

Call for the papers

“The Eighth International Conference MIYR 2024”

Seoul, South Pusan

2024.11.29~2024.11.30

Welcome to the International Conference for Researchers

TEIC-MIYR- 2024 is being organized by:

- Misheel Institute for Young Researchers (MIYR)
- International Institute of Management and Human Rights(IIMHR)

Aim of the conference:

The conference aims to build an international platform for the researchers to share their research findings with global audience, to improve the connection between theoretical and practical knowledge, to offer a networking opportunity for researchers and industrial participants, company representatives, to open opportunities to participate in projects and programs.

International Conference for Young Researchers welcomes submissions on areas including (but not limited to):

Topic 1. Information Technology

Topic 2. Bio Technology

Topic 3. Humanities

Topic 4. Physical sciences and Engineering

Topic 5. Health sciences

Topic 6. Social sciences

Topic 7. Environmental sciences/Geology

Topic 8. Others

General evaluation criteria for the best work:

- ✓ Theory and methodology used for the research is appropriate and scientific
- ✓ Methodology used for the research is clear and data used for analysis are appropriate
- ✓ Suggested idea/solution is practical
- ✓ Presentation can be prepared by group or individual researcher. Has to have a supervisor.
- ✓ Presentation should be 15minutes, 5 minutes Q&A session in ppt format.
- ✓ Article writing standards of the institute has be strictly followed

Important Dates:

- Abstract submission deadline(1-2p): **October 20, 2024**
- Full paper submission deadline(8-15p, MC-Word): **November 01, 2024**
- Conference dates: **November 29~30, 2024**

All Award /Gifts and certificates all presentations/

Grand Prize Award: Certificate and 400,000₮

Doctorate student awards:

First Prize 300.000₮

Second Prize Certificate and 250.000₮

Third Prize Certificate and 200.000₮

Master student awards:

First Prize 300.000₮

Second Prize Certificate and 250.000₮

Third Prize Certificate and 200.000₮

Conference committee:

- Ph.D. Gantumur Khongorzul, lecturer, Department of Industrial Management, Gyeongsang National University, South Korea, Misheel Institute Founder.
- Ph.D WonJong Kim, Assistant Professor, Department of Industrial Management, Gyeongsang National University, BERI, South Korea, Misheel Institute Board Member.
- Ph.D. Choi Mi Hee, Professor for Department of Rehabilitation, Masan university, Misheel Institute Board Member.
- Ph.D. Doctorant Batmunkh Shurentsetseg, Department of Industrial Management, Gyeongsang National University, South Korea, Misheel Institute Board Member.

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*Abstract and full paper, *Registration fee receipt, *Application form

Phone Number: 010-8519-2072/Korea/, 7785-8388/Mongolia/

- Ph.D. Choijin Zolzaya, Associate Professor, Head english Department, School of Foreign Languages, Mongolian University of Science and Technology, Misheel Institute Board Member.
- Ph.D U.Bolorchimeg, Department of Sociology, Onseok University, Misheel Institute Board Member.
- Ph.D G.Urandelger, Associate Professor, Marketing and Trade Department, Business School, National University of Mongolia, Misheel Institute Board Member.
- Ph.D G.Nyamsuren, Associate Professor, Department of Humanies, School of Applied Sciences, Mongolian University of Life Sciences.
- Ph.D. B. Sarantuya, Senior Lecturer, Department of Livestock product Quality and Safety Monitoring and Inspection, School of Animal Science and Biotechnology, Mongolian University of Life Sciences
- Ph.D. M.Khishig-Undrakh, Associate Professor, Institute for Teacher Development Research, Mongolian State University of Education.

Supporting Organization:

- Misheel Institute of Young Researchers, Mongolia
- International Institute of Management and Human Rights, South Korea
- UNITEF, Universtiy Industrial Technology Force, South Korea
- GME Remittance, South Korea
- AZ Financial Service, Daatgal Puujee, South Korea

Participating Universities:

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 Tottori University, Japan
 University of Agriculture in Krakow, Poland
 University of Freiburg, Germany
 Gyeonsang National University, South Korea
 Masan University, South Korea
 Soongsil University, South Korea
 Ocean university of China
 Northeast Agricultural University, Harbin, Heilongjiang, China
 National Academy of Governance (NAOG), Mongolia
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 Mongolian University of Science and Technology (MUST), Mongolia
 Mongolian University of Life Sciences (MULS), Mongolia
 "Erdenet Complex" Institute, Mongolia,
 “Erdenet Tsogtsolbor” university affiliated with MUST
 University of Finance and Economics (UFE), Mongolia
 Global Leadership University, Ulaanbaatar, Mongolia

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“ VIII дугаар Олон улсын хаврын хурал- Мишээл хүрээлэн 2024”

11- дугаар сарын 29~30ны өдөр, Солонгос улс Бусан хот

“Залуу Судлаачдын Мишээл Хүрээлэн”-гээс зохион байгуулж буй олон улсын болон монголын их дээд сургуулиудын магистр, докторант мөн залуу судлаачдын дунд эрдэм шинжилгээний шилдэг илтгэл, бүтээлийг шалгаруулах “ VIII дугаар Олон улсын хаврын хурал Мишээл хүрээлэн 2024” нь 2024 оны 11-дугаар сарын 29~30ны өдөр зохион байгуулна.

Хурлын зохион байгуулагчид:

- Залуу судлаачдын мишээл хүрээлэн, Монгол улс
- Олон улсын менежент ба хүний эрхийн хүрээлэн, Солонгос улс

Хурлын гол зорилго: Оюутнуудыг Олон улсын судалгаа шинжилгээний ажилд идэвхитэй оролцуулах, тэдний эрдэм шинжилгээний ажил, бүтээлийг нийтэд таниулах, дэмжих, бүтээлч сэтгэлгээг бий болгохоос гадна багш оюутны хамтын ажиллагааг хөгжүүлэх, онол практикийн мэдлэгийн уялдаа холбоог сайжруулах, оюутнуудын бүтээлийг ажил олгогчдод танилцуулах, төсөл хөтөлбөрт хамруулах боломж бололцоог бий болгоход оршино.

Салбар :

МТ - Мэдээллийн Технологи
БТ - Био Технологи
ХУ - Хүмүүнлэгийн Ухаан
ИТ - Инженер Технологи
АС - Анагаахын Салбар
НУ - Нийгмийн Ухаан
БГ- Байгаль/Газарзүй
ХА - Хөдөө аж ахуй
БС - Бусад салбар

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Шилдэг бүтээлд тавигдах ерөнхий шаардлага:

- ✓ Судалгааны ажил нь шинжлэх ухааны онол, арга зүйд үндэслэгдсэн байна.
- ✓ Судалгаа шинжилгээний тодорхой арга зүй, арга техникийг хэрэглэсэн байхын зэрэгцээ тооцооллыг бодит өгөгдөл дээр тулгуурлан хийсэн байна.
- ✓ Илтгэлд дэвшүүлсэн санаа оновчтой, практикт хэрэгжих боломжтой байх.
- ✓ Илтгэлийг ганцаарчилсан болон багаар бэлтгэж болох бөгөөд заавал удирдагч багштай байна.
- ✓ Илтгэлийг PPT хэлбэрээр бэлтгэх ба илтгэх хугацаа 15 минут, хэлэлцэх хугацаа 5 минут байна.
- ✓ Өгүүллийг хүрэнлэнгийн “Өгүүлэл бичих стандарт”-ын дагуу бичиж ирүүлнэ.

Өдөр:

- Хураангуй авах хугацаа(1-2р): **2024-10.20**
- Бүрэн өгүүлэл авах хугацаа (8-15р, MC-Word) : **2024- 11.01**
- Хурал болох өдөр: **2024-11.29~11.30**

Шагналт байр /Оролцсон бүх илтгэлүүд гарын бэлэг батламж дагалдан очно/

Grand Prize Award: Батламж болон 400,000төгрөг

Doctorate student Awards:

I байр Батламж, 300.000 төгрөг

II байр Батламж, 250.000 төгрөг

III байр Батламж 200.000төгрөг

Master student Awards:

I байр Батламж, 300.000 төгрөг

II байр Батламж, 250.000 төгрөг

III байр Батламж 200.000төгрөг

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THE 8th INTERNATIONAL CONFERENCE MIYR 2024

NOVEMBER 29~30, SOUTH KOREA BUSAN

TEIC-MIYR- 2024 is being organized by:

- Misheel Institute for Young Researchers (MIYR)
- International Institute of Management and Human Rights (IIMHR)

Aim of the conference:

The conference aims to build an international platform for the researchers to share their research findings with global audience, to improve the connection between theoretical and practical knowledge, to offer a networking opportunity for researchers and industrial participants, company representatives, to open opportunities to participate in projects and programs.

Conference schedule

Section 1. Education, Online Presentation (11/29)

/Mongolian time/

09:00~09:30	Participant registration	
	Gantumur Khongorzul, CEO, Misheel Institute for young researcher's Choi Mihee, Editor in Chief, Misheel Institute for young researcher's	
Time Paper ID	Paper Title	Presenter
SSSED-05 09:30~09:45	Emotional intelligence in adults	Narmandakh Maral-Erdene Munkhnasan Delgerjav
SSSED-06 09:45~10:00	Experience of student-centered learning in social science courses	Bal Enkhtsetseg
SSSPA-04 10:00~10:15	Student learning style, Studying the dependence of behavior	Batbuyn Byambatsetseg
SSSED-16 10:15~10:30	An Analysis of the Current State of Climate Change Literacy: A Case Study of Junior High School Students	Xiao Quansheng Narantsetseg Mukhtsetseg
SSSED-25 10:30~10:45	The outcome of conducting mathematics lessons using the flipped learning method	Urtnasan Munkhtsetseg
SSSED-27 10:45~11:00	A Study of factors related to the student's feeling of happiness	Chojjoo Tuvshinbayar Munkhnasan Delgerjav
HSL-03 11:00~11:15	Aligning ESP courses with the common European framework of reference for languages: a progress of students' English skills at MUST	Zolzaya Chojjin
SSSS-07 11:15~11:30	Current family structure, style and challenges in Mongolia	Bal Enkhtsetseg
Coffee Time-11:30~12:00		

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Section 2. Business, Online Presentation (11/29)

/Mongolian time/

Time Paper ID	Paper Title	Presenter
SSPS-02 12:00~12:15	On the issue of the current state of good governance	Galbadrakh Sosorbaram
SSEC-08 12:15~12:30	Detecting of fraud in financial reporting by ratio analysis (Example on Mongolian mining companies)	Badarch Khishigdavaa, Badarch Avirmed Sundui Badarch
SSBA-12 12:30~12:45	Evaluating the quality of railway passenger traffic services using the Railqual model (On the example of UBTZ)	Bayartsetseg Ganzorig Sarnai Batjargal
SSBA-13 12:45~13:00	Current trends in small business marketing	Tsermaa Nyamjav
SSOT-19 13:00~13:15	The relationship between temperament and occupation (On the example of Gyals Center employees)	Otgon Enkhzaya Pavagjav Odgerel
SSBA-20 13:15~13:30	Performance Based Financing System and Its Implementation and Results (On the Example of The Regional Diagnostic and Treatment Center in Orkhon Aimag)	Battuya Zeergene
SSEC-21 13:30~13:45	Opportunities for developing the care economy: Mongolia	Altantsetseg Purevdulam Gantsetseg Khaliun
SSBA-23 13:45~14:00	Research on consumer behavior of cultivate oyster mushroom	Batkhisig Ishdamba, Amargargal Tserendorj Enkhtuya Dunkhorol
14:00~14:30 Last Greeting (Discussion)		

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Section 3. Other, Online Presentation 11/29 /

Mongolian time/

Time Paper ID	Paper Title	Presenter
NGOT-01 14:30~14:45	Determination of the temperature effect on the formation of clinker by the free calcium oxide	Gankhuyag Javzan, Baasankhuu Tserenkhand Gantumur Munkh-Amgalan Sukhbaatar Narantuya Blessing Titilayo Ajala
NGEC-09 14:45~15:00	The Way of Opportunities to Reduce, Reuse, and Recycling Food Wastes in Mongolia	Enerel Ser-Od Tserenkhand Zorigtbaatar Enkhjargal Buyandelger
HSMS-17 15:00~15:15	Research on the academic inheritance of the traditional performance of Hilgasan Khuur	Hairihan
HSMS-18 15:15~15:30	Research on the Notation of Folk Urtiin Duu	Wurihan
HSOT-22 15:30~15:45	Understanding Déjà Vu: Neurological and Psychological Perspectives	Davaajargal Nyamdavaa
NGOT-32 15:45~16:00	Study of the soils heavy metal distribution	Sarangerel Jarantaibaatar Erdenetuya Boldbaatar Udaakhbayar Jamchin
NGOT-33 16:00~16:15	Improper conservation management affecting biodiversity	Enkhsaruul Otgonbayar
OTOT-26 16:15~16:30	Recycling and collection of waste material with system dynamics analysis	Lkhaasuren Batbold Davaanyam Batnasan
16:30~ Last Greeting		

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Phone Number: 010-8519-2072/Korea/, 7785-8388/Mongolia/

South Korea, Busan 2024.11.30

Oral presentation

/Korean time/

10:30~11:00	Participant registration	
10:30~11:00	Gantumur Khongorzul, CEO, Misheel Institute for young researcher’s Batmunkh Shurentsetseg, Misheel Institute Board Member’s	
Offline presentation in Busan (30/11)		
Paper ID Time	Paper Title	Presenter
HSOT-10 11:00~11:15	Mongolian long song - training opera singers prerequisite condition	Ulziiburen Tserenchunt
NGOT-11 11:20~11:35	The results of studying some nutritional quality of milk and meat of Mongolian reindeer	Tserenkhand Zorigtbaatar Enkhjargal Buyandelger
SSCR-14 11:40~11:55	Traditional games greate Mongolian mentality (Mongolian knucklebone shooting example)	Munkhdelger Jigjjav
SSOT-15 12:00~12:15	Problems of Sugar Beet Breeding and Seed Production in Mongolian-Possible Solutions	Bolormaa Nomin
SSLS-34 12:20~12:35	Current status and improvement directions of Mongolia is Genetic resources and traditional knowledge management system	Sanchirdulam Enkh-Amgalan
HSCS-24 12:40~12:55	The ritual of purification by fire in Mongolian culture	Baldandugar Tsogbadrakh Purbujei Turubolod
Coffee & Break Time		
13:00~13:15	UNITEF, Universtiy Industrial Technology Force	Hyungha Kim
13:15~13:30	GME Co., Ltd	Bat-Erdene Munkhgerel
13:30~13:45	AZ Financial Service Co., Ltd	Tsend Purevsuren
SSBA-28 14:30~14:45	The impact of influencer characteristics on influencer trust and purchase intention	Choi Mihee, Kim Deok Hyeon Gantumur Khongorzul
SSBA-29 14:50~15:05	A study on the impact of the psychological characteristics of entrepreneurs on service management and business performance	Choi Mihee, Yun Dong Gun Gantumur Khongorzul
NGOT-31 15:10~15:25	Some issues of food nutrition in Mongolia	Buyandelger Enkhjargal Tserenkhand Zorigtbaatar
SSBA-35 15:30~15:45	A Study on the Effects of Career Crafting and Career Self- Management on Career Satisfaction and Psychological Well- being through Person-Career Fit: Focusing on Mongolian Office Workers	Bat-Erdene Munkhgerel Won Jun Kwak
SSED-30 15:50~16:05	Changes in Social Studies Education in Elementary and Middle Schools in Mongolia and main contents of the 2019 Curriculum Revision	Tsogzolmaa Zolzaya Jo Woo Young
16:05~17:00 Discussion Last Greeting and Coffee Time		

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HGOT-01

Determination of the temperature effect on the formation of clinker by the free calcium oxide

Gankhuyag Javzan (Mc.s)^{1,2}, Baasankhuu Tserenkhand (Prof)², Gantumur Munkh-Amgalan (Ph.D)¹, Sukhbaatar Narantuya (Mc.s)³, Blessing Titilayo Ajala(Mc.s)¹

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Abstract: In this study, the primary objective of our research work is to determine the effect of temperature on clinker formation using high and low-titrated marl by measuring free calcium oxide. The mineral and chemical compositions of the raw materials were determined using X-ray diffraction and X-ray fluorescence methods, respectively. Mixture calculations were carried out using the Kind method, and the mixtures were prepared with modulus values of 0.83, 0.88, and 0.93. Tests were conducted by firing at 1000°C, 1100°C, and 1200°C. Free calcium oxide was determined in the obtained samples.

Keywords: Portland cement, final black iron ore, Harganat iron ore, elder iron ore, the chemical composition of clinker.

1. Introduction

Alite (C_3S), belite (C_2S), aluminate (C_3A), and aluminoferrite (C_4AF) are the minerals optimally contained in the polycrystalline powder material known as Portland cement.

In 1824, an English stonemason named Joseph Aspdin invented the first binding material called Portland cement by mixing limestone and clay, grinding them together, and firing the mixture at 1450°C, for which he later obtained a patent [1,2].

A homogeneous mixture of carbonate rock, clay, and iron ore is proportionately blended, ground into a uniform consistency, and fired to the clinking temperature to produce Portland cement. The resulting clinker is mixed with gypsum stone and ground to produce Portland cement.

Recently, there has been a global focus on producing high-quality cement while minimizing energy consumption and reducing production costs. Several methods have been identified to achieve energy savings in cement production. Notably, using various industrial wastes as raw materials can significantly lower energy requirements and carbon emissions. Additionally, incorporating mineralizers during the clinker production process can enhance efficiency and reduce the energy needed for clinker formation [3,4].

Researchers and scientists from countries such as Russia, China, South Korea, Italy, and Mongolia have been actively studying these methods. Despite significant advancements, the challenge of optimizing energy consumption in cement production remains an issue that has not yet been fully resolved.

It has been over 180 years since various types of Portland cement began to be used for constructing houses, dams, canals, roads, and bridges. Today, approximately 2 billion tons of cement are produced worldwide each year, and it is classified into numerous types based on its intended use. As the scale of construction projects continues to expand in our country, the demand for various construction materials, including cement, continues to grow.

2. Survey research

2.1 RESEARCH MATERIALS AND METHODS

In this study, we utilized Uvs Mergeli II, Khovd Mergeli I, Kharganat iron ore, Uvgun Datsan iron ore, Suul Khar iron ore, and Baruun Tserd gypsum. Figure 1 illustrates the locations of these selected raw materials.



Figure 1. Locations of the raw materials

The mineral composition of the raw materials was determined using X-ray diffraction methods, while the chemical composition was analyzed using X-ray fluorescence. The raw material mixture was assessed using the Kindi method, and the content of free calcium oxide was determined by volumetric methods (accelerated techniques) [2, 3, 9, 13].

(1) The effect of X-ray phase (X-ray diffraction) analysis

Phase analysis of powdered samples will be conducted using X-ray diffraction to determine their mineral composition.

(2) The effect of the X-ray fluorescence analysis method

When a substance is subjected to a force, it emits light. The method of characterizing this emitted light by measuring its intensity is known as X-ray fluorescence analysis. X-ray fluorescence spectrometry is a widely used analytical technique for elemental analysis.

(3) The effect of the Kindi method

When determining the quantity or composition of the components in the raw material mixture, calculations are based on the chemical composition of each raw material and the mixture itself, using either two, three, or four components. Since most raw material mixtures consist of two components, relevant calculations are performed according to the required control coefficient (CC) for clinker formation. Following this, a decision is made regarding the addition of a regulating component. The number of components in the raw materials for cement must exceed the number of specified parameters by one. For three components, two parameters (CC and either n or p) should be provided; for four components, three parameters (CC, n, and p) should be provided.

(4) Method for determining the free calcium oxide content in clinker

It is considered that the complete reaction of calcium oxide formed from the raw material mixture occurs at temperatures of 1450-1500°C during the firing process. The free calcium oxide content can be determined using various methods. Both qualitative and quantitative analyses can be performed using chemical, physicochemical, and physical methods. Chemical methods include techniques such as ethyl glycerate, ethyl phenolate, methyl salicylate, and ethylene glycol. The physicochemical method involves determining free calcium content using atomic absorption techniques, while physical methods include X-ray phase analysis. Among these methods, atomic absorption is the most precise, followed by the ethyl glycerate method.

2.2 Results of the research

2.2.1 The raw materials X-ray phase analysis results are shown in Figures 1 and 2 and in Table

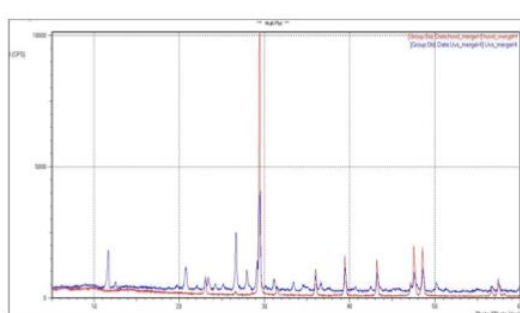


Figure 1. X-ray diffractograms of Mergel I, II

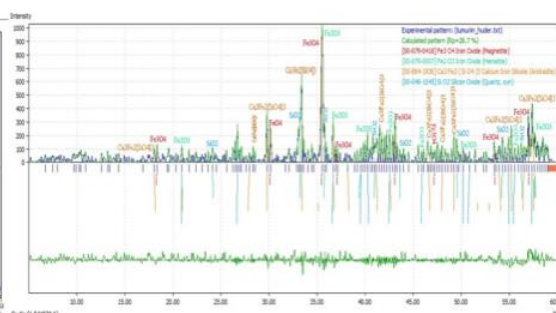


Figure 2. X-ray diffractogram of Kharganat iron ore

Table 1. Mineral composition of Mergel from Khovd and Uvs provinces

№	Mineral name	Mineral formula	Percentage, %	
			Khovd Mergel	Uvs Mergel
1	Calcite	CaCO_3	98.8	33.1
2	Quartz	SiO_2	1.2	19.7
3	Gypsum	$\text{Ca}(\text{SO}_4) (\text{H}_2\text{O})_2$		18.7
4	Albite	$\text{Na Al Si}_3 \text{O}_8$		7.5
5	Kaolinite	$\text{Al}_2 (\text{Si}_2 \text{O}_5) (\text{OH})_4$		6.2
6	Muscovite	$\text{K Al}_2 (\text{Si}_3 \text{Al}) \text{O}_{10} (\text{OH})_4$		14.8
	Σ		100	100

From Figure 1 and Table 1, it can be seen that Khovd's mergel can be fully utilized as a carbonate raw material in cement production, while Uvs's mergel can be used as an aluminosilicate raw material.

In Figure 2, the X-ray diffractogram of Kharganat iron ore shows high-intensity peaks representing magnetite (Fe_3O_4), as well as weak and faint intensity peaks representing hematite (Fe_2O_3), andradite ($\text{Ca}_3\text{Fe}_2(\text{SO}_4)_3$), and quartz.

The chemical composition of the raw materials for cement was determined using X-ray fluorescence, with the results shown in Table 2, and the calculations for the raw material mixture are presented in Tables 3.

Table 2. Chemical composition of the raw materials

№	1	2	3	4	5	6	7	8	9	10	11	12	13	
Oxide	SiO ₂	TiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	Na ₂ O	K ₂ O	SO	MnO	P ₂ O ₅	Other	LOI	
Mergel I	0.6	0.02	0.23	0.16	55.24	0.26	0.1	0.1	0.1	0.02	0.02	-	43.17	100
Mergel II	32.0	0.4	6.7	2.66	26.03	1.49	0.89	1.4	3.1	0.15	0.10	6.58	18.57	100
Khargana iron ore	7.06	-	1.02	89.2	0.53	-	1.02	1.0	0.2	-	-	0.01	-	100

Table 2 shows that the amount of the main oxide and other oxides present in the raw materials meet the standards required for producing cement clinker. Therefore, it is possible to produce cement clinker using these raw materials.

Using these three raw materials and setting $n = 2.2$, and the saturation coefficients to be 0.83, 0.88, and 0.93, calculations were made using a three-component system, and the results are shown in Table 4.

Table 3. Calculation of the raw material mixture based on a three-component system

	Mergel I+ Mergel II + Kharganat		Mergel I + Mergel II + Kharganat		Mergel I + Mergel II + Kharganat)		Cement Clinker Standard
SC	0.83		0.88		0.93		19-24
Oxide	T.e.n	K.n	T.e.n	K.n	T.e.n	K.n	
SiO ₂	14.83	21.5	14.3	20.9	13.77	20.24	0.2-0.5
TiO ₂	0.17	0.25	0.17	0.25	0.17	0.25	4-8
Al ₂ O ₃	3.13	4.54	3.04	4.44	2.92	4.3	2-5
Fe ₂ O ₃	3.53	5.12	3.45	5.04	3.32	4.88	60-65
CaO	40.8	59.16	41.33	60.34	41.84	61.5	0.5-5
MgO	0.8	1.16	0.78	1.14	0.77	1.15	0.4-1
Na ₂ O	47	0.68	0.45	0.66	0.45	0.66	
K ₂ O	0.68	0.99	0.66	0.96	0.65	0.95	
SO ₃	1.43	2.07	1.36	1.98	1.33	1.95	0.1-0.3
MnO	0.08	0.12	0.07	0.1	0.07	0.1	
P ₂ O ₅	0.06	0.09	0.05	0.07	0.05	0.07	
Others	2.94	4.26	2.82	4.12	2.7	3.97	
LOI (Loss on ignition)	31.09		31.53		31.96		
Σ	100.01	99.94	100.01	100	100	100	
n	2.2	2.2	2.2	2-4	2.2	2.2	2.2
p	0.88	0.88	0.88	0.8-1.6	0.88	0.88	0.88
Mergel I	52.79%	54.57%	56.2%		52.79%	54.57%	56.2%
Mergel II	44.68%	42.94%	41.41%		44.68%	42.94%	41.41%
Iron ore	2.53%	2.49%	2.39%		2.53%	2.49%	2.39%

From Table 3, it is evident that it is possible to produce clinker with an appropriate composition using these raw materials. *Explanation:* K.n- clinker composition, T.e.n-Raw material composition, p-alumina modulus.

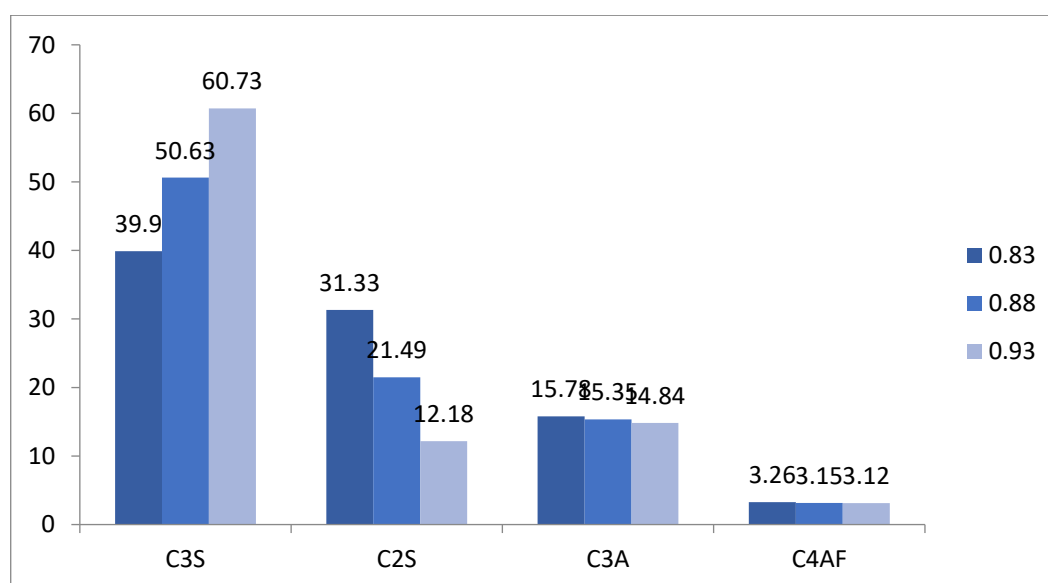


Figure 3. Mineral composition of clinker was calculated at saturation coefficients of 0.83, 0.88, and 0.93, %.

Table 4. Results of the raw material mixture calculation based on the composition of Mergel I + Mergel II + Uvgundatsan iron ore

№	Oxide, %	Saturation coefficient					
		0.83		0.88		0.93	
		T.e.n	K.n	T.e.n	K.n	T.e.n	K.n
1	SiO ₂	14.79	21.45	14.26	20.83	13.77	20.24
2	TiO ₂	0.18	0.26	0.17	0.25	0.17	0.24
3	Al ₂ O ₃	3.13	4.53	3.02	4.41	2.92	4.29
4	Fe ₂ O ₃	3.60	5.23	3.46	5.05	3.34	4.91
5	CaO	40.79	59.15	41.34	60.35	41.84	61.51
6	MgO	0.80	1.16	0.78	1.14	0.76	1.12
7	Na ₂ O	0.45	0.65	0.44	0.64	0.42	0.62
8	K ₂ O	0.66	0.96	0.64	0.93	0.62	0.91
9	SO ₃	1.41	2.05	1.36	1.99	1.32	1.94
10	MnO	0.08	0.11	0.07	0.102	0.07	0.11
11	Mn ₂ O ₃	0.003	0.01	0.003	0.005	0.003	0.005
12	P ₂ O ₅	0.06	0.08	0.05	0.08	0.05	0.08
13	Other	2.92	4.23	2.81	4.10	2.71	3.98
14	LOI	31.11	-	31.57	-	31.99	-
15	p		0.87		0.88		0.9
16	C ₃ S		39.94		50.65		60.76
17	C ₂ S		31.36		21.50		12.18
18	C ₃ A		3.13		3.12		3.04
19	C ₄ AF		15.90		15.35		14.93
20	Mergel I	52.91		54.67		56.31	
21	Mergel II	44.39		42.74		41.19	
22	U.i.o	2.70		2.59		2.50	
23	Σ	99.98	99.86	99.9	99.9	99.99	99.96

Explanation: U.i.o -Uvgundatsan iron ore, T.e.n-raw material composition, K.n- clinker composition, p-alumina modulus

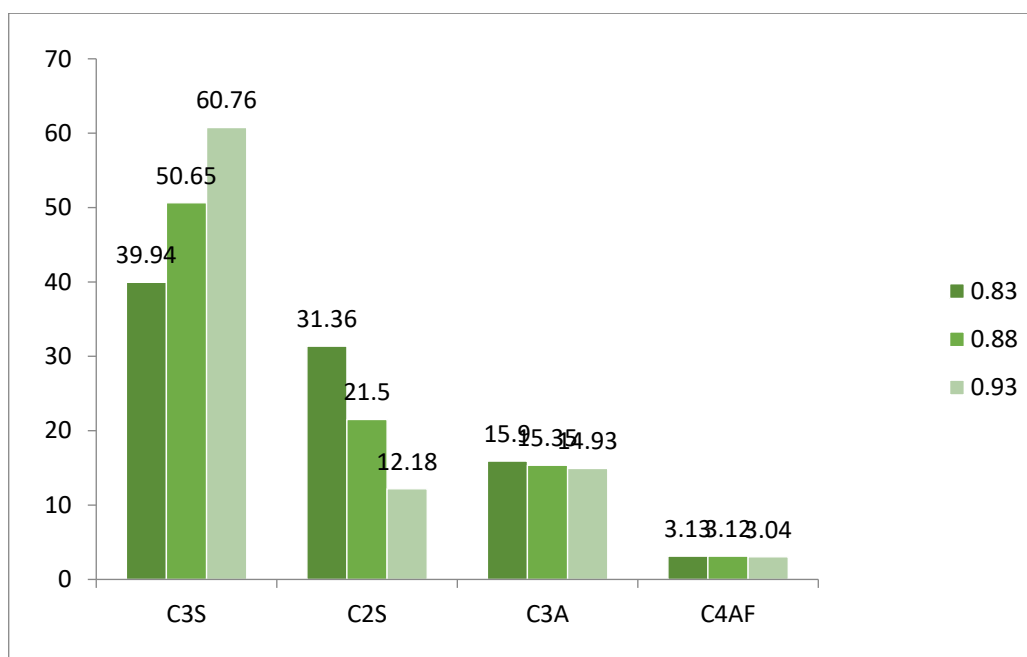


Figure 4. Mineral composition of clinker was calculated at saturation coefficients of 0.83, 0.88, and 0.93, %.

Table 5. Results of the raw material mixture calculation based on the composition of Mergel I + Mergel II + Suul Khar iron ore

№	Oxide, %	Saturation coefficient					
		0.83		0.88		0.93	
		T.e.n	K.n	T.e.n	K.n	T.e.n	K.n
1	SiO ₂	14.76	21.40	14.22	20.76	13.74	20.20
2	TiO ₂	0.18	0.26	0.17	0.25	0.17	0.25
3	Al ₂ O ₃	3.14	4.55	3.03	4.42	2.93	4.31
4	Fe ₂ O ₃	3.57	5.18	3.43	5.00	3.31	4.87
5	CaO	40.69	59.00	41.24	60.22	41.74	61.36
6	MgO	0.81	1.17	0.78	1.14	0.77	1.13
7	Na ₂ O	0.45	0.65	0.43	0.63	0.44	0.65
8	K ₂ O	0.66	0.96	0.64	0.94	0.63	0.93
9	SO ₃	1.42	2.06	1.37	2.00	1.33	1.96
10	MnO	0.08	0.12	0.08	0.11	0.07	0.10
11	P ₂ O ₅	0.06	0.08	0.05	0.08	0.05	0.07
12	Other	2.94	4.27	2.83	4.14	2.73	4.01
13	LOI	31.27	-	31.71	-	32.13	-
14	p		0.9		0.88		0.9
15	C ₃ S		39.85		50.49		60.64
16	C ₂ S		31.29		21.42		12.16
17	C ₃ A		3.27		3.23		3.16
18	C ₄ AF		15.75		15.20		14.81
19	Mergel I	52.56		54.34		55.98	
20	Mergel II	44.74		43.08		41.53	
21	S.t.h	2.70		2.58		2.49	
22	Σ	100	99.68	100	99.7	100	99.84

Explanation: S.t.h – Suul Khar iron ore, T.e.n – raw material composition, K.n – clinker composition, p – alumina modulus.

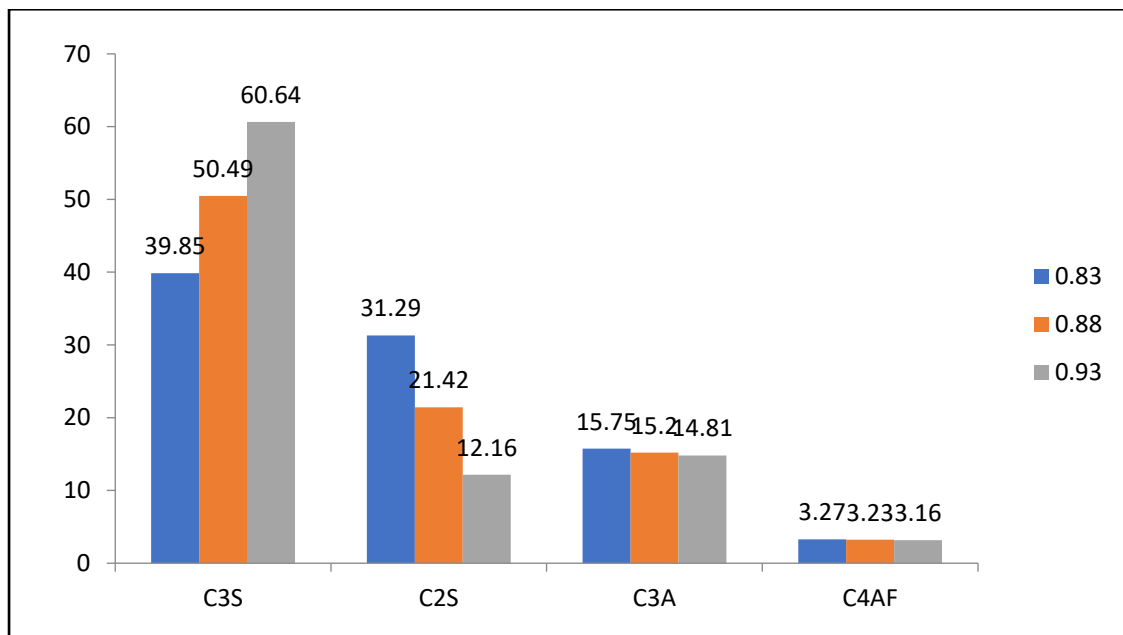


Figure 5. Mineral composition of clinker was calculated at saturation coefficients of 0.83, 0.88, and 0.93, %.

