiency) courses or other courses for your professional development did you take part in? How long were there? Where were they organized? • To what extent they were useful and effective for your work? • Which was the most useful training in the near past you participated at? Please, give me an example of any knowledge you learnt from it, and you could implement in your professional practice? • How often do you participate in workshops and seminars? How often do you participate at master classes? How do they help your work?
Informal learning	
• Teachers' informal learning related to multilingual education (preparation for teaching, English	• How do you prepare yourself for the Trinity program classes? • What kind of activities do you do for being more efficient teacher of the Trinity program? • How can you use the English in your everyday life situation, apart from the classroom teaching?

language use and language development outside the classroom; contact to native/foreign speakers; reading habits)	• How much possibility do you have in your everyday life to communicate in English, during an average week? • Do you have colleagues or guests from abroad at your faculty? How often do you meet and communicate with them? • Do you have relations to English speaker friends who are living abroad? How often do you contact them? • What influence do these interactions have on your English knowledge and presentation's skills? • What is the proportion of the books you are reading in Russian / Kazakh and English? • What is the proportion of the studies / books you are writing in English / Kazakh or Russian? • What other tools are you using for developing your English knowledge? • What are the usual everyday channels you are using, and which are improving your English knowledge at the same time? (TOPIC suggested- English TV channels / English movie and series, internet webpage, mobile applications) • Do you remember any situation what you could solve in the past year, because you are a self-reliable English speaker? • Have you discovered any professional or surprising innovation (something new and useful) while you were preparing for your Trinity program classes?
Teacher collaboration –faculty development	
• Faculty developmental aspect	• How often are you engaged in professional discussion/debates with your colleagues? • To what extent do you support your colleagues and contribute to each other's work? • Which channels do you use for efficient communication? What do you know about the co-teaching or team teaching method? Have you worked already in co-teaching or team teaching programs? What kind of experiences do you have? • Have you worked together in the Trinity programs with translators? What kind of experience do you have in this filed? • How often do you learn new methodological / technical skills from your colleagues, especially in relation with the Trinity program? • What was the last thing you learnt from them? To what extent the advices or contribution of your colleagues helped you while working in the Trinity program? • What occurrence can you remember when you showed / taught them something new? • Who can you turn you on for advice, if you are stuck with a problem, and you do not find the right solution?
The evaluation of the program and the impact of the non-formal and informal learning on the professional activities	
• The impact of teachers informal and non-formal learning on the institutional development and	• Why do you like teaching in multilingual program? What are the best elements of the program for the teachers? • Why would you suggest for young teachers colleagues to join the Trinity program as a teacher? • What do you think are the best elements of the Trinity program for students at your faculty?

boosting of the multilingual education • Possible fields of development	• What kind of challenges do you encounter while working in multilingual setting? • What makes it easier and what makes it difficult to perform well in the Trinity program? • How different programs or trainings, language courses ever helped you to teach in multilingual classes? • How does the participation in the program affect your scientific career? • What do you think what kind of learning activities can be useful for the enhancement of teaching and learning quality in multilingual setting?

Informed Consent and Description of Research for leaders

Teachers' informal and non-formal learning in multilingual education: A case of Kazakhstani higher education

You are invited to participate in a research coordinated by Balazs Benkei-Kovács PhD and Bakhyt Aubakirova. The aim of this study is to explore teachers' informal and non-formal learning in the frame of multilingual education. This study also investigates how teachers' informal and non-formal learning can facilitate for the development of multilingual education in Kazakhstani higher education institutions. The interview questions are harmless without any detrimental after-effects.

Participation is utterly **voluntary and anonymous**. First you will be engaged in a 50-60-minute-long semi-structured interview. The interview questions are related to the research questions. With your permission the interview will be conducted by a voice recorder and taking noted for the research aim. All the personal information will be anonymous and will be identified only by pseudonym throughout the study. Performing answers to the interview questions is harmless and it is without any foreseen risks. It is possible to suspend participation so that it should not be tiresome. It is also possible to withdraw consent and terminate participation at any time without any reason and without any consequences.

The results of this study will be used in publications and will also be presented at scientific conferences. If requested, written overall information will be provided on these events.

