

# **BARRIERS AND FACILITATORS OF INTRODUCING PISA IN MONGOLIA**

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Master of Education (Educational Research, Evaluation and Assessment)

Submitted in partial fulfilment of the requirements for the degree of

Master of Education

Flinders University

School of Education, Psychology and Social Work

2018.07.18

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### LIST OF ABBREVIATIONS

ADB- Asian Development Bank

EEC-Educational Evaluation Centre of Mongolia /an affiliated organisation of MECSS/

EGMA- Early Grade Mathematics Assessment

EGRA- Early Grade Reading Assessment

ITPD- Institute of Teachers' Professional Development of Mongolia /an affiliated organisation of MECSS/

MECSS- Ministry of Education, Culture, Science and Sport

MIER- Mongolian Institute for Education Research /an affiliated organisation of MECSS/

NAEP- National Assessment of Educational Progress

OECD- Organisation for Economic Co-operation and Development

PIRLS- Progress in International Reading Literacy Study

PISA- Programme for International Student Assessment

SBREC- Social and Behavioural Research Ethics Committee


TIMSS-Trends in International Mathematics and Science Study

UNESCO- United Nations Educational, Scientific and Cultural Organisation

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### STATEMENT OF ORIGINAL AUTHORSHIP

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by any other person except where due reference is made.

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

Date: 2018.11.05

## ACKNOWLEDGEMENTS

I would like to express my sincere gratitude towards my wonderful supervisor. Grace you were the lighthouse for me when I was lost, you were the grace when I struggled and were the joy when I won. I am fortunate to commence my very first step of my research journey with you, and with your care, energy and enthusiasm.

I also want to show appreciation to my tutor David Langdon. You helped me see my dissertation from different angles and encouraged me to improve my work in a way that I wanted to do and, in a way, that readers would expect. It was great to get your valuable feedback, as well as to receive your warm encouragement.

My greatest appreciation is to the Ministry of Education, Culture, Science and Sports of Mongolia, its affiliated organizations and schools for approval to conduct data collection, and special thanks to Sarantuya, T, a former Australian awards student, for her enormous support on networking. I am so thankful to all my friends, family and colleagues for cheering and sheltering me during my first academic journey. It was a great honour for me to have this opportunity to contribute to my inspiring country.

I would like to acknowledge the Australian Awards Scholarship and its teams both in Australia and Mongolia for approval and funding of my fieldtrip in Mongolia and for the remarkable support and contribution they have made for the current and future leaders of my country.



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I am grateful to my university which feels like my home, the International Students Support Centre team, most specifically, to Mahin, Nina and Anthony, Student Learning Centre staff, and Library teams. Without your support, guidance and advice, this journey would not have been successful.

Last but not least, I want to thank my persistent and smart husband who always believes in me and strengthens my hopes, dreams and goals. Your love and friendship was the strongest tower for me to lean on. I also thank my special daughters for cheering me up and giving me a chance to prove that women are strong enough to fulfil their professional goals and nurture their family at the same time.

## ABSTRACT

The Programme for International Student Assessment (PISA) is a triennial survey conducted by many countries in partnership with the Organisation for Economic Co-operation and Development (OECD), which aims to evaluate education systems and provide comparable data from participating countries by testing the knowledge and skills of 15-year-old students. Students are assessed in science, mathematics, reading, collaborative problem solving, and financial literacy, the results of which assist in measuring and evaluating standards of scholastic performance and equity in education around the world. The Mongolian Governmental Sustainable Development Goal for the upcoming 15 years seeks to introduce the PISA initiative by the year 2021 in Mongolia.

This study explores barriers and facilitators likely to affect the introduction of PISA in Mongolia. This qualitative study was conducted using semi-structured face-to-face interviews with 12 participants; adults from both the secondary school sector and at ministerial levels in Mongolia. Thematic analysis of the interviews found that the difference in knowledge about PISA between the various stakeholders has a political impact on the Education sector as well as management issues namely, time, finance and planning. These can be the most influential barriers for Mongolia when the country introduces PISA. However, the current needs of the country, acceptance of PISA into Mongolian high-level policies and the influence of international trends to accept PISA are defined as the strongest facilitators for the introduction of PISA in Mongolia. This dissertation argues that in advance of introducing PISA in a country such as Mongolia, there is a strong need for educational research to facilitate information sharing between stakeholders in order for them to gain

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scholarly knowledge to inform considerations which may burden or foster the processes inherent in implementing PISA.

### KEY WORDS

PISA, barriers, facilitators, recommendations, introducing PISA

## CHAPTER 1: INTRODUCTION

Educational developments in Mongolia have been increasing due to ongoing reform and promising initiatives in the current education system. The initiative of introducing the Programme for International Student Assessment (PISA) in Mongolia is one of them. PISA is a triennial survey conducted by many countries in partnership with the Organisation for Economic Co-operation and Development (OECD), which aims to evaluate education systems and provide comparable data from participating countries by testing the knowledge and skills of 15-year-old students. Students are assessed in science, mathematics, reading, collaborative problem solving, and financial literacy, the results of which assist in measuring and evaluating standards of scholastic performance and equity in education around the world. Although many developing and developed nations participate in PISA, Mongolia has yet to join the programme. By including this initiative as an objective in the Mongolian Sustainable Development Vision-2030” (Secretariat of State Great Khural, 2016) government policymakers express their intentions to participate in PISA by the year 2021. Such action would enable Mongolia to begin contributing to a solution for the implementation and improvement of current and future education policies. Since PISA is considered essential for the Mongolian Sustainable Development Goal over the next 15 years, it is clear that researching the introduction of PISA from various perspectives is vital for enhancing its benefits for the education system of Mongolia.

The importance of introducing PISA can be articulated by the four major contributions expected in the Mongolian education system, namely as facilitating educational equity in

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child education; enabling the monitoring of the education system; providing insights about policy, and enabling a basis for research initiatives once the experience of former PISA participants is considered (Ertl, 2006; Gurría, 2016; Organisation for Economic Co-operation and Development, 2016; Tobin, Lietz, Nugroho, Vivekanandan, & Nyamkhuu, 2015). Equity in child education is a goal as children are prepared as future citizens who contribute to the economic and social wellbeing of the country. According to Schleicher (2017), PISA enables countries and policymakers to identify inequitable distribution of learning opportunities among children with different social backgrounds. Therefore, based on a wide range of PISA outcomes concerning equity in education, policymakers may address equity-related challenges and can accordingly upgrade educational policies effectively for sustainable development of the future population and country of Mongolia.

PISA plays a dominant role in permitting the comparison of the quality of secondary education in its participating countries. Therefore, once Mongolia participates it will be possible to determine whether secondary education in Mongolia has achieved international standards. As discussed by Grek (2009) some countries choose to participate in PISA comparisons because they find that PISA focuses on policymaking and enables participating countries to identify the ways to improve legislative circumstance of the education system for future lifelong learners. Findings from the PISA outcomes may support policymakers to identify insights about current educational policy (Ertl, 2006). Similarly, with the support of PISA outcomes, the Mongolian education system may clarify either strengths or weaknesses in their current policy. Moreover, the PISA experience in Mongolia will enable the country to share its gains and obstacles associated with implementing PISA as an initiative for

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educational sustainability and this may contribute to insights about current educational policies as well.

It is anticipated that the implementation of PISA will motivate Mongolian researchers into closely studying the introduction and impact of PISA and similar initiatives. Moreover, it will cause educational researchers to acknowledge their views about educational issues raised by the future results of PISA in Mongolia and enable them to initiate valuable and thoroughly considered recommendations for improvement. By strengthening collaboration between researchers and policymakers, it will save time, money and effort in the country for the introduction of PISA and it such collaborations can increase the gains for Mongolia once it begins participating in the PISA assessment.

As summarised in the country profile of UNESCO (2009), over the last few decades the education sector of Mongolia has undergone some significant reforms. Historically, between the 1930s and 1990, the Mongolian education system was developed under the education policies of the former Soviet Union (UNESCO, 2009). After 1990, there was a strong need in the Mongolian secondary education system to attain consistency with international standards of schooling (Asian Development Bank, 2008; UNESCO, 2009, 2011; Weidman, 2001).

Therefore, in 2004, the Mongolian Parliament transferred the education structure from a ten-year schooling system to a twelve-year one. Children now begin elementary school when they are six years of age instead of eight years (UNESCO, 2009, 2011). Within the framework of the educational reform, three international laboratory schools and 30 national laboratory schools have been established, all aiming to achieve international standards. As

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defined in the Law of Education Mongolia, laboratory schools are the general secondary schools where piloting of new curricula and methodology of schooling is organized. These schools are considered role models for the schooling reforms at the national level (Secretariat of State Great Khural, 2002)

Furthermore, in 2016 the Mongolian Parliament adopted “Principles on Sustainable Development in Mongolia-2030”, which was based on the 2030 Agenda for the World Sustainable Development by the United Nations (Secretariat of State Great Khural, 2016; UNESCO, 2015). One of the main objectives of the principles clearly states that PISA will be introduced in Mongolia by 2021 (Secretariat of State Great Khural, 2016). This initiative can be considered valuable for the education system; however, the introduction of PISA may challenge the country and the education system in different ways. For instance, introducing PISA without having sufficient research and a clear plan will result in negative effects, such as to waste time, reduce benefit, and increase effort, while it will lower the contributions of the country towards global objectives for educational sustainability.

The main purpose of this study was to explore the barriers and facilitators likely to affect the introduction of PISA in Mongolia. The term “barrier” refers to issues that obstruct the process and the action of introducing PISA in Mongolia, while the term “facilitator” relates to both internal and external factors that help forward the process and the action of introducing PISA in Mongolia (Heron, 1999). According to Oliver, Innvar, Lorenc Woodman and Thomas (2014), poor access to high quality, timely and relevant research are key barriers to the introduction of new policies. However, collaboration and improved relationships between

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researchers and policymakers are the key facilitators in the successful uptake of new policy initiatives, such as PISA in Mongolia (Oliver et al., 2014). Despite these suggestions very little is known about the specific barriers and facilitators for the introduction of PISA in Mongolia. This research seeks to fill this gap and aims to provide evidence and recommendations to Mongolian Government policymakers in preparation for the introduction of the PISA initiative. Additionally, the study sought to make recommendations based on the study results for the introduction of PISA in Mongolia.

### RESEARCH RATIONALE AND EXPECTED OUTCOMES

The rationale for this study is based on the need for information and insights about how the stakeholders of the Mongolian education system would find the introduction of PISA. Moreover, by considering the view of informed stakeholders at different levels in the system (e.g. teachers, policymakers and ministerial level specialists), the study will make recommendations based on the strengths and limitations anticipated by stakeholders for the introduction of PISA in Mongolia. Moreover, the study will provide education stakeholders with an opportunity to express their views about introducing PISA in Mongolia.

Furthermore, this study would serve as a base for further research on PISA in the Mongolian and international contexts. It is expected that the scope of the current study could be extended for further academic purposes. Gurria (2016) and OECD (2016) have reported that, of the more than 70 countries and economies that participated in the last PISA cycle, only the low-and-medium income countries of Europe and Central Asia had the highest levels of participation and interest in PISA and other similar large scale testing. Therefore, this study



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could inform other countries that are considering taking part in upcoming cycles of PISA and assist them to foresee potentials and burdens in introducing PISA.

In summary, the study includes three objectives:

- 1) identifying barriers to introducing PISA in Mongolia;
- 2) identifying facilitators for introducing PISA in Mongolia; and
- 3) generating recommendations based on how available facilitators may help to eradicate barriers to the introduction of PISA in Mongolia.

To achieve these objectives, the views of educators and policymakers who would be involved with PISA were sought. It was considered that their personal insights and thoughts on the introduction of PISA would be valuable for identifying relevant barriers and facilitators in the Mongolian context. By choosing a sample of educators with different levels of expertise and knowledge of PISA, the study sought to obtain unbiased and diversified information about the issue.

## RESEARCH QUESTIONS

The main question that this study will address is “What are the barriers and facilitators to introducing PISA in Mongolia?” and the study aims to answer the following sub-questions: a) What facilitators and barriers to introducing PISA in Mongolia are anticipated by participants? b) What recommendations do participants have for the successful and effective introduction of PISA in Mongolia?

## CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Current studies on PISA generally explore how PISA affects the educational policy of a country and how PISA outcomes should be appropriately applied (Białecki, Jakubowski, & Wiśniewski, 2017; Bloem, 2013; Breakspear, 2012; Ertl, 2006; Grek, 2009; Hopfenbeck & Görden, 2017; Levin, 2012; Simola, 2005). Since the OECD has only been conducting PISA assessments from 2000, there is not a vast literature on the process of introducing PISA in a country, especially, studies on the topic of this study, which focus on experiences of countries intended to introduce PISA for the first time, could not be found.

Popularity and acceptance of international assessment methodologies, such as PISA, are rapidly developing in countries and economies. According to the most recent report by OECD, about 540,000 students representing 72 countries were assessed in the 2015 cycle of PISA (Gurría, 2016; Organisation for Economic Co-operation and Development, 2016).

Countries and regions hold different aspirations with regards to their participation in PISA. For instance, Asia-Pacific countries utilise these assessments to ensure quality, equity, and accountability of the system of education and to prove the significance and benefits of existing policies in their countries (Tobin et al., 2015). However, European countries accept PISA as a suitable measurement for the educational outcomes and the quality of educational policies, but they also expect recommendations associated with PISA results to improve existing educational policy and the education system (Ertl, 2006).

According to Ertl (2006), 'PISA-shock' is a phenomenon that can occur when a country receives unexpectedly low results in PISA. This can be the cause of urgent national reform in

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the education system, as happened in Germany when poor PISA results were obtained in the 2006 PISA assessment. The shockwaves sent through the German education system caused changes in government policy and resulted in wide-ranging school reform, which was well supported and historically significant for Germany. Moreover, PISA results have caused a change to the role and effectiveness of the German curriculum and encouraged the country to acknowledge the importance of educational research (Ertl, 2006).

Grek (2009) noted that when the first cycle of PISA (in 2000) was introduced in England, Germany, Finland and some other European countries, it was supported by policymakers whose decisions were aimed at reforms in educational policy or to ensure benefits to their existing policies. Lietz, Tobin, and Nugroho(2016) explored the barriers and facilitators which affect the utilization of ‘assessment data’ (p. 192), such as PISA, for educational policymaking purposes. Their research showed that levels of competence, quality, validity, reliability, and sustainability, and timely dissemination of the programme and its results were assumed as potentially both barriers and facilitators when the PISA was accepted by countries (Lietz et al., 2016).

In terms of barriers, Lietz, Tobin and Nugroho (2016) also found that influential barriers to the introduction of PISA in a country included the lack of power of the assessment organization at a national level, difficulties in political reform processes, and the existence of high levels of ‘bureaucracy’ in the participating countries. As described by the researchers, establishing a responsible organisation for PISA within the Ministry or with excessively tight connections to other state organisations, which are responsible for implementing educational policies, is the most common factor which decreases credible participation of a country. In

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other words, these organisations' powerlessness and excessive dependence results in disadvantageous situations, such as facing the impact of bureaucracy, occurring frequent changes in policies when the political circumstance of the country change and an unwillingness to share actual PISA results to the public or to apply for improving future policymaking.

Moreover, Lietz, Tobin and Nugroho (2016) suggested that the acceptance of PISA could be highly facilitated if the introduction of the programme is processed through the involvement of all educational stakeholders ranging from public to policymakers in decision-making, for instance, organising debate and discussions in advance. In this case, such involvement is considered an important way to make policy making processes open and inclusive not only for the education system's representatives, but also for social sphere representatives including parents and the public. From this perspective, it can be assumed that if everyone within the education system contributes somehow towards the introduction of new initiatives, such as PISA, then it might make the processes of PISA much easier for the country.

In addition to barriers, Bloem (2013) thoroughly explored the hindrances and challenges, which may impact a country's participation in PISA and the effective usage of PISA, based on samples from two low and medium income countries: Tunisia and Kyrgyzstan. The research clearly showed that finance is a factor that will hinder a country's participation in PISA. Moreover, Engel and Frizzell (2015) found that building the financial capacity to implement PISA was also a considerable challenge for individual states or territories within the countries, such as Canada and the USA. As for Mongolia, finance could be one of the major barriers. This is because Mongolia's economy is dependent on the mining commodity

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price, which is the dominant source for the Mongolian budget. An analysis undertaken by The World Bank (2018) has indicated that currently Mongolia's debt limit is higher than it should be, and these factors can cause vulnerabilities in the economics of the country. In other words, due to fact that the mining commodities price commonly fluctuate, if the income from that source would decrease and the country would stay under the pressure of debt by the time PISA is introduced, then there will be unsustainable funding for PISA. However, given this vulnerability, insecure funding for PISA could present as a barrier that needs to be eradicated.

One could speculate that the Mongolian Government's apprehension about possible poor PISA performance could be another challenge in the introduction of PISA. There may be concern because, as Bloem (2013) has pointed out, the introduction of PISA will cause the government and education standards in participating countries to be represented in international OECD publications, where education standards and achievement will be compared with many other countries. Consequently, potentially poor results may reflect unfavourably on Mongolia. It may cause the apprehension that such poor results may affect the reputation of government policymakers in the international and domestic public sphere and, therefore, decrease the value and acceptance of their other work for education.

More importantly, the assessment organization which possesses full responsibility in fulfilling PISA related tasks needs to have sufficient ability to carry out its duties. However, a study by Bloem (2013) found that low and middle-income countries faced technical challenges caused by the poor capacity of the assessment institution when they participated in

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PISA (Bloem, 2013). Under a “lack of institutional capacity” the author identified four challenges to the implementation of PISA.

Firstly, the process of conducting a national PISA survey was described as a problem for these countries due to the process requiring capabilities to adequately administer, implement and analyse the PISA survey and results. Secondly, since the translation is an essential part of the acceptance of the whole program, which directly affects the result, dealing with language related aspects of PISA were described as an issue. For instance, translating PISA tasks by considering contextual characteristics of the students’ first language is noted as an example of the most common difficulties.

Third, reporting PISA results appropriately both at national and international levels was also accepted as a challenge for new country participants. For instance, as Bloem (2013) explained, such difficulty can occur if the country poorly considers management requirements to implement PISA, such as recruiting suitable human resources, applying research resources appropriately or managing and improving ongoing capacities of the institution for national PISA reporting quality.