From Tables 3, 4, and 5, it can be seen that the mixture consisting of Mergel I, Mergel II, and iron ore, calculated at the given saturation coefficients ($K_n = 0.83, 0.88, 0.93$), theoretically results in a clinker composition where the oxide contents fall within the upper and lower limits typically found in ordinary Portland cement. Additionally, the silicate and alumina modulus of the raw material mixture meet the technical requirements for ordinary Portland cement. Furthermore, from Figures 3, 4, and 5, it is evident that the chemical composition of the clinker and the main phases—alite, belite, aluminate, and aluminoferrite—are most abundantly present in the composition of Mergel I + Mergel II + Uvgundatsan iron ore, as shown in the figures.

Table 6. Characteristics of the mixture composition, component quantity, mass%

Mixture	Mergel I	Mergel II	Kharganat	Suul Khar	Uvgundatsan	SC	n	p
A	56.2	41.40	2.39	-	-	0.93	2.2	1.4
B	55.98	41.53	-	2.49	-	0.93	2.2	1.4
C	56.31	41.19	-	-	2.50	0.93	2.2	1.4

Explanation: Mixture A contains 56.21% Mergel I + 41.40% Mergel II + 2.39% Kharganat iron ore, Mixture B contains 55.98% Mergel I + 41.53% Mergel II + 2.49% Suul Khar iron ore, and Mixture C contains 56.31% Mergel I + 41.19% Mergel II + 2.50% Uvgundatsan iron ore.

Table 7. Chemical composition of the raw material mixture, oxide composition (mass %)

Raw material Name	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	TiO ₂	MgO	Na ₂ O	K ₂ O	SO ₃	MnO	P ₂ O ₅	Other	Σ
A	20.24	4.3	4.88	61.5	0.25	1.15	0.66	0.95	1.95	0.1	0.07	3.97	100.02
B	20.73	5.31	4.12	65.1	-	1.50	1.16	0.96	0.31	-	-	0.83	100
C	20.79	5.29	4.16	65.3	-	1.48	1.16	0.96	0.31	0.0005	-	0.81	100

From Table 7, it can be seen that the amount of the main oxides all conform to the standard levels, so we need to study how much of the iron ore deposit is available in terms of reserve

Table 8 shows the composition of the raw materials

Mixture	Initial Mixture %	Additive %	Samples name	Free Calcium Oxide (CaO free)	1100°C	1200°C
		Gypsum (CaSO ₄ *2H ₂ O)		1000°C	11.41	9.8
A ₁	100	=	A ₁	13.91	10.27	7.85
A ₂	99	1	A ₂	16.88	10.88	6.96
A ₃	98.5	1.5	A ₃	24.38	10.03	8.69
A ₄	98	2	A ₄	15.10	12.87	7.76
B ₁	100	=	B ₁	14.76	11.65	10.85
B ₂	99	1	B ₂	14.29	10.80	9.50
B ₃	98.5	1.5	B ₃	14.013	12.89	11.77
B ₄	98	2	B ₄	13.71	9.25	8.12
C ₁	100	=	C ₁	22.39	9.96	5.76
C ₂	99	1	C ₂	22.95	13.16	9.23
C ₃	98.5	1.5	C ₃	28.87	15.20	7.82
C ₄	98	2	C ₄	26.25	1100°C	1200°C

Table 9 shows the free calcium oxide in the raw materials calcined at temperatures of 1000°C, 1100°C, and 1200°C. Among these raw materials, A — the Kharganat iron ore — can be used for Portland cement production, and its deposit is large. The Suul Khar and Uvgundatsan iron ores, however, have limited occurrences.

3. Conclusion

- It was determined that the raw material Mergel I has a high titration, Mergel II has a low titration, and the Kharganat iron ore primarily contains magnetite. These materials meet the requirements for cement raw materials regarding composition.
- When calculating the raw material mixture with the composition "Mergel I + Mergel II + iron ore," the main composition of the resulting clinker closely matches the standard size, indicating that clinker can be produced using these three raw materials.
- The free calcium oxide in the clinker obtained by burning at different temperatures was evaluated.
- When determining the free calcium oxide, the percentages of samples A, B, and C were shown to be similar. From this, we concluded that the most optimal condition was with sample A, which contains Mergel I, Mergel II, and Kharganat iron ore, making it the most suitable.

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SSPS-02

On the Issue of the Current State of “Good Governance”

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Abstract: This paper explores Mongolia's efforts to improve its governance system by adopting the global concept of "good governance." For developing and transitional economies, the success of economic and social reforms, as well as broader economic development, heavily depends on the maturity of governance systems and the involvement of diverse social institutions in oversight and participation. Currently, the advancement of "good governance" is widely regarded as a critical pathway for the progress of developing nations. Consequently, many developing countries aim to establish "good governance" as a means to achieve sustainable economic growth and development. In this study, we analyze the key characteristics of "good governance" through models of government-business relations. This paper examines the current state of "Good Governance" formation in Mongolia from two perspectives: macro-level and micro-level. At the macro level, the research focuses on assessing the current role of government participation in the national economy. To analyze this, we employed a methodology for identifying models of government-business relations based on the framework developed by Lee-Jay Cho, Yoon Hyung Kim, and Chung H. Lee (KDI). The study further analyzes these models in the context of Mongolia, taking into account the dominant attributes that shape government-business interactions in the country. Furthermore, we assess public opinion on the current state of governance system development based on citizen survey data.

Keywords: governance system, public-private sector relations, democratic governance, government-business relation

1. Introduction

The primary function of government is to protect national and individual safety by establishing laws and regulations for general compliance, and to provide citizens with essential services. Today, public administration reforms focus on delivering public services to citizens at the lowest possible cost, with maximum efficiency, while reducing bureaucratic hurdles. Many nations, including the so-called "transitional" former socialist countries, are progressing toward market economies and democratic systems. However, in "developing" countries where economic and social development remain low, delivering essential public services poses significant challenges. Shortages and infrastructure issues—such as roads, bridges, energy, housing, public services, food and water supply, health, culture, education, environment, and social welfare—have become widespread. Common issues like power outages, traffic congestion, delayed public transport, deteriorating parks, run-down schools and hospitals,

inadequate drainage systems, and other infrastructure deficiencies in need of urgent repair are all too familiar (Batsuh, Sh., 2009).

These problems, in turn, reduce societal productivity, diminish national competitiveness, and adversely impact development. Achieving "good governance" is widely regarded as the key pathway for developing countries to enhance growth. Therefore, nations strive for "good governance" to achieve sustainable economic growth and development (Abdul Ghani Gaghman, 2019).

2. Theoretical part

To clarify the distinction between "government" and "governance," it is essential to note that government refers to an officially established authority exercising executive powers and functions. In contrast, governance involves the promotion, execution, and management of activities that align with collective goals, often carried out by citizens and organizations that are not formal governments or authorities (Rosenau, 1992 in Bingham et al., 2005, p. 548).

According to some researchers (Richards and Smith, 2002), government is associated with bureaucracy, law, financial control, regulation, and power, whereas governance emphasizes non-regulatory policy instruments. These instruments facilitate planning and implementation through the collaborative efforts of governmental and non-governmental organizations and participants.

Good governance is a normative concept requiring certain conditions: transparent, accountable, participatory, consensus-based, equitable, effective, and ethical decision-making processes and implementation (Kaufmann, Kraay, and Zoido-Lobaton, 1999).

UNDP's Development Program outlines good governance characteristics as ensuring broad citizen participation, making decisions based on legal principles, maintaining transparency, responding to citizens' needs and interests, treating all citizens equally, efficiently using public funds, achieving effective spending, assuming political responsibility, and taking a visionary approach to development planning (Davaadulam, Ts., 2010).

In modern times, the type of state has evolved, and globalization (beginning in the 1990s) is emerging as a successor to the territorial state (1870-1940) and the industrial state (1950-1990) (Cho L., Kim Y., Chung Lee H., 2001). The success of economic management now depends on the public administration's ability to adapt, innovate, and be flexible under new conditions. During the 1970s and 1980s, the concept of "new public sector management" gained prominence worldwide, fostering a politically independent approach to public administration reforms. This shift emerged from decreasing public trust in government, underscoring the need to improve public administration and create favorable conditions for separating public service from political influence.

Following World War II, the failure of economic restructuring programs implemented in African countries by multilateral organizations, such as the World Bank and the IMF, was attributed not to the unsuitability of liberal policies for African contexts but to poor governance and ineffective program management. Today, good governance is defined by requirements such as democracy, inclusive participation, human rights, decentralized principles, rule of law, efficient and effective government management, transparency, and accountability. Neoliberalism, however, remains the principal strategy for growth (Aubut, 2004).

3. Research methodology

In our country, the current development state of the "Good Governance" system was examined at two levels: macro and micro. Macro-level research focused on identifying the current role of government participation in the national economy. Our research methodology aimed to identify models of government-business relations (Lee-Jay Cho, Yoon Hyung Kim, Chung H. Lee, KDI). The study analyzed these models based on the country's dominant attributes. Following Aubut's (2004) definition of "Good Governance," questions were developed to gather citizens' perspectives on governance. These questions addressed the following aspects:

1. **Democracy** - What is the level of democracy in Mongolia?
2. **Multilateral Participation** - To what extent do you think citizen and public participation is a fundamental characteristic of democratic governance?
3. **Human Rights** - How would you rate the status of human rights and freedoms in Mongolia?
4. **Decentralization** - What is the maturity and development level of non-governmental organizations?
5. **Rule of Law** - How prevalent is corruption in society?
6. **State Efficiency** - To what extent has accountability in public service, a key feature of democratic governance, been developed?
7. **Effective Management** - How effectively is the public-private partnership being implemented in our country?
8. **Transparency** - To what extent do you think transparency and honesty in public service, key features of democratic governance, have been established?
9. **Accountability** - To what extent is accountability at all levels, a crucial aspect of democratic governance, developed?

These questions were posed to citizens in Part 2 of the survey.

Research part 1: model analysis of "government-business relations"

In our country, the relationship between the state and civil society, as well as between the public and private sectors, follows an outdated model, with traditions from the previous system persisting. This continuity weakens collective norms and partnerships. According to Sh. Batsukh (1998), the legal framework governing the public sector is underdeveloped, with an emphasis on holding citizens accountable rather than prioritizing government accountability to citizens.

In recent years, Mongolian politics has focused on reforming state administration and developing new management principles. Traditional administrative management, dominated by authoritarian methods and reactive problem-solving, operates within a framework of rigid rules and regulations. To enhance effectiveness, there is a need to transition from authoritarian to participatory management, shifting to a proactive approach that anticipates and addresses issues before they arise. This shift entails defining goals, objectives, and strategies that are not constrained by rigid regulations.

Transparency and openness are foundational principles for government institutions. These principles promote active political participation, draw public attention to issues under discussion, and enable both public support and critical feedback (Bolormaa, A., 2008). The success of these principles in public administration reform directly impacts the outcomes of economic management.

Civil service reform in Mongolia began in 1990 and has undergone several phases. Throughout these phases, maintaining the independence of public service from political influence has remained a constant goal (Ganbold, Ts., Otgonbayar, N., 2017).

The relationship between the public and private sectors shapes the nature of a country's business environment. Table 1 presents models of public-private sector relations in some developed and newly industrialized countries. The "Government-Manager," "Government-Protector," and "Government-Judge" models reflect the primary patterns of state-business relations in Southeast Asia, Western Europe, and North America, respectively. In each country, national culture, ideology, and other factors determine the dominant style. Countries' transitions between models are often aligned with public sector reforms.

The economies of Southeast Asian countries adopting the "Government-Manager" and "Government-Protector" models experienced rapid development following World War II. However, these models are less suited to the current global economic and political environment, characterized by globalization, trade liberalization, and rapid technological advances. As a result, many countries are shifting towards the Anglo-Saxon or "Government-Judge" model. Good governance is not an automatic outcome of liberalization and democratization processes in transition economies (Susan J. Linz, 2015). However, economic liberalization and good governance can reinforce each other; liberalization typically involves reducing government intervention in the economy, thereby increasing private sector participation (Damola Adejumo Ayibiowu, 2015).

The models of government-business relations outlined by Lee-Jay Cho, Yoon Hyung Kim, and Chung H. Lee in "Restructuring the National Economy" (KDI, 2001, p. 312) generally highlight three distinct approaches for structuring the interaction between government and the business sector. Each model reflects differing levels of government involvement, approaches to economic management, and overall objectives, typically shaped by historical, cultural, and ideological influences within a nation. Here's a breakdown of these models:

Government-Manager Model: In this model, the government plays an active managerial role in the economy, often directing or steering economic activities to align with national objectives. This approach is common in East Asian countries where the government engages heavily in planning and guiding business activities. The model is characterized by extensive public-private partnerships, government-led industrial policies, and strategic support for certain sectors to accelerate economic growth and development.

Government-Protector Model: Here, the government's primary role is to shield domestic industries from external competition, often through tariffs, quotas, and other protective policies. The focus is on supporting domestic companies to build resilience and strengthen their competitiveness before fully engaging in the global market. This model is frequently seen in economies transitioning towards open markets, where the goal is to develop national industries while controlling the pace of globalization's impact.

Government-Judge Model: The government acts as a neutral regulator and "judge," primarily ensuring a fair and transparent market environment. This model emphasizes limited government intervention, where the state's role is to set up and enforce regulations to prevent monopolies, protect consumer rights, and encourage fair competition. The "Government-Judge" model is commonly associated with Anglo-Saxon economies, where the emphasis is on market-driven growth and minimal interference in business operations. These models illustrate varying levels of government involvement and provide a framework for understanding how different countries balance the roles of regulation, market freedom, and economic planning within their national contexts.

In Mongolia, the relationship between the public and private sectors has been developing for over 30 years, especially in light of the transition to a market economy. Let's analyze this relationship using criteria for government-business relations:

- **Economic Openness:** According to this criterion, Mongolia's economy is classified as open. This openness is evident in the law on foreign investment and a set of tax laws. Recently, the World Trade Organization reviewed Mongolia's trade policy (2021) and gave a commendable assessment of the policy's orientation towards an open trade and investment regime, including more inclusive trade practices. As part of the New Revival Policy, the Government of Mongolia plans to implement significant measures to increase economic openness and foreign investment.

Researchers have found that empirical studies show a strong positive correlation between per capita income and governance quality (Dellepiane S, 2010). Some studies have also shown that economic freedom encourages economic growth (James Gwartney, 1999). Additionally, research on 39 African countries has found that good governance has a positive and significant effect on growth (Bichaka Fayissa and Christian Nsiah, 2013).

- **Interference:** Elements of the government-manager model, including permanent involvement and control in dominant sectors (agriculture, processing, and mining), are prevalent. The business sector frequently demands a high level of government protection. Government intervention, both direct and indirect, remains significant in the economy.

- **Dominance of the Market Structure:** The private sector's share of the economy has grown steadily (from 72.2% in 2000 to 73.5% in 2010, and 77.5% of GDP by 2021). However, the state sector still holds a significant position. According to J. Bathuyag (2004), in transition economies, although the private sector has become dominant in numbers, the legal and institutional environment to protect private property rights has not developed sufficiently to meet modern standards.

- **Form of Corporate Governance:** Since 2012, Mongolia has been rated between 35 and 39 points on the Corruption Perceptions Index, with the lowest score of 35 recorded in the last two consecutive years. Of the nine sources used to calculate Mongolia's 2020 Index, several ratings improved: the Risk Assessment by the American PRS Group increased by 6 points, the Competitiveness Compilation Survey by Swiss IMD increased by 4 points, and the Democracy Diversity Project's assessment rose by 3 points. However, the Rule of Law Index by the World Justice Project decreased by 3 points, and the country risk level by Global Insight decreased by 12 points. Ratings by the World Economic Forum Opinion Survey, the Bertelsmann Foundation Transition Index, the World Bank's Country Policy and Institutional Assessment, and the Economic Intelligence Unit's Country Risk Assessment Score remained unchanged from the previous year. Although the corruption index score has not improved, it has declined overall.

Studies confirm that corruption has become a socially accepted phenomenon in Mongolia. Experts have found that corruption reduces both investment and GDP growth. A significant factor contributing to high corruption levels is the size of the underground economy. In 2000, a collaboration between the Government of Mongolia and the U.S. Development Agency found that products and services provided by the informal sector equaled 30% of GDP, with 40-50% of tax-paying organizations reporting losses or being non-performing. However, a 2018 survey estimated the hidden economy to be 2,971.9 billion MNT, or 9.2% of the total economy (NSH, 2020).

In conclusion, analyzing the relationship between the public and private sectors in Mongolia according to the "Government-Business Relationship" model reveals that most criteria align with the "Government-Manager" model.

Research part 2: survey on maturity of the governance system

A total of 252 individuals from Darkhan-Uul province participated in a survey assessing the maturity of the governance system. The survey was conducted through Google Forms. Regarding the age distribution of respondents, 18% were aged 18-25, 20% were 26-35, 22% were 36-45, 17% were 46-55, and 23% were over 56. By gender, 47% were men and 53% were women.

In terms of employment status, 48% were employed in the private sector, 18% worked in public institutions, 16% were elderly, 8% were students, and 10% were unemployed. This distribution can be considered representative of the population's employment structure. The questionnaire results were analyzed using a 5-point Likert scale, and the average rating was calculated.

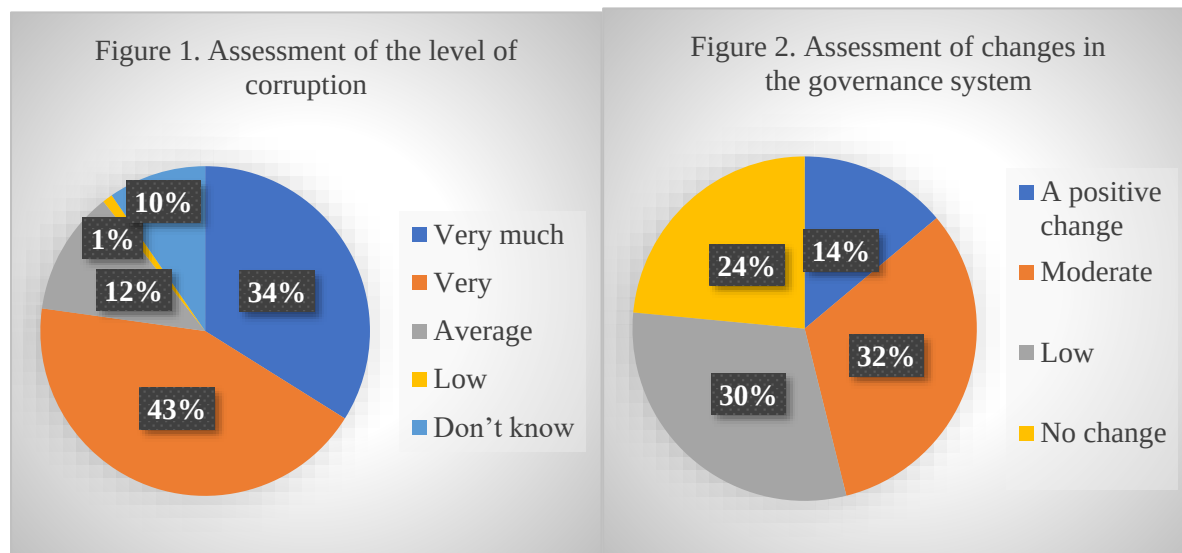
Table 1. Results of the survey on the governance system

Questions	Excellent	Good	Average	Poor	Very Poor	Weighted average rating
1. What is the level of maturity and development of non-governmental organizations?		19,1%	52,2%	21,7%	7%	18.9
2. To what extent do you think public participation, a key feature of democratic governance, is present?	2,7%	11,3%	55,7%	23,5%	6,8%	18.6
3. To what extent do you think transparency and honesty in public service, essential features of democratic governance, have matured?	0,9%	17,2%	50%	21,6%	10,3%	18.5
4. To what extent do you think accountability in public service, a fundamental characteristic of democratic governance, has matured?	0,9%	16,3%	51,8%	22%	9%	18.5
5. In your opinion, what is the level of democracy in Mongolia?	0,9%	16,4%	49,1%	21,6%	12,1%	18.2
6. How effectively is the public-private partnership implemented in our country?	0,9%	12,1%	44%	26,7%	16,4%	17.0
7. To what extent do you think accountability at all levels, a core feature of democratic governance, is mature?		13,8%	38,8%	25,9%	21,6%	16.3
8. What do you think is the status of human rights and freedoms in Mongolia?	2,9%	8,6%	37,9%	26,7%	23,9%	16.0
9. What is the level of maturity and development of political parties?		4,4%	41,6%	25,7%	28,3%	14.8
Average indicator						17.4

According to Table 1, questions 1-6—indicators such as the maturity of NGOs, citizen participation, and the openness and honesty of public service—are rated relatively higher than the average (with an average indicator of 17.4). In contrast, the maturity of political parties, the state of human rights and freedoms, and the accountability system received relatively low

ratings. When examining the results, the below-average scores are significantly higher than the above-average scores (the closest is Question 1, with a difference of 9.6 points, while the largest difference is Question 9, at 49.6 points).

In addition to these questions, two additional questions were included. Regarding the question, "How widespread is corruption in society?" 78.2% of all participants responded that corruption is very prevalent, indicating that citizens perceive the level of corruption as high (Figure 1).



How much progress has been made in the governance system in Mongolia in recent years? Figure 2 shows the response to this question. According to the data, 53.9% of respondents indicated that little or no change has occurred, reflecting a low level of public satisfaction with the governance system. From this survey, it appears that citizens are not fully satisfied with the efforts to shape the governance system.

4. Conclusion

In our study, we used the model developed by Lee-Jay Cho, Yoon Hyung Kim, and Chung H. Lee to assess the level of the public-private relationship. According to the research, when analyzing the dominant attributes of the "Government-Business Relationship Model" in the context of Mongolia, the traditional type or elements of the "Government-Manager" model prevail in the relationship between the state and the private sector.

Using Aubut's (2004) definition of "Good Governance," we developed questions to monitor citizens' views on governance and conducted a survey. According to the results, indicators such as the maturity of NGOs, citizen participation, and open and honest public service received relatively high levels of trust. In contrast, the maturity of political parties, the state of human rights and freedoms, and the accountability system were rated relatively low. Based on these results, it can be concluded that citizens are dissatisfied with the current governance system.

Many studies have shown that the development of good governance positively impacts economic growth. E. Soto's (2004) research supports the need for reform in state-private sector relations. His research on the negative impact of the hidden economy on economic development concluded: "The main obstacle to poor countries benefiting from capitalism is their inability to create capital." Through studies in various countries, Soto found that Western

capitalism fails not only in underdeveloped nations but also in transitioning economies due to the absence of legal structures (institutions) necessary for proper market relations.

It is believed that forming the legal and organizational framework that supports private property rights and defines the scope of business activities should be a primary focus of reform within state institutions related to economic management. This approach will elevate the relationship between the state and the private sector to a new level. As a result, capital circulation within the informal sector will support economic development and establish the foundational relations of a classical market economy.

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HSLs-03

Aligning Esp Courses with the Common European Framework of Reference for Languages: A Progress of Students' English Skills at Must

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Abstract: This study presents the background of Mongolia's English language policy, some specific features of ESP courses at MUST, and needs analysis and curriculum development. The study aims to show the progress of the students' English skills and some major activities taken to develop their English skills. In addition, the study emphasizes the exams for CERF and aligns ESP courses with the international standard level. There are different types of English standard exams for students. Students define their goals and need to prepare for the exams and improve their levels of English. Based on the core skills development, students will succeed in the ESP courses that meet workplace requirements. The needs analysis helps the university develop the curriculum constantly and allows students to be fluent before graduation. The study summarizes the importance of the international standard exam which measures students' core skills and provides chances to develop them anytime and anywhere.

Keywords: English exam, skill, language, education, curriculum, policy

1. Introduction

This section focuses on a brief review of the English language education policy of Mongolia. The history of English education started in 1959 with the foundation of the Department of English at the National University of Mongolia. Since that time, English language training has become more sophisticated and trained highly skilled professionals, teachers, and translators in the country conduct English language training. Language policy is an integral part of government policy for every country of the world. In the case of Mongolia, the "State Language Council" is responsible for scientifically defining, approving, and standardizing modern Mongolian language norms and terms to be followed in the official state language, providing professional advice, and issuing conclusions on issues related to terminology. In 2003, the National Academy of Language Policy was established 2006 to improve the language policy system to ensure the country's social and economic development and national security in the era of globalization.

Language policy requires attention not only to the Mongolian native language but also to foreign languages including French, German, Russian, Korean, Japanese, and Chinese, etc. In a world where information that is the source of progress is available only through a well-learned foreign language, the study and teaching of languages that are the source of scientific and technological information are becoming more important than ever in any country. The issue of foreign language education is closely related to the state policy on bilingualism. During the globalization period, Mongolians go abroad for a short or long length of stay. For several reasons, many young people are becoming bilingual these days. Thus, the government must pay attention to its language policy.

With the development of democracy in Mongolia, the opening of foreign markets, and the expansion of foreign cooperation, learning English has become a social need for all citizens. Considering this need, our government recognizes that foreign language is one of the factors of Mongolia's development and the basis of competitiveness and that foreign language education is an important issue to improve the quality, competitiveness, and liquidity of higher education.

Since 1992, in addition to Russian, the English language has been included in the curricula of secondary schools. Russian language teachers were trained for 1-2 years as English language teaching staff. In 1997, the Minister of Enlightenment issued an order, "Some measures to be taken on foreign language training". From the 1997-1998 academic year, the introduction of English language training at all levels of education and the organization of a wide range of activities have the foundation for the intensification of English language training. To improve the English language teaching content, teaching methods, and textbooks at all levels, as the professional, language and tea, and ching skills of English teachers, the "National Program to Improve the Quality of English Language Teaching" was approved by the Order No. 260 of the Government of Mongolia in 2001. It was implemented from 2002-2005.

Roger Cohen (2004) points out that the Soros Foundation and the Ministry of Education produced a set of English textbooks for secondary schools in 1998. The School-2001 Project was implemented with the support of the Soros Foundation in Mongolia. As a result of the project, teachers completed a series of methodology courses by famous foreign university lecturers from the United States and the United Kingdom. International organizations running operations in Mongolia like the Soros Foundation, Peace Corps, and the English Language Institute have contributed a lot to the professional development of English teachers in the country since 1993.

In 2002, the "Mongolian Bachelor's Standards Model" was described as "the ability to use at least one foreign language in daily and professional activities" and officially approved by the Minister of Education, Culture and Science (Order No. 390 of 2002). The government has issued orders about English language education with the aim of "providing international average English language skills" (Order No. 481 of 2006). Moreover, there have been some provisions for graduate degree programs. The "General Procedures for Master's and Doctoral Studies" was approved by Order No. 187 of the Minister of Education, Culture and Science in 2007. It defines the foreign language policy for postgraduate education in detail.

The "National Program for English Language Education" defined the general basis for implementing the program as follows:

"About 70 percent of the world's Internet information and more than 500 of the world's top universities operate in English, most contracts are in English, and the role and use of English at the international and international levels is growing rapidly." (Decree No. 293, Government of Mongolia, July 16, 2008)

The national program is based on the need to develop English as a key tool for information, communication, and business. The program states that "the government has set a goal to make English the main foreign language for all and to create conditions for conducting public affairs in English by 2021". Thus, the purpose of the program is to create favorable conditions for English language education and to develop English as a key tool for information, communication, and business. The implementation phase of the program is:

- I. Phase: In 2009-2012, create an environment for English language education, management, and organization of citizens, and establish English language education standards, content,

methodology, learning technology, learning environment, textbooks, materials, and evaluation methodology by international standards.

- II. II. Phase: In 2013-2015, establish a system to make English the main need for citizens' education, communication, and business.
- III. III. Phase: In 2016-2020, expand the process of learning English, create quality education, jobs, services, and products, and fully prepare to develop English as a key tool for acquiring knowledge and information.

In addition, to the National Program for English Language Education, some orders have been issued by the Ministry of Education and Science. For instance, in 2020, the Ministry of Education, Science, and Culture issued an order on the development and implementation of a program to improve the English language skills of bachelor's degree graduates and to prepare them for international English language examinations as part of the higher education reform policy (Order A/154, 2020, Ministry of Education, Science and Culture). Moreover, in 2021, the Ministry of Education, Science, and Culture directed schools and universities to develop an action plan to improve the quality of English language teaching and to submit an implementation report by June 30, 2022 (2021, Order A/66, Ministry of Education, Science and Culture). The Mongolian government has published a long-term policy titled "Long Term Vision 2050" which states that to provide the country with skillful professional teachers, standards at all levels of education will be identified in terms of professional, teaching, research, and foreign language skills, and implemented in conjunction with teacher development and human resource policies.

2. English for Specific Purposes

The fact that "learners know specifically why they are learning a language" (Hutchinson and Waters, 1992, p 6) is a great advantage on both sides of the process. The group of ESP learners is going to achieve the same goal in the field of studying branch, so learners' motivation, in the form of the same aim, enables teachers to meet learners' needs and expectations more easily. Learners and the way of learning ('acquiring language') are considered the main factors in the process. Hutchinson and Waters (1992) emphasize ESP as an approach, not a product which means language learning not language use is highlighted. They draw attention to a 'learning centered approach' "in which all decisions as to content and method are based on the learner's reason for learning". (Hutchinson and Waters, 1992, p19). It always comes to mind such a question as, 'What is the difference between the ESP and the "General English" approach?' According to Hutchinson, the answer to this question is quite simple, "in theory nothing, in practice a great deal". In 1987, of course, the last statement was quite true. At the time, teachers of 'General English' courses, while acknowledging that students had a specific purpose for studying English, would rarely conduct a needs analysis to determine what was necessary to achieve it. Teachers nowadays, however, are much more aware of the importance of needs analysis, and published textbooks have improved dramatically allowing the teacher to select materials that closely match the goals of the learner. Perhaps, this demonstrates the influence that the ESP approach has had on English teaching in general.

There are some types of ESP for learners. Regarding the expectations, learners have at least three kinds of expectations such as *cultural-educational, personal and individual, and academic/occupational*. The first two have a close relationship with the learner's background and his view of himself as a learner, his expectation of success, and his optimism or pessimism about the ESP course in terms of what he expects to learn. The last ones relate to the branch of ESP, which

represents the type of ESP. These sets of expectations (academic or occupational) are the ones most commonly expressed in advance when a needs analysis is carried out. Concerning "ELT" these two kinds of expectations are mainly two types of ESP according to the motivation, position, and status of the learners which become reasons for learning English: English for Occupational Purposes (EOP) and English for Academic Purposes (EAP). Kennedy and Bolitho (1984) added more types of ESP according to the needs of scientists and technologists. This type is called English for Science and Technology (EST).

The first two types are as follows: English for Occupational Purposes (EOP) EOP is taught in such a situation in which learners need to use English as part of their work or profession (Kennedy and Bolitho, 1984: 4). There will be differences in such courses depending on whether the learners are learning English before; during or after the time they are being trained in their job or profession. The content of an English program for someone engaged, for example, in a secretarial course - with its acquisition of practical skills and theoretical knowledge - is going to be different from a program for someone who is already a qualified secretary but now needs to operate in English.

English for Academic Purposes (EAP) is taught generally within educational institutions to students requiring English in their studies. The language taught may be based on particular disciplines at higher levels of education when the student is specializing (in study) or intends to specialize (pre-study) in a particular subject. In cases such as an overseas student studying at the university level, the learning of study skills (listening to lectures, taking notes, writing reports, reading textbooks) will probably form a major part of the student's English course. Frequently in such a situation, it is common to find the aims and methods of the English language department at variance with the requirements of science and technology departments, the former still concerned with drilling conversational English and manipulating structural patterns while the latter require swift and effective reading skills. However, in these situations, there is a need to see the role of English basically in terms of its providing accessibility to the knowledge contained in textbooks, periodicals, journals, reports, and abstracts (Mackay and Mountford, 1978:7). Further they will have to involve in the presentation of new knowledge such as papers, university theses, longer reports, articles in scientific journals, and others. Scholars emphasize the characteristic features of ESP courses. ESP teachers should not forget while dealing with such courses which means that should create a different curriculum with different types of exercises and different materials. Organizing the ESP course is a very important step to achieve a satisfying goal in the course. There exist many factors playing a crucial role in organizing ESP courses without them the learning process would not be effective. The term "specific" in ESP refers to a specific purpose for which English is learned and the teacher should be familiar with it. Hutchinson and Waters (1992) point out that the "language description" involves questions, e.g. *What topic areas will need to be covered? What does the student need to learn? What aspects of language will be needed and how will they be described?* (Hutchinson and Waters, 1992, p 19, 22). Hutchinson and Waters (1992) speak about "learning theory" which provides the theoretical basis for the methodology, by helping us to understand how people learn. (Hutchinson and Waters, 1992, p 23). It is natural that learning strategies vary and correspond with learners' groups, their age, level, or reason they study. The way adults acquire language is different from children, the group of advanced expects different attitudes from beginners, and teachers determine which aspects of ESP learning will be focused on to meet learners' needs and expectations successfully. Hutchinson and Waters (1992) point out another aspect affecting the ESP course as well. It relates to the learner's surroundings and discusses the questions of "who", "why", "where" and "when" connected with the nature of a particular target and learning situation. They describe them as 'needs analysis'. (p 22)

Choosing ESP materials determines the running of the course and underlines the content of the lesson. Good teaching materials help a teacher in organizing the course or what is more, it can function as an introduction to the new learning techniques, and support teachers and learners in the process of learning. Materials are also a kind of teacher reflection, "they should truly reflect what you think and feel about the learning process". (Hutchinson and Waters, 1992, p 107). Good material should be based on various interesting texts and activities providing a wide range of skills. Teachers determine which aspects of ESP learning will be focused on but one piece of material can serve for developing more than

one skill, e.g. reading, listening, vocabulary, etc. Materials should also function as a link between already learned ('existing knowledge') and new information. (Hutchinson and Waters, 1992).

The text as a learning material can be used for learning and practicing a wide range of skills. In ESP courses it can be a source of new vocabulary, communication, or reading skills. To make working with a text as much effective as possible it is necessary to involve all students' skills. It is preferred to combine working with printed text with listening to an audiocassette or video cassette which means receptive to productive activities. Concerning the ESP activities, it is necessary to keep in mind the context that should be consistent with studying the subject matter.