All information collected during this research will be handled with strict confidentially. Data obtained during the research is stored as coded information on a secure computer and paper-based material (e.g. questionnaires) is kept in a safe or a locked office also in a coded format. All computer documents related to the project will be kept in a secure password-protected computer of the principal investigator. Moreover, the interviews will be conducted only in places where nobody could see or hear our conversation. The individual codes are provided by the assistant in charge, and these are accessible and known only to her/him.

The main benefit which reasonable expected to result from this study is the opportunity to express your opinions, attitudes towards current multilingual education and your experience in the frame of this program in Kazakhstan as well as the influence of faculty members learning on the development of multilingual education. It can be carried out by telling stories, expressing ideas and your opinion, attitudes and beliefs of your teaching and learning practices.

Another benefit of this study is that in the process of interview you will be able to self-reflect on what you do currently as a professional, what challenges you encounter. Your reflection could be helpful and useful in analysis of this research.

No medical or laboratory report will be prepared about the results of the study. I am not (and have not been) treated for any kind of neurological or mental disease. I am not (and have not been) treated for any kind of neurological or mental disease.

Please sign the agreement below if you agree with the conditions outlined above and endorse participation in the study. We thank you for your collaboration.

CONTACT INFORMATION:

Questions: If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact the Research Supervisor, Dr. Balazs Benkei-Kovacs, e-mail: benkeikovacs.balazs@ppk.elte.hu, mobile: +36 303 288 068

Please sign this consent from 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.

ELTE FPP as data processor handles my above personal data confidentially and does not allow access to these for other data processing or data analyzing organizations of any kind. Details of this statement are found in the "Information of Processing of Data (GDPR)" which I agree with as proven by my signature.

(IMPORTANT: at this point by providing the appropriate link the Applicant must allow the access to the document "Permission to Data Processing" which had to be filled out before)

I read and signed the "Permission to Data Processing" document.

O I agree and accept   O I do not agree, do not accept

By proceeding you agree that data collected on your person - which cannot be identified as those belonging to your person - may be used for research purposes and that these will be accessible to other researchers.

I declare that I am over 18 years of age. I have received full detailed information concerning the conditions of my participation of the study. I agree with these conditions and I am willing to participate.

O yes   O no

Interview topics	Introductory questions
Personal information	- Please introduce yourself, tell us about your background in education? - What are the most important values and ethics you show as a leader? - How long have you been working as a faculty leader?
Developmental process of multilingual education at faculty level	
Multilingual education program development	- What do you think about multilingual education taking place at your University? - How long your university is participating in its implementation? - Could you describe how the multilingual education is developing and organized at the faculty level? - What kind of challenges does the faculty encounter while integrating multilingual program? How does the faculty assist to solve problems occurred? - What is the attitude of teachers towards such challenges? How do the faculty members overcome such difficulties? Could you give us some examples? - What kind of teaching methods or tools faculty members are using in multilingual setting? To what extent they are effective have you encountered innovative ones? - To what extent the university provides faculties with pedagogical/methodological support (?)(In English) in multilingual setting? - How do you motivate your team *in the multilingual education program*? How do you encourage learning and development of employees?
The impact of multilingual education on teacher methodological support	
	- How teachers prepare pedagogical/methodological support in English? Does the faculty supply them with appropriate teaching resources? - How do the teachers attempt to develop themselves in order to be able to work in multilingual education? - What do you think why it is difficult to conduct lessons in a foreign language? - How often does the faculty organize language courses (foreign or) for teachers? - To what extent conferences, seminars or trainings are related to the multilingual education? - What are the advantages and strengths of multilingual program for teachers?
Professional development of faculty members	
Faculty development process	- Is there any opportunity for forums where the methodological issues related to multilingual education can be discussed? - What kind of activities do you do or support for strengthening the teaching's community? Especially the community of those teachers who are teaching in English as well? - How and how often do the teachers collaborate with colleagues? What kind of incentives do you give them to do that? - How do they perceive that collaboration, and how do they realize it?

	- How do you support and improve the connection among the faculty members? - What kind of activities do you suggest for faculty teachers to *help* their professional development in the *multilingual education*? - To what extent they are engaged in learning activities *beyond the teaching / everyday work*?
Institutional or educational support for faculty members	
	- How do you facilitate development of the quality of teaching at your faculty, especially in the frames of the multilingual program? - What are the strong points of your faculty's teaching activities? What kind of strategies do you use for helping colleagues becoming better teachers? To what extent you are satisfied with the work of teaching staff? - Do you have a formal mentoring system? How do you attract or invite teachers to help each other? - What kind of events/conferences/ professional trainings do you organize regularly? To what extent such organized courses or trainings help to teach in multilingual setting? - What kind of internships do you provide for teacher's development? How it influences on their performance?