Forth, effective cooperation and collaboration with the international committee for PISA preparation were challenging for some low and middle-income countries. In order to implement PISA successfully, countries need to actively and sustainably collaborate with the international committee, such as taking part in pre-PISA training. However, as Bloem (2013) noted, some countries ignore or skip compulsory aspects and stages of PISA preparation, which eventually decreases their possible benefits. Similarly, Kamens and McNeely (2010) noted that fulfilling the standardization of international assessments might be challenging to

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developing countries due to a lack of capable experts and capacities. These studies highlight the importance of human resources for the introduction and implementation of PISA. It could be argued that, however, building an assessment team with expert knowledge and skills might be a challenge for Mongolia given its lack of experience and capacities in participating in large-scale international assessments.

In addition to financial, governmental apprehension and technical challenges, low- and medium-income countries may face contextual challenges, such as the ‘political economy’ and the culture of the country, when they implement PISA (Lockheed, 2015). In examining the meaning of these challenges, the idea of a political economy can be explained as financial support from the ruling government which funds the introduction and implementation of PISA in the participating country. According to Lockheed (2015), lack of adequate funding for PISA can represent a great challenge because the political position of the government in most countries holds ultimate power to approve, continue or stop allocation of the national budget for an initiative such as PISA.

Moreover, the culture of the country is an influential contextual challenge as it may cause miscommunication between the country and the PISA contracting bodies. For instance, as explained by Lockheed (2015), due to the culture of the country towards assessment, some participants of high-stake assessments tend to misunderstand that a low result will trouble an individual or an individual school. In this way, such fears have led newly participating countries in making excessive and unnecessary effort towards preparing students into getting high scores in PISA.

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One could argue that in the context of Mongolia, both challenges may occur, especially, in terms of the ‘political-economy’ of the country. Decision making of the newly elected ruling party in 2016 for the Parliament will be highly influential, because their decision has the potential to affect whether the ongoing and upcoming policies will be sustained or suspended. Therefore, it is possible that the political perspective of the new government will impact on the future of the planned PISA introduction in Mongolia by 2021.

Considering country specific features in the testing materials of the large-scale assessments is highly important for participating countries because they expect not only success but also data that will suggest multiple applications for the socio-economic development of the country. Unfortunately, ignoring characteristics of the participating country in the assessment programs may be problematic. For instance, Bloem (2013) found that the students in low and medium-income countries commonly had low proficiency scales on PISA domains. However, Bloem (2013) explained that poor performance in assessments was not necessarily because of their lack of proficiency; rather, it could have been caused by inappropriate testing material, which was not relevant to the specific context of the country. Although OECD (2016) explains that PISA considers the context of the participating country more year by year, if the country specific characteristics of the Mongolian context are poorly considered in PISA testing materials, this may result in barriers to accepting the program with confidence.

Engel and Frizzell (2015) have found that the motivators and facilitators for PISA participation vary from country to country. Also, the sub-national uses of PISA in two federal systems, the USA and Canada, were highly dependent on the motivators, which varied from state to state. Several motivators, which facilitated PISA participation by these states, were



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identified. For example, having adequate financial support from the government was considered a facilitator, whereas deficient or non-sustainable funding was considered a challenge for participating PISA countries.

Despite the financial challenges of PISA participation, Engel and Frizzell (2015) found that a country's purposes and expected outcomes from the assessment programmes could be a motivator, such as, the need to reform national assessment and utilizing PISA as a basis for new policy goals on education and the economy of the countries. For instance, Ferrer (2017) argued that Spain participated in the first cycle of PISA because it expected recommendations and solutions towards Spanish educational development and an assessment reform. It was also highlighted that Spain actively participated in PISA because of the perceived urgency of other reforms in Spanish education, in particularly preparing experts, learning from successful nations and gathering necessary resources (Ferrer, 2017).

Moreover, power, discourse and political reasons for introducing PISA can be considered facilitators (Engel & Frizzell, 2015). For instance, Engel and Frizzell (2015) indicated that by possessing the board-level right to vote on decisions of any changes towards PISA, Canada made its participation in PISA more purposeful and effective in reforms to its education system. Similarly, the presence of well-informed educational stakeholders about PISA and its outcomes enabled improved participation by some states of the USA. Other political reasons for accepting PISA were an eagerness to benchmark internal assessments against PISA, and a desire to monitor and compare the education system and the country to other nations and economies in terms of the results of PISA assessments. For example, evaluating the equity in

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education and the preparedness of youth for adult life were influential motives for the sub-national participation of Canada and the USA (Engel & Frizzell, 2015).

A number of similar motivators for introducing PISA may be significant to the Mongolian context. For example, the current Mongolian Parliament and educational authorities announced that there is a necessity for urgent reform on educational assessment. Moreover, the Mongolian Parliament underscored the principle of introducing PISA as one of the most promising sustainability goals. Thus, these incidents may act as motivators for fulfilling governmental goals that may facilitate the introduction of PISA in Mongolia by 2021. Furthermore, as was the case with Spain, Mongolian education authorities may expect recommendations and solutions to foster and guide the current reform on education assessment and policy.

### CONCEPTUAL FRAMEWORK OF THE STUDY

Miles and Huberman (1994) provided a definition of a conceptual framework as the part of a study that “explains, either graphically or in narrative form, the main things to be studied – the key factors, concepts, or variables – and the presumed relationships among them” (p. 18). The conceptual framework for this study is based on discussions with school and ministerial level stakeholders of the Mongolian education sectors and their responses to questions in the semi-structured interviews and analysis of their views, opinions, and experiences in relation to issues as shown in the Table 1 (A-B) Conceptual framework of the study below.

The study proceeded with an exploration of barriers and facilitators as shown in Table 1.

Section A of the Table 1 shows three main barriers that were explored, including knowledge

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of PISA and differences among stakeholders; the political impact on the education sector; and management related issues. These barriers conceptualise the main areas explored in this study.

The three main facilitators, currently present in the context of Mongolia, that were examined in this study are shown in the next section of Table 1. Namely, the needs of the country, acceptance of PISA into Mongolian National level policies and the influence of international trends in accepting PISA.

Table 1 (A-B) Conceptual framework of the study

<b>A) Types of barriers</b>		
knowledge differences among stakeholders	political impacts on the education sector	management issues /time; finance, planning/
<b>B) Facilitators</b>		
needs of the country	acceptance of PISA in the national level policies	influence of international trend to accept PISA
a) getting internationally accepted comparative data on outcomes of adolescent education b) finding solutions on improving educational assessment c) confirming the results of the newly reformed national curriculum	e.g. governmentally approving “Principle to introduce PISA in 2021” and “The Sustainable Development Goal-2030 of the country for the UN”	e.g. assuming participation in PISA as a global trend which attracts countries ‘to be compared’ internationally; expecting changes from PISA in Mongolian education, similarly PISA shock causes reforms in education sectors of the countries;

### CHAPTER 3: RESEARCH METHODOLOGY

The methodology of this study was based on the qualitative approach and reliant on face-to-face interview data. According to Hatch (2002), a qualitative research design is appropriate for a study in an education or policy setting, such as this research, which draws primarily upon data from semi-structured interviews and a review of published literature.

The introduction of PISA can be a quite new and complicated phenomenon in the Mongolian context. Olson, Martin and Mullis (2008) have suggested that Mongolia can be considered as less experienced in the area of large-scale assessments. Thus, richness and uncertainty of the process and procedures to take part in PISA may lead the country to educational research, specifically qualitative research to manage complexities of the issue. Due to the fact that the introduction of PISA is complex and new for the country which anticipate adequate foundation for quantitative research, as well as, the current study relies on the personal opinions of the participants in the setting, as recommended by some researchers (Creswell, 2012; Punch, 2014; Richards, 2013), the choice of the qualitative design is considered highly appropriate.

Satisfying the need for rigour and dependability is also vital in qualitative research (Creswell, Hanson, Plano Clark, & Morales, 2007). There are various techniques that can be applied to ensure rigour in qualitative research (Baillie, 2015). Baillie (2015) highlighted that the rigour of qualitative research depends on its 'trustworthiness' (p. 37). The 'credibility', 'dependability', 'transferability' and 'confirmability' are the main criteria which qualify as evidence of trustworthiness in qualitative research (Lincoln, 1985). As recommended by

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Lincoln (1985) credibility of the qualitative research can be well-ensured by the member checking technique. Thus, the member checking technique was applied to contribute to the rigour of this study.

Birt et al. (2016) stated that the interview transcript verified by the participant can be one way of member checking that enables the assurance of accuracy of the interview data. Therefore, in this study, the full transcripts were returned to each participant who verified the accuracy and authenticity of the information they provided. In this way, participants remained confident about their beliefs and perceptions about the issue of the study and the accuracy of the data can establish the foundation for the credibility of the research.

### ETHICAL CONSIDERATIONS

Flinders University's SBREC provided ethics approval to conduct this (project number 7809). Currently Mongolia has no official ethics system for providing approval. Therefore, the necessary permission to conduct research in the education sector of Mongolia was provided by the Ministry authorities. The values, beliefs and opinions of participants and the ethics to conduct human research were always respected. All participants provided informed consent. The privacy and confidentiality of the participants and any participating organisations are highly considered and respected. Participants are not identified, and their individual information remained confidential in the publication of the research. A participant had a choice to participate or not or withdraw from the participation at any stage of the study, without prejudice.

## LIMITATION OF THE STUDY

Although the study is carefully planned and prepared, there are three main limitations which were thoroughly considered. First, the study data was collected from only 12 people of the whole targeted population because of the time limit of the dissertation. Thus, the generalizability of the research findings may be enhanced by increasing the numbers of participants in the future research. Second, as a novice researcher, less strategic use of presupposition questions in the interviews, could lead participants to give biased responses. Therefore, the methods and techniques to avoid improper questioning during the interview were thoroughly considered. Third, since there were a considerably low number of researches in relation to the topic of the study, which might be caused by access limitation to the literature, for instance some researchers could do similar research language other than English.

## PARTICIPANTS

The purposeful sampling method was applied in this study. Participants were recruited in this study due to their responsibilities, relevant experience and possible involvement in the future introduction of PISA. For instance, the recruitment of principals was vital because they are the key people for leading all changes in schools and are responsible for implementing national level policies at their schools. Ministry level specialists were recruited because they have responsibilities in ensuring the fulfilment of state policies towards education and have obligations to the minister. In addition, collaborating, consulting and supervising educational organizations (including schools) are included as their principal duties and responsibilities.

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The sampling included 12 staff from two laboratory schools and the Ministry whose duties and responsibilities are more relevant to teaching secondary school mathematics and natural sciences to 15-year-old students. The laboratory schools were chosen in terms of their location including the capital and one province of Mongolia. In total, four teachers, two study managers and two principals from two laboratory schools and four specialists from the Ministry and its affiliated organisations participated in the interview. Participants were well-experienced in the education sector of Mongolia and for at least a decade had worked for the state secondary education. Eight out of twelve participants were female. However, the study does not examine gender differences in the findings. Like other places in the world, nearly all Mongolian teachers are female, while the majority of ministerial and management personnel in the Mongolian education system are male. Gender differences therefore would be confounded by the position of the participant in the education sector.

### DATA COLLECTION

The 30-40-minute interviews were held in offices or private rooms at school campuses and the Ministry buildings. The participants were asked about their perceptions and expectations of barriers and facilitators to introducing PISA in Mongolia. Nine open-ended questions for the qualitative interview had been developed. Participants were asked their views about factors that would foster or impede the introduction of PISA in Mongolia (See Appendix I: The Interview Protocol (English)). Questions included in the Interview Protocol were discussed and checked by the supervisor and the questions were semi-structured.

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Each interview took about 30-40 minutes. Interviews were audio recorded using a digital voice recorder to help with reviewing the results. Once recorded, all interviews were electronically stored and transcribed (typed-up). For ethical reasons, the audio files were destroyed once the file had been transcribed. In this way, knowledge of what was said by whom remained confidential.

### DATA INTERPRETATION AND ANALYSIS

Prior to the data analysis, the audio of the interviews was transcribed into Mongolian as close as possible to the original interview by the researcher. Then the transcripts were sent to participants for member checking and for verification and authentication. All transcripts were accepted as accurate by the participants. After transcripts were returned by the participants, the researcher uploaded all the data into a qualitative data analysis software programme (NVivo 11) for coding. Since there are various software packages for qualitative data analysis which suggest numerous opportunities and flexibilities (O'Leary, 2014), NVivo 11 for Windows was used. In order to keep the meaning of interview data consistent and valid, preliminary coding of the data was completed in Mongolian and translated into English later. An example of preliminary coding is shown in Table 2 illustrates how the researcher conceptualised and compared key points from the interview data. In this way, the main codes of the findings were generated, and each coded theme was supported by proof from the data, as shown in the last row of Table 2.



Table 2 An example of preliminary coding of data

<b>Participants' level of knowledge</b>	<b>High</b>	<b>Low</b>
<b>Who</b>	Ministerial level people	School level people
<b>Position to provide PISA information</b>	In the upper level of the system - informed much; At school level - instructive info to introduce PISA	All level of the system should be informed including parents and public.
<b>Preliminary 'discussion' on issues of PISA introduction among stakeholders</b>	Not compulsory	Compulsory
<b>Reasons for/ against such 'discussion'</b>	Finds PISA as a diagnosis or a study Avoids spreading wrong messages among public PISA will not be applied with surveillance purposes for individuals Students, teachers and schools should not worry too much as it is for common purposes of the country	Finds PISA as a testing or assessment reform Avoids misunderstanding and disregarded PISA may be applied with surveillance purposes for individuals Students, teachers and schools should be responsible as it is for common purposes of the country
<b>Some evidences from the data</b>	<i>...mmm... if I see from the State perspective, I think it is not necessary. Well, I see this research is not a kind of thing for political show (i.e. an event which mostly advertise working results of political parties) or election thing... Gov 1</i>	<i>We need to discuss it in advance. Preparing is essential for any kind of testing. PISA is also the same. It is better to have a discussion beforehand and work on the results to be ready for PISA. Principal 2</i>

Since the data were in the Mongolian language, the NVivo software was used only as a tool to decrease manual handling and time, and to prepare data for analysis rather than making deeper and more rigorous usage of the software. Examples of how the NVivo 11 programme was used in the open coding process of this research are shown in the following figures.

## Barriers and facilitators to introduce PISA in Mongolia

Figure 1 An example of listed nodes created with NVivo 11 Figure 1 shows a list of the nodes created in NVivo 11. Since the programme was applied for preliminary coding, extracts of all interviews were referenced under relevant nodes.

Nodes

Name	Sources	Referen	Created
Value of teacher	2	9	4/23/2
Information needed	8	20	4/23/2
Introducing PISA in Mongolia	4	9	4/23/2
current situation		3	7
Laboratory school	1	5	4/23/2
Power or political impact on Education System	9	25	4/23/2
Pros introducing PISA	3	5	4/23/2
Relations between PISA and Current curriculum reform		8	14
Appropriate Choice of subject		1	2
Expecting change of assessment		2	2
Expecting positive affect on skill based assessment		1	1
promote usage of knowledge into skill		2	2
Feel proud and find solutions		2	4
chance to compare		4	4
PISA may prepare students for other international assessments such as SAT		2	2
Actions before introducing PISA	7	29	4/23/2
Training		2	2
to prepare school		2	3
choosing representable schools		2	6
inform participants		8	14
Make system sustainable		1	1
Make country purpose and use of PISA result clear		4	9
research on potential effects and expectations from PISA		1	1
Attitude towards national purpose of PISA		2	3
Make informed at decision making and leading officials		1	1
Good management		3	10
getting support from PISA former participants		1	1
Research		3	4
Improve curriculum		1	1
Prevent psycological pressures on children		1	1
Barriers introducing PISA	1	2	4/23/2
choice of PISA component		4	6
Students' poor skills on PISA components		3	3

Figure 1 An example of listed nodes created with NVivo 11

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Figure 2 shows the nodes report created by NVivo 11, which showed all nodes by hierarchical order with their source, while an extract which constituted an individual node (i.e. Node of 'PISA included in national level policies') can be seen in Figure 3.