Creating a learning environment – motivation. The last criterion is very important and should be applied during such courses. Creating a positive learning atmosphere in the classroom is a primary step for achieving objectives and goals. It makes teaching and learning more pleasant for both sides of the process, for a teacher and a learner, and it supports students in their work. Creating a positive learning atmosphere is closely linked with motivation. Motivation is also an important and necessary part of students' work that affects their future success or failure. It is a kind of inner motor that encourages us to do our best to achieve a satisfactory goal in our activity. Harmer describes motivation as "some kind of internal drive that encourages somebody to pursue a course of action" (Harmer, 1991, p 14). The role of motivation during each activity is inevitable. Students should be motivated as much as possible to enjoy the activity and achieve its real aim.

Many linguists admit that the ESP teacher's work involves much more than teaching. Dudley-Evans and St. John (1998) prefer the term "ESP practitioner" as this definition seems to be more detailed and complete. They distinguish the following key roles of ESP practitioners: teacher, course designer and materials provider, collaborator, researcher, and evaluator. In the case of ESP classes, the teacher is no longer a "primary knower". The students themselves are frequently the primary knowers of the content of the material. The teacher's main role is to create real, authentic communication in the classroom based on the students' knowledge. The second role is as a course designer and materials provider, teacher's role is planning the course and providing materials for it. Provision of materials does not only mean choosing materials and making a suitable number of copies for the class; the teacher's task also includes adapting material when published materials are unsuitable or writing his materials. But, one of the main controversies in the field of ESP is how specific those materials should be. Hutchinson et al. (1987:165) support materials that cover a wide range of fields, arguing that the grammatical structures, functions, discourse structures, skills, and strategies of different disciplines are identical. The third role as a collaborator is to meet the specific needs of the learners and adopt the methodology and activities of the target discipline, the ESP Practitioner must first work closely with field specialists. This collaboration, however, does not have to end at the development stage and can extend as far as teaching, a possibility discussed by Johns et al. (1988). When team teaching is not a possibility, the ESP Practitioner must collaborate more closely with the learners, who will generally be more familiar with the specialized content of materials than the teacher himself or herself. An ESP teacher should also be a researcher to fulfill the students' needs. Then, the research is necessary to design a course, to write teaching materials, and to find out the ESP students' particular interests. Many ESP practitioners are therefore left with no alternative but to develop original materials. It is here that the ESP practitioner's role as a 'researcher' is especially important, with results leading directly to appropriate materials for the classroom. The final role as 'evaluator', which is not a new function and evaluation is present in General classes also but in the case of ESP, this role seems to be very important. All teachers should be involved in various types of evaluation and the most popular one is testing students. Tests are conducted to evaluate the student's progress and teaching effectiveness. However, in ESP classes an additional kind of testing should take place, which is the evaluation of course and teaching materials. As ESP courses are often well-adjusted, their evaluation is crucial. General English courses are well-studied and improved by a group of methodology specialists. On the other hand, ESP courses are unique, as it is not possible to create one ESP course that would satisfy all ESP students, therefore, the evaluation is a must.

3. English Language Curriculum: Core Skills Development for ESP courses

To improve the English language curriculum of the Mongolian University of Science and Technology, we focused on the following goals to evaluate the current curriculum. These include analyzing the current curriculum, getting a student needs analysis, analyzing classroom design, and evaluating the online training process. This study outlines some results of the study conducted among students, teachers, and employers. We have been teaching English to non-linguistic students of the Mongolian University of Science and Technology since 1992. In recent years, the following changes have been made to the English curriculum. Since 2006, there have been some changes in the English curriculum for undergraduate students in the field of engineering at MUST. On December 29, 2006, Decree No. 481 was approved by the Ministry of Education. It states that English must be studied at universities and colleges in Mongolia as a compulsory course with no less than 8 credits, and graduate students must demonstrate an intermediate level of English. However, after several years, there were some changes to the English curriculum for Higher Education in Mongolia, and Decree No. A/174 by the Ministry of Education was approved again on April 28, 2014. It states that 6 credits of English must be studied as a compulsory course for undergraduate study. The English Curriculum for the MUST bachelor's degree program offers the following courses for undergraduate students: Communicative English, English for Science and Technology, English for Social Science, and English for Specific Purposes (Order No. A-244 of 2013 of the Director of the Mongolian University of Science and Technology). The university has eight branch schools of engineering. Approximately 3000 students study English every semester. Depending on the particular bachelor's degree, students take English courses as a compulsory or elective subject. In conjunction with the government policy on English education, MUST has made a "MUST-2030, Strategic Plan" which emphasizes the importance of English. Students' English language skills will be improved and their level will be assessed using internationally recognized tests. Most of the courses for graduate degree programs will be conducted in English. Innovations will be implemented in the training activities at all levels (MUST-20308 Strategic Plan)

In 2020-2021, the university developed and implemented an English curriculum designed in CDIO form for 85 bachelor's degree programs at MUST. According to the definition of the term defined by Wikipedia, CDIO refers to the words "Conceive-Design-Implement-Operate" which originated from MIT (Massachusetts Institute of Technology) in the 1990s. It is a new educational framework to prepare engineers for the modern era. MUST have implemented CDIO successfully and all curricula are designated with this new form. To assess the English curriculum of the university, student satisfaction and needs assessment studies on the curriculum were conducted in the spring of the 2018-2019 academic year in "Communication English", "Business English", "English for Science and Technology" and "English for Specific Purpose" classes with 933 students responding. The study was written in Mongolian and included three types of questionnaires, including general, observation, and main were prepared according to a model by Wester Field (2010). Let's look at how this study defines the immediate need to learn English among MUST students. 39.1% of the responding students surveyed said that they would like to express their opinions freely in English, while 38.1% said that they would like to express their opinions in written forms of English. In addition, 90% of the students said that English is very important when going to the workplace, and expressed an interest in improving their ability to communicate with foreigners and to make phone calls.

During the 2019-2020 academic year, 65 foreign and domestic companies operating in Mongolia were surveyed and analyzed to assess the English language skills of the graduates of the Mongolian University of Science and Technology and to improve the quality of English education. The purpose of this study was to determine the employment status of MUST graduates, to define the level of English skills and foreign language satisfaction of employers, to include the suggestions of employers in the content of the English curriculum, to improve the quality of professional English language training, and to develop a curriculum that meets their needs. Based on the results of the study, the content of the English for Specific Purposes was changed, and the English grammar was comprehensively updated.

The results of the study show that employers want our graduates to speak English at an intermediate level and write e-mails, proposals, and projects as well.

With the digital transformation of education, the English language curriculum has developed in the form of an online learning system. The COVID pandemic has influenced all sectors of education in the world. During the academic year of 2020-2021, we developed a series of “Light Board” video lessons for undergraduate students. Teachers have written a total of 40 English textbooks for undergraduate students. To improve the student’s general English knowledge, a series of video lessons for undergraduate students has been developed as part of the U.S. Embassy’s Virtual 2020 Program and are being used in the English-Speaking Club. We assume that outdoor English programs support students to build a foundational knowledge of English. Therefore, the English department offers several different clubs for undergraduate students and many English activities for them. Within the English fellow program, we have implemented the “Virtual English Fellow Program 2019-2021” at MUST with the support of the U.S. Embassy in Mongolia. In 2020, a Modern Innovative American English Classroom was established as part of the U.S. Embassy’s Local Grant Project. It is a great opportunity to develop English skills for students.

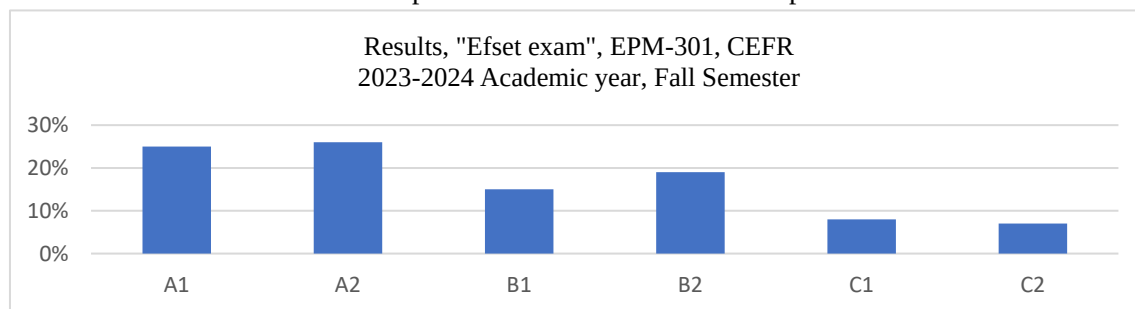
MUST E-learning currently uses advanced technology such as LMS and Microsoft Teams as the main platform for online training. Google Forms, Facebook Group, and teacher blogs have been used as optional platforms during the training process. In addition, English language courses and the master’s entrance and state exams included in the bachelor’s program were successfully organized using the test system of the Mongolian University of Science and Technology and the Microsoft Teams program. We have surveyed MUST students of the university to develop online training and teaching methods. To assess the English language needs of students and teachers and to develop the curriculum, every semester, the MUST English Department prepares a questionnaire about teaching online and textbook development. There have been some comments on the online platform’s development from students and teachers. The questionnaire shows that most of the teachers (91%) suggested that classroom learning (in-person) use was more effective, and student participation was better compared to online, or virtual, learning. Moreover, 88% said that students were more interested in a combination of classroom and online learning. 95% said that attendance was better when teaching online. The study also indicates that most students had a hard time without paper books, and viewing book files on the screen was detrimental to students’ health and vision. There was also a problem of late submission of homework online. During the oral final exams, many students became in close contact and took a lot of time to take the exams orally in class and online.

On June 22, 2022, according to order No A/209 by the president of the Mongolian University of Science and Technology has issued that all graduates of the university must get a B1 or higher level before graduation. If the students don’t reach that level they must be involved in the intensive English course by the university and certified. Moreover, it states that the newly enrolled non-English majoring students of the MUST from the 2021-2022 academic year must obtain a B1 level of English according to the CEFR before graduation. Therefore, the English Department has studied international standard exams and CEFR. There have been several different international standard exams around the world taken to measure students’ English skills. These include IELTS, TOEFL, TOEIC, Duolingo, and others. Depending on the student’s goals and objectives, international standard exams should be given to them. Some of them want to study abroad. However, most of the students prefer working in the marketplace. The university has made a decision based on the students’ target goals. We have found that “English Score” and “EFSet” are good choices for graduation. In the 2023-2024 academic year, we organized Efset and English Score international standard exams to measure students’ core skills at the international level of CEFR.

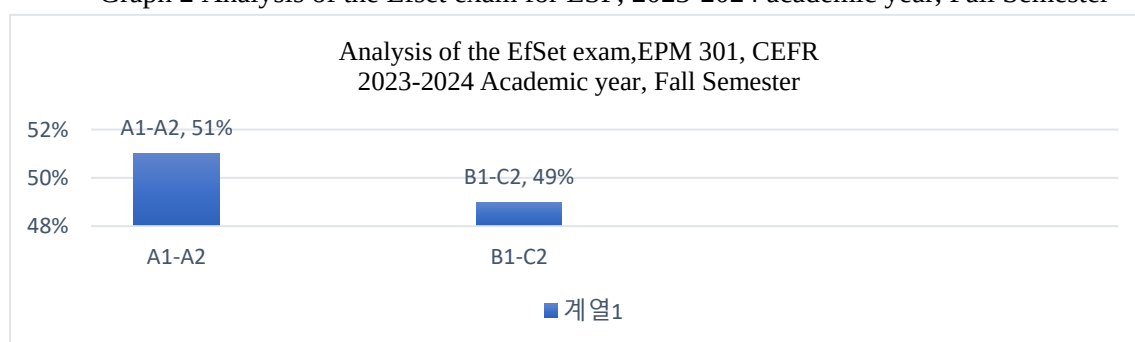
The results of the study show as follows: In the fall semester of the 2023-2024 school year, 550 students studied English for Specific Purposes. 350 students took the EF set international standard exam. A1-25%, A2-26%, B1-15%, B2-19%, C1-8%, C2-7%. 178 students at A1-A2 levels and 172 students were evaluated at B1 or higher levels. The results show that we need to improve students’ core skills by developing the content of the coursebook and organizing different kinds of school English programs for undergraduate students. Based on the results of the study, we emphasize the importance of the

international standard exams that measure the core skills at the international level. Consider the results in graph 1 as follows:

Graph 1 Efset exam results in Graph 1

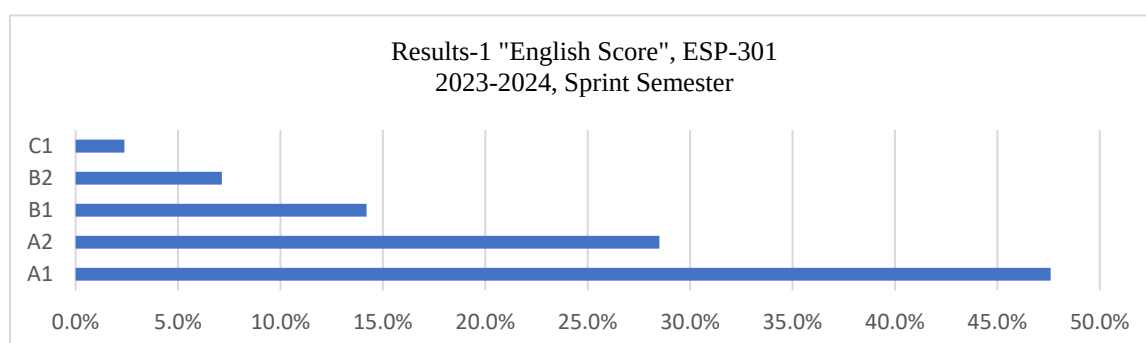


Graph 2 Analysis of the Efset exam for ESP, 2023-2024 academic year, Fall Semester

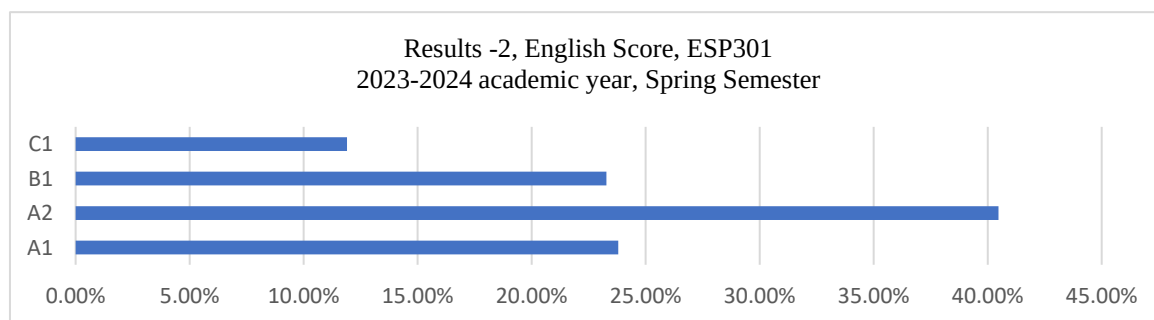


The graph 2 shows the analysis of the Efset exam results. It shows that 51% took up the A1-A2 levels, and 49% took up the B1-C2 levels. In sum, the study indicates that ESP students' English level needs to be improved and the English curriculum must focus on the core skills development while implementing different English extra-curricular activities at school.

In the 2023-2024 spring semester, we organized an international exam "English Score" which is a mobile-based international standard exam devised by the British Council for ESP students majoring in Electrical engineering. At the beginning of the semester, a total of 42 ESP students took the English Score, mobile-based exam. The results show that A1-47.6%, A2-28.5%, B1-14.2%, B2-7.14%, C1-2.38%. We gave the students time to prepare for the exam and at the end of the semester, students took the test again under their control.



The results show that there was progress in the test results as follows: A1-23.8%, A2-40.47%, B1-23.8%, and C1-11.9%. The study shows that students need some practice to get used to the structure of the test and improve their core skills while working on the online tests.



This study emphasizes that the international standard exam is beneficial for students to measure their English skills at international levels. It also provides an opportunity to develop themselves anytime and anywhere. With the technology development, students can assess their English knowledge and see their real progress and they are very motivated to take the exams. Specifically, “English Score and Efset” are suitable for those who are graduating from the university.

4. Conclusion

The Mongolian University of Science and Technology will expand into a research university, and expand its activities in line with its mission to become one of the best universities in Asia and, through MUST's 2030 Strategic Plan, bring its English curriculum in line with international standards, and improve its English language teaching policy. In this regard, the English language curriculum and student satisfaction, employers' perspectives, training activities, and online and classroom activities were comprehensively reviewed. To further improve the English education quality, the university must focus on the implementation of curriculum, student satisfaction surveys, and, employer surveys. To improve students' English skills and comply with the policy on English education of the government, we need to measure students' English skills at international standard exams. Based on the results the university implements different extracurricular English activities for students. We emphasize that “English Score” and “EFSet” are international exams devoted to students who willingly to develop their skills. All suggestions and comments resulting from this study must be included in the content of the bachelor's degree program. This study concludes that the university should provide financial support from the school for teacher development programs, provide teachers with more opportunities to develop teaching materials, develop the e-learning system, and provide e-books to students and blended learning in the future.

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SSPA-04

Student Learning Style, Studying the Dependence of Behavior

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Abstract: The learning process is an integral and continuous part of everyone's life. From childhood to adolescence, we go to school for a certain period of time every day to study various subjects. Outside of school, we continue to learn in our daily lives, including how to perform better at work, how to understand interpersonal problems, and how to solve practical family problems. But does everyone learn the same? it is not so. There is no one-size-fits-all learning method. If you were given a computer, would you read the manual first? Or just turn it on and dig into the apps inside? Would you like to be taught by a professional and learn from him? A learning style is the way in which you learn more efficiently and quickly.

To learn effectively, we need to know ourselves very well. Part of getting to know yourself is recognizing your learning style and personality traits. The study examines the relationship between learning style and behavior.

Research methodology:

- David Kolb's Learning Style Questionnaire
- Katherine Briggs, Myers-Briggs MBTI Personality Questionnaire

Significance of the study:

In Mongolia, there are few researches comparing learning style and behavior characteristics, and it can be used as a source for future research on this topic.

David Kolb's learning style, Katherine Briggs and Briggs-Myers' personality "MBTI Myers-Briggs" method were used in this research.

SSED-05

Emotional Intelligence in Adults

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Abstract: Emotion is a mental trait that expresses an internal attitude to the external environment. And mood is the reaction of a person to his surroundings. As varied as emotions are, they are generally classified as positive and negative emotions. Positive emotions are generated when people are safe and calm, but negative emotions are generated when they are dangerous and uncomfortable. But we always have a choice in how we respond to those situations. Managing your thoughts and feelings refers to the ability to adjust and adapt your emotions and feelings to changing situations (journal, 2018). These include the ability to express emotions verbally and non-verbally, to control oneself, to see things in a positive light, to express one's opinions with confidence, to deal with things independently and independently, and to manage stress, anger, anxiety, and depression in a positive way. Not only that, there are signs of overcoming unexpected unpleasant situations, self-control, completing tasks responsibly, not being shocked by new ideas and new situations. A person's mood can be predicted by the appearance of the body, behavior, facial expression, and tone of speech. That's why it is very important to be able to recognize and regulate our body thoughts, happy, hurt, developed, and bored with those movements and words.

Keywords: Adults, Emotions, Emotional Intelligence (EQ)

1. Introduction

Daniel Goleman, "Why is emotional intelligence more important than IQ? /1995/ in his work, if you can realistically assess your emotions, you can control them. Understanding yourself has two main parts. It includes: - Understand and recognize one's own emotions and their effects; - The ability to realistically assess one's own worth and abilities, respect oneself, accept oneself as one is, feel one's strengths and weaknesses, and be confident (Goleman, Emotional Intelligence: Why it can matter more than IQ?, 2006). D. According to Binder's approach, emotion is not an isolated behavioral response, but an integral part of arousal, cognition, and motivation. The main state of motivation is a complex of neural processes, which is conditioned by a specific emotional typological response (L.D. Stolyarenko, D.N. Rostov, 2008). Manifestations of emotional movements are different for men and women. Men are reluctant to show certain emotions such as fear and embarrassment, while it is normal for women to express these emotions. Every day, a woman expresses many emotions, such as love, anxiety, and sadness. It is common for men to express their emotions such as anger, frustration and aggression (B. Batsaikhan, M. Delgerjav, 2013).

Emotions: Our reactions to internal events (such as our thoughts, memories) or to events in the external environment around us. Everyone has emotions, and the type of emotion a person feels (anger, happiness or sadness) is determined by the situation that triggers that emotion (Amarbayasgalant, 2022).

Emotional intelligence (EQ): refers to an individual's ability to consciously recognize and manage their own emotions and feelings, as well as to recognize and understand the emotions of others, to share, influence, and control their emotions and feelings. In our daily lives, we act (or don't) on our

emotions, and these in turn have a profound effect on our stability and well-being, and in some cases, to the extent that they change our lives fundamentally. The emotions we feel in a given moment directly affect the choices we make, the actions we intend to take, and the visions we have. Decisions and actions based on emotions are often wrong and have the negative effect of exacerbating or distorting reality. Therefore, learning to understand and control your emotions will prevent many problems in life, mistakes and violations that cannot be corrected later, and will not only help your life to be less stressful and stable, but will also be the beginning of psychological stability and healthy relationships. Therefore, it is more rational to understand, manage and control your emotions, or in one word, to make decisions and make choices without getting caught up in your emotions (Cherry K., 2023). Not only do we make decisions based on whether we are happy, angry or sad, bored or frustrated, we also choose our hobbies and interests based on the emotions they evoke in us (Cherry, 2022). Psychologist Paul Ekman concluded that facial expressions are a common product of human development. The results of his research became the basis for developing 6 types of human emotions.

The 6 emotions identified by Paul Ekman include:

1. Joy. Active positive emotions that are manifested by pleasant feelings and optimism. It is characterized by feelings of satisfaction, happiness and well-being. Happiness is expressed through facial expressions, smiles, body language, and vocal harmony. Scientists have also found that being happy has special benefits for human health and mental health.
2. Boredom. It is a type of mood like disappointment, sadness, hopelessness, and depression. Symptoms of sadness may include feeling sensitive, feeling weak, quieting down, withdrawing from someone, and crying. Boredom is caused by many factors, and a person needs to focus on getting rid of it on purpose. Because there is a risk that the mood of sadness will deepen further.
3. Fear. It is an emotion that arises from the desire to avoid something risky. An emotional reaction to deal with a threat or fear. This creates the basic conditions for a person to optimally solve the problem of environmental threats. Facial manifestations include dilation of the pupils, stiffening of the jaw, physiological tightening of body muscles, increased heart rate and breathing, and mental alertness. As a result of the frequency of the same fear-inducing factor, the level of fear decreases.
4. Contempt. It is characterized by feelings of aversion and avoidance due to unpleasant situations. In other words, the feeling of reluctance to dislike something is manifested through the five senses, namely taste, smell, sight, hearing, and touch. Examples include food poisoning and not being able to see a pet you're afraid of. There will be symptoms such as eye twitching, vomiting, and flushing. Some researchers believe that this emotion is a response of the human body to protect itself from things that can cause serious harm to human life and body. It is also an emotion that manifests itself in human ethics and morals.
5. Anger. Anger is a strong unpleasant feeling, such as hostility, anxiety, frustration, or irritation. Facial expressions show drastic changes in the eyes, head, and body language, becoming stronger, moving quickly, speaking loudly and shouting in the voice, and sweating in the body. Anger is an unpleasant emotion, but it also guides people to identify psychological needs, take action, and find solutions to provocations and problems. But rational decision-making is complex and creates violence, fear, and unhealthy relationships. As a result, it has a negative effect on the human mind and body, leads to risky behavior of alcohol and tobacco consumption, and causes cardiovascular diseases.
6. Surprise. Surprise is a short-lived physiological reaction that occurs as a result of something unexpected (Enkhbayar, 2019).

Emotions and feelings. It is considered as a moral, intellectual and aesthetic feeling of the human soul. These feelings are made up of the emotions of being proud, happy, enjoying, loving, respecting, and encouraging good things, scenes, and words, despising bad things, despising, condemning, and hating bad things. A child's emotional development is the basis for the expression of emotions throughout life and the ability to use them in many stages of life. In various conditions of life, the results of human activities are enriched with emotions, and it will have an important impact on family relationships. Manifestations of emotional movement. A person's mood is a form of expression of his position in the external world, his feelings, and his inner attitude. Researcher According to Izard, there are 10 main manifestations of emotions. It includes:

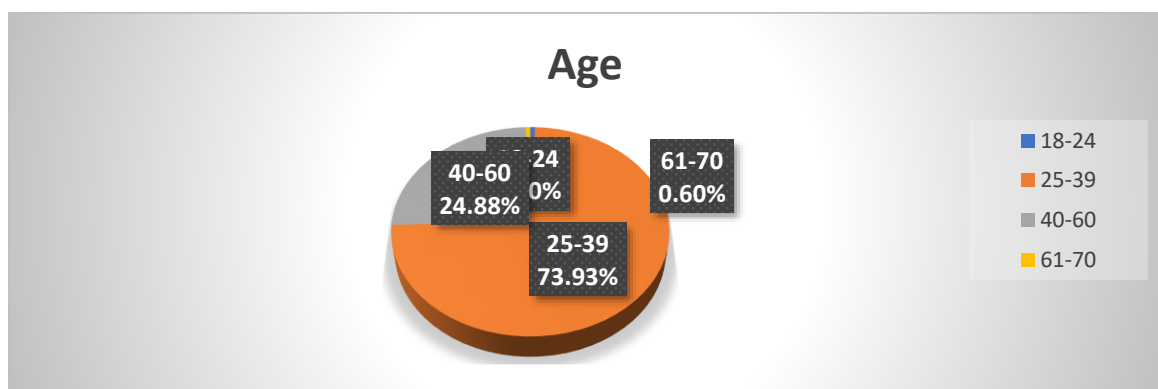
1. Be interested. A common positive mood that encourages creative motivation to learn and develop skills.
 2. Be happy. The process of feeling good about yourself when you achieve something or take control of a situation.
 3. Surprise. In the process of cognition, it is the emotional movement of momentarily paying attention to the object.
 4. Regret. It is an unpleasant feeling of depression when a person feels lonely, needs help with relationships, or rejects himself.
 5. Get angry. Basic emotions that arise in the process of socialization. It is easy to distinguish from other types of emotions.
 6. Contempt and disgust. A psychologically distressing feeling about the loss of something, often accompanied by anger and frustration.
 7. Negligence. It can be accompanied by anger, frustration, and contempt, and it is an emotional reaction that separates the individual from the group and community, and treats them with disdain and coldness.
 8. Fear. Emotions caused by anticipation of harm or danger, real or imagined.
 9. Embarrassment. An emotional reaction that violates group norms or causes an individual who is outside the group to hide or disappear.
 10. Repentance. A feeling of being uncomfortable after violating social norms, morals, and rules, or causing harm to someone, and a feeling of not repeating or avoiding it (Vilyunas, 2004).
- N. The emotional intelligence test developed by Hall is used to determine the ability of an individual to understand and be aware of his own emotions and influence others by controlling them, the ability to manage emotions and control his own behavior, and the ability to influence the behavior of others through understanding and feeling the emotional state of others. tends to. A total of 169 adults between the ages of 18 and 70 participated in this study, of which 85.11% were male and 14.89% were female. All participants in the study were parents, and the average number of children was 2.

Table 1. Cronbach's alpha – reliability analysis

Test	Number of questions	Guaranteed quality
N. Hall – Psychomotor Intelligence Test	30	.908

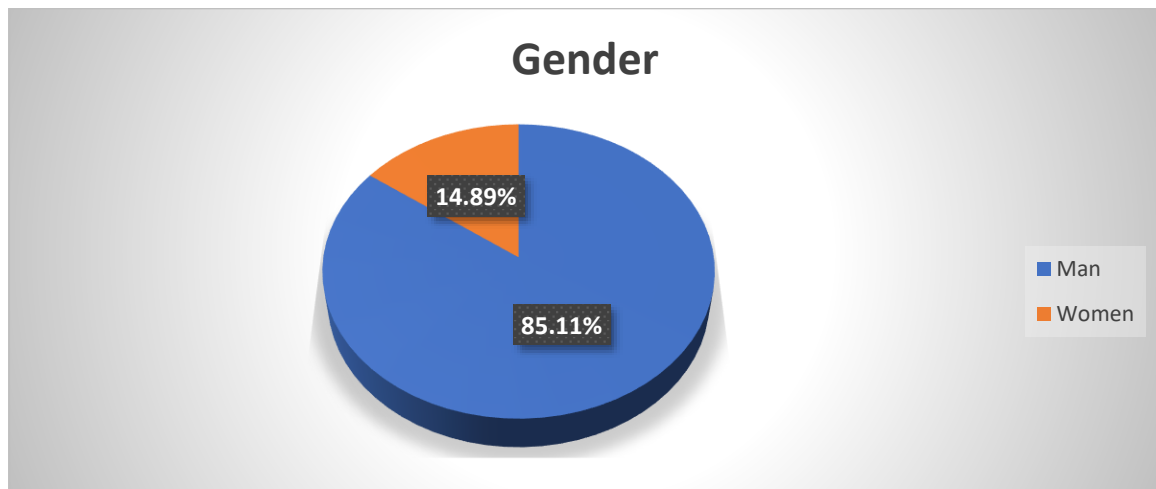
Cronbach's alpha method was used to test the reliability of the emotional intelligence test used in the study, and the questionnaire is defined as reliable if the reliability coefficient is greater than 0.6. The guaranteed quality coefficient of the research questions was greater than 0.6, so N. The Hall test has good correlation and can be used to study emotional intelligence.

Figure 1. Age data of the research participants



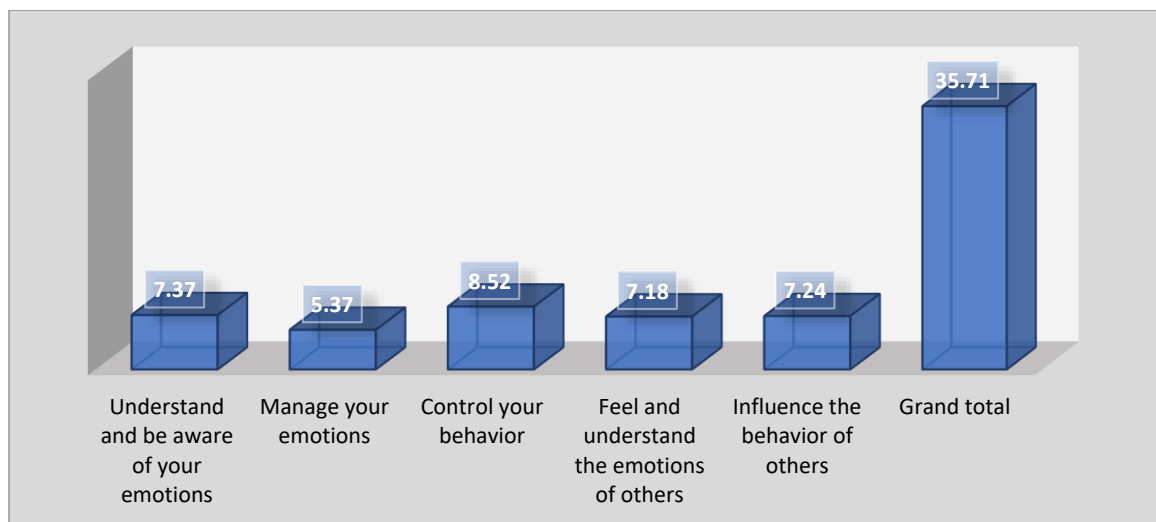
169 people aged 18-70 participated in the survey, 73.9% of participants aged 25-39, 24.8% of participants aged 40-60, and 0.6% of participants aged 18-24 and 61-70, respectively.

Figure 2. Data on gender of respondents



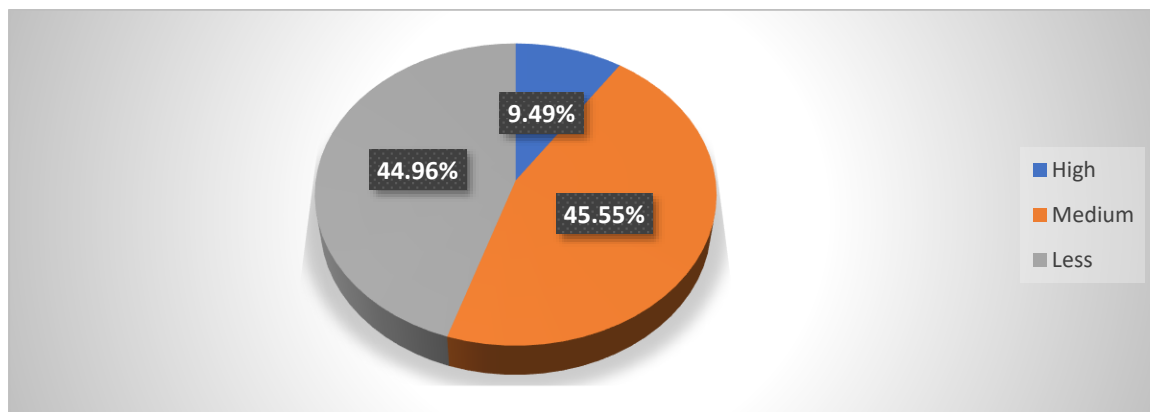
In terms of gender, 85.1% of the respondents were male and 14.9% were female.

Figure 3. Indicator of psychomotor intelligence



N. to determine emotional intelligence in adults. The Hall method was used, and this method, in addition to determining the following 5 complex abilities, produces a general coefficient of emotional intelligence. This includes the ability to understand and be aware of one's own emotions, manage one's emotions, control one's own behavior, feel and understand the emotions of others, and influence the behavior of others. Overall, the participants' ability to control their own behavior was relatively average, and it was found that their ability to understand their own emotions, control their emotions, and influence others' emotions by feeling and understanding them was poorly developed. The general coefficient of psychomotor intelligence is 35.7, which is an insufficient level.

Figure 4. General level of psychomotor intelligence



9.4 percent of all participants in the study have a high general emotional level, that is, they can understand and manage their own emotions and feelings, while 45.5 percent of them have moderately developed this ability, and 44.9 percent have insufficiently developed ability to understand and control their own emotions and feelings. result is out.

2. Conclusion

In this study, the emotional intelligence abilities of adults are average or below. A relatively high level of ability to control one's own behavior was found in the psychomotor intelligence test, which leads us to believe that it is related to following the norms of proper behavior in society. It can be concluded that emotional intelligence is a basic psychological ability that plays a very important role in adapting to the environment, making rational decisions, and communicating with others based on recognizing and controlling one's own and others' emotions and feelings. 44.9% of the participants in the study had poorly developed emotional intelligence skills, that is, the ability of these adults to understand and consciously manage their emotions is relatively low, 45.5% of them had moderately developed this ability, while only 9.4% understood their own emotions and controlled themselves accordingly. , the results showed that the ability to behave properly is highly developed. Man himself is a social animal, so he is constantly interacting. Therefore, it is considered particularly important to further study the factors affecting the ability to understand and manage one's own and others' emotions and to influence others.

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SSED-06

Experience of Student-Centered Learning In Social Science Courses

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Abstract: In recent years, countries around the world have shifted from teacher-centered learning to student-centered learning in their higher education systems, evaluating learning outcomes based on the knowledge and skills acquired by students, combining practical skills and abilities with theory rather than just imparting theoretical knowledge, teaching students to work in teams through project-based or problem-based learning, technologies and methods are intensively introduced to acquire the skills to create communication and product and operational systems. The quality of education and personal development of university students has a significant impact on the abilities of future professionals. Also, employment of graduates is the main factor determining whether the quality of higher education meets social requirements. Therefore, university teachers are responsible for supporting students' independent learning. University training is organized so that the student, not the teacher, plays a decisive role in learning a profession. Taking into account these features, how to engage and activate students in social studies and develop them in all aspects, we tried and discussed the results.