Eötvös Loránd
Tudományegyetem

E·L·T·E

How to fill out the survey?

Dear colleague,

We are expecting from you to fill out this survey. It consists of four learning events in the context of informal learning that you learned or experienced during the day. These learning events should be related to your learning activities in the frame of multilingual (polylingual) education. In this survey you are to response to the following questions: Date (choose the day); Day period (choose the hours what time approximately the learning happened); Choose faculty; **Identify the topic or goal of learning (please, be accurate and concise while giving precise reply)**; Length of learning (choose from the given variants); Description of learning activity; Type of new knowledge that you gained; Source; Channel of learning; Your role in the activity; Motivation for learning that activity; Place of learning; Utility of the new knowledge. You are to

fill it out one by one each day for five working days.

Expected time: 15-20 minutes (each day)

1. **Step:** Please, choose the day from five days given with star sign ☆☆☆☆☆
2. **Step:** Please, choose the faculty you belong to.
3. **Step:** We are expecting from you to identify the **1ˢᵗ informal learning** event to fill out

GUIDELINES FOR FILLING THE SURVEY OUT

Please click on the following link
https://elteppk.eu.qualtrics.com/jfe/form/SV_79VZHiwhk6KqOsB

NOTE: Please, keep in mind, that you have to fill out all four learning events one by one at once each day (fill this survey out for 5 working days)

The researcher: Bakhyt Aubakirova, feel free to contact me.
email: bakhyt.aubakirova@ppk.elte.hu, WhatsApp +36202679485

4. **Step:** We are expecting from you to identify the **2ⁿᵈ informal learning** event to fill out

GUIDELINES FOR FILLING THE SURVEY OUT

Please click on the following link

https://elteppk.eu.qualtrics.com/jfe/form/SV_79VZHiwhk6KqOsB

NOTE: Please, keep in mind, that you have to fill out all four learning events one by one at once each day (fill this survey out for 5 working days)

The researcher: Bakhyt Aubakirova, feel free to contact me.
email: bakhyt.aubakirova@ppk.elte.hu, WhatsApp: +36202679485

5. **Step:** We are expecting from you to identify the **3ʳᵈ informal learning** event to fill out

GUIDELINES FOR FILLING THE SURVEY OUT

Please click on the following link

https://elteppk.eu.qualtrics.com/jfe/form/SV_79VZHiwhk6KqOsB

NOTE: Please, keep in mind, that you have to fill out all four learning events one by one at once each day (fill this survey out for 5 working days)

The researcher: Bakhyt Aubakirova, feel free to contact me.
email: bakhyt.aubakirova@ppk.elte.hu, WhatsApp: +36202679485

6. **Step:** We are expecting from you to identify the **4th informal learning** event to fill out

GUIDELINES FOR FILLING THE SURVEY OUT

Please click on the following link
https://elteppk.eu.qualtrics.com/jfe/form/SV_79VZHiwhk6KqOsB

NOTE: Please, keep in mind, that you have to fill out all four learning events one by one at once each day (fill this survey out for 5 working days)

The researcher: *Bakhyt Aubakirova, feel free to contact me.*
email: bakhyt.aubakirova@ppk.elte.hu, WhatsApp +36202679485

Thank you for your collaboration!

Appendix 8. Diary questionnaire

Q001. Dear Colleague,

We would like to invite you in a research for exploring the learning events in your professional life: we would like to discover moments or events in your days which brought you some knowledge, and can for their reason accepted and appreciated as informal learning. Please remember each time you are filling this survey, you will have to report about 4 learning events of your day related to some aspects to learning, remembering also some contextual factors of this events.

If you are interested you can read more about informal learning in the following paper:
Sian Halliday- Wynes and Francesca Beddie (2009): Informal learning at a
glance: https://www.ala.asn.au/wp-content/uploads/research/Informal_learning-At_a_glance.pdf

Thank you in advance for giving to our research 15-20 minutes, in 5 consecutive days.

Q1. Date

The day of the learning activities ★★☆☆☆ 2

Q2. Please, indicate the faculty you belong to?