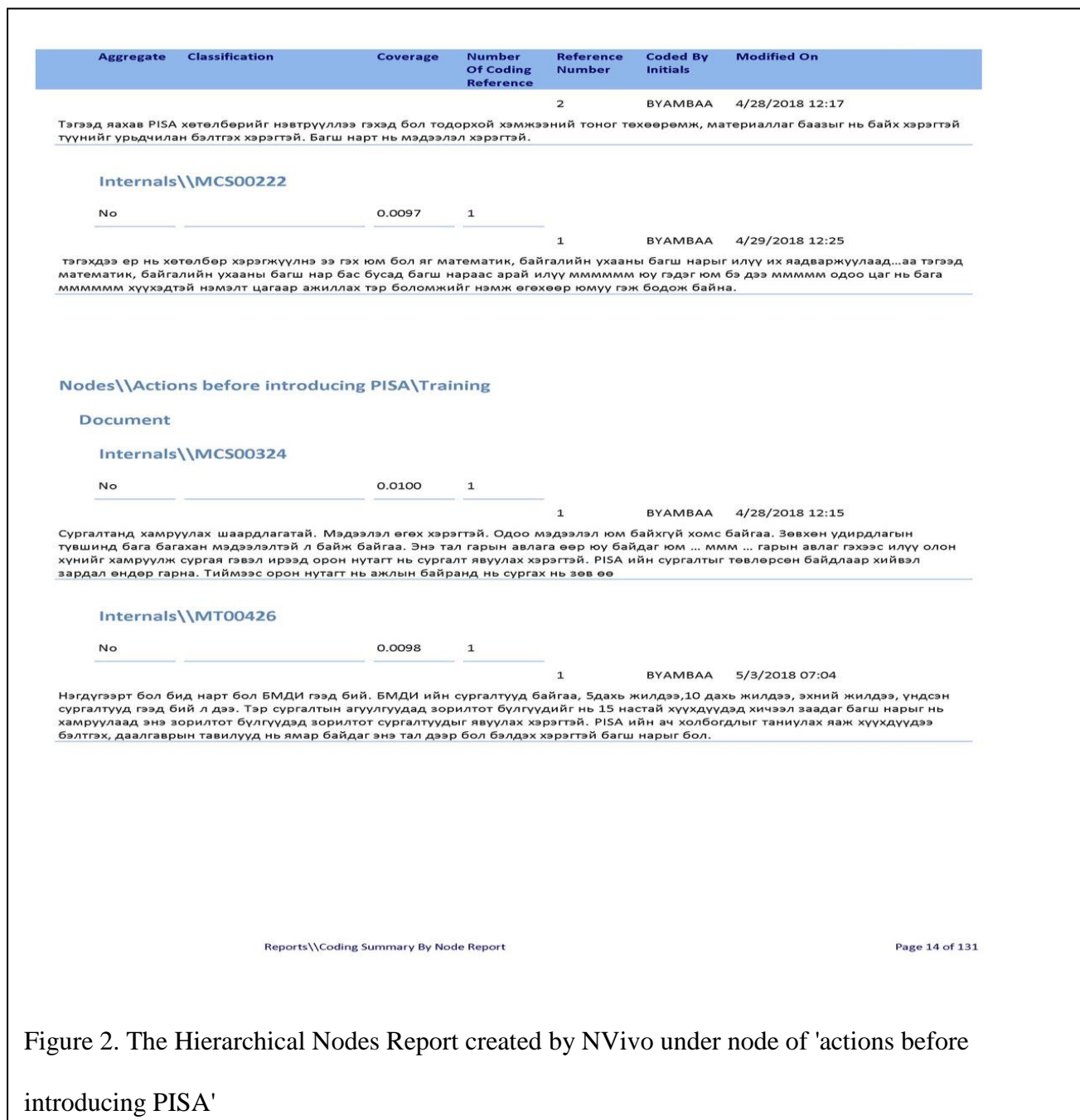
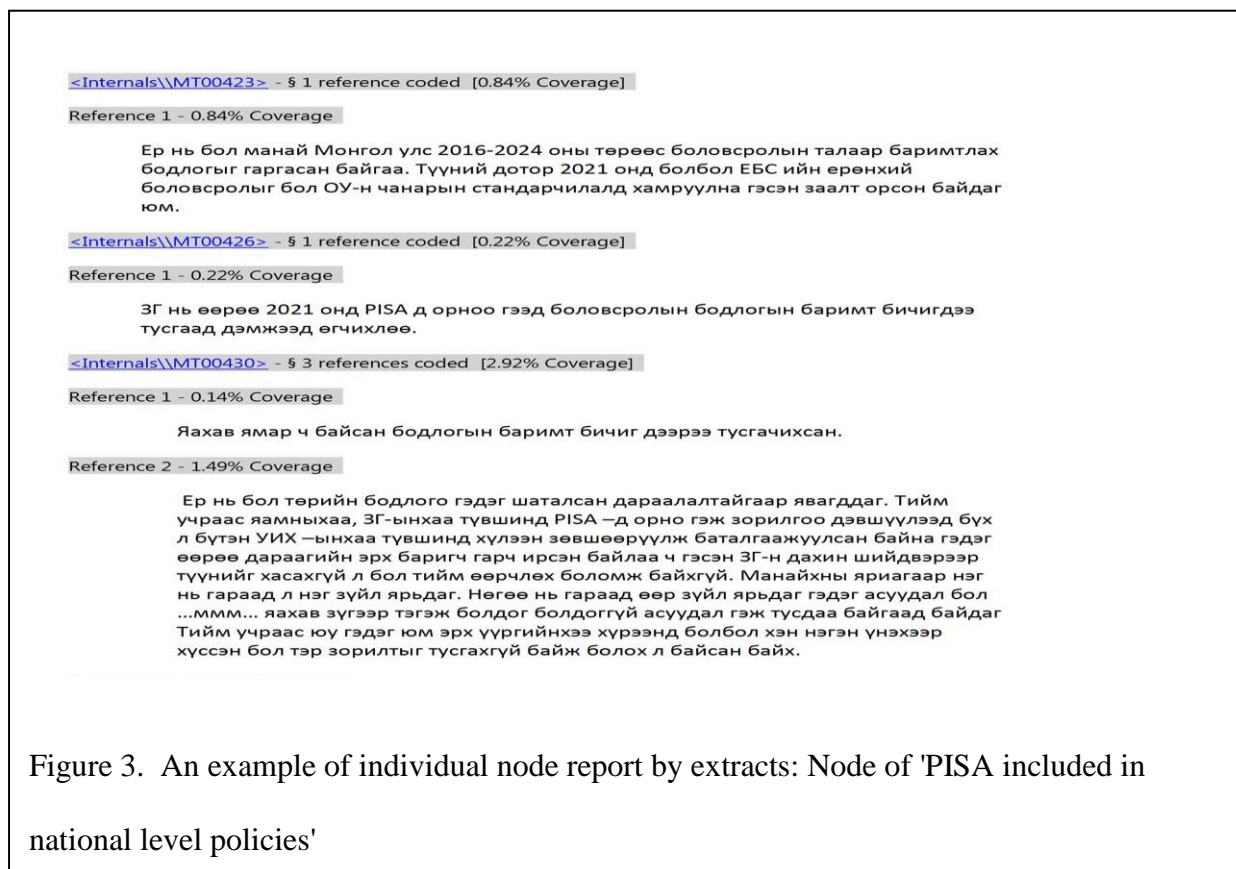


Figure 2. The Hierarchical Nodes Report created by NVivo under node of 'actions before introducing PISA'

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Moreover, coding and the analysis of the study were conducted using thematic analysis, following a six-step procedure suggested by the Clarke and Braun (2017). The process of thematic analysis of this study commenced with familiarisation of the data. The processes of interpretation of the data were completed by the researcher, who went over the data in depth several times. The second step of the analysis was purposed to generate initial codes. In the current case, it was completed with the help of NVivo 11 software. Then the process continued with phases of possible theme search and reviewing those themes, and these were conducted manually. The last two steps of the analysis were focused on final definition of themes in the study and ended with a full report and discussion of the findings.

#### CHAPTER 4: RESULTS AND DISCUSSION

Participants with four different types of responsibilities in the education sector took part in this study. This included teachers with relevant teaching experience in PISA topic contents (e.g. mathematics and natural sciences including Physics, Chemistry and Biology), study managers, principals, and specialists who represented the Ministry of Education, Culture, Science and Sports of Mongolia. The research findings suggested that these four types of stakeholders should be grouped into two separate groups due to their level of work duties and responsibilities, as shown in Figure 4. The major stakeholders of the introduction of PISA in Mongolia could be divided into one group comprising school level stakeholders, such as secondary school teachers, study managers and principals. The other group comprised government level stakeholders, including relevant specialists who work for the Ministry. Further discussion of the research findings will focus on the perspectives of these two groups.

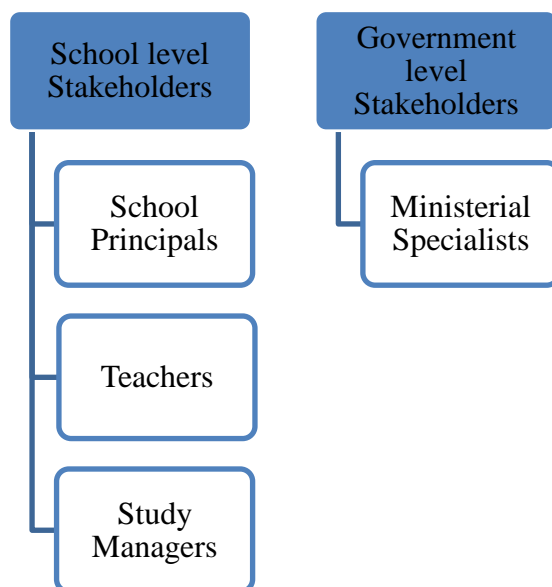


Figure 4 Groups of major stakeholders involved in the introduction of PISA in Mongolia

## Barriers and facilitators to introduce PISA in Mongolia

The study shows that the needs of the country, acceptance of PISA into Mongolian National level policies and influence of international trends in accepting PISA, are major factors which may facilitate the introduction of PISA in Mongolia. These factors will be discussed in detail, beginning with a discussion of barriers to the introduction of PISA identified through the study.

### INTRODUCTION OF PISA IN MONGOLIA: BARRIERS

Analysis of the interviews with participants identified three major barriers, which could have a significant impact on the introduction of PISA in Mongolia. The first and most influential barrier was differences in knowledge and information among the school level and government level stakeholders of the education sector. Two other barriers included the political impact of PISA on education and management related issues with regards to organizing the PISA cycle in 2021.

Table 3 compares stakeholders' views in relation to these three barriers. For example, school level stakeholders acknowledged that they know less about PISA and its introduction in Mongolia, and this knowledge differentiation gap should be filled as urgent as possible. However, governmental level stakeholders possess enough knowledge on PISA and its introduction, and they do not see that filling such a gap is necessary.

Table 3 Findings concerning Types of Barriers based on the Conceptual framework of the study

<b>Types of barriers</b>		
knowledge differences among stakeholders	political impacts on the education sector	management issues /time; finance, planning/
<b>Status and positions of stakeholders on barriers</b>		
school level:		
knows less/ wants sophisticated information	high impact on PISA introduction	influential barriers that should be eradicated
ministerial level:		
knows much/ wants to share less sophisticated information	less impact on PISA introduction	influential barriers that should be eradicated

**Barriers: Knowledge difference about PISA**

*Information about PISA*

Stakeholders’ knowledge on what PISA entails considerably differed between the two groups. It was clear that the government level stakeholders knew more about PISA as they had researched the programme for both personal and official purposes. Moreover, they had heard of PISA while they were participating in international level conferences related to PISA on at least one occasion. As one government level stakeholder explained:

*As I remember...11 or 12 years ago, in 2007, I received the first information about PISA which defined it as the study of a 15-year-old child based on the unique aspect 'competence' .....When I recall the recent PISA information, this year our staff*

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*attended one-month training abroad where the latest information about PISA was discussed. So, I have heard that information as well. Gov1*

From this extract, it can be seen that the specialist spent almost more than a decade working in the assessment field and during this period information about PISA was obtained from both direct (i.e. by attending conferences) and indirect (i.e. being informed by well-informed peers) sources. Similarly, another government level stakeholder stated:

*I find I have well researched large-scale international assessments including PISA, TIMSS, NAEP, and later EGRA and EGMA.... In particular for PISA, I believe I have good knowledge about PISA because I am interested in these types of assessment programmes both personally and professionally... In addition, I also cited and referenced some PISA research in the thesis for my educational degree. Gov2*

This second extract shows that the specialist not only had knowledge about PISA, but also had heard of and undertaken research about it and other similar programmes. Moreover, applying PISA related studies for academic purposes is a clear indication of person's knowledge and dedication towards the subject. Notable is that this government official had the potential to share well-grounded and unbiased information about PISA and would have been a prime candidate to do so as he had a strong personal interest in the field.

However, the study found that information about PISA was quite insignificant among school level stakeholders. Only a few of them shared what they had heard from facilitators' presentations during some annual professional training. All 8 participants from the school level stakeholder group indicated that their knowledge about PISA was limited. Indeed, most



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of them said that the information provided during the data collection of this study was their first and broadest discussion about PISA. As the following school level stakeholders explained:

*It was said that Mongolian students were good at some aspects of the assessment.*

*That was many years ago. I don't know other international assessments except that one. I only know how Mongolia's Centre of Educational Assessment conducts assessment... Teacher 1*

*I've heard of it. Generally, I have a little information about it... Teacher 2*

*I don't have enough information and I have not heard of it before... Study manager 2*

*I heard of something about PISA while I was attending trainings. I haven't looked deeply into it, so I don't know it well. Teacher 4*

*Well, that's what were informed of when I was participating in training (laughs) ... mmm ... (NAME AND TITLE OF THE OFFICIAL) ... of the Ministry said "PISA". Study manager 1*

*...I don't know much about PISA. I haven't found much information about it after I went looking for information from the internet after I agreed to participate in your research interview... Teacher 3*

It can therefore be assumed that knowledge about PISA of school level personnel is much less and more limited than that which is known to government officials. All teachers seemed

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to know about PISA was that someone had mentioned it to them. Moreover, the way that school level people generalised their understanding of PISA at the beginning of the interviews was a further indication of their knowledge limitation. For example, PISA was known as no more than a *“ranking determined in terms of the educational quality of each country”* Teacher 2; as the *“thing that defines the quality of international education”* Study manager 1; as the *“thing that determines the level of education in the countries”* Principal 2; or as *“the measurement for international recognition of student assessment”* Principal 1.

Having different knowledge and understanding can be a barrier to the successful introduction of new initiatives, such as PISA, particularly when it is considered as strategically applicable for national educational and developmental purposes.

### ***Poor Information from officials***

It was also noticeable that the school level stakeholders had barely received any relevant information on PISA and its introduction in Mongolia. Here are some points which describe the situation:

*We have poor information. Participating without knowing anything creates hesitation, uncertainty, and suspicion. Teacher 1*

*...First, there is no information about PISA for children. None for parents, nor teachers... Principal 1*

***More information about PISA wanted***

After having some information about PISA during the interviews, school level stakeholders expressed their interest in knowing more about the importance of the introduction of PISA in Mongolia. Most specifically, they were eager to understand why the country sought to introduce PISA and how its results would be applied in the future. Some quotes which expressed this general view are as follows:

*...Most importantly we need to know the importance well... Teacher 1*

*...It is interesting why my country specifies the introduction of PISA. It is difficult to talk about PISA because I don't know it well... Teacher 4*

*...So, we want to know about the PISA factors and features that have led Mongolia to choose it... Study manager 2*

Moreover, some of school level stakeholders wanted to become more familiar with the findings of various studies on PISA, particularly studies that compared the achievements and effects of PISA on the education sector of participating countries or of its development. For instance:

*...In particular, I guess, some countries, which are similar to our country's education characteristics, level, and economics, have probably participated in PISA before. So, what is their experience? It would be a good idea to compare their results. Study manager 2*

## Barriers and facilitators to introduce PISA in Mongolia

*...compared research is essential. In other words, I want to know things like... “one country’s assessment level was like that and then as a result of participating in the PISA initiative, in such and such ways it was improved....” Teacher 2*

*...Now, for example, I want to know examples of other countries. I would like to receive some evidence of how their level was at the beginning of PISA and how they progressed through...Teacher 3*

The most stressed point encompassing the views of school level stakeholders is that they thought it was essential for them to have more information in advance, including students and school communities. They thought that taking part in PISA with limited knowledge and understanding would decrease participants’ positive attitudes and genuine commitment towards the introduction of PISA in Mongolia. As some participants stated:

*... It is apparent. I expect that PISA should be introduced after people acknowledge it. If they are permitted to participate in the PISA introduction process, then they will be happy to continue it... Teacher 2*

*...it is advisable that the reasons why PISA is essential for Mongolia are needed to be explained to teachers, schools and students. We teachers implement and work without knowing the reasons because the school director, Department of Education or Ministry of Education has told us so. Teachers’ opinions are not shared, and we don’t know about the reasons and what results will be achieved. We just do it because we have to do it... Teacher 4*

## Barriers and facilitators to introduce PISA in Mongolia

*I would like to know the essence of PISA. Some people may think “A useless examination has been conducted” because they don’t understand the essence of PISA.*

*Teacher 2*

Some of the school level participants also believed that discussions or trainings should be organised nationwide for them to have a successful introduction and implementation of PISA in Mongolia, particularly since they are considered to be responsible for any initiatives at the school level. Due to their current situation of being not well informed, they were concerned that their poor understanding of PISA could lead them into trouble during the introduction of PISA. Their points of view are shown in the following extracts,

*We need to discuss it in advance. Preparing is essential for any kind of testing. PISA is also the same. It is better to have a discussion beforehand and work on the results to be ready for PISA. Principal 2*

*...Trainings focused on providing clear information and direction for PISA must be organized among teachers. Understanding the importance and the reasons for introducing PISA must be provided. It is not good not knowing it... Teacher 3*

*... Even though we are talking about PISA and PISA, we don’t know what exam it is and what its levels are... what exactly will be included in this assessment? Exactly what?... however, it is being talked about as just PISA and PISA... Teacher 1*

## Barriers and facilitators to introduce PISA in Mongolia

*If we know the tasks and content of PISA, we will develop ourselves while we are teaching them to my students. It is totally impossible to introduce PISA since I don't know anything about PISA... Teacher 2*

### ***Reluctance to share information about PISA***

Although, school level stakeholders wanted to know more about PISA and they explained that their participation was essential, findings of the study revealed that governmental level stakeholders generally held an opposing view. However, it is necessary to mention that there were some participants who held a position in favour of informing teachers about PISA before it was implemented, as demonstrated by one of the government stakeholders who said that:

*First, we have Institute for Teacher's Professional Development. It holds core and basic teacher development trainings for teachers who are working in the fifth year, in the 10th year, and in the first year. So, in the content of these trainings, information about PISA should be included. The training should involve teachers who teach to target groups mmm to 15-year-olds. Also, it should explain the importance of PISA to teachers and advise them on how to prepare their pupils for PISA and to know features of the exam tasks... Gov 2*

However, the majority of the well-informed participants in the study thought that since the country is going to apply PISA as a remedy for national education for the next generation,

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they did not have to inform or to discuss PISA's nuts and bolts with all the teachers and communities in advance. They said they preferred to just provide instruction level information if it was necessary. Ministerial stakeholders' positions can be explained with three general themes. First, it was said that PISA is not a new phenomenon among school level people since the country has implemented similar assessment studies at the national level. It was mentioned that:

*...in any case, first ... mmm ... every teacher knows that mmm every year the national study on student assessment and evaluation is taken and they generally understand its purposes. So, it is best to provide general information about PISA as it is. Obviously, it will be an organizational mistake causing risks to the results, if we just approach a school directly requiring them to involve a certain number of children in the PISA exam. Therefore, instead of a discussion, it is important to ensure the preparation for PISA by providing adequate information on how to prepare for participation. Gov 1*

*...in terms of organizing PISA, we conduct a Quality Assessment study at this national level, and the way we organize it is like PISA. So, there is no need to organize any other discussion in advance, instead we should from time to time inform schools with instructions of the PISA processes in Mongolia... Gov 4*

Second, there was a belief that making high level ministerial personnel understand PISA before introducing the initiative would be an effective strategy.

*It is a good idea that the Ministry should plan for PISA in cooperation with the professional organizations and reach a common understanding on PISA. According*

## Barriers and facilitators to introduce PISA in Mongolia

*to these directions, Professional organizations mmm staff in these organizations such as ITPD, EEC and MIER should obtain common and consistent understanding and functions on PISA introduction. No matter how professional we are there is an effect of an individual's perspective, so we should make roles and provide directions that are clear and common and follow them. There is no other way. Gov 3*

Third, it was explained that the reason to avoid providing thorough information about PISA and having discussions among school level stakeholders was because PISA was going to be applied for research purposes only. For example:

*...mmm... if I look from the State perspective, I think it is not necessary. Well, I see this research is not a kind of thing for political show (i.e. an event which mostly advertises the working results of political parties) or an election thing... Gov 1*

As will be discussed in the next section, these distinct perspectives on the actions needed to decrease the knowledge differential between stakeholders could impact the quality of Mongolia's participation in the first cycle of PISA in 2021.