Keywords: Competence, Results, Development, knowledge, Skills, Attitudes

1.Introduction

In today's era of rapid development of science and technology, research on karma has become a new development trend, providing an opportunity to develop together by analyzing the practical deeds in one's life. Therefore, how much experience is accumulated in the teacher's competence and professional knowledge, and how the teacher's competence is improved by observing the results of teaching and reflecting on the facts [1]. The way to improve the teaching method is action research. can be seen from the experience of teachers who have achieved certain results by conducting the researchIn the 1940s, Kurt Lewin, a citizen of the United States, was the first to conduct karma research in order to solve an important problem of his society. Action research methods have since been widely used in other fields, especially in education. Consequently, in the period of 1970-1990, karma research has had a significant influence in the field of education in many countries around the world. [2] Our knowledge base is changing and expanding rapidly every day. The skills we have today may not be used tomorrow. In a modern democratic society, we need citizens with high knowledge and life skills who know how to influence the development of the society and who are able to make changes in the society that is changing tremendously. Therefore, it is natural for us to change our teaching methods and attitudes. The following steps are critical to the successful implementation of this transformation.

- Teachers must understand that changes and reforms are necessary and that results can be achieved only if they are carried out continuously
- The teacher must be full of confidence to work in new ways, and willing and eager to accept innovation.

We are teaching today in the same way that our ancestors taught. We teach our courses in the same way as taught in universities. We teach parents, students and others using an accepted teaching method. Disrupting such a deeply rooted tradition is both time-consuming and risky. However, a teacher cannot overcome this risk alone without the support and cooperation of school management, parents, and other teachers [13]. Therefore, cooperation between teachers, teachers-school management, and teachers-students is very important for the successful implementation of reforms. In this context, the action research approach is the foundation of cooperation, mutual assistance, and joint risk-taking.

2. Characteristics of outcome-based learning

One of the steps of the education reform policy is to update the teacher's teaching method, change the student's learning approach, and create a friendly relationship between the teacher and the student. Aiko Morita, the founder of Sony Corporation, said today, "If a person is scared by his mistakes, and his future opportunities for growth are forever closed, that person's enthusiasm for work will be lost for the rest of his life, and it means that he will lose everything that he can give." This indicates that it is important to pay attention to the attitude of our students. On the basis of this requirement, the teacher should study the students' needs, diagnose them, appeal to them, and make them realize who they are and who they can become. Therefore, teachers need to develop themselves in order to choose to easy-to-understand and interesting active learning methods in their training, and not to be boring, not to be boring, and not from time to time, but always to teach good lessons. By doing this, students gain many lifelong skills such as self-expression, creative activities, listening to others, anticipating and imagining things, solving problems, and thinking about things from multiple perspectives. Student development begins with simple things. It starts with greeting the teacher, attitude towards the lesson, self-expression.

3. Research section

The purpose of the research work: to teach and learn using active learning methods in social studies, and to calculate the results by comparing the course with traditional teaching methods.

Objectives of research work:

1. Present active learning methods
 2. to present the experience in class
 3. Comparison of test results with traditional training to draw conclusions
 4. Evaluate the results using the Rubric and Bloom's Taxonomy method
 5. To analyze the development abilities of students
- How to conduct lessons "How to make learning active?" 56 teachers of EDPS were surveyed through a questionnaire.

Table1. Teacher Survey

Number of teachers surveyed	Gender		Age category			Years of work		
	Male	Female	23-33	34-45	46 and above	5-10	11-20	21 and above
56	28	28	5	40	11	5	40	11

Table2. What Active learning Methods Do You Use in Your Teaching? /open/

№	Contents	Number of votes /In duplicates/
1	in the traditional way	50
2	Structured Presentation Method	26
3	Collaborative interview method.	19
4	Problem raising method	21
5	Teamwork method	12
6	Methods of teaching independent learning skills	15
7	Methods of in-depth study of the subject	5

Table3. How Do Teachers Teach? To Survey 100 Students of EDPS Using an Open-Ended Questionnaire

№	Contents	Number of votes /In duplicates/
1	Takes notes of what the teacher teaches	50
2	Teacher-centered classes are conducted	26
3	Communicating	19
4	Problem raising method	21
5	Teamwork method	12
6	Methods of teaching independent learning skills	15
7	Methods of in-depth study of the subject	5

As you can see, the traditional way of teaching lectures, students taking notes and leaving, and assignments and tests in seminar classes is still there. When teaching social sciences at foreign universities, the names and topics of the books and research articles that the student must read on the subject will be given to the student a month in advance. When the student comes to class, he/she will come to the seminar class with the purpose of having knowledge about the subject, sharing his/her opinion with the teacher, and clarifying the problem. After that, there will be time for free discussion, and the teacher will ask the students to ask questions, work in groups, and present the answers in the form of a demonstration. There is a lot of discussion in class. It's not just for the teacher to pass the exam, but it has the good side of developing many good aspects, such as how to use it in the future, teamwork, learning from each other, decision-making, etc.

At the beginning of the semester, students are randomly assigned to teams, and their teaching methods are discussed, and student participation is included in the evaluation. One of the 2 seminar groups with 26 students was used as the experimental group. In the experimental group, results-based training was conducted in the observation group using traditional methods.

The stages of knowledge creation in workshop sessions can be divided into four parts. It consists of recall phase-I to get general understanding by reading the teacher's handout, clarification phase with questions and answers /pickers card/-II, strengthening problem-thinking phase-III, and testing new understanding by working on supplementary tests-Phase

The active learning group will be 5 teams of 5.5 people, and the first team will prepare seminar-1 within the framework of the established topic and teach it to the other teams. All the members of the teaching team will distribute their work and conduct a training session on raising specific issues according to the established topic. Evaluation will be conducted by team self-evaluation rubric. As a conclusion, each team will write and defend a work report.

Preparation for testing:

1. Study active learning methods and choose the appropriate method
2. Make a plan for training
3. Experiment and organize the work of dividing students into teams
4. Distribute team work to students / The roles of team members should be clear/

Table4. Role of teacher

	Make decisions before the start of the lesson	Start the lesson	Monitor team work and intervene in team work	Evaluate team work
A	Identify academic and social goals	Establish positive relationships	Monitor student behavior	What have been successful teamwork experiences
Б	Determining the size of the team	Explaining the academic tasks	of the course Intervening in team work It includes: Providing meaningful assistance in the execution of tasks Teaching the skills of cooperation with others	Clarify and tell what needs to be improved next time
B	Divide the students into teams	Explain the success criteria.		Analyze the evaluations given by the students to each other.
Г	Анги танхимыг зохион байгуулах	Хувийн хариуцлагыг зохион байгуулах		Each team member will be graded and evaluated for their participation in their duties
Д	Prepare your materials	Identify the intended social behavior	1. To evaluate team teaching 2. To evaluate the participation of the team in the lesson 3. Note: The team rating is calculated by averaging the ratings given to each team member. The average grade of 2 is the result of one team teaching and participation in the lessons taught by other teams.	

Table5. Role of Students

	Reading and studying	within the teaching topic Lesson planning or lesson preparation	Lesson organization or team member work distribution	Evaluating the participation of other teams in the lesson
A	Give and explain recall level tasks	Take the topic and make a plan and prepare the synopsis	A student who receives an assignment at this level explains how the assignment was completed and then concludes by asking independent questions. In the meantime, write 1 homework question on the board	Teams' homework will be checked and scored.
Б	Give and explain comprehension level tasks	Work with the teacher.		Evaluate and evaluate the participation of the team in the lesson according to the level Note: The team rating is calculated by averaging the
B	Assign and explain application level tasks	Distribute assigned tasks to members		

Г	Analytical level tasks and explanations	Re-do difficult and unclear things together with the teacher		ratings given to each team member
Д	Explain the creation level task	Lesson plan synopsis approved by the teacher.		1. Organizer 2. Interpreter 3. Expert in preparing and answering questions 4. Note taker 5. Evaluation

4. Course assessment methods

University courses are evaluated based on the following 4 principles:

1. Assessment affects students' active learning.
2. Assessments should reflect student performance fairly and accurately.
3. Assessment exercises allow students to demonstrate what they have learned and should be fair.
4. Assessment must follow higher education assessment standards.

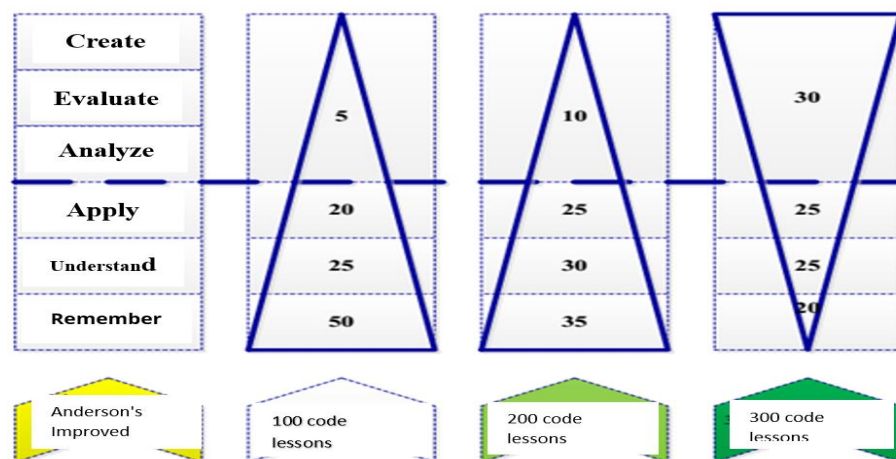


Fig 1. Selection of verbs to determine learning outcomes depending on the level of the course According to the above model, the learning outcomes of the MHM SSS101 course are 35% in level 1 of cognition and reasoning, 30% in level 2, 25% in level 3, and 10% in levels 4-6. The verb is chosen according to what should be.

Table 6.Evaluation of the teams during the test

TEAMS	SEMINAR	Evaluation of the lessons of the teams							Student participation in class					
		Study preparation and time	Quality of information. Broad knowledge of the topic and innovativeness.	The presentation of the material.	The quality of the presentation material. Creativity	Ability to work in a team	Appreciation of others	Average	Homework completed	recorded	Whether assigned questions were answered	Whether homework was recorded	Roles, responsibilities, and active participation in the team	Average
Total score		20	20	15	15	15	15		20	20	20	20	20	
I	C-1	15	16	13	12	12	13	14	10	18	14	16	15	14.6
	C-2	18	17	13	13	14	14	15.5	16	20	16	20	18	18
	C-3	20	18	14	14	15	15	17	18	20	18	20	20	19.2
Performance percentage						88.7%							86.3%	
II	C-1	13	15	12	11	12	13	13	10	16	14	16	15	14.2
	C-2	15	15	13	12	12	13	13.75	16	20	16	20	18	18
	C-3	18	18	13	13	12	14	15.5	17	19	18	20	16	18
Performance percentage						81.3%							81.9%	
III	C-1	14	16	12	11	13	12	13.5	16	16	15	16	14	15.8
	C-2	15	18	14	12	14	13	15.5	17	17	18	19	16	17.4
	C-3	19	20	15	14	15	14	17	19	18	20	20	19	19.2
Performance percentage						87%							87.3%	
IV	C-1	15	15	11	12	14	13	13.75	15	17	16	17	16	16.2
	C-2	18	15	13	13	14	14	15.25	18	19	18	18	18	18.2
	C-3	19	19	14	15	15	15	16.9	19	20	20	19	20	19.6
Performance percentage						88%							88.6%	
V	C-1	16	17	12	11	12	11	14	18	16	15	18	17	16.8
	C-2	18	18	14	13	13	12	15.5	19	18	18	19	18	18.4
	C-3	20	20	15	14	15	14	17.25	19	20	19	20	20	19.6
Performance percentage						88.3%							91.3%	

Findings of Experiment 1: Post-test student evaluations show that after teaching Seminar-I, the team members' ability to work together and work together significantly improved when teaching Seminar-II and Seminar-III. Also, the requirements set by the employer, such as responsibility, independent work, and teamwork skills, began to develop.

Table 7.

Performance percentage	TEAMS				
	I	II	III	IV	V
TEAM	88.7%	81.3%	87%	88%	88.3%
STUDENT	86.3%	81.9%	87.3%	88.6%	91.3%

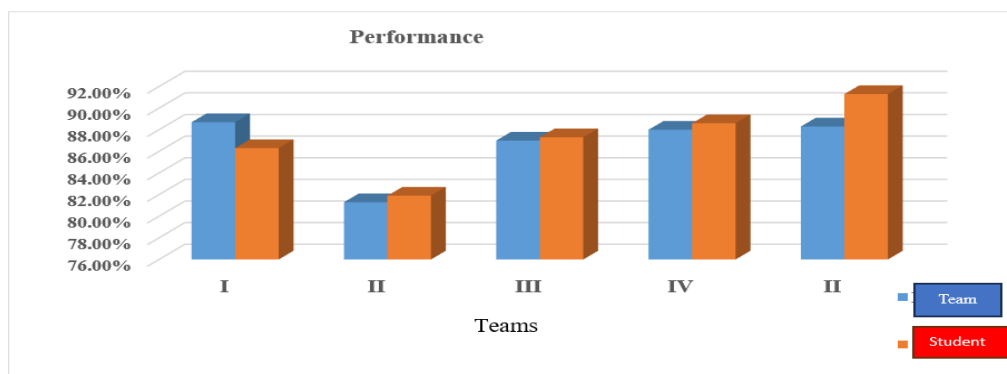


Fig 2. Performance of teams

Table 8. Positive and Negative attitudes During the Course

Д/д	ATTITUDE	
	Positivity	Negativity
1	Improved ability to work independently and complete tasks.	It was difficult to use active learning methods because I did not read the lectures in advance.
2	I was able to use the skills learned in that subject in other subjects.	Coherence between subjects was poor as not all subjects had the same requirements.
3	The ability to judge fairly has increased.	There was a tendency to give vague ratings.
4	Mutual understanding and communication improved.	Suboptimal team allocation
5	The ability of team members to work together has increased.	Blaming team members for underachievement
6	Increased ability to plan and report work.	

Table9. Evaluation of "Collaborative Learning Course" by Rubric method

Indicator	Inadequate	Moderate	Good	Very good
Time usage and performance /individually and in groups/	It was not completed on time and with poor quality. - Not done at all	On time but poor quality - Not on time, but executed with quality.	Included on time but slightly lacking in performance	Delivers on time and with quality
Active participation /per student/	Students who did not participate at all	He did not come up with any new ideas in teaching, but actively participated in what he was best at.	Actively participates in the implementation of a single new idea.	Proposes many important ideas and actively participates in their implementation.
Innovation	Do not reflect your own ideas	He turned the teacher's advice to his own advantage.	Tried new ideas but failed	The new idea was successfully implemented.
Creative thinking and attitude	Perform less important to you	Processing is done but no further improvements	Determined the importance of the lesson. Based on research	Based on multidisciplinary research, developed and improved 1-2 times.
Possibility of re-use in training	Courses are unusable and self-contained	It can be used for training, but it is less important and has errors	It can be used for training. It has the advantage of improving and setting an example for others.	It is suitable for building a library of teaching materials, reflects new ideas, is understandable and accessible to students.

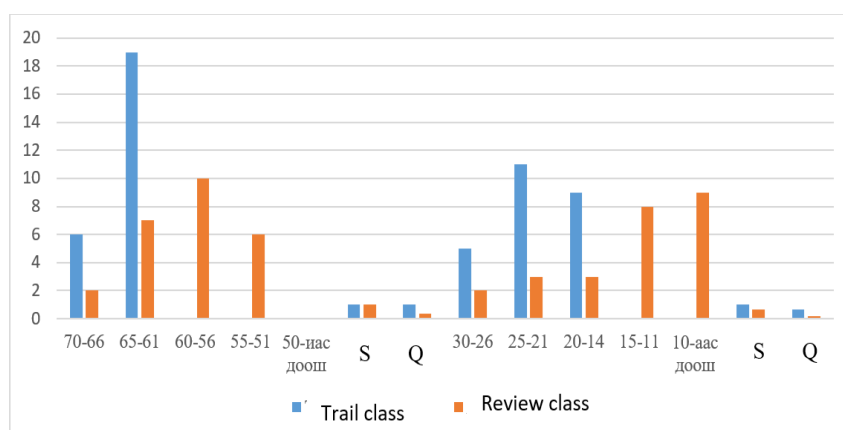
Table 10. Comparison of teaching methods

Process		Advantages	Disadvantages
Traditional training		Content will be delivered to any size group of students	One-way ratio
Tonguru training method		The lesson will be held in the form of a discussion as the subject has been studied in advance. It is important to understand the subject from all angles.	Students often have difficulties with manuals, internet and materials.
Collaborative learning	Teamwork metod	Responsibilities have increased. A lot of work was done at the same time.	1. It takes a lot of time to prepare. 2. Organization requires skill and harmony. 3. Without good organization, there will be no results.
	Teaching methods	Develop higher-level thinking skills. The student has the advantage of reinforcing his studies.	
	Method of assembly	This approach allows for 2 different teams to work together. Core and Expert team members help each other	

Table 11. A comparison of Outcomes-based learning and Traditional learning assessment

	A rating of 70 points							A rating of 30 points						
	70-66	65-61	60-56	55-51	50-иас доош	Ам	Чан	30-26	25-21	20-14	15-11	10-аас доош	Succ	Qua
Test class	6	19				100%	100%	5	11	9			100%	64%
Control class	2	7	10	6	-	100%	36%	2	3	3	8	9	64%	20%

Table 12 A comparison of outcomes-based learning and traditional learning assessment



From the graph, it can be seen that it is effective for students to work together in teams and reinforce their knowledge by teaching and learning from others. In improving the methodology, we have developed a teaching methodology based on the principles of rational use of teaching methods, selection of problems with practical content, and interesting clarity. It was seen that the following skills of students have clearly increased during the course of training

Table13. Skills improved through experimentation

№	Skills	Trial Class	Review Class
1	Electronic technology skills	+	+
2	Communication skills	+	
3	Ability to plan and organize	+	
4	Ability to research, analyze and analyze	+	
5	Timeliness and distribution skills	+	
6	Ability to work in a team	+	
7	Intellectual and leadership skills	+	
8	Ability to learn	+	
9	Ability to solve problems	+	
10	Ability to be flexible, adaptable and persistent	+	+
11	Listening skills	+	+
12	Creativity	+	

4. Conclusion

- ✓ During the traditional education, the lack of information was only delivered to the students by the teacher. However, nowadays students can get information from many sources of information. Students' own planning, leading, and organizing roles are considered more important than the reporting role of results-based seminar courses.
- ✓ It is important to be aware of many options for evaluation, and the research shows that not only evaluation during the course of the lesson, but the activities performed before and after the learning activity, as well as the activities of the students outside the classroom, can be included.
- ✓ By using result-based learning in seminar classes, it was proven that the teacher's responsibility to guide and organize the content of the course could be resolved and the student's ability to apply their knowledge and meet the employer's requirements was increased.

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SSSS-07

Current Family Structure, Style and Challenges in Mongolia

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Abstract: The social shift time carried out in Mongolia, the worldwide globalization and the cultural globalization have been bringing considerable changes to the structures and the styles of the families of Mongolia... There will be many confronting problems such as family violation, divorce and post-divorce child matter. There are common family types such as integrated, single, one-sided and having disabled members in Mongolia and several new styles have been appearing for example: transnational family, multi-cultural family, partnership family, contracted family¹, homosexual family and group living family. Accordingly, there are needs and necessities to determine ways for completely researching the family affairs in a level of theory and practice to give answers, for including in the state policy and operations, for making practical consulting and for solving the problems and the matters. Except providing the citizens with the education essential to keep families with normal relations, it is necessary to issue them a family education, which is fit to their life cycles, age specialties or otherwise which is based on their needs.

Keywords: Society, Problems, Education, Children, Protection

1.Introduction

Mongolia's social transition and globalization and cultural globalization have brought significant changes to the structure and style of the Mongolian family. The Family Policy Paper of the Government of Mongolia states that "The mission of the policy is to support the development of the Mongolian people by continuously raising the standard of living of the family and creating favorable conditions for family relations, ethical health and fulfillment of its obligations to society". This is because 70% of an individual's development, upbringing, socialization, culture, morals, attitudes, habits, and attitudes are formed in his or her native family environment, and the most important environment for human development is the family. Therefore, there is a need to study and answer family issues at the theoretical and practical level, to make practical recommendations to be reflected in government policies and activities, and to identify problems and solutions. According to the Basic Survey "Current Status of Mongolian Family Relations" in 2014-2019, which was conducted to determine the current pattern, development, changes, future trends and factors influencing family relations, the issues of family relations in Mongolia in the next 5-10 years There is a tendency to become more complex and to solve problems. It is necessary to pay due attention to this issue and plan future policies and activities. Traditional customs are becoming more and more distant. The development of civilization creates a new social environment and encourages adaptation to it.

2. Mongolian Family Structure and Style

According to the 2020 Population and Housing Census, the total number of households in Mongolia is 411.4 thousand. There are 411.4 thousand households in Ulaanbaatar, of which 52.4 percent are single households, 28.9 percent are combined families, 14.6 percent are single households, and 4.1 percent are mixed families.

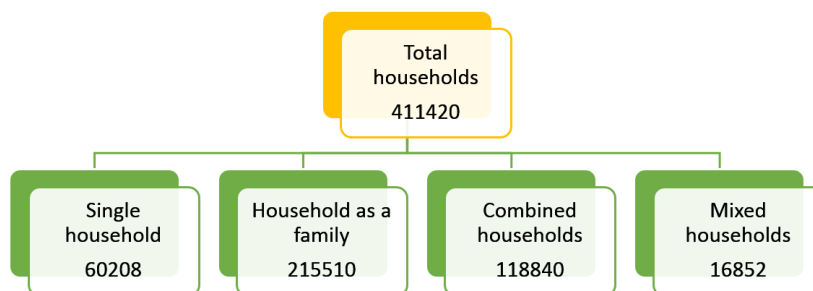


Fig. 1 Number of households, in the form of households, 2020

The traditional combined family style was born out of the need to take care of one of the elderly parents. However, today's complex families are formed for completely different and even opposite reasons. The majority of the surveyed households are young people (young families) who live under their parents care. **Challenge:** Respondents attributed the reasons for non-separation to the lack of housing (56.8%) and the inability to live independently economically (19.8%), which is a key factor in the existence of a complex family. The reason is that they no longer negatively evaluate the fact that the child was not separated from the family, that the daughter and son were not separated. The custom of entrusting a son to a daughter-in-law is becoming more and more common. The development of civilization creates a new social environment and encourages adaptation to it. For single families, conflicts and relationships with children are a concern. **Monogamous (Single)** Widowed and divorced families have the same share in monogamous families, but they are different in terms of problems. **Challenges:** A common feature of these two forms of monogamous families is financial difficulties. It was observed during the interviews that divorced people, especially women, are more likely to be depressed. Divorced family members, on the other hand, are subject to domestic violence. The victim is a victim. Divorced families surveyed were more likely to experience domestic violence during their lifetime, but often did not know how to deal with violence laws, ways to avoid violence, or who to turn to. Lack of legal knowledge and lack of access to family law often lead to repeated domestic violence, which eventually leads to divorce. In part, this is due to a lack of legal regulation and enforcement. For example, Article 14.2 of the Family Law states that "if the court deems it necessary, the proceedings shall be suspended for a period of up to three months, during which time all measures shall be taken to reconcile the spouses." Divorce is a sensitive issue that affects the rights of children, not disputes between spouses. After a divorce, one of the spouses neglects or deliberately refuses to divorce.

This, in turn, can adversely affect the child. Therefore, article 14 and article 4 of the Family Law on Divorce need to be amended as follows. These include the number of years of informal divorce, the reasons for not divorcing, the purpose of living separately (whether for personal work for family life or living separately for official purposes), remarriage (living informally with another person). Additionally, divorce may be decided on the basis of a

unilateral claim of the spouses. In addition to the above, special attention should be paid to the social issues of those who have left their children after divorce, financial and emotional support, child rearing, guardians and correction of psychological changes in children. It is advisable to increase participation. Families with members with disabilities. Challenges: They spend most of their income on health (45.5%) and education (40.6%), with 34.4 percent living on food and not enough on other things. This living standard is affected by their ability to work. The government has adopted policies and legal documents to support the employment of people with disabilities. Even if the service is being implemented, it is enough to monitor it and evaluate its results is not done.

3. Features and challenges of family relationships

Transnational family. According to the 2020 Population and Housing Census, there are 91,168 people living abroad, an increase of 6.3 percent from 2010. One in two people or 53.1 percent of those counted abroad is in the Asia-Pacific region. In the region, 1 in 4 people live in Europe. At the time of the census, 35.8 percent of people living abroad were studying, 11.5 percent were settling, 10.0 percent were working under an employment contract, 1.1 percent were on business trips, 18.5 percent were working, 13.1 percent were living abroad for family reasons, and 10.0 percent were living abroad.

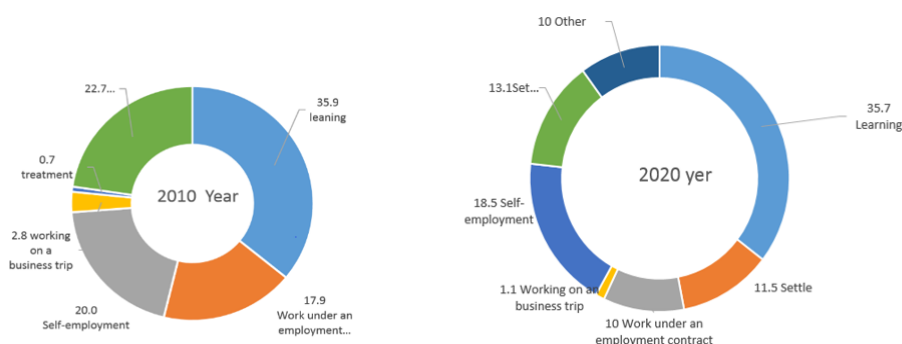


Fig.2 Citizens of the capital residing abroad, sit during the census There are goals and percentages for 2020

One in ten households surveyed (parents, sons and daughters) lives abroad. They have accomplished their goal, but [1]most of them live in the dark. Features: Most people who work abroad cannot live with their families. Only 1.8 percent of the households surveyed live with their families, children and relatives. Young families are living a life of separation from living and working abroad in order to improve their lives and secure their children. The average age of migrant workers is 31.3, and men predominate in foreign migration. In terms of marital status, 53.5 percent of men and 55.0 percent of women are married in South Korea. In the United States, 38.8 percent of young people are unmarried, while 31.4 percent are divorced, separated, or widowed. There is a problem of distraction. Although the family is not divorced or widowed, children who are separated from their parents continue to lack supervision. This suggests that it is important to analyze the marital status of young people living and working abroad and to pursue sound policies. Multicultural family. Mongolian women marry foreigners and live in the United States, Australia, South America, China, Korea, and Russia. There are also many foreigners living in Mongolia who are married to Mongolians. Cultural differences[2], the parallelism and adaptation of two different cultural traditions and norms, are

the challenges of this family. **Challenge:** Lack of knowledge of each other's language, culture, and traditions is a common problem in multicultural families. Negative social attitudes are also a problem, especially for women of Asian descent, such as Chinese, Koreans, and Japanese, and for their families. Treating them as prostitutes, insulting them, insulting their dignity, and violating their human rights are hampering peaceful family life. Foreigners are issued a one-year visa to marry in Mongolia, so they can return after one year. There are language barriers to seeking documents. There are also few job opportunities in Mongolia.

Living together. Case studies show that partners live in this way to meet their economic and physiological needs, but differ from contract families in that they perform some family functions, such as caring for each other and cooking. Cohabitation is not legally valid. This is because the Family Law does not provide for cohabitation and related legal provisions. However, Article 3 of the Law on Combating Domestic Violence states that “this law applies only to those who have not registered their marriage with a state authority but are living together ...” and concluded[3] that it is the only source of regulation of cohabitation. Between 2002 and 2007 ... 22,924 children were born when their parents did not register their marriage with the authorities, or during their cohabitation period[4], indicating that cohabitation is quite common. Estimates and studies suggest that unwanted pregnancies are more likely to occur in the pre-marital life, and that unwanted pregnancies can lead to orphanhood, avoidance of benefits for the unborn child, and social stigma. Estimates and studies suggest that unwanted pregnancies are more likely to occur during the pre-marital period, and that unwanted pregnancies can lead to orphanhood, avoidance of benefits for newborns, and social stigma. In order to address these issues, there is a need to improve the legal framework, and the Family Law needs to include specific provisions on cohabitation. This will ensure, on the one hand, the coherence of the Family Law and the Law on Combating Domestic Violence, and, on the other hand, the legal framework for resolving many of the issues facing partners. According to the case study, cohabitation can be a time when couples get to know each other, but this can lead to problems due to the couple's irresponsible actions and lack of knowledge about family planning. should be provided. The contractual form of the family is used in a different sense than the notion of a marriage contract. The results of the study show that the contract family type is not widespread (1.6%) but has already emerged. For example, case studies show that one party emphasizes sexuality and the other seeks financial support. To this end, an agreement is made on who will have what rights and responsibilities during the contract period, and the appropriate terms will be set out. To this end, an agreement is made on who will have what rights and responsibilities during the contract period, and the appropriate terms will be set out. For example, the two sides agreed on the terms of not having joint property, not having children, not cheating on each other (not having sex with another person), providing financial assistance, not interfering with each other's work, not harassing each other, and not infringing on liberty.

Gay. In our country, information about homosexuals is limited and information about cohabiting couples is kept secret, but we conducted a survey among them. NGOs such as Together, Youth Health, and A New Optimistic Life regularly address these people. The survey found that these people were not socially acceptable, but their close siblings and friends knew them, their parents knew them, some even knew them, and they talked to them and shared their emotional turmoil. People living in groups. The lives of art groups and prostitutes are becoming a new way of life, not a family style, but a way of life and a way of life. Young family. Couples under the age of 30, living together for no more than 5 years, both couples are considered to be young married for the first time. The perfect young married couple. Today[5] 67.5 percent of Mongolia's population is under the age of 34, which has a direct impact on population reproduction, marriage, and the growth of young families. When asked who family conflicts

are most common, 16.3% said that conflicts between parents-in-law and daughters-in-law are common among young families. is slightly related. The low level of family life of today's youth is moderate (52.5%) and poor (25.6%). This conflict is becoming more stressful. The study also found that 38 percent of divorces occur in young couples who divorce within 6 to 7 years of marriage, indicating that young people are less likely to cope with the early stages of family life. There are many young families living separately from their parents due to lack of housing. The survey included data from 48 young families living with their parents, 25 living with their parents-in-law, and 81 other families (living with other siblings). 56.8 percent of young families live with their parents because they do not have their own housing and 20 percent say they are not economically self-sufficient. The Mongolian Government's Population Policy on Family Development states: The state shall support any fair initiatives and activities to increase the family's ability to develop independently economically and to increase its wealth." Today, however, the lack of an economic and legal environment for young families to build private houses, provide small loans for agriculture and business, and support young parents is hampering their ability to live and develop independently. Therefore, by supporting youth employment and providing stable jobs, we will be able to solve many issues such as improving household income and livelihoods, improving living conditions, and building homes. In the new social environment, divorce is associated with many factors. First, the new social system, which respects human rights and freedoms and promotes democracy and free choice, no longer has the compulsory social condemnation of divorce as it did under socialism. Second, rising unemployment, poverty, and crime, which are the companions of the social crisis during the transition, have led to increased divorce and the inability of the family to fulfill its role in society. Third, during these so-called transition years, the status of individual marriages is no longer given much importance, and divorce is seen as normal. Fourth, changes in family and family relationships in line with social development trends are expected to further increase divorce.

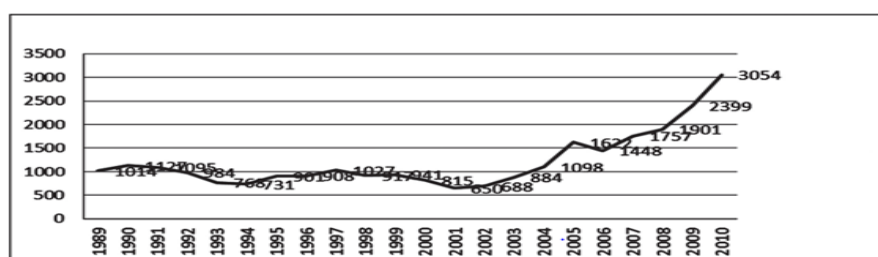


Fig.3 Number of divorces up to 2010

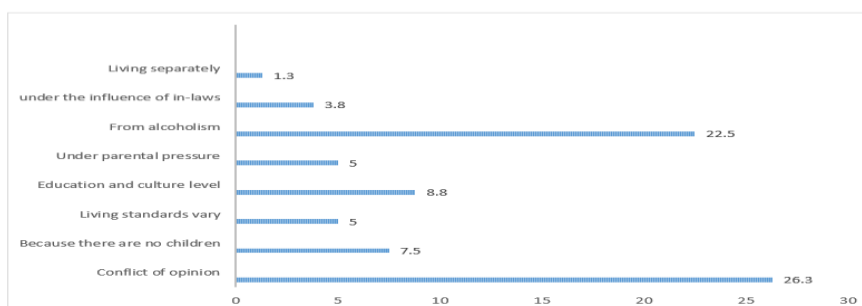


Fig.4 Reasons for divorce

Middle-aged family. In middle-aged families, the role of reproduction is dominated by socialization, with couples aged 35-55 and children aged 10-25. This is a time to cope with the burdens of a young family and to get used to life. Such families account for 44.2 percent of the

surveyed families. Middle-aged families maintain the intimacy of their husbands and wives at this stage of their lives. Studies show that the decline in love and care is more common in mid-life (10-19 years), and in the early stages of life they do not see each other's shortcomings and are warmly loving. There is a change in the scope of social relations, a change in attitudes, and re-socialization. It is also affected by many physical, psychological and social changes in this age group. This is manifested in family relationships such as quarrels, jealousy, cheating on the family, conflicts with children, and an interest in making a turn in life. In middle-aged families, children are in transition and their parents are older and have more responsibilities to care for them. **Elderly family.** Depending on life expectancy, retirement age, and length of life together, families over the age of 55 are included in the elderly family. Rising prices (26.2%), unemployment (16.7%), poverty (9.3%), and public service bureaucracy (7.8%) were considered to be the most negative issues affecting family life. - economic factors are putting a lot of pressure. "What do you plan to do to improve your family life?" In response to the question, the elders answered that housing, purchase and renovation (29.7%), additional household income (26.9%), and acquisition, replacement, and ownership of property (15%). I think we have improved our living conditions. The elders gave many suggestions on the open question of what the government should do about the family. These include: increasing income opportunities, regardless of age, providing jobs and housing, increasing pensions and benefits, support businesses, reduce poverty, provide health care to poor households, reduce inflation, create leisure facilities for the elderly, create a comfortable living environment, teach traditional techniques, focus on child rearing, and local organizations approach each family. Proposals to work are predominant, with the majority proposing solutions to the problems facing older families with sound economic policies. The government is taking steps to improve the living conditions, housing, and living conditions of older families, but[6] it is not always possible for older families to be satisfied. They are dissatisfied with 74.8 percent of household income and finances, 52.1 percent with property and material things, and 43.0 percent with their social status. Older family relationships are greatly influenced by age, psychological and physical changes, and aging. During this time, the couple no longer have sexual intercourse, and many psychological traits, such as depression, thinking about death, and stubbornness, develop, and they often hurt each other, so they do not understand each other as easily as they did when they were younger. Apart from providing pensions and benefits to the elderly, the society lacks emotional support activities and activities based on the experience and skills of the elderly using their free time. There are many causes for problems in family relationships, but when grouped together, they depend on four main factors: socio-economic, family relationships, the couple's personal and other dependencies.