Faculty of Philology and Pedagogy (KBU)	Faculty of Natural Sciences (KBU)	Faculty of Physics and Technical Sciences (ENU)	Mechanics and Mathematics faculty (ENU)
○	○	○	◉

1. LEARNING EVENT № 1

Q3. What is the topic or goal of your learning activity? (For example: Professional discussion with colleagues about the problems of Astrophysics; Using wiki about Kondratiev wave; Lunch gathering with guest lecturers from our faculty) Please, indicate it in 2 - 5 words shortly?

Professional discussion with colleagues about Cauchy's theorem

Q4.
Day period

Q5. Length of the learning activity

- ○ Less than 10 minutes
- ◉ 10-30 minutes
- ○ 1-2 hours
- ○ More than 2 hours

Q6. Description of learning activity. Please describe briefly the activity which resulted in learning?

- ○ Information gathering
- ○ Online consultation
- ○ Knowledge sharing

- ○ Job execution
- ◉ Conversation

Q7. Type of the new knowledge

Professional knowledge	English language knowledge	Methodological knowledge	Ability/skill to perform well in the everyday work of the MP
○	○	○	◉

Q8. Source

- ○ Training or program on Multilingual education
- ○ Conference or workshop
- ○ Colleagues or peers
- ○ Meeting with guest speakers
- ○ Internet if yes, specify

- ○ Books if yes, specify
- ○ Community networking events
- ◉ Discussion
- ○ Collaboration with colleagues(professional groups
- ○ One-time reading

Q9.
Channel of the learning

Interaction with a person	Reading	Media or Internet	Observation	Experience	Self-regulated learning	Lunch gathering	Social websites
○	◉	○	○	○	○	○	○

Q10. Tools

Computer or laptop	E-book reader	Tablet	Smartphone	Television or radio	Other devices	Social media	Only personal contact	Projector	None
☑	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q11. My role in that activity

Items	My role in that activity
Mentor	Tutor
Counsellor	
Technical specialist	
Coach,peer coaching	
Learner	
Presenter	

Learner
Presenter
Teacher
Teacher
Mentee
None

Collaborator's role	
Learner	1

Q12. Motivation for the learning activities

○ Curiosity   ● Reflection and critical thinking
○ Problem solving   ○ Job execution
○ Supporting teaching   ○ Receiving or giving feedback
○ Supporting evaluation   ○ Not specific purpose

Q13. Place of the learning

○ Office   ○ Outside
○ Home   ○ University building
● Classroom   ○ Travel, public transport

Q14. Utility of the new knowledge

Correlations

		Day period?	Length of learning activity?	Description of learning activity. Please briefly describe the activity which resulted in learning?	Type of the new knowledge	Source?	Channel of the learning?	Tools?	My role in that activity?	Collaborator's role in that activity?	Motivation for the learning activity?	Place of the learning?	Utility of the new knowledge?
Day period?	Pearson Correlation	1	.150*	-.158*	.033	-.024	.036	-.160*	-.008	.049	.144*	-.140*	**-.353****
	Sig. (2-tailed)		.027	.020	.628	.727	.599	.019	.913	.509	.035	.042	**.000**
	N	216	216	216	212	216	216	214	201	184	214	212	211
Length of learning activity?	Pearson Correlation	.150*	1	-.069	.001	.066	.198**	-.093	.127	-.160*	.211**	-.180**	-.164*
	Sig. (2-tailed)	.027		.294	.991	.316	.002	.160	.061	.024	.001	.007	.013
	N	216	233	233	229	233	233	231	216	197	230	228	228
Description of learning activity. Please briefly describe the activity which resulted in learning?	Pearson Correlation	-.158*	-.069	1	.069	.151*	-.121	**.349****	.124	-.137	.089	.273**	-.028
	Sig. (2-tailed)	.020	.294		.301	.022	.065	**.000**	.069	.055	.180	.000	.669
	N	216	233	233	229	233	233	231	216	197	230	228	228
Type of the new knowledge	Pearson Correlation	.033	.001	.069	1	.110	.049	-.038	-.227**	.069	-.017	.023	-.036
	Sig. (2-tailed)	.628	.991	.301		.095	.458	.565	.001	.338	.803	.737	.594
	N	212	229	229	229	229	229	228	214	195	228	224	224
Source?	Pearson Correlation	-.024	.066	.151*	.110	1	-.011	.111	.087	-.091	-.118	.159*	.032
	Sig. (2-tailed)	.727	.316	.022	.095		.864	.091	.205	.204	.074	.017	.631
	N	216	233	233	229	233	233	231	216	197	230	228	228
Channel of the learning?	Pearson Correlation	.036	.198**	-.121	.049	-.011	1	**-.342****	-.137*	.003	.097	**-.351****	.016
	Sig. (2-tailed)	.599	.002	.065	.458	.864		**.000**	.045	.971	.141	**.000**	.816