### ***Concerns of school level stakeholders if they lack information***

According to school level stakeholders, if their information about PISA is insufficient it may lead them to exercise precaution, as well as disrespectful attitudes and criticism. Some of them were also concerned that the public could criticise the education sector if they were not well-informed about PISA before its introduction in Mongolia.



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### a) Precaution

As the main body for school level implementation of any initiative, school staff agreed that they needed information more than instructions. Because without information they are facing various precautions, such as what happens if the PISA is not consistent with what they teach:

*... For us, the most anxious thing is what kinds of tasks will be given in the PISA exam materials... (smiles) ...whether the given tasks are consistent with what we teach or not. Also, whether exam materials include what we teach our children or not. I believe that it [the implementation] is possible if we attend training on how to prepare for PISA and help our students to prepare for the examination... Teacher 1*

*...What I am really frightened of is when my pupils stake the PISA exam whether they may suffer as result of having completely different exam materials and tasks that I have not taught them yet. I have this anxious feeling... Teacher 3*

Moreover, some of them were concerned that PISA might be applied as a tool monitors and assesses their work:

*It's a very difficult thing to be assessed without knowing it (laughs). And then eventually, if the results are bad and we will be responsible for it. If it amounts to poor results, it is common that we will be judged and pressured, such as "Lessons were taught poorly." or "You have not worked well but the country is implementing such a good curriculum or programme. It's OK to have the pressure to do something,*

## Barriers and facilitators to introduce PISA in Mongolia

*but for this programme it is different. Therefore, it is important to be aware of this programme, in advance. Study manager 2*

Furthermore, some participants were concerned about whether the Mongolian education system would be ready for introducing PISA and whether the decision to introduce PISA was poorly researched:

*Speaking of teachers .....they have a small preparation because of piloting a new curriculum. A small improvement has been achieved in our assessment procedures so far. In reality, it is difficult to say that we teachers are ready for PISA. Teacher 1*

*...So, I would like to ask that since the education system is not well developed currently, in this situation, what it's like to be tested for... ...For me, I think it's a waste of time because it's not the time to be tested. I think...mmm...'Is it really necessary to be assessed?' Principal 2*

*...On the contrary, the ability of children to read in their mother tongue may be different in every child as the dimension of every vessel differs. One child can have 100% skill while another 85%, and some 45%. So, I think 15-year old children cannot get such an exam on the computer... Principal 1*

*...I will say that schools are not ready for PISA. I think that the techniques and equipment are not adequate as well as classrooms... Teacher 4*

*In my country, the assessment criteria and what contents should be included in the exam materials ...mmm..... Generally, we focus mainly on teaching the contents*

## Barriers and facilitators to introduce PISA in Mongolia

*based on scientific theories and knowledge regarding Math. We have taught content more which is based on scientific knowledge. If exam material is based on assessing practical skills, then our students might complain that they have not studied such things in their lessons. Teacher 3*

*...Mongolians are talking about foreign countries experiences and piloting them without comparing Mongolian students' skills and knowledge. In other words, there is no comparison that you are talking about. We just talk about foreign experiences and we bring them into my country. Those experiences are piloted without a comparison. Teacher 2*

### b) Disrespectful attitudes

As described by participants, common disrespectful attitudes towards the introduction of PISA could be an issue when people do not know its purpose, its effectiveness and its possible applications. Two attitudes, namely ignorance and too much ambition for achieving high scores in PISA were identified by participants as concerning. In terms of ignorance, less-informed people could find PISA as a temporary initiative that could be changed soon, or its results could no longer be useful. Participants referred to these issues in the interviews both directly and indirectly. For example,

*It is apparent that attitudes have changed due to lacking information and going without knowing what they are supposed to know. Yes, the most important thing is knowledge and information. It is possible to introduce PISA if teachers are*

## Barriers and facilitators to introduce PISA in Mongolia

*encouraged to understand, as well as students and parents realize the importance of PISA. Teacher 1*

*...Some people may think “A useless examination has been conducted because they don’t understand the essence of PISA” ... Teacher 2*

*... PISA is just like a usual exam taken once, isn’t it? Study manager 2*

From the above examples we can see that participants suggested that the school communities should be well informed to have a consistent attitude toward the introduction of PISA.

Moreover, the last statement (i.e. ... *PISA is just like a usual exam taken once, isn’t it? Study manager 2*) demonstrates the exact example of ignorance which is caused by a knowledge differential.

On the other hand, some participants were also concerned that if the introduction of PISA is understood to be an exam in which students have to achieve high scores, then it will interfere with obtaining representative data about Mongolia. In other words, participants explained that if PISA was considered just an exam where high scores were the goal, it would complicate the other benefits of PISA for the Mongolian education system. For example, collecting various socio-economic data on students’ development or country specific factors affecting education quality would be missed. As the participants explained that,

*...personally, I suspect some organizational mistakes may cause the situation which may decrease PISA importance or make the results misleading. For example, it is not common, but some people in the PISA preparation team may attempt to open PISA*

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*exam materials to the public in advance or help students during the exam, to increase the chances of getting high scores. To me it can happen if people do not understand the purpose and the importance of the introduction of PISA well. Study manager 2*

*...teachers who teach PISA subjects and people who are going to organize the examination should have clear direction about PISA. It is not favourable to organize PISA when teachers have a different understanding. Teachers need to understand that the results of PISA will not influence their personal success and work evaluation and monitoring. Teacher 3*

### c) Criticism among school stakeholders and public as concern

As discussed by participants, a lack of information could lead to criticisms among school stakeholders against the PISA initiative which could inhibit a successful introduction of it. According to some participants introducing PISA as a new initiative raised criticism among teachers because of pressures associated with change and related to new and constant reforms in the sector. Such a notion was articulated by a participant who said:

*The best way would be for teachers to have information that PISA is not a brand-new thing. It should be explained that this will be consistent with your piloting curriculum 'in these and those ways'. Teacher 1*

Furthermore, the Sector could also be criticised for not informing people about why and how the country decided to accept PISA as an important initiative. Such as,

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*...Mongolians are talking about foreign countries experiences and piloting them without comparing Mongolian students' skills and knowledge. In other words, there is no comparison that you are talking about. We just talk about foreign experiences and we bring them into my country. Those experiences are piloted without a comparison. Teacher 2*

In addition, participants provided a warning that the introduction of PISA could be criticized among school stakeholders, if they were to have a misunderstanding about PISA and its purposes. For example,

*Some teachers don't like being assessed because many exams are frequently conducted, and their workload is increasing. They might think 'another examination and another examination' and as a result they become fed up with the new initiative. Teacher 2*

Moreover, since the cost of PISA is considerably high for developing countries, the government could be criticised by the public because other urgent issues requiring financial assistance need to be resolved first. In terms of the effectiveness of the state's budget, school stakeholders and the public may blame policymakers if they do not know the reasons and purpose of the introduction of PISA in Mongolia. Participants in the study expressed their desire to be informed and suggested that the public be informed, of at least why introducing PISA in 2021 is worth spending the state's budget on, as well as whether there are urgent issues that require answers in the education sector of the country. Participants warned that such a vague situation may lead people to believe that the introduction of PISA is a means to provide an opportunity for authorities to gain their own '*economic benefits*'. For instance:

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*...Yes, it is essential to provide information for everything. Nowadays, people are suspicious like 'whose business is going to benefit when an initiative is introduced'. Who and what reasons are the basis to introduce this new thing? Now, many curricula have been piloted in our education system. Therefore, people might tend to suspect that PISA for 15-year-old students will be introduced for fulfilling someone's interest in 'economic benefits'. Teacher 3*

*...Social attitudes and understanding mmm... attitudes have not changed yet, so it means it's necessary to change public perceptions.... Gov 2*

*It does not matter to me, for example, the different criticisms made by people, such as 'PISA is business for profit', 'tools for rich countries raising their reputation,' and 'work of wealthy countries' etc... Gov 3*

From the perspective of ministerial level people, they did not consider the existing knowledge differential among the stakeholders to be a barrier, because they assumed that Mongolia would only expect to collect comparative base data about the education system and on the human development aspects (e.g., *cognitive, affective and psycho-motor*) of the adolescents from the first PISA participation as mentioned in the following extracts.

*For the pros of PISA... mmm... I hope I covered it in my previous talk. However, if I discuss it in general, first, it [participating in PISA] is an advantage which provides an opportunity for Mongolia to compare and identify the education competence of the country [compared to the world]. Gov 3*

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*In terms of three main domains of human development including cognitive, affective and psycho-motor...For Mongolia, we need to do something to identify elements which are affecting the cognitive domain of adolescent development. Currently we do not exactly identify the status of Mongolian adolescents' general cognitive domain. To me, therefore, for this reason PISA is the first and most important pillar. Gov 1*

Accordingly, they thought that it would be reasonable and sufficient to provide school level people with general information and guidance at the time of their actual participation in implementing PISA. However, such a perspective may not be considered a barrier, only if the PISA applicants have a common understanding and expectations about the basics of the initiative in advance. The following extracts clearly indicate that stakeholders of this study do not have a common and consistent understanding of PISA and its introduction into the country. As some participants explained:

*No, no. [I know] Almost... nothing. I am aware that people may criticize that "Why this person does not have any information about this national policy." Actually, I do not know much about PISA nor do the teachers. Principal 1*

*It is a good idea that the Ministry should plan for PISA in cooperation with the professional organizations and reach a common understanding on PISA. According to these directions, Professional organizations mmm staff in these organizations such as ITPD, EEC and MIER should obtain common and consistent understanding and functions on the introduction of PISA. No matter how professional we are, there is an*



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*effect of an individual's perspective, so we should make roles and directions clear and common and follow them. There is no other way. Gov 3*

### **Barriers: Political impact on education**

Since the PISA initiative was mentioned as part of the highly strategic purposes of the country, the participants raised some points about political issues that could present as barriers to the introduction of PISA. In both direct and latent ways, most participants acknowledged that political power facilitates or blocks any decisions related to the education sector.

In terms of the introduction of PISA, some participants directly expressed their opinion based on their past observations and experiences in similar situations in the education system. They could foresee that political power could be considered a barrier because it could pause or suspend the process of the introduction of PISA in 2021; and it could cause trouble with regard to human resource stability.

For instance, some participants thought that the current change in the government of Mongolia could pause or suspend the introduction of PISA, because they observed that policies in the education system tend to be unstable when the ruling party changes. This point was stressed by some participants who remarked that...

*This may become a barrier when PISA is introduced.... obviously, it will become a barrier in a country like Mongolia where people connect everything to politics.*

*Teacher 1*

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*This is obviously a big barrier in the Mongolian society when a political party wins an election and they hold the state power. So, initiatives that a previous political party had launched have been automatically condemned and stopped. Some initiatives have completely changed. This pattern has lasted for last 10 years ....mm... almost 10-20 years. Our political system has become like this. I think this might be repeated in the near future. Teacher 2*

*It is possible. Somehow, for example, the previous minister had set a goal of taking part in a qualitative evaluation in 2021, while we would not deny the situation that the other minister appointed from the opposite party may resist implementing it. Perhaps it is a cause for keeping still and remaining silent about the introduction of PISA in 2021. So, if there is no stable continuation of the policy, and if the situation in which conflict directly occurs on the continuing work of the former party when the new party won mmm ... if such a situation does not stop, it will not deny that there will be an impact caused by power on introduction and implementation of PISA. Gov 2*

Moreover, participants suggested that political power could cause trouble with regard to human resource stability for the introduction of PISA, since the knowledge management of the current and prospective initiatives in the education system are highly dependent on the people who are in charge of it.

*Well, this is a thing that ...mmm... politically our country becomes unstable a lot. So, if the employee who was responsible for PISA was given his job, the relevant issues*

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*would be diminished... Especially since the PISA is an international level study, the MECSS is in charge of its introduction, it may cause such instability. Gov 3*

*...at the time of change in the ruling party, from there they appoint their staff. He/ or She comes and proposes this policy. Regardless of how a policy has taken place before, and without considering the consistence among the policies, the authority firmly assists their own determination. Such a situation has been existing for a long time. Gov 2*

While the rest of the participants whether they did not explicitly express such an opinion, their sharing of past experiences indicated that political power could be a barrier to the introduction of PISA. Some of them stated that the introduction and suspension of initiatives in the education system were highly dependent on political power. Such as,

*PISA might become an initiative which may belong to a former ruling political party now. In my country a piloting curriculum has changed due to winning of a new political party. Even terminologies and contents were changed because of that. I wish that hadn't happened. Teacher 3*

*Mongolian teachers have been piloting many curricula for many years as political party and high officials have changed in 4 years. Every political change influences our national curriculum and plan. We try to work by implementing and piloting those changes in curriculum in accordance with the guidance given by high officials. We never complain it is not possible and it cannot be done. Teacher 4*

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*There is nothing to deny such a situation. It is maybe the same in Mongolia, because there is some tendency to dislike the former government. To my mind, if there is a mistake, we can try fixing it and keep going on. Study manager 2*

Participants also shared similar opinions that people who have authoritative positions in the system have the power to impact the policy implementation such as the governmental principle to introduce PISA in Mongolia. As participants exclaimed:

*...It depends only on the person in charge of the sector of our country. Gov 4*

*... While I have been working at this laboratory school for last 5-6 years, our ministry of education may have been changed 3 ....no... 4 times. As the ministry has been changed, a new thing and initiative has been introduced in the education system. We are required to work towards that change like "A thread follows its needle" Teacher 4*

*... And most importantly, the most essential thing is that the education policy should not be dependent on politics and the policy should continue in the same way as it was first developed. It's only for the educational system. Principal 2*

*Yes, it happens. When a new minister was appointed, the direction of our reform was changed. When another one is appointed, the main guidance and direction was again changed. As a result, a chaotic rustle arises and sometimes we don't know what to do. Teacher 1*

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*Well, for me, mmm... I observed that people had an expectation in relation to introducing PISA soon. They were observing the whole process like “Well, PISA is approved in the policy”. Even after the election when the ruling party was changed, we still had some hesitation, such as “What will be the new government’s decision, whether they agree to participate in PISA or not” and, we were worried whether principles included in the state policy on education would be implemented or not, what if it would not happen. Gov 3*

As discussed above, there were number of participants who were concerned that the introduction of PISA could be suspended because of new ruling party that had commenced governing in 2016. However, a few of the participants denied the possibility of a political impact which could prevent the introduction of PISA in Mongolia. Such as:

*Well, that's Ok. This is a possible problem, but this is not the case in Mongolia. There is some circumstance in which such a power causes change in our history. Even though, I think, for PISA the same thing will not happen. Gov 1*

*I do not think so. Once our country has set goals to introduce the internationally accepted assessment program in the country, one person or another party that has just obtained power to rule will not change it. No, it won't. I believe it's still possible to continue the purpose. Principal 1*

*Well, politically, this is OK. Gov 4*

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*It also becomes a support and a resource if high officials have a positive opinion on introducing PISA. Gov 2*

*Our country has included PISA as an objective. However, currently if the situation demands to change it or an authority deems it should change somehow, in advance of making his or her final decision, it is certain that the current official will thoroughly research and consider a reason why the former official raised such an objective. Gov*

*3*

From these extracts, it can be clearly seen that the power of individuals is highly influential with regard to the decision-making processes in the education sector of Mongolia. Especially, since the participants agreed with the point that, officials, who are in charge of ruling the education sector, have the right to establish or suspend relevant initiatives including policies and principles.

Legally, all ministers are appointed by the prime minister who is the representative of the ruling party in Mongolia. Since ministers are politically appointed, it is understandable that policies may be impacted by political power if there is no clear and sustainable legislation in the sector. Therefore, the decision of introducing PISA for the first time in 2021 could be that it is suspended or continued depending on how the new ruling government of the country considers its importance. Furthermore, such decisions could be highly dependent on the foundation and sustainability of the documents in which the country presented the argument for the introduction of PISA in Mongolia.

**Barriers: Management related issues**

Time, finance and resources are management related issues which can be considered barriers to the introduction of PISA and these are discussed below. As study participants pointed out these issues which may be perceived as minor difficulties, become barriers with poor planning and application...

***Management related issues: Timeframe for the introduction of PISA***

According to participants, the timeframe for introducing PISA was a two-sided barrier. On the one hand some of the participants suggested that this is not the suitable time to introduce PISA to Mongolia. On the other hand, the international timeframe for PISA requires that the country to take urgent action.

Because of ongoing reforms in the education sector, most of the school level people, teachers as well as students, indicated that more time was needed to participate in such an assessment. Some participants suggested that the country should introduce PISA when the education system is better developed. For example,

*So, I would like to ask that yet, we have not developed the education system well, then what aspects shall we be assessed for. I mean we are not ready in terms of the time,*  
*Principal 2*

Some participants took the position that the timing for the introduction of PISA was not appropriate for teachers. Participants assumed that teachers would not be ready because they are not well accustomed to the ongoing reforms and renovations in the system, particularly in

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terms curriculum changes. Hence, they anticipated that the introduction of PISA would cause some tensions for teachers, such as

*Well, we were implementing the Cambridge model of the curriculum first, then it is said that the name changed to Tsum. However, we noticed at least a slight difference between these two. I think it's not the right time to introduce PISA because teachers are not well experienced now. It's far better if it is introduced when the time teachers feel confident about their experience on how to implement the curriculum reform saying like "That's the way it is." Study manager1*

*It may require plenty of time. Both children and teachers are not ready for piloting new experiments immediately, so much time might be needed. Speaking of teachers .....they have small preparation time as a result of piloting a new curriculum. A small improvement has been achieved in our assessment procedures so far. In reality, it is difficult to say that we teachers are ready for PISA. Teacher 1*

The issue of the timeframe was also considered a problem when participants discussed the perspectives of students. Participants thought that to qualify the level of assessment Mongolia needed more time to prepare fifteen-year-old students.