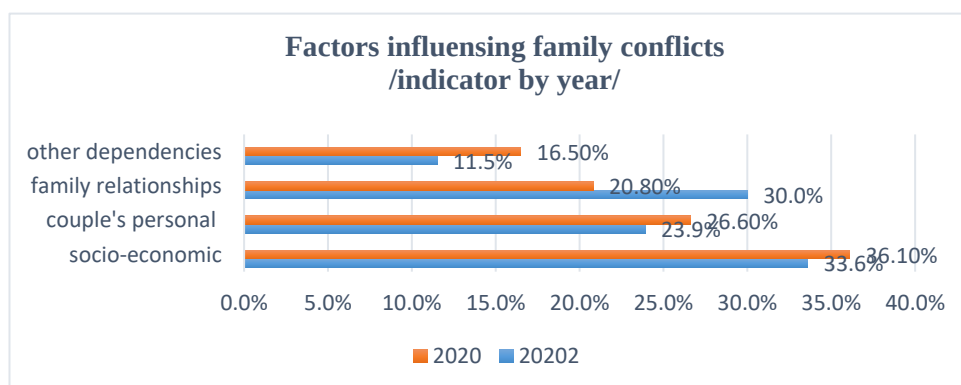


Fig.5 Factors influencing family conflicts

Table 1 Causes of family conflicts / 2015 and 2020 comparative results

№	2015 year	2020 year
Factors	percent	percent
Socio-economic factors		
1. From finance	48.0	42.2
2. From alcohol	58.3	21.8
3. Living and working separately	-	3.1
4. Cultural differences	-	1.4
5 From religious differences	-	0.7
Couples' personal factors		
1 Conflict of opinion	31.8	30.0
2 Differences in upbringing and environment	-	7.1
3 Differences in education	-	7.1
4 Due to age difference	-	4.7
5 Because there are no children	-	0.1
Family member communication factors		
1. Because of misunderstandings	-	29.8
2. Out of jealousy	37.1	14.7
3. Lack of love and care	29.7	7.4
4. Breaking Faith	32.0	4.6
5. Denial of personal freedom	-	3.8
6. From sexual misconduct	9.0	1.4
Factors that depend on other people		
1 Because of a child's problem	24.4	23.6
2 Because of in-laws, friends, and neighbors	23.7	-

In this study[7], the content of family education was studied in the context of family relations, ethics, law, family economics, family planning, family upbringing, tradition, responsibility, health, and child rearing. According to the survey, 54% of respondents said that they mostly get health information from the media, 51.6% said that legal education is from the media, and 40% said that reproductive sex education is from the media. 18.8% of household budgets, 36.8% of children's upbringing, and 50.6% of family traditions and customs are received from parents. Household budget spending (47.9%), family planning (44.8%), family ethics (39.1%), child rearing (23.7%), family responsibilities (32.2%) %, information on family traditions and customs (25.1%) and education are not available anywhere. There is very little formal training or expert advice on these issues. However, 22.8% said that health education and 23% answered reproductive education from specialists, which means that they are more likely to have received medical care. When categorized by urban and rural areas, the majority of respondents answered that rural families receive information from their parents or do not receive it from anywhere. In terms of age, 71.8% of 18-45 year olds said they receive information in some form, while 57.6% of those over 45 said they did not receive it anywhere. This is due to the fact that the need for family education is high among young and middle-aged people, who pay some attention to this issue.

4. Conclusion

According to the survey, there is no formal family education system and there is a lack of resources to provide education in this area. Lack of family education is a major cause of family problems. Throughout the history of the Mongolian family, it has provided family education to future generations and taught them life skills in accordance with traditional customs and laws, based on kinship ties with a unique image of civilization. However, in a country with a small population, given the changing lifestyle and diversity of family issues, providing family education to citizens in a scientifically sound manner and in accordance with family needs will be an important incentive for the country and human development. In addition to providing citizens with the education they need to maintain a normal family relationship, they also need to provide family education that is tailored to their life cycle and age. According to the survey, 72.3% said that a family counseling center is needed, 72.3% said that a family education center is needed, and 45.4% said that a wedding hall is needed. Attitudes toward the family are slowly changing from stereotypes. At the same time, family values are being undermined, and infidelity, materialistic interests, avoidance of family responsibilities, sexual freedom, and selfishness are on the rise. Parents pay a lot of attention to caring for their children, loving them and providing for them financially, but they are losing a lot in choosing how to communicate and raise their children. Therefore, it is important for parents to systematically develop “good parenting” training and information activities to help their children develop and grow up in the right role models, taking into account the age and mental characteristics of their children. Take into account the views of recent researchers on whether it is necessary to improve the supply and material base of basic services in rural areas, and to support regional development, and to make it mandatory for them to be distributed to many administrative units. There is a need to expand the scope of public services provided to the poor and suburban households who do not have access to social services, as well as to migrant families, through various training and employment services, such as health and education. Establishing a government system that is specifically responsible for the family will be important in increasing cross-sectoral coordination to address family issues.

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SSES-08

Detecting of Fraud in Financial Reporting by Ratio Analysis (Example on Mongolian Mining Companies)

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Abstract: As of 2023, the mining sector collected 7,277.0 billion MNT in taxes and fees. 2,886.8 billion MNT or 65.8 percent increased from the same period last year. In 2023, 81,191.9 thousand tons of coal, 1,395.3 thousand tons of copper concentrate, 5,643.7 tons of molybdenum concentrate, 14,854.8 kg of gold, 5,332.3 thousand tons of iron ore, 2,304.4 thousand tons of iron ore concentrate, and 204.6 thousand tons of feldspar ore, 108.4 thousand tons of fluoride concentrate, 402.9 thousand tons of zinc concentrate, and 16,454.0 tons of silver concentrate were produced.

Financial statements provide users with accurate information and have a significant impact on decision making. Therefore, detection of errors and fraud in financial statements is of great importance. In our country, tax, audit and other control institutions analyze transactions using traditional methods that do not have specific methods for detecting errors and fraud in financial statements, which requires a lot of time and manpower. Therefore, there is still a need to detect financial reporting errors with a special methodology.

The purpose of this study is to examine the relationship between financial statement analysis and fraudulent financial statements. In the study, 8 joint-stock companies in the mining industry were selected and analyzed from 97 Class III companies listed on the Mongolian Stock Exchange. Since the mining sector is inextricably linked to the economy and development of the country with its own characteristics, it receives a lot of subsidies and support from the government. That's why large amounts of money carry power and risk. With this feature, it can be seen that the ratios of total assets, total liabilities, sales, gross profit and net profit in the financial statement have a significant impact on whether the financial statement is presented incorrectly or not.

According to analysis of changes in ratios, the most common ratio indicative of financial delinquency is the ratio of total assets to total debt, which is 8 to 8. Furthermore, the ratio of net profit percentage and return on total assets has the lowest rating of 2.

According to the results of the research, the methods of fraud are different depending on the business, economic, legal system and the characteristics of the industry in each country. Therefore, it is believed that the development of a target model tailored to specific sectors and directions based on these characteristics will be more effective than a general model.

Keywords: Mongolia, Financial statement, Fraud, Mining, Ratio

1. Introduction

As of 2023, the mining sector collected 7,277.0 billion MNT in taxes and fees. 2,886.8 billion MNT or 65.8 percent increased from the same period last year [8]. In 2023, 81,191.9 thousand tons of coal, 1,395.3 thousand tons of copper concentrate, 5,643.7 tons of molybdenum concentrate, 14,854.8 kg of gold, 5,332.3 thousand tons of iron ore, 2,304.4 thousand tons of iron ore concentrate, and 204.6 thousand tons of feldspar ore, 108.4 thousand tons of fluoride concentrate, 402.9 thousand tons of zinc concentrate, and 16,454.0 tons of silver concentrate were produced.[7].

Some domestic and foreign scientists such as S.Tsolmon [9], Bhardwaj, A [1], Spathis, C [10], and Zainudin, E [11]. have studied the relationship between ratio analysis and financial statement fraud risk from all types of companies.

Issuers registered in Class - III of the Stock Registration Act are: Small and medium-sized companies that are innovative, high-risk, and in the growth phase of their business cycle, or mining companies with exploration and exploitation licenses, that offer their shares to professional investors or to retail investors who have notified the brokerage firm in writing of their decision to offer their shares to such investors. There are 97 companies on this list [5]. The mining sector is more likely than other sectors to report fraudulent financial statements. For example, the tendency to include all costs in the cost of goods sold is prevalent, which leads to a tendency to produce inaccurate financial statements.

The regulations for implementing the Law "On Promoting Economic Transparency" [4], which was passed by the Parliament in order to support the disclosure of hidden assets, income, and activities of individuals and legal entities and to regulate the registration of information in a unified manner, were approved by Government Resolution No. 348 dated 2015.08.07. This is a clear indication of the failure to report financial statements accurately, and it is believed that this violation is also related to the failure of audit, tax, and other inspection bodies to detect it.

Financial statements provide investors, creditors, and shareholders with accurate information and have a significant impact on decision making [2]. In our country, tax, audit and other control institutions analyze transactions using traditional methods that do not have a special method for detecting errors and fraud in financial statements, which requires a lot of time and manpower. Therefore, it is necessary to study the theoretical and practical problems of other methods of detecting fraud in financial statements. Fraud in financial statements is often seen in the following indicators.

The first main indicators are: More underreporting of assets and revenue, Inventory price increases, decreases, and reporting at incorrect times, Hiding expenses and debts, Misclassification and valuation of assets. Revenue related financial statement fraud is currently the most common form of financial statement fraud and is related to revenue and accounts receivable.

Accounts receivable	XXX↑
Revenue	XXX↑

The second most common form of financial statement fraud is inventory overstatement.

Inventory C1	true	
Purchasing		true
Goods ready for sale	true	
Inventory C2		high
Cost of sold goods	small	
Revenue		high

The third most common form of financial statement fraud is the understatement of debts and credits. These are Failure to record accounts liabilities, Failure to record accrued liabilities, Record revenue without receipt, Failure to record contingent liabilities.

The fourth most common form of financial statement fraud is the overstatement of assets. These are Overstatement of current assets, Incorrect calculation of accumulated depreciation, Overstatement of inventory and receivables, Consolidation of overstated assets

The purpose of the study is to detect fraud in financial statement by ratio analysis for the financial statements of joint-stock companies. In order to achieve this goal, it was revealed that a total of

861,065.7 million MNT of assets and income were hidden in connection with the implementation of the law “On Promoting Economic Transparency” approved in 2015 [4], and this appears to be financial statement fraud of this magnitude. Also, according to the results of the 2013 “Corporate Governance Assessment Report”, 27.5% of Mongolia’s top 20 companies were rated as needing improvement, which is very unsatisfactory compared to other developed Asian countries. This indicates weak corporate governance and, furthermore, a weak accountability system. Weak accountability systems for investors and shareholders increase the risk of financial statement fraud.

2. Survey research

Research materials and methods

In the study, using the financial data of 8 joint stock companies of mining industry which are registered on the Mongolian stock exchange – Class III. The main ratio analysis was calculated by the following way of Spathis [10] Nine Financial Ratios. Ratio analysis was conducted in this study to see whether or not fraudulent financial reporting could be predictable. The nine financial ratios used are adapted from Spathis [10]:

Key Ratios	Formula	Purpose
Sales to Total Asset Ratio	Sales/Total Assets	Revenues and receivables are the most common accounts that are manipulated when committing financial statements fraud. Increased revenue normally leads to an increase in receivables.
Account Receivable to Sales Ratio	Receivable/Sales	
Net Profit Margin	Net Profit/Sales	These ratios will be used because the profit margins assess the profitability of the company. A high profit margin attracts investors to a company. Management is therefore more likely to misstate the financial statements in order to increase the demand for the company's share capital.
Net Profit to Total Asset Ratio	Net Profit/Total Assets	
Gross Profit to Total Asset Ratio	Gross Profit/Total Assets	
Inventories to Sales Ratio	Inventories/Sales	This is because inventories may be manipulated by management to strengthen the financial position of the company.
Working Capital to Total Asset Ratio	Working Capital/Total Assets	This ratio will be used as companies with relatively low working capital may face liquidity difficulties.
Debt Percentage	Total Liabilities/Total Assets	These ratios will be used because a high debt structure may increase the likelihood of fraud in financial reporting. Once they have been confronted with profitability problems, companies can start borrowing money; thus, increasing their debt.
Debt to Equity Ratio	Total Liabilities/Shareholders' Equity	

3. Results of the research

The study is the list of companies which are taken from the MSE website (www.mse.mn) under the enforcement section. There are financial statements taken by the 2023 under the Mongolian Stock Exchange. This study is carried out by compiling secondary data from the Mongolian Stock Exchange Market, just selected for 8 joint stock companies samples. The data collected for each selected case study shall be in the form of a financial statement of the last year, the ratio analysis was calculated in 2 scenarios with a variety of Spathis [10] Nine Financial Ratios, and the results are as follows.

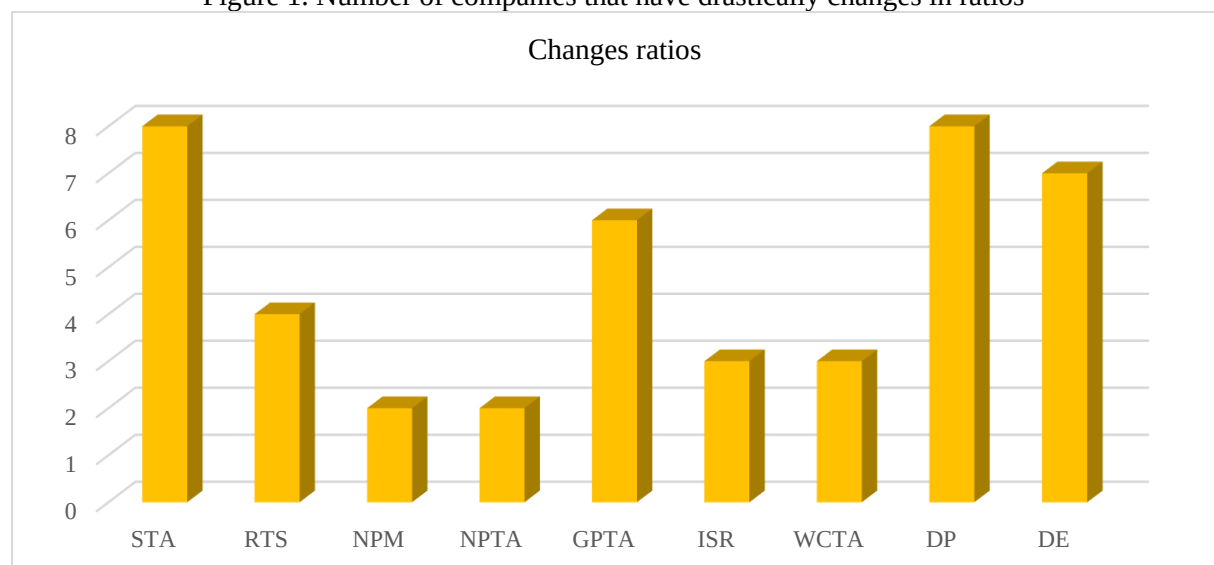
Table 1. Changes in Ratios of Companies

Ratios	Altain zam	Mongol alt	Mogoin gol	Shariin gol	Shivee ovoo	Taliin gol	Tavan tolgoi	Tushig uul	Total
STA	1	1	1	1	1	1	1	1	8
RTS	0	1	0	1	0	1	0	1	4
NPM	0	0	1	0	0	0	1	0	2
NPTA	0	0	1	0	0	0	1	0	2
GPTA	1	1	1	1	0	1	1	0	6
ISR	0	0	1	0	1	1	0	0	3
WCTA	0	0	1	0	0	0	1	1	3
DP	1	1	1	1	1	1	1	1	8
DE	1	1	1	1	0	1	1	1	7

Resource: Researcher calculation

When used the financial ratio change benchmark, the change ratio was determined in the study, and it was marked as 1, which the change ratio was greater than 10%, if it is less than 10% is marked as 0. The dramatic changes in STA and DP have been found to be higher for the year of omission than for the that period. The DE ratio shows the highest number of companies in groups. This indicates that the companies involved tend to increase their debts dramatically in their business period and also in the fraud year. In the meantime, the ISR ratios showed the lowest numbers for companies in groups. The trends which show that the ratios have been manipulated by the companies in group is slightly similar.

Figure 1. Number of companies that have drastically changes in ratios



Resource: Researcher calculation

After the coding, it was found that all 8 companies had more than 10% change in at least one ratio for both groups of categories the year of fraud. However, this shows consistency in the signs leading to fraud actions for each company analysed.

Figure 1 shows the changes of the ratio and the analysis shows the most common ratio showing signs of financial irregularities are the debt-to-equity ratios, which is roughly 7 out of 8. Furthermore, the inventory-to-sales ratio is the least common, affecting just 3 companies out of 8 businesses. This could be due to the fact that some of these firms do not have an inventory of their operations. Most companies involved tend to increase their debts dramatically in their early business period and also in the fraud year. In the meantime, the inventory-to-sale ratios reveal the lowest numbers for companies and the patterns which show that the ratios have been manipulated by the companies are slightly similar.

4. Discussion

All the financial ratios study by Spathis have significant relationships with fraudulent financial statements except for Gross Profit-to-Assets ratio, percentage of Inventory-to-Total Assets. It means that financial ratios can explain the occurrence of fraudulent financial statement [10].

The study by Dalnial et al., have shown that financial ratios can be a tool for detecting fraudulent financial reports. In his study, total debt to total asset ratio was found to have a significant difference in the mean result which shows a higher leverage for fraudulent firms. The leverage ratio of total debt to total equity is a significant predictor of fraud detection, this ratio indicates that companies with higher debt-to-equity ratios would be a good indicator for fraudulent firms. [10].

Cynthia Harrington (Association of Certified Fraud Examiners) in her study “Analysis ratios for detecting financial statement fraud” developed several indices to detect whether financial statements are false, such as sales growth index (SGI), gross margin index (GMI), asset quality index (AQI), and selling and gross administrative index (SGAI). However, according to Indian scientist Beneish, his own research has confirmed that using these indices can detect false statements with an accuracy of approximately 50%.

In a study by Maludi Salehi, Dr. Ali Mansoury and Dr. Rezu Pirayesh, titled “Firm size and audit regulation and fraud detection: empirical evidence from Iran” a sample of 180 Iranian companies with 240 questionnaires was used to examine how financial fraud depends on the country’s audit system, market environment, and the size and quality of audit firms using binomial tests. The results of the study indicated that the main causes of financial fraud in Iran are poor audit and accounting systems and standards, extensive legal oversight, and low accountability [6].

Research conducted in Mongolia was conducted by S. Tzolmon in his study “Mongolized version of the Fraud model for detecting false financial statements” based on 370 financial statements of 154 companies for the last three years using econometric Logit regression, Probit, and Linear models using E-Views software. Also, in his study “Potentiality of using modeling to verify the accuracy of financial statements of enterprises” S. Tzolmon analyzed the case of “M” company using the “Mongolized version of the Fraud model for detecting false financial statements” study [9].

5. Conclusion

This study researches the effect of financial ratios on fraud financial statement. The involved companies are tending to increase their debts dramatically in their business period. The current assets in the total assets is denied until it is no effect on fraud financial statement. The debtor's revenue is

denied until it has no effect on fraud financial statement. The inventory of the total assets is rejected in such a way that the efficiency ratios does not have any bearing on false financial statement.

From this analysis, it can be concluded that financial ratios can be used to detect false financial information provided by companies. Companies of the mongolian stock exchange have shown a trend of deviation in at least one of the nine ratios used.

It was found that the financial ratio and the inconsistency of the financial statement were shown in the previous period. It is suggested that fraud financial statement may be detected even at a much earlier stage if a thorough investigation has been carried out into the submission of each financial statement-related report. The symptom of an overstatement of sales and an increase in debt was shown in the earlier period such in fraud financial statement.

Companies that tend to increase their debt are likely to have liquidity problems and may be under pressure to maintain profitability. Companies that tend to drastically change their financial ratios during the course of their business operations will have difficulty covering losses and expenses in the coming years, which will lead them to incur more debt and eventually resort to fraudulent financial reporting or any illegal business practices to maintain their business's existence and image.

Another distorting factor related to income is the inflated value of accounts receivable. Accounts receivable can be used to hide false income. This study shows that an increase in the sales to total assets ratio is associated with an increase in accounts receivable.

This study suggests potential future work that can be used to develop and implement a financial statement, audit methodology in the Mongolian scenario. The results obtained will serve as a guide for organizations involved in decision-making based on financial statement research.

This study will remind the Mongolian Stock Exchange of the need to thoroughly examine each statement submitted to the Mongolian Stock Exchange related to financial statements.

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NGEC-09

The Way of Opportunities to Reduce, Reuse, and Recycling Food Wastes in Mongolia

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Abstract: Food scraps, vegetable and fruit peels, bones, used cooking oil, pastry leftovers, scraps, and eggshells account for one-third of the total waste in our country (Unread.today, 2020) Therefore, we have researched ways to reduce food waste, and determined vegetable and fruit scrap nutrition, and the possibility of reusing them. A questionnaire survey was conducted with 40 households, comprising 21 questions on food consumption and waste. When the daily vegetable and fruit waste of five households was calculated, the average was 284 grams per household, totaling 1.423 kilograms. In this research; we used spectrophotometric and microbiological methods and the results were calculated with a frequency of 3 times. Vitamin C content in pumpkin peel, apple peel, carrot peel, cabbage core, and broccoli stem were 2-3 times higher than raw materials, while vitamin A was 0.136-5.9 mg/100 g, which contained less vitamin A content when compared to raw materials. Total bacterial counts were detected in vegetable scraps, but not in pasteurized, heat-treated soup and apple juice. According to our research, vegetable peel soup, and apple peel juice provide enough daily vitamin A and C requirements. The economic assessment of five types of purchased fruit and vegetable waste revealed that 37% of the total purchased value is discarded, leaving only 63% utilized. These findings have prompted the development of crucial proposals and recommendations to tackle the issue of food waste comprehensively. Proposed initiatives include enhancing awareness among households, institutions, universities, and students, promoting the use of food waste for composting, establishing a centralized statistical database through expanded research, implementing legal provisions, analyzing the nutritional content of commonly used vegetables, investigating the production of eco-friendly plastics using vegetable waste, exploring the integration of vegetable waste into animal feed production, and designing a supermarket and mobile application to facilitate the sale or donation of surplus food at discounted prices.

Keywords: vegetable scrap, apple peel, nutrition, soup, suggestion

1. Problem statement

Human activity and waste significantly impact global warming and greenhouse gas emissions, with food production and transportation playing major roles. Approximately 11% of the world's greenhouse gas emission is from these processes, while methane concentrations in the atmosphere have increased by 160% since 1750 due to human intervention (Methane, 2023). About Mongolia only 17-20% of all waste is recycled, but food waste isn't recycled. In Ulaanbaatar, households produce an average of 290 kg of food waste annually, which equates to approximately 72 kg per person per year (Report on Food Waste in UB 2022). In Ulaanbaatar

city, food waste alone accounts for 41% of household waste in summer and 36.2% in winter. According to a 2022 survey, 32% of household food waste is fruit and vegetable peels, 21% leftover food, 15% bones, 9% raw meat and peel, and 7% completely spoiled and waste of fruits and vegetables. In our country, 22-35% of vegetables, fruits, and grains are lost during transportation, storage, sorting, and delivery. In our country, 22-35% of vegetables, fruits, and grains are wasted during transportation, storage, sorting, and delivery, with an additional 45% wasted from leftovers and uneaten food. The Food and Agriculture Organization of the United Nations estimates that by 2050, the world's population will reach 9.1 billion, and food demand will increase by 70% (Unread.today, 2020). While some people suffer from hunger and *malnutrition*, *excessive food consumption* continues on the other hand. Many countries in the world, such as Japan, France, Italy, and South Korea have issued various laws and regulations on food waste, but there is no special "Food Waste Law" for Mongolia.

Purpose of the Study: To identify ways to reduce food waste in Mongolia and to analyze the nutrient content of wasted vegetable materials.

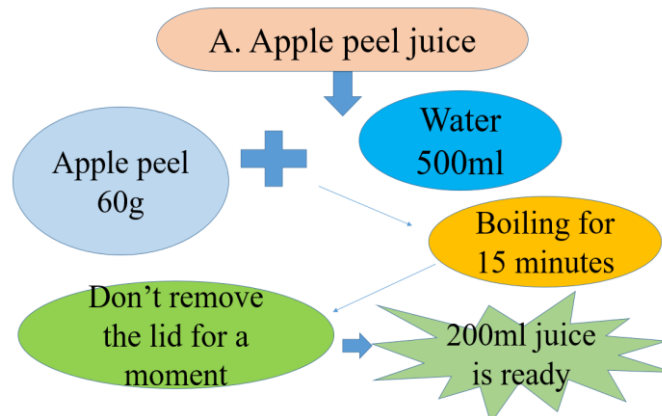
Research Objectives:

- 1.To assess the overall state of household food waste.
- 2.To analyze the nutrient content of vegetable raw materials, including peels and processed products.
- 3.To evaluate bacterial contamination in various types of vegetable peels.
- 4.To explore options for recycling vegetables.
- 5.To formulate suggestions and recommendations for reducing food waste.

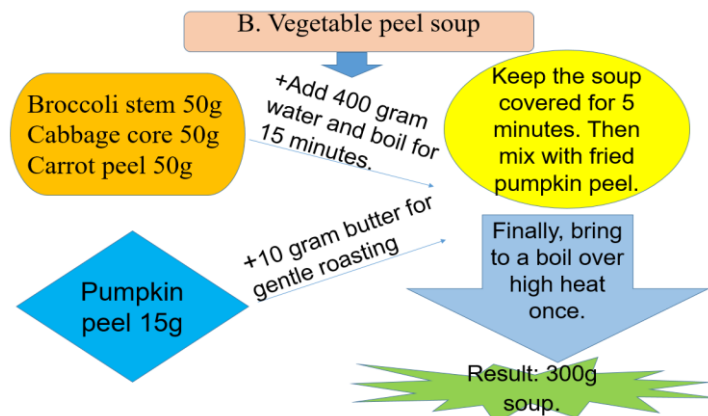
During my junior year at university, I participated in the "Young Environmental Leadership" program for a month. This experience inspired me to explore the relationship between my profession and the environment. From that moment, I began searching for ways to connect the food sector to environmental sustainability. Since then, I have been making plans and sharing knowledge with my friends and family day by day. I am deeply interested in volunteer work related to the environment and enjoy educating others on this topic. I frequently provided information about food waste to my fellow club members and actively participated in and organized activities for my school's eco club. We used to meet once a week to engage in various activities. Such as; organizing an Environmental Day on the central school grounds for playing games, holding quiz competitions, and introducing the club to others; another activity is providing environmental lessons, exchanging opinions, and developing future plans together. We created content about air and other pollution issues in Mongolia; picked up garbage in the mountains; made trash cans from available materials; and composted with eggshells.

Material and method: We searched for a feasibility study of food waste reuse. Questionnaire survey with 21 questions taken from 40 households in July 2023 who live in Ulaanbaatar city, Bayan-Ulgii, and Erdenet province. Fact survey was taken from 5 households on February 7, 2024 who lives in SBD, BZD, HUD. The research materials included apple, pumpkin, cabbage, carrot, and broccoli, as well as their respective waste parts (scrap, core, stem) that purchased from "Minii Svljee-Zaisan". Laboratory analysis of vitamin C and vitamin A was determined by spectrophotometric method with 3 repetitions (B.Uurtsaikh, 2022), and the total number of bacteria was determined according to the MNS ISO 4833:1995 standard (estandard.gov.mn) from February to March 2024. Based on the determination of the nutrients in wasted materials, made a *technological scheme* (Picture 1) for making apple peel juice and vegetable scrap soup. Apple peel juice and vegetable scrap soup represents a zero-waste technology recommendation for home use.

The raw materials for these “zero-waste” products included apple peel, pumpkin peel, carrot peel, cabbage core, and broccoli stalks. The way we approach small actions matters greatly; even taking one eco-friendly step can significantly impact our future (butterfly effect).



Picture 1. Apple peel juice technological scheme



Picture 2. Vegetable scrap soup technological scheme

2. Results

1. Questionnaire Survey: Here are the results of 21 questions;

1. What's your most favorite fruit? Apples, bananas, citrus fruits, grapes, pears, peaches, mangoes (high to low). The popularity of these fruits suggests a potential for significant waste from these types.
2. Name at least 5 of your most widely consumed vegetables? Carrots, potatoes, onions, cabbage, beets, and peppers.
3. Do you separate your food waste? Yes - 64.1%, No - 35.8%.
4. Do you believe there are benefits to segregating your food waste? Yes: 85.6%, No: 15.3%
5. When faced with excess food, what is your preferred action? A. Properly stored and reused: 23.6%; B. Donated to others: 2.6%; C. Used to feed animals: 44.7%; D. Utilized as fertilizer: 0%; E. Discarded directly: 28.9%.
28.9% of respondents either discard excess food immediately or express uncertainty about the appropriate action, therefore we have set a target to reduce this percentage.

2. Fact survey: One-day consumption of fruit and vegetable waste among five families, the total intake amounted to 1423 g, averaging 284 g per a day. Each family, on average, consisted of 4.5 people, resulting in a total of 18 participants in the study (Table 1).

Table 1. Total fruit and vegetable waste (for 5 households)

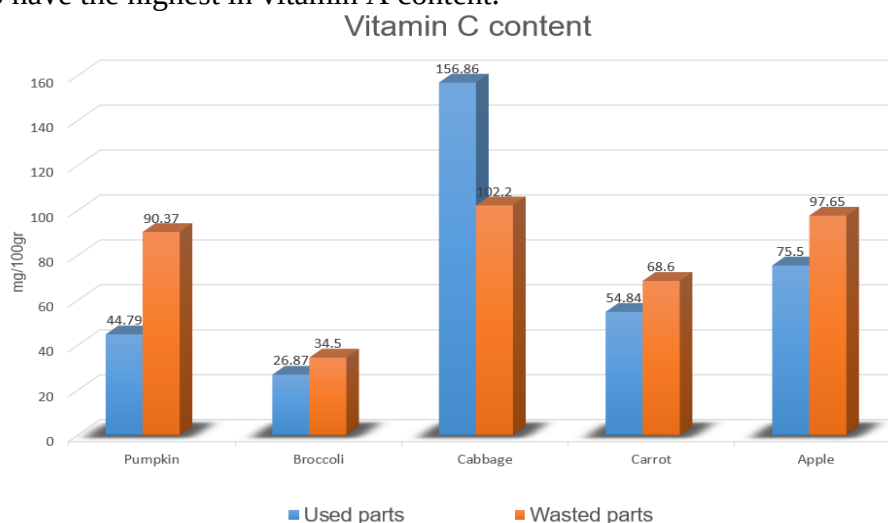
Family representative	Members	Waste weight
B.Misheel	3	625 gr
S.Enerel	4	150 gr
B.Enkhzul	6	275 gr
B.Oyuntsetseg	1	173 gr
B.Bayarjargal	4	200 gr
Average	4.5	284 gr
Total	18 person	1423 gr

3. Result of vegetable and their waste nutrition: Five types of vegetables (pumpkin, broccoli, cabbage, carrot, apple) and main samples included vegetable wastes (pumpkin peel, broccoli stem, cabbage core, carrot peel, apple peel), vitamin A and C contents determined by mentioned methodologies (Table 2).

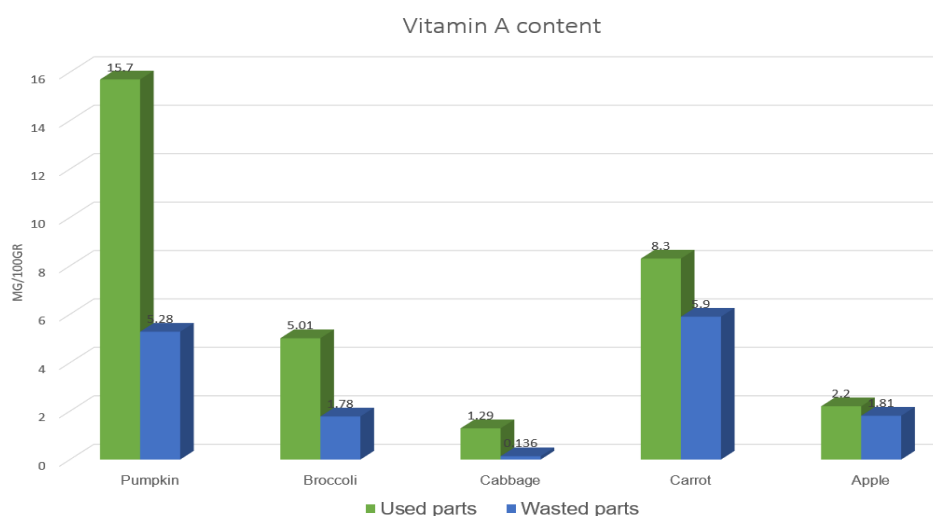
Table 2. Vitamin A, and C content of 5 vegetables and their waste (scrap, core, stem).

Sample	C vitamin	A vitamin	Sample	C vitamin	A vitamin
Pumpkin	44.79mg	15.7mg	Pumpkin peel	90.37mg	5.28mg
Broccoli	26.87mg	5.01mg	Broccoli stem	34.5mg	1.78mg
Cabbage	156.86mg	1.29mg	Cabbage core	102.2mg	0.136mg
Carrot	54.84mg	8.3mg	Carrot peel	68.60mg	5.90mg
Apple	75.50mg	2.20mg	Apple peel	97.65mg	1.81mg

Vitamin C content in pumpkin peel is twice as high as in pumpkin (44.79mg-90.37mg), and broccoli stem is 8 mg higher than broccoli (26.87mg-34.5mg), carrot peel is 14mg higher than carrot (54.84mg-68.60mg), apple peel is 22mg higher than apple. Cabbage core had the highest vitamin C content at 102.2mg. Carrot peel (5.90 mg) and pumpkin peel (5.28 mg) were found to have the highest in vitamin A content.



Picture 3. Vitamin A content



Picture 4. Vitamin A content

Total bacterial count result: Apple peel 1.2×10^3 cfu/ml, pumpkin peel 1.2×10^4 cfu/ml, carrot peel 1×10^4 cfu/ml, broccoli stems and roots 1×10^4 cfu/ml.

- Product results:** Broccoli, cabbage, carrot, and apple skins were washed using a baking soda solution (1 tablespoon of baking soda in 1 liter of water for 12-15 minutes) and rinsed thoroughly in cold water. Following heat treatment, they were processed according to the described method (see Picture 1). Both the apple peel juice and vegetable scrap soup were prepared solely from discarded vegetable wastes and water, without any additional flavorings. Seasoning with salt and spices is optional once prepared, according to individual taste preferences.