234

	N	216	233		233	229	233	233	231	216	197	230	228	228
Tools?	Pearson Correlation	-.160*	-.093		.349**	-.038	.111	-.342**	1	.226**	-.231**	.040	**.490****	.076
	Sig. (2-tailed)	.019	.160		.000	.565	.091	.000		.001	.001	.548	**.000**	.256
	N	214	231		231	228	231	231	231	215	196	229	226	226
My role in that activity?	Pearson Correlation	-.008	.127		.124	-.227**	.087	-.137*	.226**	1	-.110	.078	.089	-.063
	Sig. (2-tailed)	.913	.061		.069	.001	.205	.045	.001		.123	.253	.197	.359
	N	201	216		216	214	216	216	215	216	197	215	211	211
Collaborator's role in that activity?	Pearson Correlation	.049	-.160*		-.137	.069	-.091	.003	-.231**	-.110	1	-.023	-.096	.040
	Sig. (2-tailed)	.509	.024		.055	.338	.204	.971	.001	.123		.744	.183	.582
	N	184	197		197	195	197	197	196	197	197	197	195	192
Motivation for the learning activity?	Pearson Correlation	.144*	.211**		.089	-.017	-.118	.097	.040	.078	-.023	1	.020	-.194**
	Sig. (2-tailed)	.035	.001		.180	.803	.074	.141	.548	.253	.744		.767	.004
	N	214	230		230	228	230	230	229	215	197	230	225	225
Place of the learning?	Pearson Correlation	-.140*	-.180**		.273**	.023	.159*	-.351**	.490**	.089	-.096	.020	1	-.003
	Sig. (2-tailed)	.042	.007		.000	.737	.017	.000	.000	.197	.183	.767		.968
	N	212	228		228	224	228	228	226	211	195	225	228	223
Utility of the new knowledge?	Pearson Correlation	-.353**	-.164*		-.028	-.036	.032	.016	.076	-.063	.040	-.194**	-.003	1
	Sig. (2-tailed)	.000	.013		.669	.594	.631	.816	.256	.359	.582	.004	.968	
	N	211	228		228	224	228	228	226	211	192	225	223	228

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 10. Ethical permission for the study of Hungarian Educational experts

EÖTVÖS LORÁND TUDOMÁNYEGYETEM
PEDAGÓGIAI ÉS
PSZICHOLÓGIAI KAR
KUTATÁSETIKAI BIZOTTSÁG

E·L·T·E

EÖTVÖS LORÁND UNIVERSITY
FACULTY OF EDUCATION
AND PSYCHOLOGY
RESEARCH ETHICS COMMITTEE

Reference number: 2021/440

Research Ethics Application Approval

Name of the Principal Investigator (PI)	Balazs Benkei-Kovacs
Academic degree of the PI	PhD Degree
Place of work of the PI (Faculty/Institute/Department)	Supervisor Doctoral School of Education, , Eötvös Loránd University Senior Lecturer, Department of Education, Budapest Business School
Job title of the PI:	Supervisor at ELTE Doctoral School of Education senior lecturer at BGE Department of Education
E-mail address of the PI	benkei-kovacs.balazs@uni-bge.hu
Title of the research:	Analysis of Hungarian educational experts in view of policy and faculty development programs in the topic of multilingual education. This research is a part of the empirical analysis of dissertation "Teachers' informal and non-formal learning in multilingual education in the context of Kazakhstani higher education institutions", under development and prepared by Bakhyt Aubakirova.
Research fields related to the topic of the present research (e.g. cognitive psychology, etc)	Educational policy and faculty development programs
Other researchers involved (e.g. students, etc.)	Bakhyt Aubakirova, a PhD Candidate at Adult learning and education programme, Doctoral School of Education, Faculty of Education and Psychology, ELTE Holder of Stipendium Hungaricum research grant for 5th year.
Expected dates of the beginning and the end of the research	15th November – 31st of January

This decision is based on the evaluation of the referenced Application submitted to the Research Ethics Committee.