*When we begin to introduce this programme, when the examination on the math and natural science is held, there must be some average score which indicates the skill level of students, is that right ... in this case, in my view, currently, we are not prepared to reach those indicators. Principal 1*



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*It varies from child to child. Children have a variety of knowledge and skill levels.*

*Yes, they are not ready. Teacher 2*

*...anyway, our children are not ready to be assessed at the international level maybe with similar assessment to the American level. Also, the availability of training equipment for competency-based learning is insufficient in schools... Principal 2*

Furthermore, some participants were apprehensive that the country would be unable to participate in the PISA 2021 cycle because of not meeting the requirements of timeframe. In other words, some participants criticised the government for delaying the process and for being less attentive to PISA related issues. For instance, some government level stakeholders indicated that the timeframe could be a challenge for Mongolia because to keep up with the PISA process and timeframe for its introduction, the country should hurry to take the necessary steps. As participants explained:

*However, we still have less time... Well, you know PISA-D. PISA for Development...*

*For example, we are late for it. Last November, Bhutan was registered as the last country, which was may be 8<sup>th</sup> or the 9<sup>th</sup> country. I remember it was last November, in 2017. So, we cannot participate in PISA-D, but we still have a chance to take part in PISA. But it is necessary to take essential steps and act quickly. We need to hurry.*

*Gov 2*

*...especially, to compare with previous experiences ... I was attending two or three training sessions on TIMSS, for example one was held abroad... others were organised here... at these training sessions mmm I have noticed that because of poor*

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*time management we made some mistakes when we were participating in TIMSS before. Gov 1*

### **Management related issues: Finance**

Apart from time management issues, resolving the financial requirements for the introduction of PISA could be identified as one of the considerable barriers. In relation to finance participants took two distinct positions. Namely, the majority of study participants felt that financing PISA would be a problem for country because of the economic difficulties currently occurring in Mongolia. However, other participants believed that Mongolia has the financial capacity to pay for PISA if decision makers accept that Mongolia's participation in PISA is vital.

The following extracts show how some participants believed that paying PISA's fee and costs would present as a barrier to the introduction of PISA because some participants felt that the change in the country's government would also cause changes in the financing of current and prospective principles for the education system.

*...originally, exactly ...the high officials of our country know the money in terms of financing. Most importantly, they might support it if they are aware of and realize the goal and importance of PISA. Teacher 1*

*Even for us, if we are about to implement or do one thing, we all stand out because of financial problems. Principal 1*

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*Mmm.... The participating fee is quite high. The country pays that fee. Therefore, high officials might not introduce PISA due to financial problems. It is beneficial that the exams are taken in every 3 years if it is introduced. Teacher 2*

*As I mentioned before, if the issues regarding budget and financing are not decided and there is no money, we can't even participate in PISA or other projects. Principal 1*

Moreover, some participants held the position that funding for the introduction of PISA would be barrier in Mongolia, because they estimated that the general economic capacity of the country was low.

*It is difficult to talk about financial possibilities of my country. A very small amount of money is spent in the education system. Now, exactly, what... mmm... Generally, the finance cannot spend for .... Teacher 1*

*In my opinion, if we need to fund it based on our domestic resources...mmm..., or I mean, there is little chance of financing from GDP of the country. Gov 1*

*...on this financial issue, the thing I am hesitating about is that, in terms of economic capacities, our country can pay such a cost or not. Gov 3*

Some participants saw the financial cost as a barrier because they assumed that the country would be unable to finance PISA's cost and fees because of the current social and economic conditions in Mongolia. For example:

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*In the case of the country I cannot say anything. It is difficult to participate in such a high cost assessment, even nowadays the country is facing difficulties in paying salaries. Well, on the other hand, if there is such an amount of money available, for sure it will be a facilitator. Principal 2*

*Mmmm... if we consider the current social situation, it does not seem possible nowadays. Study manager 2*

*Speaking of the Mongolian situation, teachers initiated a strike for increasing our salary a few months ago. The Government responded that it was totally impossible to accept our request because Mongolia had a contract with the International Monetary Fund, so the Mongolian State Budget had to be tight. I cannot say this condition might influence the introduction of PISA. High officials have already estimated these kinds of barriers since they realized the importance of PISA and decided to allocate it a relevant budget. Teacher 4*

*The financing can become a barrier because my country has a financial crisis now. Study manager 1*

Another group of people who were more optimistic about money related issues associated with the introduction of PISA expressed their position as they believed that the country had the economic capacity to introduce PISA as a priority. The following quotes illustrate these points

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*Even though it is very difficult for Mongolia to pay for fees to participate and organize in PISA due to the current economic situation, I hope the required budget can be allocated by our government as a whole country. Teacher 3*

*If the entry into PISA is vital, the government will budget for it. Gov 4*

*Since it is informed that a big percentage of the state budget is spent in the education sector as well as there is a strong need for renewing and improving our assessment and a necessity of PISA in my country, this initiative should be supported and regulated. Study manager 1*

In addition, some participants held the view that finance cannot be barrier to the introduction of PISA because they believed that such a principle included in a government level policy would be worth spending the national budget on. Moreover, since it has been included in the policy, the participants felt that the necessary funding for PISA would have initially been well-planned.

*Mmm, but it is usually said that at least 20% of the budget is spent on education. If that's right, it's probably worth spending the money for it. Study manager 2*

*With respect to budget potentials, since PISA has many years of international experience, there is a fixed amount of cost per child that they are planning on, for example, the Mongolian population is more than 3 million and from the population PISA will involve certain number of children who are studying to acquire secondary*

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*education, such and such. So, considering our country's potential, it must have been reflected on national level goals. Gov 3*

### ***Management related issues: Planning***

The last management related issue is planning for the PISA 2021 cycle. According to government level participants to take part in this cycle Mongolia should have good management. Participants especially emphasized the importance of taking decisive steps towards the introduction of PISA. Furthermore, some participants claimed that the country lacks sophisticated planning. As discussed with participants it seems hard to get consistent and confirmed information about the country's aim to introduce PISA.

Moreover, some interesting points that the study sought answers to remained unclear. For example, having clear information about the action plan for the introduction of PISA, becoming familiar with responsible bodies, to see documents related to finance or to know the ways in which the country expected to use PISA results and outcomes. The extracts below prove these points well, for example:

With regard to the action plan for the introduction of PISA participants expressed a view that,

*So, what we did until now is that we set a goal to take part in 2021. Although, I really won't believe that there is any study or estimation on what it meant, how much it would cost us, how much it would cost to register, how much it costs to organize it. So, I cannot give clear information about where this work process is now. Gov 2*

*No steps have been taken at this time. Gov 1*

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*So, on the other hand, "Planning" and "Management" may cause many different challenges. Gov 4*

*In other words, although the goal is included as an aspect in the state principles of the education, it should be divided into a separate plan; I mean... that has to be broken down into a plan. So, let me think, it was approved by the government in 2014, and by 2021, for 7 years, I hope actions will be planned during 7 year period within the assessment framework of the Ministry of Education. I guess there are first tasks such as doing monitoring research or something else. Gov 3*

As for actions towards preparing responsible bodies for the introduction of PISA one participant expressed a view that:

*We need to appoint a National Project Manager whom we regularly send to consultation meetings. We need to prepare those who work at the managerial level. As for a national project manager, he or she should be specialized in the assessment and measurement field, must have high-level English proficiency, and to be well-experienced the research field at least. If we progress in this way, we might answer the question of how much we have prepared such experts in the education sector. Gov*

2

Some participants hesitated about the approval of the document to finance PISA and the possible usage of PISA results and outcomes for the country.

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*I do not know what's going on right now. It might be clear if you ask these finance things from the Ministry of Finance. To me there is no information in this area. Gov 1*

*According to the information I have read, I am not aware of anything like that Mongolia has such and such expectations from PISA. Gov 3*

Having discussed barriers to the introduction of PISA, this next section presents study findings which represent strong facilitators for the first participation of Mongolia in the PISA 2021 cycle.

### THE INTRODUCTION OF PISA: FACILITATORS

As expected, this study found that the needs of the country, acceptance of PISA into Mongolian National level policies and the influence of international trends in accepting PISA were identified as major factors that would facilitate the introduction of PISA in Mongolia (see Table 4). The needs of the country, acceptance of PISA into Mongolian National level policies and the influence of international trends in accepting PISA were the main facilitators and these can be applied to eradicate the three major barriers identified in the study. As shown in Table 4, the governmentally approved principle to introduce PISA in 2021 and the Sustainable Development Goal-2030 of the country for the UN can be considered as examples of how the country accepted the introduction of PISA at the National level.



Table 4 Findings concerning Types of Barriers based on the Conceptual framework of the study

<b>Facilitators</b>		
needs of the country	acceptance of PISA in the national level policies	influence of international trend to accept PISA
a) getting internationally accepted comparative data on outcomes of adolescent education b) finding solutions on improving educational assessment c) confirming the results of the newly reformed national curriculum	e.g. governmentally approving “Principle to introduce PISA in 2021” and “The Sustainable Development Goal-2030 of the country for the UN”	e.g. assuming participation in PISA as a global trend which attracts countries ‘to be compared’ internationally; expecting changes from PISA in Mongolian education, similarly PISA shock causes reforms in education sectors of the countries;

**Facilitators: The needs of the country**

According to study participants there were three strong needs which would persuade the country to take part in the upcoming PISA cycle. These included getting internationally accepted comparative data on outcomes of adolescent education, to find solutions on improving educational assessment and to confirm the results of the newly reformed national curriculum.

Some participants suggested that Mongolia would participate in PISA because there is a necessity to compare the education level of the adolescents internationally and to obtain comparative data which could be used not only for educational but also socio-economic

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purposes in Mongolia. On this issue, governmental level participants expressed their views in the following ways:

*...Generally speaking, if Mongolia receives information like “results of PISA questionnaire and exams show that such and such things are affecting the success of students, for example the role of a parent or a parent's understanding of the child”, it is possible that the country can apply that baseline data in order to develop a policy to solve relevant problems. Gov 3*

*...And by introducing it, we must consider not only implementation, but also we need to identify actions that should be taken in this field no matter whether it is an issue of curriculum or for the system. Gov 2*

*It seems that the country wants this because it was planning to look at what our curriculum is all about, how well it meets the competence level of international children, and so on. Gov 4*

*...The reason why Mongolia is entering it is to diagnose the current state of the situation... And if we are in PISA, we will find our further way of orientation. In other words, I understand that Mongolia is focusing on something like "where is the starting point of our country in PISA"? Gov 1*

For the school level people, they find such comparative data would be necessary for reasons, such as to define current education quality and standards compared to international levels, as the following participants explained.;

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*There must be assessment renovation and we must follow international standards.*

*Furthermore, we need to estimate how those foreign country's experiences are compatible with the Mongolian environment. Principal 1*

*I realized that our Mongolia is participating in PISA and will recognize the quality of education in the international arena. Study manager 1*

Participants also thought it would help Mongolia get a proper understanding of students' educational achievements compared to international students, as the following teachers indicated.

*...it may enable teachers to know their students' level comparing with the international rating. Also, we will know our teaching outcomes and preparation level. I think teachers need to have as many as possible external examinations. As external exams are frequently taken, teachers will analyse their teaching and they will find out where they made mistakes. Teacher 2*

*Generally speaking, if the examination is organized fairly, even parents will know their children's level. The parents will pay attention to their children's weak points to have definite guidance on how they can contribute on their children's knowledge and skills. Paying attention to children helps their further development. I think these possibilities might happen. Teacher 3*

Obtaining approval concerning the quality of education was another possible outcome for Mongolia being part of PISA. As one study manager exclaimed:

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*People say that our education is poor. But in fact, is our education really bad or is not it? We should make it clear. Study manager 2*

Furthermore, in terms of a researcher's perspective, the ministerial level stakeholders emphasised the significance of obtaining data from Mongolia's participation in PISA. For example, they specified that PISA would enable the country to obtain externally analysed and reliable base indicators that can represent education quality and the academic development of children in the country.

*From the perspective of the researcher, we have to make sure that we are going to have a certain degree of justification for implementing any major reforms. Based on this view, I think that we should see such justifications from external studies like PISA. Therefore, we have to include this type of assessment. Generally speaking, we have to take part in either of these - PISA or TIMSS or PIRLS. However, the results should be realistic. It should be true. Gov 2*

*In 2030 we will define what our Mongolian child should be like. Well, the main concept I have obtained so far is that with regards to the planning we must do by 2030, it is a good idea to find out certain results of the diagnosis that external auditors provide, such as the PISA organizers, who are saying "you are going there or here". Of course, it does not mean that we believe PISA will tell us everything. However, I think somehow, we have to have an external review of the education sector and look at the findings by comparing them to our real situation and then we must think of the next steps in the industry. Gov 1*

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*So, in the case of research, external assessment is considered more important than self-assessment, so if I am asked to encourage PISA, I will raise both my arms and legs. Gov 3*

Moreover, participants agreed that the assessment is the controversial issue for the education sector which in need of urgent and significant improvement. Therefore, seeking solutions for improving educational assessment might be another reason to set the goal to participate in PISA. Study stakeholders explained with comments such as:

*Although I think assessment of PISA is needed, I don't know what exactly what assessment is included. Teacher 1*

*In mathematics and natural sciences, because of piloting the core curriculum and curriculum reform, three types of tasks such as knowledge, skills and application are used for the assessment. The direction of the State exams and university entrance examinations are focused on this. There are some difficulties to assess and teach some content of mathematics in terms of how it is used in real life situations. Materials, methodologies and tasks for the assessment which define children's skills are not good for teachers. Even, assessment related topics have not been mentioned at trainings for teachers' skill improvement. Teacher 4*

*Particularly, the issue of evaluation is still in our education sector. Gov 1*

*For us, from the time we first met with students, we do our job, but we do not even focus on what we have done for those children in the end. In other words, it is much*

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*less in terms of assessing the outcome of own work. In general, we are lacking how to make a final evaluation or assessment. Gov 3*

*It is so beneficial for us to have this assessment which complies with international standards. I am sure that this kind of thing is necessary for us in the near future.*

*Students are choosing private commercial companies which run student exchange activities when they want to study abroad without taking exams because Mongolia doesn't have a general assessment like this. Teacher 2*

From the study findings, it can also be seen that confirming the results of a newly reformed national curriculum might be a need in the country and this will facilitate a decision to take part in PISA. For example, ministerial level people indicated that the primary goal of participating PISA 2021 would be the relevance PISA in regard to this need of the country, as shown in the following extracts.

*Also, countries take part in PISA with a clear goal and some expectations. That is considered to be possible in our country as well. Because by 2021, since the curriculum reform will be almost seven ...mmm... about seven or eight years will have been passed. Its result will be considered as a result, such as an outcome of impact evaluation, which defines what the exact effect was. Gov 2*

*For me, this is a great support. For example, in recent years, especially in 2012, Mongolia intensely made its educational reforms. Generally, the curriculum and its contents were updated quite well regarding current social and educational trends which are accepted at international levels. Gov 4*

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*Our country may have planned that first, PISA should be introduced in 2021 through the implementation of the reformed curriculum and the country may aim to see the outcome of its implementation. Generally, from 2012 to 2021, it equals a 9-year period, so it can be considered as the end of the implementation of the reformed secondary education curriculum in which first graders focused on obtaining special and general skills from their 9-year learning process. Gov 3*

Not only governmental level stakeholders but also school stakeholders proposed that the government could prioritize PISA because they need external methods to monitor and evaluate the outcomes of the curriculum reform. Such a sentiment was mentioned in the following extract.

*They might want to know the outcome of renewed curriculum (core curriculum) or to be assessed and there are certain reasons and incentives. Teacher 4*

### **Facilitators: Acceptance of PISA into Mongolian National level policies**

The findings of the study reveal that accepting and approving PISA as important in the Mongolian strategic and national level policies would facilitate its introduction in Mongolia. First, considering the general structure of policymaking in Mongolia, some participants felt that the governmentally approved principle to introduce PISA in 2021 would have the potential to sustain it in the future. The ways in which certain policy goes through the policymaking process is clearly described in the following extracts.

*In general, government policy is organized in a hierarchical order. Having set a goal*

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*to participate in PISA at the ministerial and the governmental level and then having it approved by the State Great Khural is not such a common thing. Therefore, it is not possible to be modified even if the next authority or the new government comes out. There is no way to change it unless the government decides on it and it is discussed again through legitimate legal processes. People used to tell us about some issues that when one authority comes, one thing is stated while another authority comes out, another thing is considered. Mmm...however, well... it's different from issue to issue: for some it is possible to be modified while others are not to be done so. So ...what's the point in that... someone who is in power if he or she really wanted, this principle would not have been the aim. Gov 3*

Apart from the above extract, the rest of the governmental level participants agreed that the introduction of PISA being included in Mongolian State level policies was an important goal. Moreover, some of the participants suggested that such inclusion in a high-level policy, such as the Sustainable Development Goal, would be an indicator that Mongolia would take part in PISA 2021. Extracts supporting this view include as follows,

*Generally, Mongolia has issued "State Policy on Education for 2016-2024". Within that policy, it is included that, in 2021, general secondary education will be assessed against international quality standards, such as PISA. Gov 1*

*...In any case, it has been included in the policy paper. Gov 4*

*...The government has been supporting the participation of PISA in 2021 and approved it in the education policy documents. Gov 2*



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*It was included in the Government Action Plan, so it is in the framework of sustainable development. As well as, this purpose mentioned during the recent National Conference for sustainable education. As a result of this conference, I find that our Ministry and its management level officials have somehow delivered comments to the public. Gov 3*

### **Facilitators: influence of international trends for accepting PISA**

More and more new countries are participating in PISA year by year and its results are accepted as important in most countries. There are numerous well researched examples of how PISA shock caused reforms in education sectors of the countries and in what ways PISA findings impacted them (Ertl, 2006). Except for its high acceptance at the international level, perhaps participating in PISA can be defined as a global trend which attracts countries 'to be compared' internationally (Engel & Frizzell, 2015). Therefore, it can be a facilitator which pushes Mongolia to make such a decision. Below are some examples which indicate what participants understand about being compared internationally and what they expect from such comparisons. For example, some participants felt that being compared by PISA is necessary because it will enable the country to see where the level and quality of Mongolian education among others is placed.

*In the case of the country, this assessment will determine the level of educational outcomes of our education sector. Principal 1*

*...Let's look at where we are in the world. Study manager 2*

*Taking whole perspective of the country, knowing where the quality of the education*

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*sector at the international level is one of the important issues. Well, in terms of PISA quality and suitability, I am in favour of Mongolian participation not regardless of PISA or any other assessment even it is once only. Gov 3*

It is also believed that PISA will provide information of the actual education level of Mongolian students compared to other countries since the assessment includes children who are just or about to finish compulsory secondary education in Mongolia. As the following teachers explained,

*I support this personally. There should be an assessment policy. Children's general level needs to be assessed and compared with other countries' level. Teacher 2*

*Children who acquired the compulsory education progress in general education in their chosen specializations. Then, children need to know their level. Teacher 1*

Another point which emphasised such comparisons is that some participants thought PISA could be helpful for Mongolia not only for defining the present situation of the education sector but also for getting guidance for future upgrades and reforms in the sector. This point is clearly shown below.