Picture 3. Vegetable scrap soup and apple peel juice

5. Results in nutritional value of products

Table 3. Content of Vitamin A and C

Sample	C vitamin	A vitamin	Sample	C vitamin	A vitamin
Apple juice	13.27mg	2.39mg	Apple peel juice	5.49mg	1.08mg
Veggie soup	21.31mg	5.27mg	Veggie waste juice	51.49mg	7.83mg

Vitamin C content in apple peel juice is 5.49mg, while vegetable scrap contains 51.49 mg. Vegetable scrap soup contains more than twice as much vitamin C as vegetable soup. The

adult daily requirement of vitamin C is 40-50 mg. For Vitamin A, apple peel juice contains 1.08mg, and vegetable scrap contains 7.83mg. One cup of vegetable scrap soup can provide daily requirements of vitamin A and C.

Total bacterial count result: After cleaning, decontamination, and heat treatment, the total number of bacteria in the two types of waste products was determined to be safe for use, as no bacterial growth was observed on the petri dish.

6. Economic calculation: In Mongolia, when purchasing 4200g of vegetables, we typically discard 881g, which amounts to 37% of the total expenditure being wasted, leaving only 63% utilized.



Picture 4. Five types of vegetables each waste weigh

Table 4. The economic calculation (1 USD=3370 MNT)

Purchase	Weight and price (₮-MNT)	Wasted weight	Weight left to use	When turn wastes into percentage	When Turn wastes into money
Pumpkin-1	1kg=5600₮	320g	781g	29%	1600₮
Cabbage-1	1600g=2600₮	270g	1410g	16%	416₮
Broccoli-1	880g=5300₮	211.2g	679.8g	23.6%	1261₮
Carrot-3	315g=600₮	44g	271g	13.9%	87.5₮
Apple-1	217g=1500₮	36g	181g	16.5%	247.5₮
Total: 5 types	4200g=15600₮	881.2g	3300g	-	5839₮

When I asked people about how to reduce food waste, their creative answers prompted them to rethink their approach to waste. After presenting the research results to my friends and teachers, I had the opportunity to make a discussion on this topic. Sharing the findings sparked conversations, and in some cases, my friends even asked more questions later, which was advantageous as it allowed them to contribute their thoughts as well.

Challenges and perspectives

Spreading information about food waste was challenging due to the uncommon practice of waste sorting among people. Also, there was a lack of statistical data in our country, and we didn't have enough research papers to compare laboratory determination. Perspectives;

- ✓ Include food waste education programs in the curriculum to educate students about the importance of reducing food waste.
- ✓ Create a centralized statistical database by conducting more extensive and precise

questionnaire surveys.

- ✓ Make laboratory determination in vitamin, minerals of other vegetable and fruit wastes.
- ✓ Create legislation to help reduce food waste and implement laws in other countries.
- ✓ Create a community of “Food flash box”, and make phone applications that can communicate with them.
- ✓ Create a marketplace that sells surplus, unsold food.
- ✓ Reduce plastic bags and single-used wastes during purchase
- ✓ Implementing composting methods for food waste management.
- ✓ Exploring the possibility of mixing vegetable waste with plastic to produce eco-friendly plastic that decomposes more rapidly in nature compared to conventional plastics.
- ✓ Searching for ways to turn fruit and vegetable waste into animal feed or as supplements for animal feed production.

I believe that searching and trying on these suggestions will help to reduce the amount of food waste in Mongolia.

Acknowledgments

I sincerely thank my advisor, Dr, Ass Prof B. Enkhjargal, for her invaluable support throughout the research. I would also like to express my gratitude to laboratory workers and everyone who participated in the questionnaire and fact survey.

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HSOT-10

The Characteristics of Mongolian Operatic Vocal Training: The Case of G. Khaidav

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Abstract: One of the rare singing styles that can be considered classical in the world is the "Urtiin Duu" (Long Song). This art form involves extending syllables with vocal modulations, creating a variety of melodic ornaments through the coordinated use of breath, vocal organs, and the larynx. The resulting sounds are characterized by deep resonances, ringing tones, and soaring ornamentations. This remarkable art of the Mongolian people has been passed down through generations, producing singers with unique training systems. The vocal range and proper breath control, which are crucial elements in performing the Long Song, can be regarded as the foundational basis for operatic singing. Despite having had a relatively short time to familiarize themselves with opera compared to European countries where the art form has flourished, Mongolian singers have achieved global recognition and continue to perform on the world's most prestigious stages. This success can be attributed to the Long Song, a national cultural treasure deeply embedded in the lives of Mongolians—nurtured through lullabies at birth, the rhythm of games during childhood, songs of herding in adulthood, and chants of prayer in old age. This study aims to elucidate, through a historical comparative method, how the Long Song has served as a precursor to operatic vocal training for Mongolian singers.

Keywords: Long Song, opera singing, vocal training, training system

NGOT-11

The Results of Studying Some Nutritional Quality of Milk and Meat of Mongolian Reindeer

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Abstract-Reindeer is considered a very rare species in terms of status. Globally, according to the IUCN Red List Categories and Criteria, the species listed as Least Concern, regionally evaluated as Vulnerable.

The reindeer global distributions southernmost boundaries lie in Khovsgol Lake. Randomly distributed on high mountain slopes and alpine zones (2300-3000 m). Migrate in summer from the forest belt up to alpine pastures with lichen, moss and shrubs. Return to the forest in winter and spring; do not migrate over long distances.

During the 30 years the range has been reduced almost by half and numbers significantly decreased. In 1996 the total population was estimated to be 200-400. Nomadic herders have domesticated reindeer herds. Hunting prohibited since 1953. Included in the Mongolian Red Book as Rare (1987) second edition of the Mongolian Red Book (1997) as Very Rare. Included in the Mongolian Law on Fauna as Very Rare.

According to the results of our research, 12.15% protein, 20.55% fat, 5.81% lactose, and 1.51% ash were found in reindeer milk. However, protein content of meat protein was 24.76%, fat content was 13.77% and ash were 1.24%.

Keywords-reindeer, nutrition, food safety, fatty acid, lactose

1. Introduction

2.

Reindeer herding is conducted in nine countries: Norway, Finland, Sweden, Russia, Greenland, Alaska (the United States), Mongolia, China and Canada.

In 1996, there were about 400 reindeer in Mongolia, and in 2023, about 2,500 reindeer were counted. People who herd reindeer are called Tsaatan, and currently there are more than 400 Tsaatan people living in Huvsgul taiga in Mongolia.

Status: Very Rare species. Globally, according to the IUCN Red List Categories and Criteria, the species listed as Least Concern; Regionally evaluated as Vulnerable. Randomly distributed on high mountain slopes and alpine zones (2300-3000 m).

Hunting prohibited since 1953 in Mongolia. Included in the Mongolian Red Book as Rare(1987) second edition of the Mongolian Red Book (1997) as Very Rare. Included in the Mongolian Law on Fauna as Very Rare. Most of the distribution area falls under the Khoridol Saridag Strictly Protected Area, and Ulaan Taiga and Khovsgol Lake National Parks.

We conducted this study to compare the general chemical composition and fatty acids composition of

reindeer meat and milk.

Fatty acids are aliphatic - carboxylic acids, which exist freely in the body and connect with together to consist lipids. From the point of view of nutrients, polyunsaturated fatty acids, or fatty acids containing two or more secondary bonds, such as linoleic, linolenic, and arachidonic acids, are highly biologically active. These irreplaceable essential fatty acids are the structure of the body's cell membranes as well as the source of prostaglandins, a hormone-like substance [1], [2].

2. Survey research

Research materials and methods

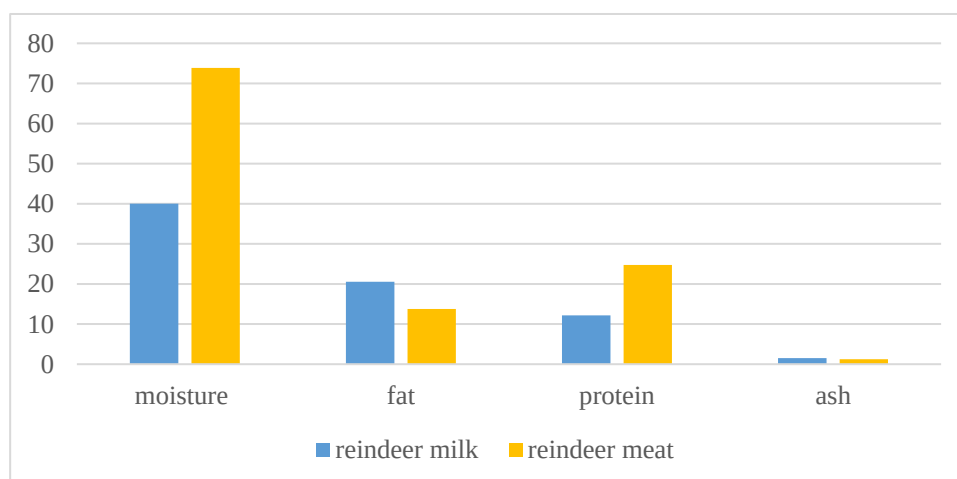
Material: In our research, we determined the general chemical parameters and fatty acid composition by preparing samples of reindeer milk and dried curds in Huvsgul province in according to the standards in January, 2024.

Milk moisture was determined by MNS 6477:2014, fat by MNS 5035:2020, protein by MNS ISO 937:1984, ash by MNS ISO 936:2003, and calories by SAZ 08:2009. Methodology for determining fatty acid composition according to SAZ 18:2016: Gas chromatographic method for determination of fatty acid composition according to SAZ 18:2016 [3], [5].

3. Results of the research

3.1. Results of determined general chemical parameters

The moisture content of the reindeer meat was 73.89%, protein 24.76%, fat 13.77% and ash 1.24%. The water content of the milk was 40.03%, protein 12.15%, fat 20.55%, ash 1.51% and lactose 5.81%. The calorie content of the milk was 256 kcal.



3.2. Results of determined fatty acids

A total of 20 types of fatty acids were detected in reindeer milk, 21 types were detected in meat. 10 were saturated fatty acids in reindeer milk, 9 were saturated fatty acids in reindeer meat. Saturated fatty acid was 69.56%, monounsaturated was 26.83% and polyunsaturated fatty acid was 3.5% in reindeer milk.

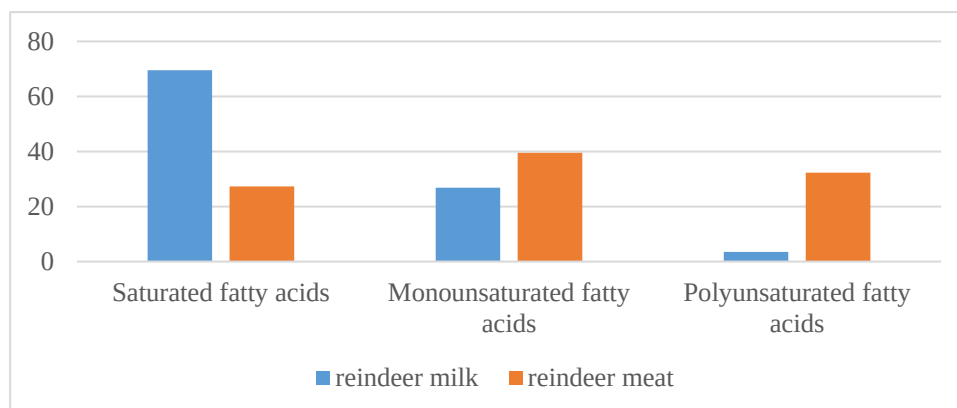


Fig 2. Fatty acids content of reindeer milk and meat, %

Saturated fatty acid was 27.29%, monounsaturated was 39.51% and polyunsaturated fatty acid was 32.34% in reindeer meat. Tricosanoic, undecanoic and arachidic acids wasn't detected in reindeer milk, caproic, caprylic, capric, undecanoic, lauric and tridecanoic acid wasn't detected in reindeer meat.

Table 1. Content of saturated acids in milk and meat of reindeer, %

Formula	Fatty acids	reindeer milk	reindeer meat
C4:0	Butyric acid	3.44	8.13
C6:0	Caproic acid	1.04	0
C8:0	Caprylic acid	0.35	0
C10:0	Capric acid	0.69	0
C11:0	Undecanoic acid	0	0
C12:0	Lauric acid	0.9	0
C13:0	Tridecanoic acid	0	0
C14:0	Myristic acid	13.51	0.83
C15:0	Pentadecanoic acid	1.6	0.37
C16:0	Palmitic acid	39.06	1.46
C17:0	Heptadecanoic acid	0.55	0.61
C18:0	Stearic acid	8.42	14.97
C20:0	Arachidic acid	0	0.07
C23:0	Tricosanoic acid	0	0.69
C24:0	Lignoceric acid	0	0.16
		69.56	27.29

Among the saturated fatty acids, palmitic acid, myristic acid and stearic acid was the highest at 8.42 %-39.06 % in reindeer milk. Among saturated fatty acids, stearic acid was the highest in reindeer meat, at 14.97%.

Among the unsaturated fatty acids, oleic acid was the highest at 24.89%-37.21%. Other unsaturated fatty acids were found in smaller amounts, 0.5%-1.11% in reindeer milk and meat.

Table 2. Content of polyunsaturated acids in milk and meat of reindeer, %

Formula	Fatty acids	Reindeer milk	Reindeer meat
C18:2n9 trans/cis	Linoleic acid	2.41	20.54
C18:3(6)	Gamma-linolenic acid	0.25	0
C18:3(3)	Alpha-linolenic acid	0.19	1.02
C20:3(3)	Cis-11,14,17 Eicosadienoic acid	0.19	10.03
C20:5(3)	Eicosapentaenoic acid (EPA)	-	0.75
C22:6(3)	Docosahexaenoic acid (DHA)	0.46	0
	Total	3.5	32.34

Among the polyunsaturated fatty acids, linoleic acid was the highest in 20.54% in reindeer meat, 2.41% in reindeer milk. But gamma-linolenic and docosahexaenoic acids weren't detected in reindeer meat.

4. Discussion

Researcher J.R. Luick, R.G. White, M. Gau, R. Jenness are University of Alaska Fairbanks, determined the chemical composition of reindeer milk at five intervals during the lactation cycle. Their study found that Alaskan reindeer milk at mid-lactation contained 31.6% dry matter, 15.5% fat, 3.1% lactose, and 1.3% ash. This is 28.37% dry matter, 5.05% fat and 2.71% lactose less than our study results [11].

According to Norway researchers Hallvard Gjøstein, Øystein Holand and Robert B. Weladji, content of reindeer milk constituents were 15.5% fat, 9.9% protein and 2.5% lactose [12], [13].

Also according to Norway researchers, content of reindeer meat constituents were 3.1% fat, 21.5% protein and 75% moisture [14].

Russian researchers [Anastasiia A. Semenova](#), [Olga K. Derevitskaya](#) and [Andrey S. Dydykin](#), content of reindeer meat constituents were 1.2% fat and 23% protein [15].

5. Conclusion

1. According to our research, the fat content of reindeer milk was 20.5%, protein 12.1%, lactose 5.8% and minerals 1.5%. however, the fat content of the meat was 6.78% less and the protein content was 12.61% higher than reindeer milk.
2. In determining the composition of fatty acids, a total of 20 types of fatty acids were found in reindeer milk, 21 types were detected in meat. 10 saturated fatty acids, 5 monounsaturated fatty acids and 5 types of polyunsaturated fatty acids found in reindeer milk.
3. The monounsaturated fatty acid of reindeer milk was 26.83% and among them, oleic acid was the highest, 24.8%. Among the polyunsaturated fatty acids, linoleic acid was the highest in 20.54% in reindeer meat, 2.41% in reindeer milk.
4. In Mongolia, there is a lot of research on the milk and meat of cows, horse, sheep, goats, and camels, but research of reindeer is rare. Therefore, it is necessary to determine fatty acids, amino acids, minerals and vitamins in reindeer milk and meat in detail.

6. Appreciation

The project "Establishment of Asian Food Composition Database" implemented by the Mongolian University of Life Sciences is being implemented with the funding of the "Asian Food and Agriculture Cooperation Initiative" (AFACI) international organization. This research was carried out within the framework of this project.

I would like to thank the funding organization of the project (Asian Food and Agriculture Cooperation Initiative) and the project team and community.

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SSBA-12

Evaluating the quality of railway passenger traffic services using the Railqual model (On the example of UBTZ)

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Abstract- This research aims to clarify the needs of passengers by evaluating the quality of UBTZ passenger traffic services using the RAILQUAL model, aimed at evaluating current activities, determining ways to improve the quality of services in the future based on the research results, and putting forward suggestions and initiatives that will be helpful for future policies.

Therefore, in this study, we developed the RAILQUAL research model by conducting a theoretical study of the quality of railway passenger traffic services. The RAILQUAL model was developed with 6 factors and 22 questionnaires according to the characteristics of UBTZ passenger traffic, and the research results were evaluated using SPSS 25-program.

In this study, a random sampling of 553 users using UBTZ was conducted. According to the results of the survey, the importance of the factors affecting the quality of service in the passenger traffic sector of UBTZ was determined, and the ways and suggestions for improving the quality of passenger transport services of UBTZ were reflected in the future.

SSBA-13

Current Trends in Small Business Marketing

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Abstract: According to the World Bank, around 90% of the total business and more than 50% of the employment are made up of SME. In addition, officially registered SMEs account for up to 40 percent of the gross domestic product (GDP) of developing countries. Therefore, many countries have made the development of the SME sector a priority because it contributes significantly to increasing employment and reducing poverty.

Within the framework of the "Elimination of Poverty" goal, which is one of the component goals of sustainable development, countries around the world are implementing policies to support the development of family and small and medium-sized industries, and are carrying out empowerment and support activities within the framework of various projects and programs. However, there are still cases where project participants are unable to succeed due to lack of business, marketing and management education and other factors.

Using the methodology of the International Trade Center's (ITC) competitiveness matrix, the competitiveness of Mongolia's SMEs was determined at three levels: company capabilities, business ecosystem, and macro environment. Today, one of the most important determinants of a company's capabilities is the planning and implementation of marketing activities, and one of the most common problems in operating businesses is the underutilization of marketing tools and their lack of customization.

Therefore, we have launched this research work by conducting a survey among small and medium-sized businesses in Orkhon aimag to investigate the state of their marketing activities and offer the opportunity to use modern marketing tools.

Keywords: current trends in marketing, social marketing, marketing tools, target customers, marketing planning

1. Introduction

In accordance to Article 5.1 and 5.3 of the Law on "Supporting Small and medium enterprises and services", SMEs are classified as micro, small and medium. We have selected 107 enterprises and organizations operating in Orkhon aimag as the primary research unit, 11% (12 enterprises) were medium-sized enterprises, 47% (50 enterprises) were small enterprises, and 42% (45 enterprises) is a micro-enterprise. Furthermore, in order to evaluate the marketing activities of micro and small business organizations, we conducted a quantitative and qualitative survey among entrepreneurs based on the results, and worked to determine how to adapt to modern marketing trends.

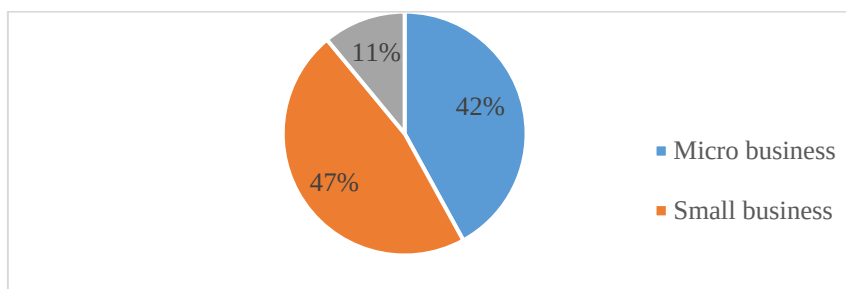


Fig.1 Micro, small and medium businesses in Orkhon aimag

34% of surveyed entrepreneurs (36 entrepreneurs) have one to five employees, 8% (9 entrepreneurs) have six to ten employees, 32% (34 entrepreneurs) have 11-20 employees, and 15% (16 entrepreneurs) have 20-50 employees. 11% (12 entrepreneurs) have 50-200 employees.

Table 1. Number of employees

№	NUMBER OF EMPLOYEES	Number of entrepreneurs	Entrepreneurs in per cent
1	1-5 employees	36	34%
2	6-10 up to employees	9	8%
3	11- 20 up to employees	34	32%
4	20-50 up to employees	16	15%
5	50-200 up to employees	12	11%

Most of the surveyed companies, 84%, have been operating for more than five years or their operations are relatively stable. On the other hand, 11% have been operating for 3-5 years, while 5% have been operating for up to 3 years.

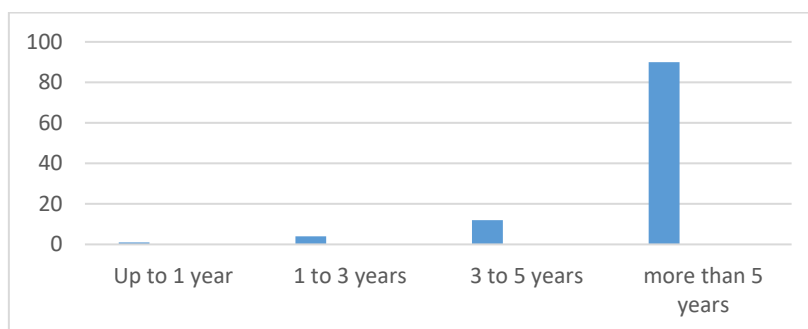


Fig.2 Years of operation

Furthermore, in order to evaluate the marketing activities of micro and small businesses, we conducted quantitative and qualitative research among business owners based on the results and determined how to adapt to modern marketing trends.

Basis of research: Most micro and small businesses do not plan their marketing activities, do not define their target customers, and do not base their research on the selection of marketing tools. It is common to observe business owners operating in Orkhon aimag by using social networks or Facebook to conduct their own advertising. Live, pictures, and sentences are also used in the advertisement. Therefore, we have conducted this study to study the marketing activities of business owners, to evaluate their knowledge of marketing tools, and to determine how these tools will affect their operations if they are used.

Therefore, we define the following objectives in this research work:

Objective:

The purpose of the study is to determine the impact of marketing tools on the activities of micro, small and medium enterprises and service providers operating in Orkhon aimag.

Research outcome

Within this goal, we set the following outcomes. These include:

- Taking a sample survey from micro, small and medium industries and service providers operating in Orkhon aimag;
- Summarize the results of the sample research and produce a brief report;
- Offer and recommend marketing tools that can be used by small businesses based on the results of the research

Impact of research: Micro and small business owners can use the results of this research directly in their activities to increase their sales revenue by correctly identifying their target customers and using appropriate marketing tools.

Scope of research: In our research, we studied 107 companies operating in Orkhon aimag.

Methodology of research: In our research, we studied the marketing activities of micro, small and medium businesses using questionnaires, and collected the results from interviews with a sample of micro and small business owners.

2. Theoretical research

Many researchers have studied the impact of marketing on small and medium-sized businesses and the importance of marketing plans in small and medium-sized businesses. Researcher Julia Cronin-Gilmore, in her research work "Exploring Marketing Strategies in Small Businesses", conducted in-depth interviews with 20 participants and studied the problems they face in their marketing activities and the possibility of determining their marketing strategies for creating and delivering customer value in the future. As a result of the research, recommendations were made to increase the marketing education of business owners, have a marketing strategy plan, and improve communication. (Cronin-Gilmore, 2012)

Researchers Anca Popescu and Adriana Tulbure in their research work "The Importance of Social Media Marketing Strategies for Small Businesses" studied how small business owners use social networks and social marketing in their operations, and determined the importance of social media marketing in business, further theoretical and It is suggested that the basic concepts should be developed and included in the marketing strategy. (Anna Popescu, 2022)

Researcher Juanico A.N., Lamostre H.L, Lopes Z.M., Nabus E.C. et al., in their research work "Marketing Strategy and Its Effect on Small Scale Business" studied how small business marketing strategies are used, and although small businesses use marketing strategies, it is important to develop and use strategies focused on determining target customers, price, distribution, and quality of goods and services. It is recommended. (Juanico A.N., 2020)

In their study "Digital Marketing Adoption and Success for Small Businesses: The Application of the Do-It-Yourself and Technology Acceptance Models", researchers Wendy Rits and Mario Wolf analyzed the behavior of small businesses when adopting digital marketing technology using the Technology Acceptance Model, Davis, 1989) and DIY (Do-it-yourself model, Wolf, M. and McQuitty, S. 2013) models, TAM directly considers the benefits of technology, while the DIY behavioral model considers digital marketing strategies capable of influencing market characteristics. It is recommended that it is suitable for use in small businesses because it determines implementation decisions.

3. Methods

In our research, we conducted a first-stage questionnaire survey involving 107 businesses operating in Orkhon aimag, and in the next stage, 20 business owners were selected and surveyed through interviews, and the results were compiled.

4. Results, Data Analysis

We received a survey with 10 questions related to the marketing activities of businesses, and the results of the survey are as follows. These include:

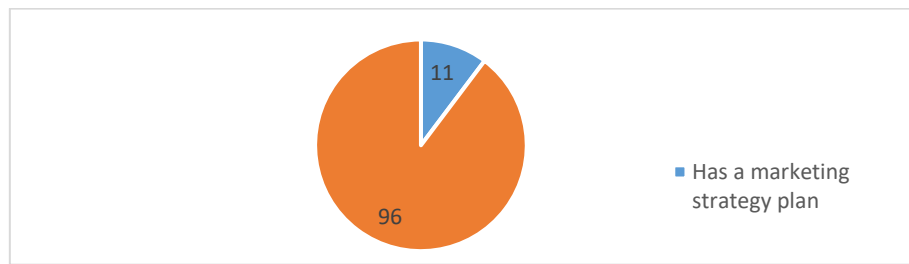


Fig.3 Does your company have a strategic marketing plan??

Only 10.3% of business owners answered that they develop a marketing strategy plan, and 89.7% answered that they do not have a marketing strategy plan. This illustrates that organizations develop strategic plans, but not specific marketing strategies.

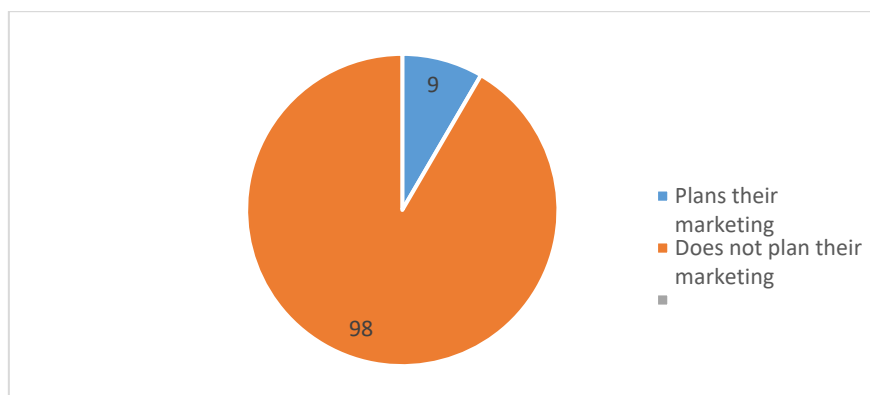


Fig.4 Does your company plan its marketing activities?

91.5% of entrepreneurs said that they plan their marketing activities, while 8.4% said that they do not. Although the majority of business owners responded that they plan their marketing activities, they did so because they considered advertising to be a marketing activity.

Table 2. Does your company utilize the following marketing strategies?

Marketing strategy	Yes	No
Pricing strategy	46	61
Promotional strategy (advertising)	98	9
Distribution strategy	16	91

Whereas 43% of the entrepreneurs answered that they utilize pricing strategy, 91.5% answered promotional strategy, and 15% answered they utilize distribution strategy, 85% answered that they do not utilize distribution strategy, 57% pricing strategy, and 8.5% promotional strategy respectively.

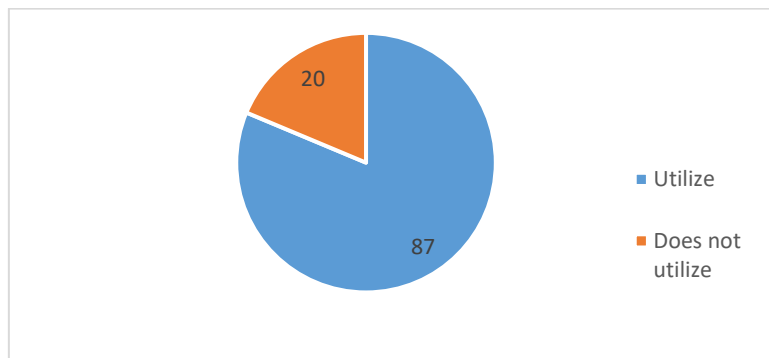


Fig.5 Does your organization use price discounts and promotions??

81.3% of business owners answered that they use price discount incentives, while 18.7% answered that they do not use price discount incentives..

Table 3. Does your organization use the following promotional methods??

Promotional methods	Yes
Price discount	46
Gifts and raffle	29
Printed advertisements	13
Website, email advertisements	24
TV advertisements	6
Newspaper, magazine advertisements	8
Social media marketing (facebook, youtube, Instagram,)	94
Podcast	2
AI	10
Influencers	4
Sponsoring	8
Quantity and price promotions	17

All entrepreneurs utilize a combination of the aforementioned promotional methods, of which, 87.8% use social marketing, 43% use discounts, 27% use giveaways and sweepstakes, 16% use quantity and value incentives, and 22.4% have their own company website.

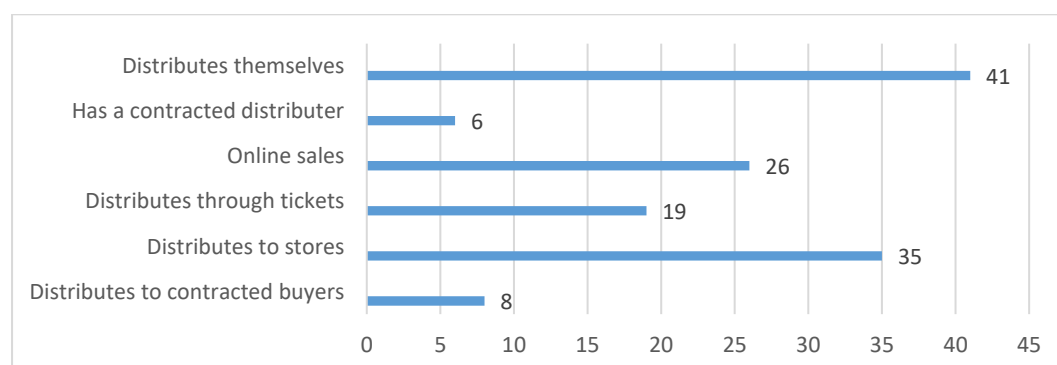


Fig.6 Does your organization use the following methods in sales?

87.8% of entrepreneurs use direct distribution channels, of which 24.3% use online channels for sales.

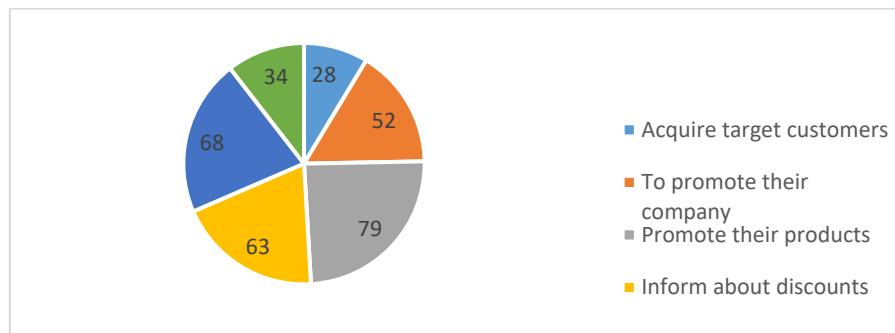


Fig.7 How does your organization use social marketing?

73.8% of entrepreneurs use social media to promote and promote their products and services, 63.% to communicate with customers, and 59% to inform about discounts. But 26% use social media to acquire target customers.

Table 4. How can your company's marketing training be evaluated??

Does your company have a marketing department or specialist?	21
Does your company's management take marketing courses?	49
Do you measure your employees' marketing knowledge?	11
Do you have theoretical knowledge of marketing strategy and planning?	32
Seeks advice from others	29

Whereas 49.8% of business owners have attended at least 1 marketing training, 30% have theoretical knowledge of marketing strategy and planning, and only 19.6% have a marketing department or specialist.

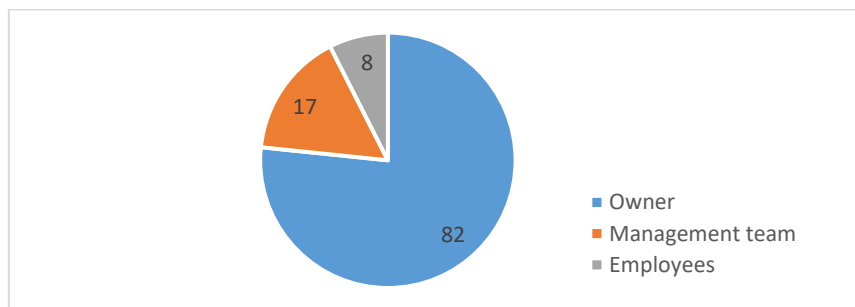


Fig.8 Who makes your organization's product, pricing, and promotional decisions??

76.6% of the surveyed entrepreneurs make their companies' marketing decisions alone.

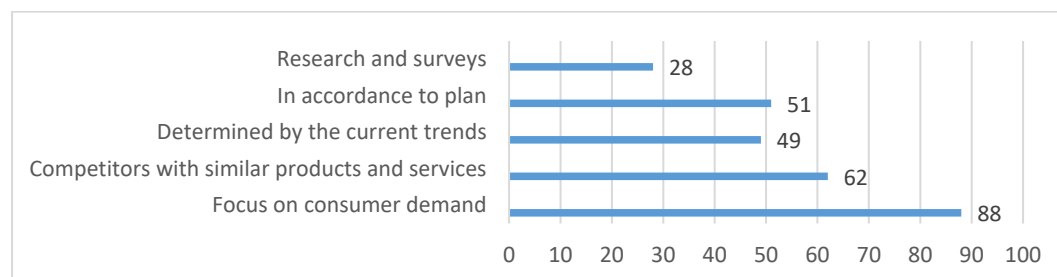


Fig.9 What does your organization base its marketing decisions on?

When making marketing (product, price, promotion) decisions, 82.2% of business owners focus on consumer demand, 58% on competitors, 26.1% on research, and 47.7% on organizational plans.

We conducted a survey with a total of 107 entrepreneurs, and for companies with more than 20 employees, they develop a marketing strategy plan, have a marketing specialist, and develop and implement marketing strategies. Even if they do not develop a special marketing strategy plan, they include their marketing strategies in the general strategic planning of their organization. However, for micro and small businesses, they operate without a marketing plan, without experts, and without a clear strategy to follow.

Therefore, we tried to understand the problem more clearly by talking to 20 entrepreneurs using qualitative research or interview method.

Question #1. Would you rate your knowledge of marketing? All 20 of our interlocutors answered that they had only heard about the question, which shows that the knowledge of micro and small business owners is inadequate.

Question #2. How do you get your customers and clients? to the question, 50% of them are found by friends and relatives, and 7 or 35% answered that they are based on advertisements.

Question #3. How do you know market trends and demand? Have you done any research? 80% answered that they had never done research, but 80% of them answered that the demand increases during certain periods and events, for example, the number of customers increases during a certain holiday.

Question #4. Have you ever consulted a professional about marketing strategies and tools? to the question of how they implement marketing, 90% answered that they had attended 1-2 trainings organized by the project program, team, or group, but they had never received advice and information from a professional on how to use it in their own business. The answer is that they advertise according to others' standards and show discounts.