IMPORTANT: this ethical permission is sent only to the Principal Investigator (person requesting the ethical permission).

Budapest, 02. 11. 2021.

Eötvös Loránd University
Faculty of Education and Psychology
Research Ethics Committee
H-1064 Budapest, Izabella u. 46.

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Research Ethics Committee, Chair or Acting Member

H-1064 Budapest, Izabella u. 46.   •   telephone: (36-1) 209-0619
e-mail: keb@ppk.elte.hu • www.ppk-keb.elte.hu

Appendix 11. Permission to data processing for Hungarian educational experts

I, as undersigned data subject (the participant of the interview),

hereby expressly give my consent to the following data controller:

Benkei-Kovács Balázs Phd and Aubakirova Bakhyt

06303288068 (phone number)

Doctoral School of Education

Eötvös Lorand University (HU 1053 Budapest, Egyetem tér 1-3.)

1075 Budapest, Kazinczy u. 23-27. (address of the Doctoral School)

to process my following data:

- length of my educational experience in Higher education (given in year)

for the following purposes:

This data together with the anonym interview segment could be published in the doctoral dissertation and in scientific papers, keeping confidential all my other data, ensuring total anonymity.

Legal basis of the processing of my data: my consent, given with this statement.

Data processor:

- Benkei-Kovacs Balázs Phd and Bakhyt Aubakirova, PhD Candidate
- BKB: H-1027 Budapest Frankel Leó ut 9. I. em 7. 0630-328-8068
- BA_ H-1076, Budapest, Peterfy-Sandor ut 36-35 (address of the processor) 06202679485 (phone number)

The duration of my data processing: is according the Rules of Document Management at Eötvös Lorand University:

- My processed data will be discarded after 5 years.

My rights

9. Transparent information, communication and modalities for the exercise of the rights of the data subject – **I can ask for information concerning my data, at any time;**
10. Right of access by the data subject – **I can access my data at any time;**
11. Right to erasure ('right to be forgotten'), right to restriction of processing – **If I have found a mistake, data controller will correct as soon as possible.**
12. Information to be provided where personal data have not been obtained from the data subject – **I will be informed if my data are forwarded to third party**;
13. Right to data portability (if data controller process my data on the basis of my consent/contract

    the processing is carried out by automated means.) – **if I need, data controller will give me my data;**
14. Right to object - **I can object, at any time to processing of my personal data ;**
15. The right not to be subject to a decision based solely on automated processing, including profiling **– it does not concerns me, nevertheless I can tell if still I am.;**
16. The right to legal remedy: in the case of breach of my rights, I can turn to the data protection officer, to the **National Authority for Data Protection and Freedom of Information, or you can sue a claim to the court.**

Data protection officer of the University:

Rector's Cabinet

1053 Budapest, Ferenciek tere 6.

Tel.: +36-1-411-6500/2855

Email: strategia@rk.elte.hu

National Authority for Data Protection and Freedom of Information

1055 Budapest,

Falk Miksa utca 9-11.

www.naih.hu

Tel.: +36-1-391-1400

The court:

I can sue for a claim according to my place of residence.

I hereby expressly declare that I have understood the information given above and in the Annex of this declaration, and I give my consent to the data processing with regard it

……………………………………………………………………………………………

      location (site)   date   signature (participant)

(name): -Benkei-Kovacs Balázs Phd and Bakhyt Aubakirova, PhD Candidate

BKB: H-1027 Budapest Frankel Leó ut 9. I. em 7. 0630-328-8068

-      BA: H-1076, Budapest, Peterfy-Sandor ut 36-35 (address of the processor) 06202679485 (phone number)

identification number according to the choice of the data subject (e.g. date and place of birth,

Passport number: Bakhyt Aubakirova - N12301310

Identification card: Benkei-Kovács Balázs 400699RA

Informed Consent and Description of Research for educational policy experts (online study)

Analysis of Hungarian educational experts in view of policy and faculty development programs in the topic of multilingual education.

You are invited to participate in a research coordinated by Balazs Benkei Kovacs PhD and a PhD Candidate Bakhyt Aubakirova. The aim of this study is identifying the valuable approaches towards the use of educational policy and important possibilities of successful implementation of educational reform. The study also assists in determining main issues of education policy development and how it can facilitate for the development of multilingual education in the context of Kazakhstani higher education institutions. The interview questions are harmless without any detrimental after-effects.