*The first year of participating in PISA will enable us to make comparisons. Our participation in the following round will enable us to define our priorities and directions which we will need to concentrate on. Teacher 3*

Some participants thought Mongolia should compare its education quality with international assessments because some former participating countries acknowledge their PISA results and

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share something positive about PISA. In other words, as discussed in the following quotes, all participants had heard of and had understood that PISA was an effective and necessary measurement in which countries must participate to be ‘compared’.

*... Once we participated in IT training in Korea. Koreans were proud of themselves that they are ranked at top in the world in relation to PISA. I remember that. I obtained the initial knowledge about PISA from that training and I realized that PISA is very important. I noticed that they were boastful of high-ranking status in the PISA wherever we visited in that country. ...After then, even though I have been keeping in mind that the importance of PISA is high, I don't know exactly what it is. I have an opinion that I wish my country should implement PISA since I knew that Koreas were so boastful of their students who can learn in any countries in the world without any difficulties. Teacher 1*

*It was talked about at one of our courses. ... mmm ... Finnish is the most ... mmmm .... its children ... mmm... it is ranked in the first place in the world by its quality of education Principal 2*

*Like Kyrgyzstan, they are still in PISA. So, we have to get into it too. Gov 2*

*From the example of Singapore, they have presented their results like “we first participated in PISA in that year and were assessed in that way on those issues therefore we did such and such things to improve our condition. It was done and reached that level”. From these expressions, it was observed that the Singaporean education sector was aligned with the results of PISA and that the results were of*

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*great significance. So, I've seen such a structured international survey, which possesses quite a high reputation. Gov 3*

In addition, Mongolian participation in PISA or other similar assessments are considered compulsory because participants believed that certain international standards for education quality exist and the country should be compared against them by participating in such assessments. In this way the quality of education in Mongolia will be accepted and approved at an international level.

*If we did not do it in 2021, we would have to qualify for international quality assessment one day, sooner or later it doesn't matter. Gov 2*

*Mongolian education and its quality will be accepted at an international level.*

*Teacher 1*

Moreover, one participant suggested that Mongolia should take part in PISA when the results would be reliable and valid for development of the country, as well as the education sector.

*Why don't we become involved in PISA if it can detect by at least 50% of validity and reliability between the factors: quality of education and socio-economic factors of the country... Study manager 2*

Apart from acknowledging PISA's importance, some participants guessed that the country would participate in PISA just because of its interest in keeping up with common trends in the world. For instance,

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*First, (laughs) our country likes to mimic various things. Taking part in assessments and something like that seems to be a country of interest. (laughs), isn't it? In particular, it seems like the country is fond of participating in something to compare itself to others. Study manager 2*

Finally, PISA was expected as an assessment that would provide information about the knowledge and skill level of Mongolian students and would indicate whether they would meet the learning requirements of foreign universities.

*I think that possibilities may increase in the admission of Mongolian students at international famous universities if Mongolia receives high scores on PISA and the assessment of my children's knowledge and skills are high. It would be thought that children pass at PISA exams. So, children may be invited to study there and children may be supportive because they might find it as a studying abroad opportunity. This may become an incentive to children. Teacher2*

## IMPLICATIONS FOR THE FUTURE

Participants of this study made numerous recommendations for the introduction of PISA based on their experience and knowledge within the education sector of Mongolia. These are discussed in the next section.

Participants from the school level expected that their lack of power would not be a barrier for them to implement PISA, provided policymakers and upper level authorities would make PISA and related policies adequate by keeping the underpinnings of PISA consistent, and

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most importantly by paying attention to the contribution of PISA to child development. Participants wanted to be sure about PISA's reliability and validity in order to assess students' development. It was thought that in this way, differences in the information available among stakeholders of the education sector could be minimised. The following statements alluded to this view.

*Basically, decisions of the rulers may affect people at the upper levels, such as it will impact on the actions of the government, the ITPD or the EEC. Not on ours. At lower levels, no matter what the authority is, if the policy is developed adequately and if it is also for the development, we keep doing things appointed to us. Principal 2*

*It is important that if people at the upper level of the system keep their understanding consistent, make sure that their decision is aimed at developing our children in the way we want and improve how we assess the skills of those developing children. In addition, it is also helpful for improving the teachers' quality of life. If such and such things are reliable and valid, we have no problem in implementing it. Principal 1*

Furthermore, participants were worried about too much political impact on education which could be difficult for maintaining sustainable policy and introducing any initiatives like PISA. Therefore, maintaining sustainability of the education policy and consistent actions for its implementation were highlighted as important by participants. They said:

*If it is the case what is in the educational policy document is adopted, then the government should set goals towards the principle and the state central administrative body in charge of education matters to the government, simply, the*

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*ministry of education of Mongolia should make certain decisions and take legitimate steps to make it happen. Gov 2*

*What I really worry about is whether my government conducts reasonable research before introducing an initiative. We will have nothing if we implement projects without having research just copying them because that country implemented it successfully and that country's policy is extremely good. Teacher 1*

Some participants also suggested that Mongolia should participate in several PISA cycles in the future since one of the principals uses of PISA is comparisons with other countries, and therefore they believed that it will be effective for Mongolia.

*My country should implement it in a long run. This will allow us to compare the results. It is so useless if we repeat processes like previous curriculums as they were piloted for a while and then stopped. For example, in our laboratory school while we were piloting a new curriculum, another curriculum was introduced without waiting for the results of the previous one. We need to participate in PISA for 3 times or 9 years. Teacher 2*

*It is important how we can adapt those initiatives in Mongolian settings instead of copying that foreign experience and implementing it automatically... Teacher 4*

Lastly, management related issues for organizing the PISA cycle in 2021 were considered barriers for the introduction of PISA. That is why stakeholders in the study recommended some solutions which might eradicate those barriers. For example, some participants felt that

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with help of participation in OECD initiatives, such as PISA, it could be beneficial in terms of Mongolia's foreign relations.

*It may become a facility and resource if participating in activities from OECD enables a country to have diplomatic cooperation with other countries and economic and political importance. Teacher 3*

There was also an expectation that, current cooperation and collaboration with UNESCO could be helpful for Mongolia's participation in PISA. Most specifically, some participants hoped that UNESCO could donate or help to find donor to finance the introduction of PISA in Mongolia.

*Well, I think UNESCO will also be able to get together with us. From here on ... we can seek some technical support from them ... or something like that. UNESCO and OECD are closely tied to each other. Generally, we have been able to communicate with UNESCO at the government level with many policy papers and by working together. So, with the support of UNESCO, we may also have the opportunity to participate in this program. So, in this respect, I am just wondering about our chances to have such opportunities from those organizations .... mmm ... or by some agreements with the cooperating countries. Gov 2*

Participants also pointed out the importance of researching PISA and revealed recommendations for dealing with possible barriers to the introduction of PISA.



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*It is imperative that if we can justify with some research findings and proofs on what part of the PISA is essential to deal with which types of issues. Gov 4*

Some participants were also concerned that proper and adequate application of PISA results would be essential.

*I'm a bit concerned about the fact that even if we took part in PISA assuming it is important - if we do not use the results of it well, it will be a matter of spending a lot of money and the teachers may not care about it. So, I think that the most important thing is in applying the results of the PISA survey in positive and smart ways, for instance, reflecting the results in education policy or using them to change the attitude of teachers who are working for policy implementation. And then, most importantly, it is best to make the right justifications on the results. Gov 3*

Moreover, some school level people wanted to remind us that the psychological pressures of PISA examination on students should be considered in advance and minimised at all possible levels.

*A reason why I am asking is that every exam makes children have anxiety. Even unit exams or everyday quizzes influence children's psychology. Children have psychological pressures and worries like "What will happen." Children may have that psychological pressure when they take an examination with a 1000-point scale. PISA makes children worry about their result if their performance is not good. They might over think what would happen to my math teachers, Mongolian language*

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*teacher if we receive weak points on the exam. This kind of pressure might influence children's mental health. Teacher 3*

It was also emphasised that Mongolia could collaborate and be assisted by former PISA participants, such as Hong Kong, to prepare human resources in the country for the introduction of PISA.

*We need to have the time to prepare our staff for PISA. For example, Hong Kong has been in PISA from the beginning, is that right? ...Mmm... Hong Kong has been supporting Macau as well as China to participate in PISA. So, we can also get such support. We can learn from the experiences of some countries. Gov 2*

Finally, it was also recommended that to sustain the financial aspects of the introduction of PISA in Mongolia, relevant policies and budget planning should be approved as soon as possible.

*... mmm ... according to the budget law, it is important to budget for PISA - to include and allocate the necessary funds hieratically or even once to the education sector funding to introduce the PISA. Once the budget is approved, it only follows budget allocation. Then at the time of the budget process, changes in the economic circumstances, such as the difference between the inflationary adjustments will be solved at the time of the implementation process. Gov 3*

## CHAPTER 5: CONCLUSION

The Programme for International Student Assessment (PISA) has been included in the governmental Sustainability Goal -2030 of Mongolia and within this policy the country stated its intention to take part in the PISA-2021 cycle. However, for the implementation of this goal educational stakeholders have indicated that so far there has been less than sophisticated action taken towards the introduction of PISA in Mongolia. Therefore, at this initial stage of the PISA process, this study could significantly inform Mongolia to conceptualise the facilitators and barriers the introduction of PISA based on the expectations of stakeholders and may mitigate some barriers before they arise.

As a result of the interviews with 12 participants, the informed knowledge levels about PISA were found to be highly differentiated between stakeholders. According to the study findings ministry level people had obtained more information about PISA before the interviews, while school level people had only heard about PISA as here say and their knowledge of PISA was limited. School level stakeholders took PISA related issues seriously and wanted to know as much as possible, because they expected the introduction of PISA to be one of the most promising goals of the country.

Noteworthy was that most ministerial level stakeholders held the position that information about PISA did not need to be shared with school level stakeholders. PISA related issues should not be deliberately shared as PISA would only be used as a diagnosis of the education sector. Considering this viewpoint, it can be concluded that such knowledge and expectation differences between stakeholders about PISA may burden the introduction of PISA in

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Mongolia and lower the effectiveness of its future processes. Therefore, policy makers should consider this issue well and work towards lowering the knowledge differential. Furthermore, they should pay more attention to keeping all stakeholders well-informed so that they may possess a shared understanding about PISA at all levels of the system.

Another influential barrier that may challenge the likely introduction of PISA in Mongolia could be related to the political context. From their past experiences, almost all stakeholders indicated that they had found the political impact within the education sector of Mongolia to be high. Most specifically, some of the participants suspected that political power could burden the introduction of PISA in different ways, such as, the suspension of introducing PISA altogether, or halting actions or placing limitations on the funding for PISA. As participants explained, political power could be considered a barrier because the sustainable implementation of former policies in the system has been low. It may not be the case for the introduction of PISA however, in order to improve the gains from implementing PISA, Mongolian policymakers should strengthen their actions to maintain sustainability of this governmental policy and to reconsider goals for participating in PISA.

The last challenging issues for the introduction of PISA in Mongolia could be management related barriers, namely money, time and planning for PISA. First, since all of the participating countries are fully responsible for financial issues, the majority of participants agreed that paying money for PISA could be barrier for Mongolia. Economic instabilities, the debts of the country and some social demands for increasing teacher salaries were expected to place create pressure which could cause difficulties for the government to fund the

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introduction of PISA from the state budget. Therefore, as suggested by stakeholders, it may be recommendable that the country finds donors to help support the participation of Mongolia in the PISA-2021 cycle.

Second, the timeframe for the introduction of PISA was considered another management related barrier. On the one hand, school level stakeholders felt that introducing PISA in 2021 may not be the right time because the system is not ready to be assessed internationally. On the other hand, ministerial level people felt that the timeframe could be a problem because of PISA requirements. Both issues should be well considered, most importantly, to avoid wasting money and effort, the country should devise schedules that are clearly and tightly adhere to OECD planning. Mongolia should take urgent action for participation in PISA 2021.

Third, poor planning was expected to be the last management issue in the future introduction of PISA because the participants noted that currently the position of policymakers on PISA were not clear and vague. That is why Mongolia should take urgent action towards goals to participate in PISA and stick with its preparation for the PISA cycle. Mongolia should find solutions to secure sustainability in terms of the future intentions for PISA and monitor its process regularly as well as upgrade the planning if necessary.

In general, there were three main factors which could facilitate the introduction of PISA in Mongolia including, having a strong need to improve student learning assessment in the system; approving the introduction of PISA as a future goal in the sophisticated policies of the country; and influence of international trends to accept PISA as a credible source to

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determine the quality of education worldwide. How these facilitators could be helpful for Mongolia to eradicate the previous barriers will be recommended in the following section, supported with of points made by stakeholders in this study.

### Recommendations

Table 5 outlines the recommendations of applying existing facilitators to eradicate the given barriers. In this way, the study suggests that with help of facilitators, the barriers found in this study may be eradicated and assist Mongolia to effectively introduce PISA in 2021.

Furthermore, difficulties that could occur should these barriers remain at the time of introducing PISA in Mongolia are shown in the last row of Table 5. For example, if barrier of knowledge differentiate remains at the time of PISA introduction, difficulties such as precaution; disrespectful attitude; and public and stakeholders' criticism can occur among the stakeholders of PISA in Mongolia.

Table 5 Recommendations for Introducing PISA in Mongolia

<b>Recommendations</b>		
decrease knowledge difference gaps between the stakeholders considering needs of the country	keep sustainability of the national policies; decrease political impacts on long-term and strategic policies	commence urgent action; find reliable and sustainable budget solutions; learn from peers and research;
<b>Possible impact if enabled</b>		
knowledge difference among stakeholders	political impacts on the education sector	management issues /time; finance, planning/
precaution/ disrespectful attitude/ public and stakeholders' criticism	weaken the sustainability of the policy and may quit to introduce PISA	delay/suspend PISA introduction; decrease the benefits from PISA participation

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As discussed in the previous chapter, it is recommended that before commencing any action to eradicate barriers which might be relevant in the introduction of PISA, the Mongolian education system should seek answers to the following questions. They are:

- Did we research it well?
- Is it really the assessment that we have been looking for?
- What is our premier purpose to introduce PISA?
- What are the facilitators and
- What are the barriers?
- How do we eradicate barriers?
- How do we apply its result?

These questions overlap the purpose of this study too. By considering these aspects thoroughly, the country can prevent certain risks; at least it will avoid wasting time and money. First of all, policymakers should self-evaluate the current research basis for the introduction of PISA in the country. If the programme is well-researched the country should initiate relevant planning and actions without hesitation and clarify the roles and responsibilities of the stakeholders in clear and consistent ways. In this way, it may decrease the knowledge differential among stakeholders and it may help them to be consistent and cooperative with the stated goals of Mongolia's participate in PISA for the first time. If the country finds such a purpose is poorly researched, then it should be accepted honestly. By accepting such findings, the country may prevent wasting resources, as well as enabling the opportunity to undertake in depth research about the introduction of PISA. This would help

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the country to identify the common goals and possible applications of PISA results in a credible way.

Researching the importance of PISA in Mongolia and its academic effectiveness would help determine the worth of Mongolia's participation in PISA. Adequate answers for such reasoning can be obtained when the needs of the country to take part in large scale assessments such as PISA are clearly stated. In simple words taking part in PISA can be conceptualised as a situation in which Mongolia asks outsiders to serve as judges for its education quality. Therefore, it is necessary to look back at the needs and goals of the country, in order to fully benefit from this service. If the service does not meet the country's specific needs for the education system, obviously there is no need to waste funding in an otherwise tight state budget.

In terms of facilitators and barriers which can be foreseen, issues raised in this study are only the first layer of issues identified for the introduction of PISA. It is undeniable that sudden barriers can occur any time. However, defining facilitators and barriers realistically, can make the processes for preparing Mongolia to participate in PISA much easier.

The last highly recommendable point on the introduction of PISA that needs full consideration is to be certain of how PISA results will be used and to find possible ways to eradicate known barriers. Uncertain intentions for the use of future PISA results are considered a strong cause for hesitation and lead to misunderstandings and confusion among stakeholders, especially at the school level. For example, if policy makers have intentions to use future PISA results for the surveillance of schooling practices then the school community



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should be openly informed about this and the level of application should be officially described in advance. Moreover, policymakers should thoroughly consider possible barriers and have back up plans to eradicate them. The more foresee problems, the better they are solved effectively.

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## Barriers and facilitators to introduce PISA in Mongolia

### APPENDICES

## APPENDIX A: LETTER OF INTRODUCTION (ENGLISH)



*Dr Grace Skrzypiec*  
*grace.skrzypiec@flinders.edu.au*

**Education**  
**College of Education, Psychology and Social Work**  
GPO Box 2100  
Adelaide SA 5001  
Tel: +61 08 8201 5878  
Fax: +61 08 8201 3184  
<http://ehll.flinders.edu.au/education/>  
CRICOS Provider No. 00114A

15 September 2017

Dear «Principal» «Pname»

### **Re: Barriers and facilitators to introducing PISA in Mongolia**

Mrs Byambasuren Erdenesuren is undertaking a study to understand the potential resources and facilitators as well as challenges and barriers, when introducing PISA in Mongolia.

She is undertaking this research with the aim of generating initiatives and recommendations based on the outcomes of this project on how available facilitators may help to eradicate barriers.

Mrs Byambasuren Erdenesuren is seeking your permission to approach members of your school, including teachers and study managers /the Ministry staff including specialists, to participate in an interview, to discuss factors associated with the introduction of PISA in Mongolia.

The 30-40 minute interviews would take place at a time that would suit you during November and December, 2017 or January, 2018.

#### **What does the study involve?**

With your approval, Mrs Erdenesuren will

- Provide information for the staff about the research during an official staff meeting
- Seek voluntary participation from potential participants
- Seek informed consent from those who wish to participate
- Mrs Erdenesuren would be happy to speak to you further about the research if that is desirable.
- Mrs Erdenesuren would be happy to present findings to you and other staff members at the end of the project.

## Barriers and facilitators to introduce PISA in Mongolia

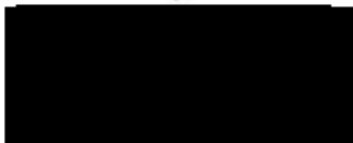
This study has the approval of the Flinders University Ethics Committee (see contact details below) **participants and schools will not be identified in the research**, and collected data will be de-identified.

All participants will be given feedback of the findings on completion of the study.

Any enquiries you may have concerning this research should be directed to me at the address given above or by telephone on 8201 5878 or e-mail [grace.skrzypiec@flinders.edu.au](mailto:grace.skrzypiec@flinders.edu.au).

I hope that you will give this request due consideration and I assure you that Mrs Erdenesuren will be willing to work with you in a manner which suits the school/ the Ministry and which will cause minimal disruption to the school day/ the working day.