Question #5. What do you know about modern marketing tools such as social media, interactive and customer relationship marketing? to the question, 100% of the interviewees answered that they advertise their activities and goods and services through the Facebook page, which they have listened to, and often do so live..

5. Discussion, Conclusion

According to the results of the research, it can be seen that medium-sized business owners have a clear understanding of marketing, reflect their marketing strategy in their strategic planning, and use marketing tools. On the other hand, micro and small business owners have a superficial understanding of marketing, they run their business in the flow, and they work without any planning.

When we started this research, we aimed to assess the current state of marketing activities of micro, small and medium businesses and determine the possibility of increasing their sales using modern tools, but during the research, it was found that our micro and small business owners lack marketing knowledge and do not use marketing in their activities. Therefore, we offer the following recommendations:

1. Conduct marketing training for micro and small-medium business owners
2. To offer appropriate marketing tools to the business owner by giving individual advice
3. To improve IT knowledge of entrepreneurs
4. To teach easy methods of conducting basic research on the market and demand for goods and services
5. It is necessary to guide entrepreneurs to cooperate in similar fields, study as a team, and plan their activities

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SSCR-14

Traditional Games Create Mongolian Mentality (Mongolian knucklebone shooting example)

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Abstract: Living in the harsh environment of nature for four seasons, Mongolians have developed the habit of being cautious and thoughtful in any natural phenomenon, and reacting to unexpected things calmly and resourcefully.

All of these psychological traits are the main characteristics of a knucklebone archers. Apart from learning to shoot, the first skill an archer must acquire is mental stability or concentration.

When shooting knuckles, many actions such as sitting, aiming, pinching, positioning, pulling, reaching, and shooting must be performed accurately and consistently using the sense of the fingertips.

Although it is an action performed by the fingers, it means that everything is measured by the senses and adjusted by the imagination.

There is a phrase in ankle archery called "thought to suppress" (санаа дарх). It is a phrase that refers to the very precise amount of raising and lowering the railing, which is several times less than a millimeter.

In order to experience this subtle dimension, it is necessary to be very focused, and then to imagine all the dimensions, and to do this action without fail all the time. Hunting and military finesse will "bloom" in a short period of time, and this is the basic skill you can get from knucklebone archers. That is why knucklebone archery is not only the main reason for its popularity among men, but it has also developed into a discipline of psychology and skill training.

The fact that archers who have been shooting for many years respect others, have humorous words in ordinary times, are generous and helpful, and after parting with good memories, they are glorified through legends and myths, which has been passed down as oral cultural heritage.

During the knucklebone archery festival, an archer should not influence others by talking too much, should not be afraid of anything, should not brag even if he hits, should be calm even if he misses, should be careful and observant, and should perform all his actions repeatedly and uniformly.

But when shooting, you should sharpen yourself the most and shoot with a warrior's fierceness. A person with a bad heart can't even shoot an arrow, his hands tremble, he can't catch his breath, he can't aim.

Senior archers will always advise you to find psychological balance and shoot from within, and after learning this, it is the basis for rational and short-term decision making.

This psychological similarity has been the main force behind the formation and strength of the knucklebone archery team.

SSOT-15

Problems of Sugar Beet Breeding and Seed Production in Mongolian-Possible Solutions

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Abstract: An analysis of the state of breeding and seed production in Mongolia is presented, highlighting the main reasons hindering the development of scientific directions and production. The strategic directions for the development of breeding and seed production in the Mongolian Federation for 2025–2035 are outlined, indicating a vector for breakthrough fundamental research. Options for improving domestic breeding and seed production are proposed to ensure Mongolia's food security for strategically important products.

Keyword: breeding, seed production, sugar beet, development strategy, food security.

SSSED-16

An Analysis of the Current State of Climate Change Literacy: A Case Study of Junior High School Students

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Abstract: In today's rapidly changing climate, understanding climate change literacy is essential for students. This study aims to assess the current state of climate change literacy among junior high school students. A total of 2,323 second-grade students from eight cities in the Inner Mongolia Autonomous Region participated in the survey. The questionnaire was developed using the Sojump platform and the survey was conducted electronically. Based on the research indicators, the students' knowledge levels of climate change literacy were categorized into four groups: 32% were rated as high, 35.5% as above average, 23.9% as below average, and 8.1% as low. The evaluation of skills, attitudes, and behaviors related to climate change literacy yielded scores of 3.49, 3.9, and 3.75, respectively, on a 5-point Likert scale. Although the overall literacy scores are above average, there remains a significant need to enhance students' understanding of climate change.

Keywords: Climate change, Climate change literacy, Knowledge, Skills, Attitudes, Behaviors

1. Introduction

Climate change is one of the greatest challenges facing humanity, and education plays a crucial role in addressing it. UNESCO emphasizes that "the strongest weapon against climate change is education," prioritizing climate change education in its initiatives. The objective of climate change education is to enhance students' understanding of the issue, thereby improving their literacy regarding climate change.

As a responsible large country, China has actively engaged in the international community's response to climate change and has implemented numerous policies related to climate change education. Notably, the "21st Century Agenda of the People's Republic of China", the "National Plan for Addressing Climate Change," and the "Policies and Actions for Addressing Climate Change in the People's Republic of China" have introduced climate change education at all levels in their policy documents. These initiatives aim to raise public awareness of environmental issues and shape students' attitudes and emotions toward the environment, thereby fostering a sense of responsibility to society. Consequently, there is a clear emphasis on changing unsustainable behaviors and lifestyles regarding the environment. Despite the implementation of climate change education for some time, research in this area remains insufficient, with most studies focusing primarily on policy advocacy and implementation. The goal of climate change education is to enhance students' understanding of climate change. Junior high school

represents a crucial period for students to develop personal thinking patterns and values, making it essential to systematically improve their climate change literacy. Therefore, this study aims to analyze the current state of climate change literacy among Junior high school students.

2. Literature Review

Research on climate change literacy, both internationally and domestically, is rooted in the concept of climate literacy.

In 2007, the U.S. National Oceanic and Atmospheric Administration (NOAA) introduced the concept of "climate literacy" in its report titled *Climate Literacy: Essential Principles of Climate Science*. This concept refers to the ability of individuals or social groups to understand climate-related issues, encompassing knowledge of climate, the impacts of human activities on climate, and the effects of climate on human life and social development.

Researcher Vladimir Lay argued that climate-literate individuals grasp the fundamental principles of the global climate system, acquire relevant scientific information, communicate effectively, and make responsible decisions. Building on this, Alenda-Demoutiez J defined climate change literacy as the knowledge and skills to comprehend the causes, effects, and solutions to climate change.

According to Zhao Feng et al., climate change literacy refers to students' understanding of climate change after receiving climate change education. This understanding includes recognizing the effects of human activities and the impact of climate change on social development, as well as students' ability to address the complex problems associated with climate change, which is defined by values, unique qualities, and key skills. It is important to emphasize that while climate change literacy research originates from climate literacy research, the two concepts are not synonymous. Climate literacy is a broader concept that encompasses a comprehensive understanding of the climate system, whereas climate change literacy focuses specifically on the phenomenon of climate change, including its causes, trends, and impacts.

Research by Leiserowitz A, Lombardi D, and Hestness et al. examined perceptions of climate change systems and global warming causes, effects, and solutions among U.S. adolescents and adults, revealing significant misunderstandings among students. In a study conducted by Jarrett and Takacs with 229 students aged 13-16, they assessed understanding of climate change concepts, such as "the difference between weather and climate," and found that students who had studied subjects like biology and chemistry could better grasp the mechanisms underlying climate change.

Chen Tao discovered that gender, age, awareness of climate change, and attention levels significantly influence students' willingness to combat climate change, based on a Binary Logistic model analysis using survey data. Xu Fuhui et al. compared measures of climate change attitudes and analyzed four aspects: cognition, emotion, intention, and behavior.

According to research on climate change and environmental protection awareness among primary and secondary school students in the People's Republic of China, over 50% of the more than 4,000 surveyed students lacked a sufficient understanding of climate-related terminology, while 59.5% acknowledged the importance of climate change. Additionally, more than 80% expressed readiness to respond to climate change through daily practices such as saving water and electricity.

A survey conducted by Wang Xueqi and Chen Jin involving 1,539 students aged 12-14 in Xiamen, Shenzhen, and Ningbo, China, revealed that coastal adolescents exhibited low levels of climate science knowledge but had a moderate awareness of climate change and mitigation measures.

Overall, previous research has primarily focused on assessing students' understanding and knowledge of climate change, along with their knowledge, attitudes, and behaviors.

However, there is a lack of comprehensive research that considers all four aspects: knowledge, skills, attitudes, and behaviors related to climate change. This highlights the need for further exploration of students' concepts in this regard and the development of a comprehensive methodology for their enhancement. Therefore, this study proposes evaluating not only students' knowledge but also their skills, attitudes, and behavioral levels, in order to identify effective strategies for their development.

3. Methodology

3.1 Design Of The Research

This study employed a questionnaire method and collected data electronically. The survey questionnaire was developed based on previous studies, including the Yale University Climate Change Communication Project and research on U.S. middle school students' perceptions of climate change causes. The questionnaire, which consists of 52 questions, aims to assess students' climate change literacy across four categories: knowledge, skills, attitudes, and behaviors. Each question is designed to allow only one response. The knowledge section includes 8 questions, with 1 point awarded for each correct answer and 0 points for incorrect answers. The skills section contains 16 questions, the attitude section includes 12 questions, and the behavior section has 16 questions. These sections use a 5-point scale (1 - Strongly Disagree to 5 - Strongly Agree) to measure responses. Students' climate change literacy was evaluated based on their scores in these four areas: knowledge, skills, attitudes, and behaviors.

Table 1. Students' climate change literacy level (score)

Level	Climate change knowledge	Climate Change skills, attitudes, and behaviors
	Quantification (total score)	Quantification (average score)
Higher (positive)	[6; 8]	[4; 5]
Above average	[4; 6]	[3; 4]
Below average	[2; 4]	[2; 3]
Down (negative)	[0; 2]	[1; 2]

3.2 Study group

A total of 2,323 second-grade secondary school students from eight cities in the Inner Mongolia Autonomous Region participated in the survey. Among them, 64% (1,485) were from rural areas, and 36% (838) were from urban areas. The sample comprised 51% male students (1,170) and 49% female students (1,153). Regarding age distribution, 14-year-olds made up 73% of the participants (1,696), followed by 13-year-olds at 18% (418), and 15-year-olds at 9% (209). Additionally, 87% (2,020) reported practicing green travel in their daily lives, while 13% (303) did not.

Table 2. General information of study participants

General information		Quantity(N)	Percent(%)
Residence	Urban	838	36
	Rural	1485	64
Gender	Male	1170	51
	Female	1153	49
Age	13	418	18
	14	1696	73
	15	209	9
Green travel	Yes	2020	87
	No	303	13

3.3 Procedure of data collection

A panel approach was employed to translate a questionnaire aimed at assessing students' climate change literacy into Mongolian. The translation team included doctoral and master's students specializing in geography and education. The initial Chinese-to-Mongolian translation was refined through team discussions and consultations, resulting in an improved final version.

3.4 Statistical analysis

Data from the electronic survey were analyzed using IBM SPSS Statistics 27, a software package for quantitative social research. Reliability and factor analyses were conducted to assess the questionnaire.

4. Findings

4.1 Findings on students' levels of knowledge in climate change literacy

Two questions were developed for each of the four aspects of climate change knowledge: concepts, causes, consequences, and management. According to the survey results, 62% (1,445) answered correctly regarding the concept of climate change, while 38% (878) selected the incorrect answer, with some students confusing climate change with global warming. Concerning the primary cause of climate change, 60% (1,402) correctly identified human activities, while 40% (921) incorrectly attributed it to volcanic eruptions and ozone depletion. Regarding the consequences of climate change, 54% (1,244) had a correct understanding, though some students mistakenly believed that global temperatures would rise uniformly. Only 44% (1,025) answered correctly on climate change management, indicating that students' overall knowledge about climate change is inadequate.

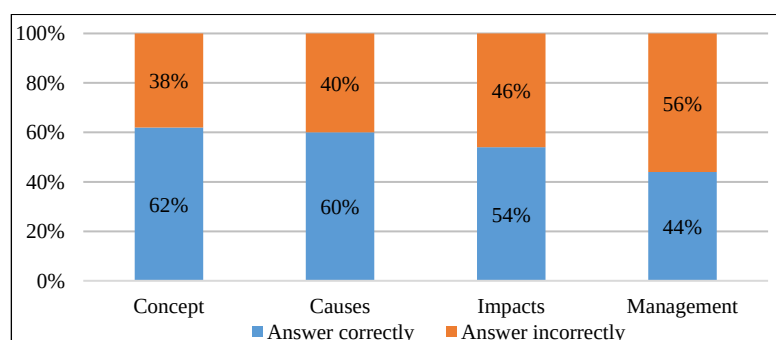


Figure 1. Students' knowledge of climate change

In terms of climate change knowledge, 32% of all students surveyed were rated as above average, and 35.5% as average, while 23.9% were rated as below average, and 8.1% as well below average.

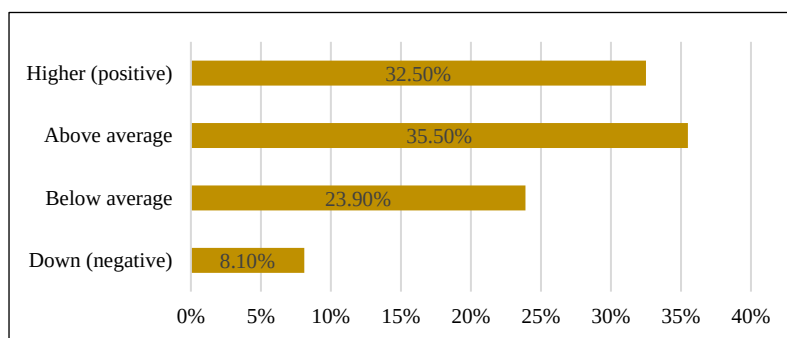


Figure 2. Level of climate change knowledge among students

4.2 Findings on students' levels of skills, attitudes, and behaviors in climate change literacy

The factor analysis conducted to assess the validity of the research questions categorized the 44 items into three groups, excluding those related to knowledge of climate change. The reliability analysis results indicated a Cronbach's Alpha ($\alpha = 0.976$), suggesting that the research questions effectively reflect the current state of students' climate change literacy. This provides statistical confirmation that these questions can be used to evaluate the situation.

Table 3. Factor analysis and mean scores of students' skills, attitudes, and behaviors toward climate change

Criterion		Mean	Standard deviation	Validity	Cronbach's Alpha (a)
Climate change skills	Skills to acquire and process information	3.43	.840	.848	.972
	Critical thinking skills	3.39	.846	.853	
	Problem solving skills	3.55	.817	.853	
	Communication and exchange skills	3.58	.804	.842	
Climate change attitudes	Cognitive component	3.99	.807	.841	.919
	Affective component	3.78	.714	.756	
	Behavioral component	3.93	.718	.801	
Climate change behaviors	Mitigation behaviors	3.79	.804	.930	.956
	Adaptation behaviors	3.70	.885	.914	
KMO and Bartlett's Test					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy					.976
Bartlett's Test of Sphericity		Approx. Chi-Square			38243.711
		df			120
		Sig.			.000
Cronbach's Alpha (For 44 questions)					.976

According to these criteria and results, the average indicators of students' skills, attitudes, and behaviors regarding climate change are all above average. However, not all are satisfactory when considering the pressing issues facing society today. Therefore, there is a need for measures aimed at enhancing students' skills to engage with climate change issues, as well as promoting their active participation and response.

4.3 Findings on difference analysis of students' climate change literacy

In terms of climate change knowledge, urban students scored higher on average than rural students. However, no significant differences were found with respect to gender and green travel.

Table 4. Differences in students' knowledge of climate change

		N	Mean	Standard deviation	t	p
Gender	Male	1170	4.41	1.996	.196	.845
	Female	1153	4.40	1.839		
Residence	Urban	838	4.75	1.902	6.484	.000
	Rural	1485	4.21	1.903		
Green travel	Yes	2020	4.42	1.910	.826	.409
	No	303	4.32	1.982		

p<.05

Additionally, the analysis of students' skills, attitudes, and behaviors regarding climate change by gender yielded the following results.

Table 5. Gender differences in students' skills, attitudes, and behaviors regarding climate change

	Gender	N	Mean	Standard deviation	t	P
Climate change skills	Male	1170	3.525	.829	2.436	.015
	Female	1153	3.447	.710		
Skills to acquire and process information	Male	1170	3.454	.900	1.658	.098
	Female	1153	3.396	.774		
Critical thinking skills	Male	1170	3.444	.895	3.345	.001
	Female	1153	3.327	.789		
Problem solving skills	Male	1170	3.587	.873	2.026	.043
	Female	1153	3.519	.754		
Communication and exchange skills	Male	1170	3.614	.844	2.066	.039
	Female	1153	3.545	.759		
Climate change attitudes	Male	1170	3.848	.695	-4.281	.000
	Female	1153	3.961	.578		
Cognitive component	Male	1170	3.941	.856	-3.548	.000
	Female	1153	4.059	.750		
Affective component	Male	1170	3.723	.782	-3.795	.000
	Female	1153	3.835	.633		
Behavioral component	Male	1170	3.879	.782	-3.711	.000
	Female	1153	3.989	.642		
Climate change behaviors	Male	1170	3.746	.847	-.212	.832
	Female	1153	3.753	.776		
Mitigation behaviors	Male	1170	3.771	.845	-.951	.342
	Female	1153	3.803	.759		
Mitigation behaviors	Male	1170	3.714	.908	.665	.506
	Female	1153	3.689	.862		

p<.05

From the table above, it is evident that boys performed better on average than girls in critical thinking, problem-solving, and communication skills related to climate change. Conversely, girls outperformed boys in cognitive, emotional, and behavioral attitudes, with these differences being statistically significant. However, no gender differences were observed concerning students' skills to acquire and process information about climate change and their behaviors.

The results of the analysis of students' skills, attitudes, and behaviors regarding climate change in residence are presented below.

Table 6. Residence-based differences in students' skills, attitudes, and behaviors regarding climate change

	Residence	N	Mean	Standard deviation	T	p
Climate change skills	Urban	838	3.596	.819	5.042	.000
	Rural	1485	3.424	.74		
Skills to acquire and process information	Urban	838	3.536	.895	4.676	.000
	Rural	1485	3.362	.801		
Critical thinking skills	Urban	838	3.493	.897	4.501	.000
	Rural	1485	3.325	.809		
Problem solving skills	Urban	838	3.652	.86	4.3	.000
	Rural	1485	3.498	.786		
Communication and exchange skills	Urban	838	3.703	.84	5.434	.000
	Rural	1485	3.511	.774		
Climate change attitudes	Urban	838	4.026	.677	6.749	.000
	Rural	1485	3.835	.611		
Cognitive component	Urban	838	4.152	.822	6.919	.000
	Rural	1485	3.914	.785		

Affective component	Urban	838	3.871	.746	4.607	.000
	Rural	1485	3.726	.69		
Behavioral component	Urban	838	4.055	.745	6.133	.000
	Rural	1485	3.866	.693		
Climate change behaviors	Urban	838	3.881	.827	5.825	.000
	Rural	1485	3.676	.795		
Mitigation behaviors	Urban	838	3.935	.814	6.721	.000
	Rural	1485	3.703	.786		
Mitigation behaviors	Urban	838	3.596	.819	4.510	.000
	Rural	1485	3.424	.74		

p<.05

According to these results, students' skills to acquire and process information about climate change, think critically, solve problems, communicate and exchange ideas, as well as their cognitive, emotional, and behavioral attitudes toward mitigating and adapting to climate change, showed that the average performance of urban students was higher than that of rural students, with statistically significant differences.

The analysis of students' skills, attitudes, and behaviors regarding climate change in relation to green travel reveals the following results.

Table 7. Differences in students' skills, attitudes, and behaviors toward climate change in relation to green travel

	Green travel	N	Mean	Standard deviation	t	p
Climate change skills	Yes	2020	3.534	.769	8.151	.000
	No	303	3.166	.727		
Skills to acquire and process information	Yes	2020	3.479	.832	8.275	.000
	No	303	3.067	.804		
Critical thinking skills	Yes	2020	3.435	.837	7.374	.000
	No	303	3.057	.832		
Problem solving skills	Yes	2020	3.601	.806	7.25	.000
	No	303	3.237	.816		
Communication and exchange skills	Yes	2020	3.621	.8	6.618	.000
	No	303	3.305	.774		
Climate change attitudes	Yes	2020	3.939	.639	6.791	.000
	No	303	3.673	.617		
Cognitive component	Yes	2020	4.033	.801	5.177	.000
	No	303	3.777	.814		
Affective component	Yes	2020	3.811	.715	5.678	.000
	No	303	3.563	.667		
Behavioral component	Yes	2020	3.972	.709	6.711	.000
	No	303	3.678	.724		
Climate change behaviors	Yes	2020	3.815	.797	10.161	.000
	No	303	3.317	.784		
Mitigation behaviors	Yes	2020	3.85	.788	10.125	.000
	No	303	3.363	.78		
Mitigation behaviors	Yes	2020	3.769	.869	9.56	.000
	No	303	3.257	.864		

p<.05

Based on the above results, students' skills to acquire and process information about climate change, think critically, solve problems, and communicate effectively—as well as their cognitive, emotional, and behavioral attitudes toward reducing and adapting to climate change—show that the average scores of students who engage in green travel in their daily lives are higher and statistically different from those of students who do not. This highlights the importance of green travel.

5. Conclusion

Regarding students' knowledge of climate change literacy, 32% were rated as high and 35.5% as above average, while 23.9% were rated below average, and 8.1% were rated as low. The general scores for skills, attitudes, and behaviors related to climate change literacy were 3.49, 3.9, and 3.75, respectively, on a 5-point Likert scale. These findings highlight the need for actions to deepen students' understanding of climate change, enhance their skills to engage with it, and promote their active participation and response.

The average score of boys was higher than that of girls in terms of students' skills, while girls scored higher than boys regarding their attitudes. Therefore, it is advisable to implement programs and methods tailored to their interests to engage boys' attitudes in this area and enhance girls' abilities.

There is a need to focus specifically on climate change literacy for rural students and to enhance the equitable distribution of educational resources between urban and rural areas.

Green travel in everyday life plays a crucial role in developing students' climate change literacy. Therefore, schools should actively promote the concept of green travel and foster these habits in students through hands-on activities, ultimately encouraging action against climate change aimed at enhancing awareness and skills.

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HSMS-17

Research On the Academic Inheritance of The Traditional Performance of Hilgasan Khuur

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Abstract: Shen Kuo, a scholar in the Northern Song Dynasty, wrote in *Mengxi Bi Tan*: "The Hilgasan Khuur follows the Han Dynasty, and the music still complains about the Chanyu." This is the earliest record of the term Hilgasan Khuur in history books. Hilgasan Khuur refers to bowed string instruments made of Hilgasan and carried by northern nomadic peoples. It originated from the Xiongnu and has been passed down to this day. The traditional Mongolian bowed string instruments such as the Morin Khuur, Khorchin Choor, Chahar Hiil, and OirdsYekel all belong to this category.

As a bowed string instrument that has been passed down for thousands of years and carries a profound historical and cultural heritage, the inheritance and protection of the traditional playing method of the Hilgasan Khuur faces the impact and challenges of the development of modern music. This article summarizes the artistic characteristics of the four tuning methods, four playing methods and related traditional repertoires of the four instruments of the Hilgasan Khuur. By analyzing the history and current situation of the academic inheritance of the Hilgasan Khuur, it reveals the advantages and challenges of the academic inheritance. It emphasizes that under the background of national policies and the protection of intangible cultural heritage, promoting the academic inheritance of the traditional playing method of the Hilgasan Khuur has far-reaching significance for protecting the musical diversity of the Hilgasan Khuur and promoting national traditional culture.

Keywords: Hilgasan Khuur; traditional playing method; artistic characteristics; academic inheritance

The term Hilgasan Khuur was first recorded in "*Mengxi Bi Tan*" by Shen Kuo, a scholar in the Northern Song Dynasty, which means a Hu people's musical instrument made of Hilgasan. It originated from the Xiongnu and has been passed down to this day. It generally refers to bowed string instruments made of Hilgasan and carried by northern nomadic peoples, such as Morin Khuur, Horchin Choor, Chahar Hiil, and OirdsYekel. Among them, the modern performance techniques of Morin Khuur art are relatively mature and have been passed down from folk traditions to the world's professional stage. In contrast, the traditional performance methods of instruments such as Horchin Choor, Chahar Hiil, and Oirds Yekel have been marginalized and are on the verge of extinction. In the 21st century, intangible cultural heritage inheritance and protection boom, the traditional performance methods of Hilgasan Khuur should be inherited and developed along with the modern performance techniques of Morin Khuur, showing its musical charm and artistic value.

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The maturity of the modern performance techniques of Morin Khuur art is inseparable from the hard work and reform of several generations of artists, but the important role played by academic inheritance cannot be ignored. Drawing on the academic inheritance experience of the modern performance techniques of the Morin Khuur, and adopting the academic inheritance model and professional training, is the basis for the systematic, comprehensive, standardized and effective inheritance and development of the traditional culture of the Hilgasan Khuur.

1. Artistic characteristics of traditional performance of Hilgasan Khuur

The Hilgasan Khuur is divided into four types of instruments: Morin Khuur, Horqin Choor, Chahar Hiil and Oirds Yekel. Their traditional performance methods also have different tuning methods, special performance techniques and related traditional repertoires, forming a system of artistic characteristics with diverse styles of Hilgasan Khuur. They have both related commonalities and different personalities. Since the 1960s, famous Morin Khuur players such as Sangduren, Alatan Cang, Buren, Bai Dawa and other predecessors have conducted theoretical research on the traditional performance of Hilgasan Khuur, and obtained important theoretical results such as three tuning methods and five performance methods, which established the theoretical research foundation of Hilgasan Khuur. On this basis, the author sorted out and analyzed the artistic characteristics of the existing traditional performance of Hilgasan Khuur and expounded my own views.

1.1 Four tuning methods:

The research of predecessors such as Sangduren, Altansang, Buren, Bai Dawa pointed out that there are three tuning methods for Hilgasan Khuur: positive fourth, positive fifth and reverse fourth, and reverse fifth tuning is not included. The reason is that reverse fifth tuning is rarely used and has no traditional repertoire support, so it does not constitute an independent tuning method. In fact, reverse fifth tuning is not only widely used, but also has many traditional repertoires that have been passed down to this day. It is undoubtedly one of the traditional tuning methods of Hilgasan Khuur. Therefore, Hilgasan Khuur should be divided into four traditional tuning methods: positive fourth tuning, positive fifth tuning, reverse fourth tuning and reverse fifth tuning. The commonalities and differences between them are reflected in positive and reverse, fourth and fifth.

In the positive fourth tuning method, the bass string is on the right, the treble string is on the left, and the double strings present a pure fourth relationship. There are also names such as Choor Hug (Hug means tuning or tuning), Erut Hug, Zhuonen (black mane horse) Hug, Bag (small) Hug in folk music. This tuning method is used in traditional music such as Horqin Choor and OirdsYekel "Zhongon".

The positive fifth tuning method has the bass string on the right, the treble string on the left, and the two strings present a perfect fifth relationship. There are also names such as Chahar Hug, Khuur Hug, Urielte (five-year-old horse) Hug, Yihe (big) Hug, Luu (dragon, the fifth of the zodiac) Hug, Ariga (yang) Hug, and Mongolia Hug in folk music. Chahar Hiil and OirdsYekel use this tuning method for other traditional music except "Zhuonen".

The reverse fourth tuning method has the bass string on the left, the treble string on the right, and the two strings present a perfect fourth relationship. In folklore, there are also names such as Borjigin Hug, Solgei (reverse) Hug, Bilige (yin) Hug, etc., which are the common tuning methods used by modern Morin Khuur.

In the reverse fifth tuning method, the bass string is on the left, the treble string is on the right, and the two strings present a perfect fifth relationship. The folk name needs to be verified. The Morin Khuur uses this tuning method to play or accompany long folk songs. Mongolia has many traditional repertoires played with reverse fifth tuning.

1.2 Four playing methods:

Based on the four tuning methods of four instruments, four left-hand characteristic playing techniques, namely, Choorplaying method, Builalt playing method, Torghut playing method and top finger playing method, were formed.

Choor playing method, also known as Choor tuning Khuur playing method, is a special playing technique of Khorchin Choor. The thumb, index finger, ring finger and little finger are used to press the strings, and the middle finger is not used in traditional performance. The thumb only presses a fixed position four degrees above the open string of the inner string with the side, which produces a natural harmonic and forms a double tone with the melody sound of the second position of the outer string. According to the needs, the thumb harmonic or the inner open string bass is selectively used to form a Choor sound effect with the melody sound of the outer string. The index finger and the ring finger use the first joint of the inner finger to press the string. Since the index finger and the ring finger are used most frequently and run through four positions, the slide and change of position performance of the index finger and the ring finger in Khorchin Choorperformance is very rich. Because the little finger is short, it is pressed with the fingertip, and the usage rate is not high.

The Builalt(the sound of camel) playing method is a special playing technique of the Chahar Hiil and the Morin Khuur. In the past, the Morin Khuur industry generally referred to it as the traditional harmonic playing method. The translation is not accurate and has a fixed name, so it is hereby directly translated as the Builalt playing method. This playing method was originally the traditional playing method of the Chahar hiil. According to Mr. Buren, it was Mr. Bagan who successfully transplanted this playing method to the anti-fourth Borjigin tuned Morin Khuur. The Builalt playing method uses double strings on the second and third positions of the Chahar hiil and Morin Khuur, which can produce a two-part Choor sound effect by combining real sound with natural harmonics, double natural harmonics, or natural harmonics with artificial harmonics. The monophonic melody is played using this playing method, which can naturally produce two-tones of different natures from 2 to 11 degrees, without the need to write a two-part melody. The Builalt playing method uses the thumb, index finger, ring finger and little finger to press the strings, and the middle finger is not used in traditional performance. The thumb has a fixed position for pressing the strings. It only presses the fifth degree above the open inner string (the third position is played at the octave above the open inner string), producing natural harmonics, forming a double tone with the melody sound of the outer string. When the melody sound finger moves on the inner string, the thumb does not press the string. There are two ways to press the string with the index finger: fingertip pressing and fingernail root pressing. Choose according to personal playing habits. The ring finger uses the fingertip to press the string. When playing in the second position, the ring finger is the main finger for pressing the string, so the glissando of the ring finger is one of the characteristics of the Berurat playing method. The little finger presses the string with the fingertip. The little finger glissando playing of the third position of the outer string of Chahar hiil is one of the characteristics of this playing method.

The Torghut playing method is a characteristic playing method of OirdsYekel with a perfect fourth tuning and a single position. When using the index and ring fingertips to play natural harmonics at the positions of the minor third, perfect fourth, and perfect fifth above the inner open string, the second joint of the finger touches the natural harmonics of the outer string to form a double natural harmonic tidal sound effect, imitating the sounds of animals such as horses, camels, deer, cattle, sheep, and birds. The little finger often presses the natural harmonic position of the fifth degree above the outer open string, forming a same degree relationship with the natural harmonic of the fourth degree of the ring finger above the inner open string, enriching the expressiveness.

The top finger playing method is widely used in the playing techniques of Chahar hiil, OirdsYekel and Morin Khuur. Use the base of the index and middle finger nails, the thumb, ring finger and little finger tips to play the top string, and the little finger presses the inner string from the bottom of the outer string to press the string. The top finger playing method is used in Morin Khuur, Chahar hiil and OirdsYekel. It is used in combination with Morin Khuur Builalt playing method, Chaharhiil Builalt playing method and Oirat Yekel Torghut playing method to enrich the expressiveness. With the maturity of modern playing techniques of Morin Khuur, the top finger playing method can not only play traditional repertoires, but also difficult solos, concertos and foreign transplanted repertoires.

1.3 Traditional repertoire:

There are many traditional repertoires passed down by the Hilgasan Khuur. Take the Horqin Choormaster Seraxi as an example. Documents record that he played and recorded as many as 130 repertoires. There are heroic epics in the form of self-playing and self-singing, such as "Xun Yan" and "Hero Gunagan", narrative folk songs such as "Four Seasons" and "Togtohk", solo long and short folk songs such as "Zhuseerei", "Ulagai River", "Wind in the Sky", "Gada Meiren", traditional repertoires such as "Puan Mantra", "Victory Order", "Uran hajin tovch", and ensemble repertoires such as "Bayin", "Nanhua", "Modrema", etc.; Chahar hiil traditional repertoires include Mongolian court music Aser suite repertoires "Aduqin Aser", "Taibusi Aser", "Gule Chagan Aser", "Aduqin Youdebai Aser", etc.; Wei La The traditional music pieces played in the fifth degree of Teyekele include "Camel Racing", "Deer Calling", "Tripping Little Yellow Horse", etc.; the traditional music pieces played in the fourth degree include "The Prince's Black Stallion", "Hanggai Zhuonen", "Horse at the Post Station", etc.; the long and short tune folk songs played on the Morin Khuur tuned in the fourth degree include "Cool Hanggai", "Duridemule Saihan", "Senjidma", etc.; the traditional Aser music pieces played on the Morin Khuur tuned in the fifth degree include "Tripping Flowered Horse", "Camel Bell", "Horse with Two Manes", "Flowing Eweng River", etc.

The author believes that the traditional repertoire of the Hilgasan Khuur cannot be limited to the past tense. In addition to the traditional repertoire of the Hilgasan Khuur and traditional long and short folk songs, the creative repertoire with traditional music forms, styles and playing methods as the main body should be included in this category. For example, the solo piece of OirdsYekel tuned in the fourth degree, "The Magical Black Mane Horse", created by Mr. Buren, a national inheritor of the Morin Khuur music on the Intangible Cultural Heritage List, has developed the traditional OirdsYekel repertoire of just tens of seconds into a three-part, four-minute solo piece, and the traditional playing method of OirdsYekel, which was limited to playing in two positions, has been developed to playing in four positions. Its style characteristics are closely centered on the traditional music form of OirdsYekel, raising the art of Oirat Yekel from folk art to a professional level, which is extremely groundbreaking. The song "Ujumchin Aser" created by the famous Morin Khuur player Mr. Zhadamba is a creative piece, but whether it is the title, music form, melody style or playing method, it fully reflects the traditional Aser suite style. Therefore, it is only a matter of time before such creative repertoires are integrated into the traditional repertoire of Hilgasan Khuur.

The traditional tuning method, playing method and traditional repertoire of Hilgasan Khuur all have unique regional styles and are an indispensable and important part of my country's traditional music culture. The traditional playing method of Hilgasan Khuur not only contains complex playing techniques, but also is a kind of cultural memory inheritance.

2. The inheritance and current situation of the Hilgasan Khuur academic school

Before the founding of New China, the art of HilgasanKhuur had always been inherited and developed among the people. After the founding of the People's Republic of China, with the support of national education policies, the art of Morouqin relied on school education and gradually moved towards a modern and professional development path.