Participation is utterly **voluntary and anonymous**. First you will be engaged in a 40-50 minutes semi-structured interview. The interview questions are related to the research questions. With your permission the interview will be conducted by a voice recorder and taking noted for the research aim. All the personal information will be anonymous and will be identified only by pseudonym throughout the study. Performing answers to the interview questions is harmless and it is without any foreseen risks. It is possible to suspend participation so that it should not be tiresome. It is also possible to withdraw consent and terminate participation at any time without any reason and without any consequences.

The results of this study will be used in publications and will also be presented at scientific conferences. If requested, written overall information will be provided on these events.

All information collected during this research will be handled with strict confidentially. Data obtained during the research is stored as coded information on a secure computer and paper-based material (e.g. questionnaires) is kept in a safe or a locked office also in a coded format. All computer documents related to the project will be kept in a secure password-protected computer of the principal investigator. Moreover, the interviews will be conducted only in places where nobody could see or hear our conversation.

The main benefit which reasonable expected to result from this study is the opportunity to express your opinions, attitudes towards educational policy implementation and your experience in the frame of educational reform and faculty development program. It can be carried out by telling stories, expressing ideas and your opinion, attitudes and beliefs of your practices in the field of education.

Another benefit of this study is that in the process of interview you will be able to self-reflect on what you do currently as a professional, what challenges you encounter. Your reflection could be helpful and useful in analysis of this research.

No medical or laboratory report will be prepared about the results of the study. I am not (and have not been) treated for any kind of neurological or mental disease. I am not (and have not been) treated for any kind of neurological or mental disease.

Please sign the agreement below if you agree with the conditions outlined above and endorse participation in the study. We thank you for your collaboration.

CONTACT INFORMATION:
If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact:
Research Supervisor, Dr. Balazs Benkei-Kovacs, mobile: +36 303 288 068.
PhD Candidate Aubakirova Bakhyt, e-mail: bakhyt.aubakirova@ppk.elte.hu, mobile: +36202679485
Please sign this consent from 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.

ELTE FPP as data processor handles my above personal data confidentially and does not allow access to these for other data processing or data analyzing organizations of any kind. Details of this statement are found in the "Information of Processing of Data (GDPR)" which I agree with as proven by my signature.

(IMPORTANT: at this point by providing the appropriate link the Applicant must allow the access to the document "Permission to Data Processing" which had to be filled out before)

I read and signed the "Permission to Data Processing" document.

O I agree and accept   O I do not agree, do not accept

By proceeding you agree that data collected on your person - which cannot be identified as those belonging to your person - may be used for research purposes and that these will be accessible to other researchers.

I declare that I am over 18 years of age. I have received full detailed information concerning the conditions of my participation of the study. I agree with these conditions and I am willing to participate.

O yes   O no

INTERVIEW QUESTIONS FOR EDUCATIONAL EXPERTS

Length of the educational expert' experience in Higher education (in years): _____

№	INTERVIEW QUESTIONS
	Introduction part
1	Have you seen any similar educational reform during your research in the world? (national-wide, centralized program in HEIs, internal modernization)
b	What was the most innovative element of that development?
2	What do you think would it be possible to adapt such Kazakhstani multilingual reform in European HEIs? What would be reasons for it based on your experience? (useful, more easy-to-do)
3	In your opinion, what kind of challenges do the teachers encounter in multilingual program if it is implemented in Hungary?
	Macro level
2	In your opinion, what kind of support should be provided to the universities at the national level?
3	In your view, what are the strengths and weaknesses of multilingual program?
4	If a similar program is implemented in Hungary, what kind of barrier would appear at national level up to your experience?
	Meso level
7	Based on your international experience, what are the effective tolls (at institutional level) for involving teachers actively in education reforms?
8	What do you think, how can faculty leaders motivate teachers in participating in multilingual program more intensively?
9	If at your university similar program is introduced, what kind of support would you welcome for teachers?
	Micro level
10	How many different roles university teachers are participating in? (in general enumeration)
11	Supposing that the role of language teacher is a typical function for academic staff up to your opinion? How can they match effectively that new requirement?
12	In your opinion, what kind of challenges would the teachers (your colleagues) encounter in a similar educational reform implementation?
Final remark: Do you have any other idea of suggestions for helping to support multilingual program development?	