Yours sincerely,



Dr Grace Skrzypiec

Senior Lecturer

College of Education, Psychology and Social Work

*This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee. For more information regarding ethical approval of the project the Secretary of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email [human.researchethics@flinders.edu.au](mailto:human.researchethics@flinders.edu.au).*

APPENDIX B: LETTER OF INTRODUCTION (MONGOLIAN)



Боловсрол  
Боловсрол, сэтгэл судлал, нийгмийн ажлын тэнхим  
Шуудангийн хайрцаг 2100  
Аделаид хот, Өмнөд Австрали 5001  
Утас: +61 08 8201 5878  
Факс: +61 08 8201 3184  
<http://ehlt.flinders.edu.au/education/>  
CRICOS Provider No. 00114A

2017 оны 09 дүгээр сарын 15

Хүндэт «Захирал» «Овог нэр»

**Олон улсын суралцагсдын үнэлгээний хөтөлбөр (PISA)-ийг Монгол улсад нэвтрүүлэхэд тулгарч буй бэрхшээл ба нөөц боломж**

Манай сургуулийн оюутан Эрдэнэсүрэнгийн Бямбасүрэн нь PISA-г Монгол улсад нэвтрүүлэх нөөц боломж ба тулгарч буй бэрхшээлийн талаар олж мэдэхээр боловсролын магистрын дипломын ажлын төсөл эхлүүлээд байна.

PISA-г нэвтрүүлэхэд тулгарах бэрхшээлийг арилгахад Монгол улс байгаа нөөц боломжоо хэрхэн ашиглаж болох талаар судалгаанд тулгуурласан шинэлэг санаачлага дэвшүүлэх, зөвлөмж боловсруулах зорилгоор энэхүү судалгааны ажлыг хийж байгаа билээ.

Эрдэнэсүрэнгийн Бямбасүрэн нь PISA-г нэвтрүүлэхтэй холбоотой хүчин зүйлсийг судлах зорилгоор танай багш, сургалтын менежерийн төлөөллөөс судалгааны ярилцлага хийх зөвшөөрөл авахаар танд хандаж байна.

Ярилцлагыг хүн тус бүрээс 30-40 минутаар танай сургуулийн боломжит хугацааг харгалзан 2017 оны 11, 12 дугаар сар, 2018 оны 1 дүгээр сарын аль тохиромжтойд явуулна.

**Судалгаа юуг хамрах вэ?**

Э.Бямбасүрэн нь таны зөвшөөрлийн дагуу:

- Танай байгууллагын албан ёсны хурал дээр судалгааныхаа талаар нийт багш ажилтнуудад мэдээлэл өгнө.
- Судалгаанд сайн дураар оролцох хүсэлтэй оролцогчдыг бүртгэнэ.
- Сайн дураар оролцогчдоос зөвшөөрөл авна.
- Э.Бямбасүрэн нь сонирхсон хүмүүстэй судалгааны талаар дэлгэрэнгүй ярилцаж болно.



## Barriers and facilitators to introduce PISA in Mongolia

- Э.Бямбасүрэн нь судалгааныхаа эцсийн үр дүнг танд болон танай хамт олонд танилцуулж болно.

Энэхүү судалгаанд Флиндерсийн их сургуулийн судлаачдын Ёс зүйн Хороо (холбоо барих хаягийг доороос харна уу) зөвшөөрөл олгосон ба судалгааны **оролцогчид оролцсон сургууль, цуглуулсан мэдээлийн нууцлал** хадгалагдана.

Судалгааны ажил дуусахад бүх оролцогчдод байгууллагын удирдлагаар нь дамжуулан судалгааны үр дүнгийн талаар танилцуулна.

Судалгаатай холбоотой асуудлаар нэмэлтээр тодруулах зүйлсийг захидлын баруун дээд хэсэгт бичсэн хаягаар болон 8201 5878 эсвэл [grace.skrzypiec@flinders.edu.au](mailto:grace.skrzypiec@flinders.edu.au) цахим хаягаар илгээнэ үү.

Энэхүү хүсэлтийг нааштайгаар хүлээн авна гэдэгт итгэж байна. Э. Бямбасүрэн нь танай сургуулийн/ байгууллагын хэвийн үйл ажиллагаанд саад учруулалгүй, сургуулийн дэг журамд нийцүүлэн судалгаагаа явуулах хүсэлтэй байгааг үүгээр баталж байна.

Таныг хүндэтгэсэн,



Грэйс Скрзипек (PhD)

Боловсрол, Сэтгэл судлал, Нийгмийн ажилтны Коллежийн  
Ахлах багш

*Энэ судалгаа нь Флиндерсийн Их сургуулийн Нийгэм, Биеэвэрлест судалгааны Ёс зүйн Хорооны зөвшөөрлийг авсан болно. Судалгааны ёс зүйн зөвшөөрлийн талаар нэмэлт мэдээлэл авахыг хүсвэл 8201 3116 утсаар буюу 8201 2035 факсаар эсвэл [human.researchethics@flinders.edu.au](mailto:human.researchethics@flinders.edu.au) цахим хаягаар холбогдон*

APPENDIX C: INFORMATION SHEET (ENGLISH)



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Fax: 001+61 08 8201 3184  
<http://ehit.flinders.edu.au/education/>  
CRICOS Provider No. 00114A

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**INFORMATION SHEET**  
(for 'all participants')

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**Title:** Barriers and facilitators to introducing PISA (Program for International Student Assessment) in Mongolia

**Researcher**  
Byambasuren Erdenesuren  
College of Education, Psychology and Social work  
Flinders University

**Former position:**  
A specialist of the Humanities at the Department of Education, Culture and Arts of Govisumber province  
An acting role in Head of the Department of Education, Culture and Arts of Govisumber province

**Supervisor**  
Dr Grace Skrzypiec  
College of Education, Psychology and Social work  
Flinders University

**Description of the study**  
This project will investigate the potential resources and facilitators as well as challenges and barriers, when introducing PISA in Mongolia. This project is supported by Flinders University, College of Education, Psychology and Social work.

**Purpose of the study**  
This project aims to generate initiatives and recommendations on how available facilitators may help to eradicate barriers to introducing PISA in Mongolia.

**What will I be asked to do?**  
You are invited to attend a one-on-one interview with me where I will ask you a few questions regarding your views about factors associated with the introduction of PISA in Mongolia. Your participation is entirely voluntary. The interview will take about 30-40 minutes. The interview will be audio recorded using a digital voice recorder to help with reviewing the results. Once recorded, the interview will be stored as a computer file and transcribed (typed-up) and will be destroyed once the audio file has been transcribed. In this way, knowledge of what was said by whom remain confidential.

**What benefit will I gain from being involved in this study?**  
The sharing of your expectations will contribute to research that aims to generate initiatives and recommendations on how available facilitators may help to eradicate barriers, which we hope will benefit the implementation of the current developmental policy for education in Mongolia.

## Barriers and facilitators to introduce PISA in Mongolia

### **Will I be identifiable by being involved in this study?**

Participation in this study will be confidential. Anonymity of the participants is highly important, but it cannot be fully guaranteed because of the small population pool and the nature of the research. However, I can confirm that any identifying information will be removed, and your comments will not be linked directly to you in the published research. In addition, all information and results obtained in this study will be stored in a secure way, with access restricted to relevant researchers.

### **Are there any risks or discomforts if I am involved?**

Other interviewee may be able to identify your contributions even though they will not be directly attributed to you. Few risks are anticipated from your involvement in this study such as although participation will be anonymous and all data treated completely confidentially, given the small population size, contributions may be recognisable and attributable to the participant by those who are part of the small pool.

If you have any concerns regarding anticipated or actual risks or discomforts, please raise them with me by the given contact (88xx xxxx). I will consider all your raised concerns as important and work for finding the secure solutions to deal with.

### **How do I agree to participate?**

Again, your participation is voluntary. You may answer 'no comment' or refuse to answer any questions, and you are free to withdraw from the interview at any time without effect or consequences. A consent form accompanies this information sheet. If you agree to participate please read and sign the form and see me to organise an interview time. I will give you my contact details so you can let me know if you need to change the time.

Contact detail of the principal researcher:

*Mobile phone number: 8887 9511*

*Email address: erde0007@flinders.edu.au*

### **How will I receive feedback?**

On project completion, outcomes of the project will be given to all participants through your school or workplace.

Thank you for taking the time to read this information sheet, and I hope that you will accept my invitation to be involved.

*This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number: 7809).  
For more information regarding ethical approval of the project only, the Executive Officer of the Committee can be contacted by telephone on 001+61 8201 3116, by fax on 001+61 8201 2035, or by email to [human.researchethics@flinders.edu.au](mailto:human.researchethics@flinders.edu.au)*

APPENDIX D: INFORMATION SHEET (MONGOLIAN)



**Flinders**  
UNIVERSITY

Удирдаж буй багш  
Грэйс Скряпник (PhD)  
grace.skrzywiec@flinders.edu.au

Судлаач оюутан  
Эрдэнэс үрэнгийн Бямбасүрэн  
erde0007@flinders.edu.au

**Боловсрол**

Боловсрол, сэтгэл судлал, нийгмийн ажлын  
танхим

Шуудангийн хайрцаг 2100  
Аделаид хот, Өмнөд Австрали 5001

Утас: 001+61 08 8201 5878

Факс: 001+61 08 8201 3184

<http://ehit.flinders.edu.au/education/>

CRICOS Provider No. 00114A

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**МЭДЭЭЛЛИЙН ХУУДАС**  
( 'оролцогч бүрт' )

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**Сэдэв:** Олон улсын суралцагсдын үнэлгээний хөтөлбөр (PISA)-ийг Монгол улсад нэвтрүүлэхэд тулгарч буй бэрхшээл ба нөөц боломж

**Судлаач**

Эрдэнэсүрэнгийн Бямбасүрэн  
Флиндерсийн Их Сургуулийн  
Боловсрол, Сэтгэл судлал, Нийгмийн ажлын Коллеж

**Өмнө нь:**

Говьсүмбэр аймгийн Боловсрол, Соёл, Урлагийн газрын Хүмүүнлэгийн ухаан хариуцсан мэргэжилтэн  
Говьсүмбэр аймгийн Боловсрол, Соёл, Урлагийн газрын Даргын үүрэг гүйцэтгэгч

**Удирдаж буй багш**

Грэйс Скряпник (PhD)  
Флиндерсийн Их Сургуулийн  
Боловсрол, Сэтгэл судлал, Нийгмийн ажлын Коллеж

Энэхүү ярилцлага нь 'PISA-г Монгол улсад нэвтрүүлэхэд тулгарч буй бэрхшээл ба нөөц боломж' магистрын дипломын ажлын нэг хэсэг бөгөөд PISA-г Монгол улсад нэвтрүүлэх нөөц боломж ба тулгарч буй бэрхшээлийн талаар олж мэдэхийг зорьж байгаа билээ. Тус судалгааны ажил нь Өмнөд Австралийн Флиндерсийн их сургуулийн Боловсрол, сэтгэл судлал, нийгмийн ажлын коллежийн дэмжлэгтэйгээр хийгдэж байна.

**Судалгааны зорилго**

PISA-г нэвтрүүлэхэд тулгарах бэрхшээлийг арилгахад Монгол улс байгаа нөөц боломжоо хэрхэн ашиглаж болох талаар судалгаанд тулгуурласан шинэлэг санаачлага дэвшүүлэх, зөвлөмж боловсруулахад энэхүү судалгааны ажлын зорилго оршино.

**Оролцогчид судалгаанд хэрхэн хамрагдах вэ?**

Судлаач PISA-г нэвтрүүлэхтэй холбоотой хүчин зүйлсийн талаарх таны үзэл бодлыг мэдэх зорилгоор таниас ганцаарчилсан ярилцлага авна. Таны оролцоо сайн дурынх байх бөгөөд ярилцлага 30-40 минут

## Barriers and facilitators to introduce PISA in Mongolia

үргэлжилнэ. Судалгааны мэдээллийг шинжлэх зорилгоор таны яриаг дижитал дуу хураагуурт бичнэ. Ярилцлагыг бичвэр хэлбэрт шилжүүлэх хүртэл компьютерийн аудио файл хэлбэрээр хадгалах ба бичвэрт шилжүүлмэгц аудио файлыг устгана.

### **Энэхүү судалгаанд оролцох нь ямар үр нөлөөтэй вэ?**

Таны оролцоо “PISA-г нэвтрүүлэхэд тулгарах бэрхшээлийг арилгахад Монгол улс байгаа нөөц боломжоо хэрхэн ашиглаж болох талаар судалгаанд тулгуурласан шинэлэг санаачлага дэвшүүлэх, зөвлөмж боловсруулах” гэсэн судалгааны гол зорилгыг биелүүлэх болон манай улсын боловсролын талаар дэвшүүлсэн боллогын зорилгуудыг хэрэгжүүлэхэд дэмжих зэрэгт чухал нөлөөтэй юм.

### **Судалгаанд оролцсныг мэдэх боломжтой юу?**

Таны судалгаанд оролцсон тухай хувийн мэдээлэл нууцалтай байна. Таныг хэн болохыг таньж болох бүх мэдээллүүдийг устгаж, үзэл бодлоо илэрхийлсэн яриа таных болохыг уншигчдад задруулахгүй. Судалгааны үр дүнд олж авсан мэдээлэл, үр дүнг зөвхөн судлаач л нэвтрэх боломжтой өндөр нууцлалтайгаар хадгална.

### **Судалгаанд оролцох нь надад ямар нэгэн эрсдэл, таагүй байдал үүсгэх үү?**

Судлаач үүсч болзошгүй бэрхшээлийг урьдчилан тооцоолж судалгааг явуулна.

Судалгаанд оролцогчдын хувийн мэдээллийг задруулахгүй бөгөөд судалгааны мэдээллийн нууцыг чандлан хадгалах болно. Цөөн тооны оролцогчдыг судалгаанд сонгон хамруулж байгаа учир оролцогчдыг судалгаанд оролцож буйг түүвэрт сонгогдсон бусад хүмүүс мэдэж болзошгүй юм. Гэвч бид таны хувийн болон судалгаанд өгсөн мэдээллийн нууцлалыг судалгаанд хэн ямар мэдээлэл өгсөн болох нь судлаачаас өөр ямар ч хүн мэдэх боломжгүй байхаар кодлож, судалгааны бүтээлд ашиглах болно.

эрэв судалгаанд оролцоход танд тулгарч болох эрсдлийг сануулах буюу бодит эрсдэл тулгарсан талаар мэдэгдэх шаардлага гарвал судлаачид (88xx xxxx) дугаарт холбогдон хандана уу.

### **Судалгаанд оролцохоо хэрхэн илэрхийлэх вэ?**

Судалгаанд сайн дураар оролцоно. Та судалгааны асуултанд ямар нэгэн хариу өгөхгүй байх эсвэл хариулахаас татгалзаж болно. Ямар нэгэн асуудалгүйгээр судалгааг орхиж болно. Хэрвээ та судалгаанд оролцохыг зөвшөөрвөл энэхүү мэдээллийн хуудаст хавсаргасан “Зөвшөөрлийн хуудас”-ыг уншиж, гарын үсгээ зураад судлаачтай холбогдож, ярилцлагын хугацаа, газрыг товлон.

*Судлаачтай холбоо барих:*

*Утасны дугаар: 8887 9511*

*Цахим хаяг /э-мэйл/: [erde0007@flinders.edu.au](mailto:erde0007@flinders.edu.au)*

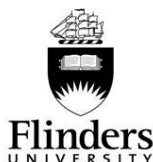
### **Судалгааны үр дүнгийн талаарх мэдээллийг хэрхэн хүлээн авах вэ?**

Оролцогч бүрт магистрын дипломын ажил бүрэн дуусмагц судалгааны үр дүнг сургууль ажлын байраар нь дамжуулан мэдээллэнэ.

Мэдээллийн хуудсыг цаг гарган уншсанд баярлалаа. Таныг бидний хүсэлтийг хүлээн авч судалгаанд оролцоно гэдэгт итгэж байна.

Энэ судалгаа нь Флиндерсийн Их сургуулийн Нийгэм, Бихеворист судалгааны Ёс зүйн Хорооны зөвшөөрлийг авсан болно(Зөвшөөрлийн дугаар: 7809). Судалгааны ёс зүйн зөвшөөрлийн талаар нэмэлт мэдээлэл авахыг хүсвэл 001+61 8201 3116 утсаар буюу 001+61 8201 2035 факсаар эсвэл [human.researchethics@flinders.edu.au](mailto:human.researchethics@flinders.edu.au), цахим хаягаар холбогдоно уу.

APPENDIX E: CONSENT FORM (ENGLISH)



**CONSENT FORM FOR PARTICIPATION IN RESEARCH  
(by semi-structured interview)**

Barriers and facilitators to introducing PISA (Program for International Student Assessment) in Mongolia

I .....

being over the age of 18 years hereby consent to participate as requested in the "Letter of introduction" and "Information sheet" for the research project on "Barriers and facilitators to introducing PISA in Mongolia"

1. I have read the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I agree to audio recording of my information and participation.
4. I am aware that I should retain a copy of the Information Sheet and Consent Form for future reference.
5. I understand that:
  - I may not directly benefit from taking part in this research.
  - I am free to withdraw from the project at any time and am free to decline to answer particular questions.
  - While the information gained in this study will be published as explained, I will not be identified, and individual information will remain confidential.
  - I may ask that the recording be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.
6. I agree to the tape/transcript being made available to other researchers who are not members of this research team, but who are judged by the research team to be doing related research, on condition that my identity is not revealed.

**Participant's signature**.....**Date**.....

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

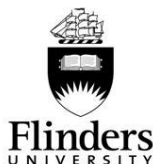
**Researcher's name:** Byambasuren Erdenesuren

**Researcher's signature**.....**Date**.....

7. I, the participant whose signature appears below, have verified the researcher's report and agree to the publication of my information as reported.

Participant's signature.....Date.....

APPENDIX F: CONSENT FORM (MONGOLIAN)



СУДАЛГААНД ОРОЛЦОХЫГ ЗӨВШӨӨРСӨН МАЯГТ  
(Ярилцлагын аргаар)

Олон улсын суралцагсдын үнэлгээний хөтөлбөр (PISA)-ийг Монгол улсад нэвтрүүлэхэд тулгарч буй бэрхшээл ба нөөц боломж

Миний бие ..... нь

18-аас дээш настай бөгөөд “Удиртгал захидал” ба “Мэдээллийн хуудас”-т байх хүсэлтийн дагуу “PISA-г Монгол улсад нэвтрүүлэхэд тулгарч буй бэрхшээл ба нөөц боломж” сэдэвт судалгаанд оролцохыг зөвшөөрснийг үүгээр илэрхийлж байна.

1. Миний бие өгсөн мэдээллийг уншсан болно.
2. Судалгааны аргачлал болон аливаа эрсдлийн талаар миний санаанд нийцэхүйцээр тайлбарласан болно.
3. Миний өгөх мэдээлэл болон оролцоог дуу бичлэг хэлбэрээр бичихийг зөвшөөрч байна.
4. Мэдээллийн хуудас болон Зөвшөөрсөн маягтын хуулбарыг цаашид баримт болгох зорилоор хадгалж болохыг мэдэж байна.
5. Миний бие дараах зүйлсийг ойлгосон болно. Үүнд:
  - Би тус судалгаанд оролцсоноор шууд хэлбэрийн ашиг хүртэхгүй байж болно.
  - Би судалгаанд оролцохоос хүссэн үедээ болон тодорхой асуултанд хариулахаас чөлөөтэй татгалзах боломжтой болно.
  - Судлаачын тайлбарласанчлан тус судалгаагаар цуглуулсан мэдээллийг хэвлэхдээ миний нэр, хувийн мэдээллийг нууцласан байна.
  - Би дуу бичлэг хийхийг зогсоох болон судалгаанд оролцохоос ямар нэгэн шийтгэлгүйгээр хүссэн үедээ татгалзах боломжтой болно
6. Дуу бичлэг болон түүний тайлалыг миний хувь хүний нууцлалыг хадгалж тухайн судалгааны багийн гишүүн биш боловч судалгааны багийн тодорхойлсноор тэдэнтэй ойролцоо судалгаа хийж буй хөндлөнгийн судлаачдад танилцуулж болно.

**Оролцогчийн гарын үсэг.....Огноо.....**

Миний бие оролцогчдод судалгаанд оролцох нь сайн дурын байхыг тайлбарлаж, судалгааны нөхцөлийг бүрэн ойлгож, албадлагагүйгээр оролцох талаар анхааруулсанаа үүгээр баталгаажуулж байна.

**Судлаачийн нэр:** Эрдэнэсүрэнгийн Бямбасүрэн

**Судлаачийн гарын үсэг.....Огноо.....**

7. Доорх гарын үсгийн эзэн оролцогч миний бие судлаачийн тайлалыг уншиж, өгсөн мэдээллээ хэвлүүлэхийг зөвшөөрч байна.

# Barriers and facilitators to introduce PISA in Mongolia

## APPENDIX G: APPROVAL FROM AUTHORITIES OF PARTICIPATING ORGANISATIONS (ENGLISH)

Secretary, Social and Behavioural Research Ethics Committee  
Flinders University

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

### **Re: Research Administration - Ethics (SBREC Project 7809).**

I have been informed about the study "*Barriers and facilitators to introducing PISA (Program for International Student Assessment) in Mongolia*" by Flinders University Scholar, *Byambasuren Erdenesuren*.

I understand that the research has been approved by Flinders University Social and Behavioural Research Ethics Committee. In compliance with the Ethic's Committee requirement, I write to confirm that I approve of the study being undertaken by *Byambasuren Erdenesuren* at *[insert institution name]*.

In consenting to the study I agree to provide support for notifying staff about the research and allowing them to volunteer for participation. My staff and I will assist *Byambasuren Erdenesuren* by providing a suitable private area for the confidential interviews.

*Byambasuren Erdenesuren* has indicated that the interview transcripts will be de-identified and that *[insert name of institution]* will not be identified in the research, and that on completion of the study, she will provide feedback of the overall findings.

I have no objection in *Byambasuren Erdenesuren* undertaking the interviews following the protocol she has indicated.

Yours truly,

«Pname»  
Principal  
«School»

Byambasuren Erdenesuren 112



APPENDIX H: APPROVAL FROM AUTHORITIES OF PARTICIPATING  
ORGANISATIONS (MONGOLIAN)

Флиндерсийн Их Сургуулийн  
Нийгмийн ухаан, Бихеворист Судалгааны Ёс зүйн Хорооны  
Нарийн бичгийн дарга

Огноо: \_\_\_\_\_

**Re: Судалгаа хийх- Ёс зүйн (НБСЭХ Судалгааны дугаар 7809).**

Миний бие Флиндерсийн их сургуулийн судлаач Эрдэнэсүрэнгийн Бямбасүрэнгийн "PISA буюу Олон Улсын Сурагчдын Үнэлгээний хөтөлбөрийг Монгол улсад нэвтрүүлэхэд тулгарах бэрхшээл ба дэмжих хүчин зүйл" судалгааны тухай зохих мэдээлэлтэй танилцлаа.

Тус судалгаа нь Флиндерсийн Их Сургуулийн Нийгмийн ухаан, Бихеворист Судалгааны Ёс зүйн Хороо (НБСЭХ)- ны зөвшөөрөлтэй талаар танилцаж, Э. Бямбасүрэнг тус Ёс зүйн Хорооны шаардлагын дагуу манай ..... дээр судалгаа явуулахыг зөвшөөрч байна.

Энэхүү судалгааг хийхийг зөвшөөрснөөрөө миний бие байгууллагын ажилтан, албан хаагчдад судалгааны талаар мэдээлэх болон сайн дурын үндсэн дээр ажилтнуудаа судалгааны ярилцлагад оролцуулах зэргийг дэмжиж буйг илэрхийлж байгаа юм. Мөн би болон манай ажилтнууд Э. Бямбасүрэнд судалгаа явуулахад нь тохирох тусгай өрөөнд оролцогчидтой мэдээллийн нууцлалтайгаар ярилцахад нь туслахыг илэрхийлж байна.

Э. Бямбасүрэн нь ярилцлагын бичигт буулгасан эхэд оролцогчийн хувийн мэдээллийг нууцалж, манай байгууллагыг тус судалгаанд оролцсон болохыг таних боломжгүй байдлаар цаашид ашиглахаа илэрхийлсэн болно. Мөн судалгаа бүрэн дуусахад судалгааны ерөнхий үр дүнгийн тухай байгууллагын удирдлагаар дамжуулан эргэж мэдээллэхээр боллоо.

Э. Бямбасүрэнг товч танилцуулсан ярилцлагын тэмдэглэлийн дагуу судалгааны мэдээллэл цуглуулахад татгалзах зүйлгүй болно.

Хүндэтгэсэн,

«Овог нэр»  
.....  
Захирал, дарга

# Barriers and facilitators to introduce PISA in Mongolia

## APPENDIX I: THE INTERVIEW PROTOCOL (ENGLISH)

### INDIVIDUAL, SEMI-STRUCTURED INTERVIEW PROTOCOL

Flinders University College of Education, Psychology and Social Science

/FOR ALL PARTICIPANTS /

**Topic: Barriers and facilitators to introducing PISA (Program for International Student Assessment) in Mongolia**

Date: \_\_/\_\_/\_\_ Place code: \_\_\_\_\_ Interviewee code: \_\_\_\_\_

*Hello! Thank you for taking the time to talk with me today.*

*Here is the Consent Form: by signing on it which will indicate your acceptance to participate in interview. As discussed in Information Sheet, your participation is voluntary and Interview will last for 45 minutes.*

*Now, let's begin the interview.*

#### Icebreaker questions

- A) What subject do you teach? How long have you been teaching this subject?
- B) What are your responsibilities and duties? How long have you been working?

#### Opinions about the introduction of PISA in Mongolia

##### 1. Have you heard of PISA?

##### A. YES

**Yes – What have you heard?** How do you find about adopting or introducing the PISA international educational framework in Mongolia? How do you find about the facilitators to introducing PISA in Mongolia?

##### B. NO

No – Researcher briefly explain about PISA– **What does this sound like to you?**

**What would you like to know?**

**Did you know PISA will be introduced in Mongolia in the future? What do you think about that? What do you think would be 'good about it'? ... 'Bad about it'?**

**Note for interviewer:** If the participants uncertain about the facilitators or an interviewer find the confirmation of the points mentioned in the literature, the interviewer will suggest some facilitators from the literatures as suggested in probes. The interviewer may eliminate ideas in probe if the interviewee has already covered.

# Barriers and facilitators to introduce PISA in Mongolia

## COMMON

### 2. Some people think .... (about PISA facilitators and barriers) .... What do you think about that?

#### **Probes for 'Facilitators':**

- a) competence, quality, validity, reliability, sustainability and timely dissemination of the program and its results;
- b) the introduction of the program is processed through the discussion and involvement of all educational stakeholders from public to policy makers;
- c) having financial support from the government
- d) a country's purposes and expected outcomes from the assessment programs
- e) power, discourse and political reasons for introducing PISA
- f) expect recommendations and solutions to foster and fuel the current reform on assessment and policy.

How do you find about the anticipating barriers to introducing PISA in Mongolia?

#### **Probes for 'Barriers':**

- a) competence, quality, validity, reliability, sustainability and timely dissemination of the program and its results;
- b) bureaucracy
- c) the funding and its sustainability
- d) the governmental apprehensions of poor performance;
- e) technical challenges caused by the poor capacity of the assessment institution: a lack of experts and capabilities;
- f) contextual challenges, such as the 'political economy', the 'regulatory environment', and the culture of the country;
- g) the irrelevance of the testing materials towards the specific country context.

### 3. Suggestions for the successful and effective introduction of PISA in Mongolia

*Note for interviewer: In relation to responses of participants the interviewer may ask suitable informational, restatement or reflective probes where necessary.*

How do you find your contribution, responsibilities and involvement towards the successful introduction of PISA in your school or in Mongolia?

How ready are Mongolian students for the introduction of PISA in Mongolia?

What makes you think so?

## Barriers and facilitators to introduce PISA in Mongolia

How should be Mongolian students prepared in order to be ready for PISA in Mongolia?

How ready are Mongolian teachers for the introduction of PISA in Mongolia?

What makes you think so?

How should be Mongolian teachers supported in order to be ready for PISA in Mongolia?

How ready are Mongolian schools for the introduction of PISA in Mongolia?

What makes you think so?

How should be Mongolian teachers supported in order to be ready for PISA in Mongolia?

In your opinion, what should policy makers need to consider eradicating barriers before introducing PISA in Mongolia?

**It is the end of the interview.**

**Do you want to add anything in relation to the topic of the study?**

**By participating in this interview and sharing your opinion you are enormously contributing to significant research which is valuable for the successful implementation of the Educational goal on policy for the Sustainable Development of Mongolia-2030.**

**Thank you for your time, sharing your opinion and talking honestly.**

APPENDIX J: THE INTERVIEW PROTOCOL (MONGOLIAN)

ГАНЦААРЧИЛСАН, ХАГАС СТАНДАРТЧИЛСАН ЯРИЛЦЛАГЫН УДИРДАМЖ  
Өмнөд Австралийн флиндерсийн Их Сургуулийн Боловсрол, Сэтгэл судлал, Нийгмийн  
ажил Судлалын Коллеж  
/БҮХ ОРОЛЦОГЧДОД /

**Сэдэв: PISA буюу Олон Улсын Сурагчдын Үнэлгээний хөтөлбөрийг Монгол улсад  
нэвтрүүлэхэд тулгарах бэрхшээл ба дэмжих хүчин зүйл**

Огноо: \_\_/\_\_/\_\_ Байршлын код: \_\_\_\_\_ Оролцогчийн код: \_\_\_\_\_

*Сайн байна уу! Юуны өмнө энэ ярилцлагад цаг гарган оролцохыг зөвшөөрсөн  
танд баярлалаа.*

*Ярилцлага эхлэхээс өмнө та **мэдээллийн хуудастай** дахин танилцаж,  
**Зөвшөөрлийн хуудаст** гарын үсэг зурж баталгаажуулна уу. Ингэснээр та  
судалгааны талаар бүрэн мэдээллэл авч сайн дурын үндсэн дээрнийт 45  
минут үргэлжлэх ярилцлагад оролцохоо зөвшөөрснийг илтгэх болно.*

*Ингээд ярилцлагаа эхэлцгээе*

**Удиртгал асуулт: туршлагын тухайд**

- A) Та ямар хичээл заадаг вэ? Та энэ хичээлийг заагаад хэдэн жил болж байна вэ?  
B) Та ямар ажил алба хашдаг вэ? Та энэ ажил, албыг эрхлээд хэдэн жил болж  
байна вэ?

**PISA-г Монголд нэвтрүүлэх талаарх үзэл бодол**

**1. Та өмнө нь PISA-гийн талаар сонсож байсан үү?**

**A. ТИЙМ**

**Тийм – Ямар ямар зүйл сонсож байв?**

PISA олон улсын боловсролын талаарх судалгааны хөтөлбөрийг Монголд  
нутагшуулах, нэвтрүүлэхийг та хэрхэн хүлээж авдаг вэ? Энэ талаар ямар байр  
суурьтай байдаг вэ?

PISA олон улсын боловсролын талаарх судалгааны хөтөлбөрийг нутагшуулах,  
нэвтрүүлэхэд Монголд ямар ямар нөөц боломж байгаа гэж та үзэж байна вэ?  
Ямар ямар саад бэрхшээл тулгарч болох вэ?

**B. ҮГҮЙ**

Үгүй – Судлаач PISA-гийн талаар товч танилцуулна– **Танд энэ хөтөлбөр ямар  
санагдаж байна?**

Та энэ хөтөлбөрийн талаар юуг илүү мэдэхийг хүсч байна?

Монгол улс PISA хөтөлбөрийг удахгүй нэвтрүүлэхээр болсон талаар дуулсан уу?

## Barriers and facilitators to introduce PISA in Mongolia

Энэ талаар та ямар байр суурьтай байна вэ?

Тус хөтөлбөрийг нэвтрүүлэхийн "Сайн талууд" нь юу юу байна гэж та бодож байна вэ?

"Сул талууд" нь юу юу байж болох вэ?

### НИЙТЛЭГ

#### **2. Зарим хүмүүсийн үзсэнээр .... (PISA хөтөлбөрийг нэвтрүүлэхэд дэмжих нөөц боломж ба тулгарах бэрхшээл нь ) .... Та эдгээрийг юу гэж харж байна вэ?**

##### **Дэмжих асуулт /нөөц боломж/:**

- a) тухайн үнэлгээний хөтөлбөр, түүний үр дүнгийн чансаа, чанар, бодитой эсэх, тохирц, найдвартай байдал, цаг хугацаандаа үр дүнгээ мэдээлэх байдал;
- b) боловсролын харилцаанд оролцож буй бүх субъектийг оролцуулж, сайтар хэлэлцсэний үндсэн дээр хөтөлбөрийг нэвтрүүлэх болсонд
- c) ЗГ-аас шаардлагатай төсвийг баталсан байх
- d) улс орны боловсролын талаарх зорилготой тус хөтөлбөрийн зорилго давхцаж байх
- e) PISA-г нэвтрүүлэх эрх мэдэл, улс төрийн шалтгаан
- f) үнэлгээний талаар одоо авч хэрэгжүүлж буй үйл ажиллагааны болон бодлогын шинэчлэл, өөрчлөлтийг дэмжих, урагшлуулах гарц, гаргалгааг эрэлхийлж буй нөхцөл

PISA-г нэвтрүүлэхэд Монгол улсад ямар ямар бэрхшээл тулгарч болзошгүй гэж та үзэж байна вэ?

##### **Дэмжих асуулт /саад бэрхшээл/:**

- a) тухайн үнэлгээний хөтөлбөр, түүний үр дүнгийн чансаа, чанар, бодитой эсэх, тохирц, найдвартай байдал, цаг хугацаандаа үр дүнгээ мэдээлэх байдал;
- b) эрх баригч өөрчлөгдөх
- c) судалгааны хөтөлбөрт хамрагдахад шаардагдах төсөв, түүний тогтвортой байдал
- d) муу үнэлгээ авахаас болгоожилсон ЗГ-ын байр суурь;
- e) Судалгааг хариуцаж хэрэгжүүлэх институтын чадамжгүй байдлаас шалгаалсан техникийн талын бэрхшээлүүд: мэргэшсэн хүний нөөц дутагдалтай байх, хэрэгжүүлэх техник хэрэгсэл нөөц боломж хангалтгүй байх;
- f) улс төр-эдийн засгийн байдал, төрийн удирдан зохион байгуулалт, соёлын онцлог зэрэг улс орны орчин нөхцлөөс шалтгаалсан бэрхшээлүүд;
- g) улс орны боловсролын системийн онцлогт үнэлгээ судалгааны материалууд уялдахгүй байх.

### 3. PISA-г Монгол улсад амжилттай нэвтрүүлэхэд туслах санал

PISA-г Монгол улсад эсвэл танай сургуульд нэвтрүүлэхэд өөрийн оруулах хувь нэмэр, үүрэг, оролцооны талаар та хэрхэн харж байна вэ?

Таны бодлоор PISA-г Монголд нэвтрүүлэхэд манай сурагчид хэр бэлэн байгаа бол?

Та ямар учраас ингэж үзэж байна вэ?

Монголд PISA-г нэвтрүүлэхийн тулд сурагчдаа хэрхэн бэлтгэх шаардлагатай гэж та үзэж байна вэ?

Таны бодлоор PISA-г Монголд нэвтрүүлэхэд манай багш нар хэр бэлэн байгаа бол?

Та ямар учраас ингэж үзэж байна вэ?

Монголд PISA-г нэвтрүүлэхийн тулд багш нарт ямар дэмжлэг тусалцаа шаардлагатай гэж та үзэж байна вэ?

Таны бодлоор PISA-г Монголд нэвтрүүлэхэд манай сургуулиуд хэр бэлэн байгаа бол?

Та ямар учраас ингэж үзэж байна вэ?

Монголд PISA-г нэвтрүүлэхийн тулд сургуулиудад ямар дэмжлэг тусалцаа шаардлагатай гэж та үзэж байна вэ?

**Судалгаа маань ингээд өндөрлөж байна.**

**Танд судалгааны сэдэвтэй холбоотой нэмж хэлэх зүйлс байна уу?**

**Та энэ ярилцлагад оролцож, өөрийн үзэл бодлоо хуваалцсанаараа “Монгол Улсын Тогтвортой Хөгжлийн Бодлого-2030”-д тусгасан төрөөс Боловсролын талаар баримтлах бодлогын хэрэгжилтийг дэмжих ач холбогдол бүхий судалгаанд чухал хувь нэмэр оруулж байна.**

**Судалгаанд маань цаг гаргаж, өөрийн үзэл бодлоо хуваалцаж, илэн далангүй ярилцсан танд баярлалаа.**