2.1. The inheritance and development of the Hilgasan Khuur academic school

The inheritance of the academic school of Hilgasan Khuur in China began with the establishment of the Art Department of Inner Mongolia Normal University (now the Music College of Inner Mongolia Normal University) in 1954. Te Menghe became the first professional teacher of MorinKhuur in China and compiled the first professional teaching material of MorinKhuur in 1956. Textbook", since then MorinKhuur art has officially become one of the majors in music schools, opening up a new world for the academic inheritance of Morinouqin art, and training students such as Li Xingwu and Kan Chaozhong. In 1957, Horqin Choormaster Seraxi served as a professional teacher of Horqin Choorin Inner Mongolia Art School. He trained students such as Sanduyuan, Bai Dawa, Qi Aotegenbayar, Xirimo, and Meiliqige, etc., and became Horqin's leading teacher. A solid foundation has been laid for the inheritance and development of Choor and MorinKhuur art. As seniors such as Qi Aotegenbayar, Xirimo, Aobao, Buhe Nasheng, Xie Tiezhuang, Na Huhe, Zhang Quansheng and other seniors have successively joined the ranks of professional teachers of MorinKhuur in different colleges and universities, the academic school of MorinKhuur art has been inherited. The system has been gradually improved, modern performance technology has gradually matured, and batches of outstanding performance and teaching talents have been cultivated. After the reform and opening up, the inheritance of Horqin Choorart academy gradually declined, which was in sharp contrast with the flourishing modern morinKhuur art, and was once on the verge of being lost.

The academic inheritance of MorinKhuur art has gradually spread from Inner Mongolia Normal University and Inner Mongolia Art School to Hohhot Nationalities University, the Affiliated Secondary School of Inner Mongolia Arts University, Hohhot Art School, Hohhot Vocational and Technical College, Baotou Normal University Conservatory of Music, Inner Mongolia University of Science and Technology Art and Design College, Baotou Art Vocational School, Inner Mongolia Nationalities Preschool Teachers College, Ordos Institute of Technology, Ejin Horo Banner Qi-Baoligo International MorinKhuur School, Inner Mongolia Normal University Erlian International College, Xilin Gol Vocational College Qi-Baoligo International Morin Khuur College, Xiliingol Vocational and Technical College Mongolian Language, Culture and Art Department, While 24 colleges and universities in the region are developing, including Ning Normal University, Ulanqab Art School, Inner Mongolia University for Nationalities, Horqin Vocational College of Art, Hulunbuir College of Music, Hulunbuir Vocational College, Chifeng College, Hetao College, and Xing'an Vocational and Technical College, the region's 14 colleges and universities outside the region, including Minzu University of China, Southwest University for Nationalities, Northwest University for Nationalities, Xinjiang Arts Institute, Xinjiang Arts Institute Affiliated Middle School, Northwest University for Nationalities, Harbin Normal University, Heilongjiang Vocational College for Nationalities, Heilongjiang Vocational College for Art, Harbin Petroleum Institute, Jilin Art Institute, Baicheng Normal College, Shenyang Conservatory of Music, and Hebei Normal College for Nationalities, are also training postgraduate students in the field of Morin Khuur. Today, Minzu University of China, Northwest University for Nationalities,

Inner Mongolia Normal University, Inner Mongolia Arts Institute, and other colleges and universities also train postgraduate students in the field of Morin Khuur.

In 2006, Mr. Buren, the national inheritor of the intangible cultural heritage of Morin Khuur music, was hired by the School of Music of Inner Mongolia Normal University and became the first master's supervisor in the field of Morin Khuur performance and theoretical research in the field of Chinese ethnic minority art. He trained 12 master's students in Morin Khuur, including Jin Hai, Zhang Jinsheng, Ma Xi, Wuliji Hexige, Hai Rihan, Wuyun Bilige, Dabulaga, Sansar, etc. He taught the traditional performance methods of Hilgasan Khuur instruments such as Horqin Chpoor, Chahar hiil, and OirdsYekele in a comprehensive and systematic manner for the first time. He is an important figure and the only thread of the cross-century inheritance of the traditional performance method of Hilgasan Khuur. In 2013, Mr. Bu Lin was hired by Inner Mongolia University of Arts as the instructor of the "Horqin Choor Inheritance Class" and trained 7 Horqin Choorperformance talents.

In addition, social forces running schools is also an important part of the inheritance of the Hilgasan Khuur art academy. Mr. Na Huhe founded the "Inner Mongolia Huhe Morin Khuur Art Academy" in 1999, and trained many Morin Khuur performance and teaching talents, making great contributions to the vigorous development of Morin Khuur art.

After 70 years of development, the academic inheritance of modern Morin Khuur art has formed a scientific and standardized teaching system. The development of Morin Khuur art today is inseparable from the academic inheritance platform. In comparison, the academic inheritance of traditional performance methods such as Horqin Choor, Chahar hiil, and OirdsYekele is still in its infancy.

2.2 The current status of the academic inheritance of the traditional performance method of the Hilgasan Khuur

In order to understand the current status of the academic inheritance of the traditional performance method of the Hilgasan Khuur, the author communicated with teachers from 10 undergraduate colleges with Morin Khuur majors in the Inner Mongolia Autonomous Region. It was learned that although these colleges all have professional skills courses for Morin Khuur, teaching modern performance techniques and repertoires of Morin Khuur, with regard to the traditional performance method of the Hilgasan Khuur, except for the "Traditional Performance Method of the Hilgasan Khuur" course specially opened by Inner Mongolia Normal University, other colleges do not have such courses specifically. Among them, the Inner Mongolia Academy of Arts and Inner Mongolia University for Nationalities teach the traditional performance method of Korchin Chooras an elective course, but the traditional performance methods of Chahar hiil and OirdsYekel are not within the scope of teaching of the nine colleges.

The course of "Traditional Performance of Hilgasan Khuur" is difficult to carry out in various music schools. The author believes that there are several reasons: First, there is a shortage of teachers who can fully master the traditional performance of Hilgasan Khuur. In the 21st century, when the art of Hilgasan Khuur is becoming more mature and developed, the vision of Hilgasan Khuur professional teachers is more focused on the modernization of Hilgasan Khuur art, ignoring the importance of the inheritance and protection of the traditional performance of Hilgasan Khuur, resulting in insufficient attention to the traditional performance of Hilgasan Khuur, and even contempt, resulting in a situation where teachers who can master the traditional performance of Hilgasan Khuur are insufficient. Second, it is necessary to prepare a variety of musical instruments. Students majoring in Hilgasan Khuur have purchased Hilgasan Khuur, but asking them to prepare four musical instruments at the same time, such as Korchin Choor, Chahar hiil, and OirdsYekele, will increase the economic burden on students' families. Third, audio-visual materials are scarce. Audio-visual materials are an important reference for the inheritance

of the traditional performance of Hilgasan Khuur today. It is necessary to collect audio and video materials of the traditional performance of Hilgasan Khuur as comprehensively as possible, and it is imperative to ensure that the traditional performance of Hilgasan Khuur does not lose its traditional performance style. Fourth, there is a lack of teaching materials for the traditional performance of the Hilgasan Khuur. The writing of teaching materials for the traditional performance of the Hilgasan Khuur should be based on the audio-visual materials of the previous performances, and the traditional repertoires played by the previous performances should be recorded in the form of teaching materials or collections for use in practical teaching. However, there is currently no special teaching material for "Traditional Performance of the Hilgasan Khuur". Therefore, the author believes that the lack of teaching staff and teaching tools are the fundamental reasons that limit the academic inheritance of the traditional performance of the Hilgasan Khuur.

The reason why Inner Mongolia Normal University can offer the course "Traditional Performance of Hilgasan Khuur" is that the teachers of the Morin Khuur major received the systematic inheritance of Mr. Buren's traditional performance of the Hilgasan Khuur during their postgraduate studies at the university and fully mastered the traditional performance of the Hilgasan Khuur. In addition, the university funded the purchase of instruments and opened courses, which enabled this course to be successfully carried out and completed the academic inheritance teaching purpose of the traditional performance of the Hilgasan Khuur. The 2016 version of the training program of the School of Music of Inner Mongolia Normal University offers an elective course "Traditional Performance of Hilgasan Khuur" for undergraduate students majoring in Morin Khuur, with a total of 2 semesters, 32 hours and 2 credits. The 5th and 6th semesters are collectively taught, and students learn the Morin Khuur top finger performance and four traditional performance methods and traditional repertoires of four instruments, namely, the Builalt performance, the Korchin Choor performance, the Chahar hiil Builalt performance, and the OirdsYekel Turbed performance. From 2018 to 2024, a total of 39 students majoring in Morin Khuur took the course "Traditional Performance of Hilgasan Khuur". Through teaching, it is found that students majoring in Morin Khuur can quickly master the playing methods of various instruments and the style characteristics of traditional repertoires by using the existing Morin Khuur playing techniques and skills, and reach a certain level of performance in a short period of time, completing the expected teaching goals. These 39 students can independently play 3-5 traditional repertoires on Morin Khuur, Korchin Chaoer, Chahar hiil, and OirdsYekele. Students who master the traditional playing method of Hilgasan Khuur not only broaden their knowledge scope and improve their playing skills, but also master a variety of playing methods and styles, providing a variety of possibilities for the diversification of social practice and further study and employment. In order to enable students to more fully master the traditional playing method of Hilgasan Khuur, the 2024 undergraduate training program of the School of Music of Inner Mongolia Normal University will adjust the course of "Traditional Playing Method of Hilgasan Khuur" to an elective course of 4 semesters, 64 hours and 4 credits, and change the start of learning from the junior year to the start of learning from the freshman year, so that students can be exposed to the traditional playing method of Hilgasan Khuur earlier, so that they can participate in social practice activities earlier and accumulate stage experience.

As the builder of the course "Traditional Hilgasan Khuur Performance", the author still has many problems in the improvement of teaching methods, the collection and arrangement of audio-visual materials, the compilation of teaching materials and the construction of mixed teaching, which still need to be improved and perfected. In addition, the inheritance of the traditional Hilgasan Khuur performance method is difficult to form a large-scale and popularized method by relying on individuals and one or two colleges. Therefore, the traditional culture of the traditional Hilgasan Khuur performance method can only have a prosperous future if the construction of the HilgasanKhuur teaching staff

is accelerated, various colleges and universities strongly support it, and the whole society participates.

3. The importance of academic inheritance of the traditional performance method of Hilgasan Khuur

The traditional performance method of Hilgasan Khuur has always been inherited among the people. Why should it be included in the syllabus of music schools for academic inheritance? The following analysis summarizes its importance.

3.1 Broaden students' knowledge scope and improve practical performance ability

The first beneficiary of the academic inheritance of the traditional performance method of Hilgasan Khuur is students. Students majoring in Morin Khuur can use existing performance techniques and music theory knowledge to quickly and standardizedly master the traditional performance methods, regional styles and traditional repertoire performance essentials of different instruments such as Morin Khuur, Khorchin Choor, Chahar hiil, and OirdsYekele. Students who master a variety of traditional performance methods have a better understanding of the differences in performance methods, performance styles, and interpretation of traditional repertoires, and have more comprehensive theoretical knowledge.

Completely mastering the traditional performance method of the Hilgasan Khuur can promote students' stage practice performance ability. Compared with students who only know the modern performance method of the Morin Khuur, students who master the traditional performance method of the Hilgasan Khuur can not only play modern works of the Morin Khuur, but also play the traditional performance methods and repertoires of four instruments with different tunings, styles and methods. The styles they master are diverse and their technical skills are more comprehensive, enabling students to develop more comprehensively. Therefore, the academic inheritance of the traditional performance method of the Hilgasan Khuur plays an important role in the professional development of students.

3.2 Academic inheritance makes the traditional performance of Hilgasan Khuur move towards professional development

The academic inheritance of the traditional performance of Hilgasan Khuur is an important way for it to move from folk art to professional development. The professional situation of Morin Khuur art is inseparable from the development of academic teaching. The traditional performance of Hilgasan Khuur should learn from the experience of Morin Khuur art development and combine college education to achieve the transformation from folk inheritance to professional development. The Morin Khuur art, which is also a folk inheritance, has stepped onto the world stage from the yurt in just a few decades, and its modern performance technology is quite mature. Nowadays, there is a world of difference between professional performers and amateurs in terms of performance technology. Therefore, the academic inheritance of the traditional performance of Hilgasan Khuur and its professional development are the fundamental guarantee for its development in today's society.

Students majoring in Morin Khuur can use their existing performance skills and music theory knowledge to quickly master the various traditional performance methods and style characteristics of Hilgasan Khuur, and can learn and play different styles of music in a very short time. Their mastery speed and performance ability are unmatched by folk inheritance. Furthermore, the professional transformation of the traditional performance method of

Hilgasan Khuur will give it more possibilities for innovation and development. Therefore, the academic inheritance of the traditional performance method of Hilgasan Khuur will make it more standardized and high-quality inheritance and development.

3.3 Inherit, protect and promote excellent traditional culture

The traditional performance method of the Hilgasan Khuur is an important part of Mongolian traditional culture. It includes a variety of tuning methods, playing methods, regional styles and traditional repertoires. The content is rich and colorful, reflecting the production and living styles and cultural background of different regions in the northern Xinjiang culture. Unfortunately, there are few elements of the traditional performance method of the Hilgasan Khuur used in modern Morin Khuur performances, and too many have been lost. The traditional performance method of the Hilgasan Khuur not only broadens students' knowledge scope and improves their practical performance ability, but also plays a vital role in the diversification of music creation, the diversification of performance forms, and the life of cultural customs. The works that combine the elements of Horqin Choor epic music, Chahar hiil Aser music, and Oirds Yekel Tuerhut music with the traditional and modern music elements of the Morin Khuur must be more colorful. Incorporating the traditional performance method of the Hilgasan Khuur into large-scale performance forms such as the ASEAN ensemble and Aser suite will return traditional music to its original appearance, convey the original style characteristics, and enable contemporary people to watch, appreciate, and experience the charm of traditional music that has been passed down for thousands of years. Therefore, the academic inheritance of the traditional Hilgasan Khuur playing method, which inherits, protects and promotes the excellent national traditional culture through the majority of Morin Khuur professional students, is an important way to inherit and develop the traditional Hilgasan Khuur playing method in today's technological era.

4. Conclusion

The traditional performance of the Hilgasan Khuur is an important part of Mongolian traditional cultural and artistic treasures. It includes four instruments, namely, the Morin Khuur, the Horqin Choor, the Chahar hiil, and the Oirds Yekel. It also has four tuning methods, four playing methods, and related traditional repertoires. It is a complete system of bowed string instruments with the same origin and divergence, forming an art form with diverse styles. Its valuable artistic wealth, such as tuning methods, playing methods, and regional styles, should be reasonably applied in the modern technological era. We cannot only focus on the prosperity and development of modern Morin Khuur performance methods, and marginalize traditional performance methods because they lag behind the development of the times. We should systematically explore, study, and reuse the traditional performance methods of the Hilgasan Khuur to make it conform to the current technological era and the intangible cultural heritage protection environment.

Drawing on the successful experience of the academic inheritance of modern Morin Khuur art to inherit and develop the traditional performance method of Hilgasan Khuur is an important way to effectively inherit and develop it in the 21st century. Only by combining the academic inheritance of professional colleges and universities can the traditional performance method of Hilgasan Khuur be more standardized and developed in the long run. Using Morin Khuur professionals to inherit the traditional performance method of Hilgasan Khuur can not only broaden students' knowledge and improve their stage practical performance ability, but also improve the traditional performance method inherited from the folk to a professional level, so that the traditional performance method of Hilgasan Khuur can be guaranteed to be inherited with high quality. Accelerating the construction of the teaching staff of the traditional performance method of Hilgasan Khuur

and teaching aids such as audio-visual materials and textbooks, encouraging and supporting music colleges and universities to offer the course of "Traditional Performance Method of Hilgasan Khuur", and making the traditional performance method of Hilgasan Khuur more professional. The inheritance and development of the traditional performance method of Hilgasan Khuur is the difficulty currently faced by the academic inheritance of the traditional performance method of Hilgasan Khuur. Solving these problems and promoting the academic inheritance of the traditional performance method of Hilgasan Khuur is imminent.

Inheriting the traditional performance method of Hilgasan Khuur is not conservative, but to skillfully apply the traditional cultural essence of the traditional performance method of Hilgasan Khuur in modern life. It is also a practical action to implement General Secretary Xi Jinping's important expositions on the inheritance and protection of cultural heritage, vigorously promote the excellent traditional Chinese culture, and build the cultural brand of northern Xinjiang. We have lost too much of the traditional culture of HilgasanKhuur and inherited too little. If we continue like this, we will be ashamed of the excellent traditional culture that has been passed down for thousands of years and the ancestors who have passed it down from generation to generation. In the era of superb and mature performance techniques of modern Morin Khuur art and the environment of the spread of the intangible cultural heritage protection craze, it is particularly important to inherit, protect, develop and promote the traditional performance method of Hilgasan Khuur. It is also the mission and responsibility that professionals engaged in Hilgasan Khuur cannot shirk.

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HSMS-18

Research on the Notation of Folk Urtiin Duu

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Abstract: This paper deeply explores the notation of Mongolian folk Urtiin Duu, an intangible cultural heritage, and focuses on how to scientifically and rationally record their unique artistic characteristics. The study points out that the simplified notation has the advantages of being easy to learn and flexible in key changes, and is the preferred choice for notating folk Urtiin Duu. In view of the difficulty in recording the free rhythm of folk Urtiin Duu, a method of grouping a group of sound forms based on the combination of the internal rhythmic rhythm and speed changes is proposed to solve the problem of recording non-equal rhythms. For the notation of the core techniques of the decorative elements of folk Urtiin Duu, such as Tashilaga and Nogula, the concept of the music theory symbol system is changed to accurately express them in order to protect the artistic essence of folk Urtiin Duu. In addition, the importance of the backing words in the singing of folk Urtiin Duu is emphasized, and it is advocated to record the backing words in a comprehensive manner to protect the traditional charm of folk Urtiin Duu.

This paper comprehensively considers the selection of musical notation, the processing of rhythm, the application of decorative symbols and the standardized recording of filler words, aiming to provide a more scientific and reasonable musical notation strategy for the educational inheritance of folk Urtiin Duu, and promote the inheritance, protection and development of this precious cultural heritage.

Keywords: folk Urtiin Duu; musical notation; rhythm; decorative symbols; filler words;

As a cultural treasure of the nomadic peoples of the Mongolian Plateau, folk Urtiin Duu have gone through a long historical accumulation from the ancient Xiongnu to the Mongolians, and carry the collective memory and cultural genes of the various ethnic groups in the northern grasslands. As a living oral cultural heritage, with its long and smooth melody lines, non-equally divided free rhythms, colorful decorative techniques, and "more tunes and fewer words" style, it constitutes a distinctive "Mongolian singing method" and is known as the "living fossil" of grassland music. Since the founding of New China, benefiting from the country's attention and protection of the cultural heritage of ethnic minorities, a series of important documents and research results have been published, including "500 Mongolian Folk Songs", "Collection of Chinese Folk Songs·Inner Mongolia Volume", "Khorchin folk Urtiin Duu", "Appreciation of Mongolian Folk Songs", "Selection of Urtiin Duu Teaching Repertoires", "Folk Urtiin Duu Teaching Repertoires", "Folk Singing Methods of Urtiin Duu", "Style Areas and Repertoires of Mongolian folk Urtiin Duu in Inner Mongolia", and "Proceedings of the Mongolian Symposium of Urtiin Duu", which have greatly enriched the research and dissemination of folk Urtiin Duu and promoted the inheritance and development of folk Urtiin Duu.

However, the notation of folk Urtiin Duu still faces many challenges, especially in the context of teaching and inheritance. The article "Exploring the Basic Elements of Mastering Singing Skills in the Teaching of "Urtiin Duu" by Siqin Bilige, Associate Professor of the

School of Music of Inner Mongolia Normal University and a teacher of Urtiin Duu "In 1980, N. Norobbanzid and Yi Chogbadrah of Mongolia worked together to collect, organize and notate folk Urtiin Duu, and compiled teaching materials for "Oh-Hi" training....". This achievement has promoted the teaching of "Urtiin Duu". Tonglaga, director of CCTV's "Folk Songs·China", in "A Brief Discussion on the Inheritance and Protection of Mongolian folk Urtiin Duu" The statement that "Baoyin Deliger mainly adopts the so-called 'sight-teaching' method in the teaching of the 'Urtiin Duu Class', but at the same time he also attaches great importance to the traditional 'oral transmission and heart-to-heart teaching method, and skillfully combines the two. 'Sight-teaching' is necessary for vocal teaching in professional music schools, and is also an important sign of the formalization and systematization of vocal teaching" reveals the important position of textbooks in the teaching of folk Urtiin Duu, and emphasizes the importance of combining scientific analysis with traditional oral transmission and heart-to-heart teaching. However, the famous scholar Morjiu in his article "The Unforgettable Yerguksin" pointed out that "how to use scientific analysis and correct training methods to quickly master the singing skills of Nugula is the core issue in the teaching of Urtiin Duu and the famous scholar Keqinfu in his article "On the Call for the Singing Art of Urtiin Duu" pointed out that "although the teaching of Urtiin Duu vocal art in the autonomous region has a history of 40 years, there is still no unified and standardized Urtiin Duu teaching syllabus and unified scientific and standardized teaching materials..." and wondered "Why not compile a complete and scientific Urtiin Duu vocal teaching material that progresses from the shallow to the deep and step by step?" "Also pointed out that although folk Urtiin Duu have a long history of inheritance, the problem of lacking a unified and standardized teaching syllabus and scientific and systematic teaching materials is still prominent, calling for the compilation of scientific training methods and systematic teaching materials for Nugula singing skills. In view of this, the notation of folk Urtiin Duu is particularly critical and urgent. It is necessary not only to overcome the difficulty of how to accurately record its artistic essence in theory, but also to find a notation method that adapts to its complex characteristics in practice. How to accurately capture and record the unique artistic expression of folk Urtiin Duu has become an urgent problem to be solved.

Teacher Mulan's "A Brief Discussion on the Standardization of Urtiin Duu and Its Singing Art Terms" and Mr. Lv Hongjiu's "Exploration of Urtiin Duu Notation" have laid the foundation for this field, but in practice, more sophisticated and systematic notation rules are still needed to adapt to the complexity of folk Urtiin Duu. The difficulty of notation lies in how to choose the most appropriate notation method, accurately depict the rhythm of free rhythm, perfectly convey the delicate emotions of ornaments, and comprehensively record the unique charm of the supporting words.

Based on the urgent need for the inheritance and education of folk Urtiin Duu, this paper conducts an in-depth discussion on the difficulties in notation of folk Urtiin Duu, aiming to explore a set of notation methods that can both reflect the artistic characteristics of folk Urtiin Duu and adapt to the needs of teaching practice. Through detailed analysis and empirical research, it is hoped that a more scientific and standardized notation guidance can be provided for the notation arrangement and teaching inheritance of folk Urtiin Duu, and to promote the effective inheritance and innovative development of this intangible cultural heritage in the modern education system under the background of the new era.

1. Selection of musical notation

By referring to several Mongolian folk song collections and folk Urtiin Duu textbooks, we know that there are three methods for notating folk Urtiin Duu: simple notation, line notation, and simple-line comparison notation. The "500 Mongolian Folk Songs" published in 1979, the "Chinese Folk Songs Collection • Inner Mongolia Volume", a key project of the National Art Research Project published in 1989, and the "Inner Mongolia Mongolian

Urtiin Duu Style Area and Typical Repertoires", a key project of the Inner Mongolia Cultural and Art Gallery Construction Plan published in 2023, are recorded using simple notation. The "Urtiin Duu Teaching Repertoire Selection" of the National Music Series of the School of Arts of Inner Mongolia University published in 2006 and the "Urtiin Duu Teaching Repertoire Selection" published in 2014 are recorded using line notation. The "Introduction to the Art of Singing folk Urtiin Duu" published in 2011 is recorded using simple-line comparison. Among them, song collections and textbooks using simple notation account for the vast majority. In the modern context of mature and developed music theory, which notation is more suitable for notating folk Urtiin Duu and can meet the actual needs of the majority of folk Urtiin Duu inheritors? The author believes that it is the simplified notation.

Simplified musical notation is easy to learn and widely used. The solfeggio method can be sung more accurately. Since the key signature can be changed at will and the content of the score will not change, it can be sung in any mode. In the teaching of folk Urtiin Duu, it is common to choose different modes to sing according to different vocal conditions when singing a song. Take the Xilin Gol folk Urtiin Duu "Little Yellow Horse" as an example: Mr. Haazab, the king of Urtiin Duu, sang in A flat, and other singers sang in different modes such as E flat, F, F sharp, G, etc. This is a very normal phenomenon. Using the simplified musical notation method, only one record is needed to meet the needs of all inheritors to sing in any mode.

So, what key should be used to record "Little Yellow Horse" with line score? Most people cannot sing it in the A flat key sung by Mr. Haazab. It is complicated and messy to record it in 5 modes, and record the same song 5 times. What if there is another person singing in D and C? Therefore, from the perspective of the need for singing in a different key, the use of line score to record folk Urtiin Duu cannot meet the actual needs of singing in different modes.

In summary, the line score notation method is mainly limited to the needs of the user group for changing keys. According to the needs of different groups for singing in a different key, the use of simplified score notation for folk Urtiin Duu is the most scientific and practical. The notation can refer to the results of "500 Mongolian Folk Songs" and other achievements. The key signature is not marked. Only the song range and 1= (do is equal) are marked on the score, so that users can fill in the key signature suitable for their own singing, which is convenient for the majority of folk Urtiin Duu inheritors to read the score easily, and can also meet the actual needs of the inheritors to sing in different modes.

2. Recording of rhythm

"The Chohilga (rhythm) of Urtiin Duu singing art is the basis for giving Urtiin Duu life rhythm. In the notation of folk Urtiin Duu, it is the most difficult to record the free rhythm of non-equal rhythm as accurately as possible, and it is also the most troublesome thing for folk Urtiin Duu notators. After reading many documents, experts and scholars have basically discussed the rhythm of folk Urtiin Duu in terms of singing speed and time value, but there is no document on how to accurately record the rhythm of folk Urtiin Duu for reference. This is also the main reason why the notation of folk Urtiin Duu has not been standardized and broken through in terms of rhythm recording.

Mr. Lv Hongjiu's "Exploration on Notation of Urtiin Duu" is one of the few research results on notation of folk Urtiin Duu. In the article, Mr. Lv Hongjiu analyzed the problems existing in the recording and subdivision of long notes in the published notation of folk Urtiin Duu, and put forward his own views on the setting of rhythm unit beat value, the division of measures and the quantification of time signature, which provided a lot of inspiration for the author's research.

Although the rhythm of folk Urtiin Duu is broad and free, it is not random, irregular, or unbridled. Its internal rhythm is very rigorous. The author believes that the rhythm of

folk Urtiin Duu can be divided into two parts: those that can be evenly beat and those that cannot be evenly beat. Often, the speed of two adjacent rhythms will change from fast to slow. Mr. Haazab once said: "The rhythm of folk Urtiin Duu is like riding a horse", which made many scholars enter into infinite reverie. The author understands this sentence as the combination and alternation of fast and slow rhythm speeds. Mr. Da Sangbao and Mr. Geerlezabu's article "Three Elements of Mongolian Urtiin Duu Singing Art" mentioned that "We can carefully understand from the lyrics 'There are not valleys on the grassland, stretch and retract the reins and walk carefully' that the Chohilga of Urtiin Duu singing art is not static provides a reliable basis for the author's understanding.

The rhythm of folk Urtiin Duu can be divided into several groups (musical sections) according to the lyrics and decorations, and recorded in the form of a group of notes. The number of beats in each group can be one beat, two beats, three beats or four beats. Taking the "Little Yellow Horse" sung by Mr. Hazab as an example, the song consists of 7 phrases. The 6 beats of the first sentence are formed by the combination of three groups of notes of 2+1+3, the 9 beats of the second sentence are formed by the combination of five groups of notes of 1+3+1+1+3, the 6 beats of the third sentence are formed by the combination of four groups of notes of 1+1+3+1, the 6 beats of the fourth sentence are formed by the combination of two groups of notes of 3+3, the 8 beats of the fifth sentence are formed by the combination of five groups of notes of 2+1+2+1+2, the 7 beats of the sixth sentence are formed by the combination of five groups of notes of 1+1+2+2+1, and the 5 beats of the seventh sentence are formed by the combination of three groups of notes of 1+1+3. The whole song can basically be sung and beat, but the third beat of the first sentence and the first beat of the seventh sentence are special. The singing time is longer than one beat, but less than one and a half beats. After careful consideration, the author decided to record it as one beat, slow down the beat speed, and combine the fast and slow beat speed to solve this problem (the score example is attached, please refer to Mr. Haazab's recording materials).

The fast and slow changes in the beat speed and the group sound recording method have provided many conveniences for the author's Urtiin Duu notation, and basically solved the problem of difficulty in rhythm recording subdivision. Through actual teaching experiments, students can quickly and accurately grasp the inner rhythm of folk Urtiin Duu, which proves the feasibility of this method.

3. The use of decorative symbols

The colorful "Nugula" is the soul of the folk Urtiin Duu art. Experts and scholars have different interpretations of its meaning. In the article "A Brief Discussion on the Standardization of Terminology of Wujitingduo and Its Singing Art, Teacher Mulan carefully sorted out and standardized the five decorative small Nogula, such as soft Nogula, exquisite Nogula, percussion Nogula, plucked Nogula (Tashilaga Nogula), and the top-style Nogula, and the six singing techniques and the form analysis term big Nogula (musical phrase), such as laryngeal Nogula, mandibular Nogula, upper Nogula, small tongue Nogula, nasal Nogula, and chest Nogula, and made appropriate explanations. The author understands that "Nugula" is a general term for the core nouns of folk Urtiin Duu, and it is also a special term with multiple meanings. Mr. Da Sangbao and Mr. Gereljabu explained in the article "Three Elements of Mongolian Urtiin Duu Singing Art" that "pushing out a note of breath or emitting continuous tremors through the root of the tongue and the back of the palate is called Dashilaga (i.e., Tashilaga). Using different tones to make a small Nogulaga or decorate Nogulaga is a decorative sound (i.e., Nogula). The author understands that Tashilaga decoration is a repetitive decoration of a note, and Nogula decoration is an alternating decoration of different notes (2 notes). Next, the author will talk about using existing music theory decorative symbols to record the core decorative

techniques of folk Urtiin Duu such as Tashilaga, Nogula, Hayalaga, Saqilaga, and glissando.

3.1 Recording of Tashilaga.

Tashilaga decoration generally repeats a note 3-5 times, and is flexible to use. Using the "∞" symbol to mark this decoration in the score will greatly reduce the repeated notes on the score, reducing the burden of notation and reading. Mr. Haazab used Tashilaga decoration 28 times in singing "Little Yellow Horse". If the symbol is not used, then at least 84 notes of Tashilaga decoration must be recorded, which will not only increase the difficulty of reading the score for the inheritor, but also lose the flexibility.

3.2 Recording of Nogura

Nogura is divided into big Nogura and small Nogura. Big Nogura refers specifically to the phrase, and small Nogura refers specifically to the singing technique of ornaments. This article describes the notation symbols of Nogura decorations with different alternating tones.

Nogura decorations are divided into two types: upward alternating Nogura and downward alternating Nogura. Upward alternating Nogura is based on the main tone, alternating to the high tone, and finally falling on the high tone. It is recorded with the "∞" symbol. Downward alternating Nogura is based on the main tone, alternating to the bass, and finally falling on the main tone or bass. It is recorded with the "∞" symbol. The two symbols are very similar, so it is necessary to distinguish them clearly when noting and reading the score, so as not to make mistakes in the alternating direction and lose the original style characteristics. Nogura decorations generally alternate 2-3 times, with the characteristics of flexible use. The two adjacent tones of the pentatonic mode are often repeated alternately without sound isolation (pentatonic mode). For example: Do-Re, Re-Mi, Mi-Sol, Sol-La, La-Do are used alternately upwards, and Do-La, La-Sol, Sol-Mi, Mi-Re, Re-Do are used alternately downwards. Mr. Haazab used the Nogura decoration 4 times in singing "Little Yellow Horse", 3 of which were alternating upwards and 1 was alternating downwards. The use of symbols for Nogura decoration can also reduce the repetition rate of notes, reduce the burden of reading music, and can be used flexibly.

3.3 Recording of Hayalaga, Saqilaga and glissando.

Hayalaga can be understood as a downward glissando, which appears after the high note at the end of a phrase, like throwing something down from a high place, with a large span, and the final landing point pitch is unclear, and is recorded with "↘". Mr. Hazab used this technique at the end of the 3rd and 6th phrases of "Little Yellow Horse".

Saqilaga can be understood as an upward glissando, which appears before the high note at the beginning of a phrase, like throwing something up from a low place, with a large span, and the starting pitch is unclear, and is recorded with the "↗". Mr. Hazab used this technique at the beginning of the 2nd phrase of "Little Yellow Horse".

Glissando is divided into upward glissando and downward glissando. The notation symbol of upward glissando is the same as that of Saqilaga, and the notation symbol of downward glissando is the same as that of Hayalaga. The degree is generally between 4 and 5 degrees, and the position of use is not fixed. Mr. Hazab used the downward glissando technique 7 times in singing "Little Yellow Horse".

So, how to distinguish Hayalaga, Saqilaga, upward glissando and downward glissando in the score? 1. By the position of use. 2. Whether the pitch of the starting point and the landing point is clear. 3. The span of the range.

3.4 Recording of appoggiatura.

In his article "Exploration on the Notation of Urtiin Duu", Mr. Lü Hongjiu pointed out that "for many years, the notation of Urtiin Duu has been characterized by the indistinguishability of the main notes of the melody and the decorative flourishes". The author understands that Mr. Lü Hongjiu's description of the use of the main notes and appoggiatura is not rigorous.

Appoggiatura is another kind of record of up and down glissando, which is divided into front appoggiatura and back appoggiatura, which is different in the front and back position of the main tone, and plays the role of glissando between 2-3 degrees, with clear starting and landing pitches. The duration of appoggiatura is small, and plays a decorative role.

The backbone tone is the main framework of the melody, while the grace notes such as Tashilaga, Nogula, Hayalaga, Saqilaga, glissando, and appoggiatura are the colorful decorations of folk Urtiin Duu, which are flowers on the framework and play a beautifying role. Therefore, it is particularly important to distinguish between backbone notes and decorative symbols.

Mr. Lü Hongjiu advocates that "in order to relatively 'fix' the melody of the Urtiin Duu on the score, it is necessary to adjust the original music theory and add necessary explanations. The author believes that using the existing knowledge of musical notation to change the theoretical concept of musical ornaments to serve the complex notation of folk Urtiin Duu and make the notation of folk Urtiin Duu songs closer to the original is a practical proof of the application of Western music theory in Chinese music. In fact, this is how the author notated folk Urtiin Duu.

5. The importance of filler words

Folk Urtiin Duu have the characteristics of "more tunes and fewer words". A song often has only a few lyrics, and most of its dragging tunes are filled with filler words such as a, ha, ai, hai, i, hi, etc. that have no subjective meaning. The usage rate of filler words is much higher than that of the main lyrics. Take "Little Yellow Horse" as an example: in the first paragraph of the song with 7 phrases and 80 notes, only 6 lyrics occupy 9 notes, and the remaining 71 notes are completed by 15 filler words repeatedly used to fill the dragging tune, which is enough to prove the important role of filler words in the singing of folk Urtiin Duu.

There are strict rules for the use of filler words. If the rules are not followed, the traditional charm of the language of folk Urtiin Duu will change or lose the traditional regional style. For example, when the melody of Xilin Gol folk Urtiin Duu goes up, i or hi is used, and when the melody goes down, o or ho is used. The hayala decoration is used to ou, and the sachilaga decoration is used to ai. Filler words will also change when they encounter the tashilaga decoration. For example: when singing the filler word a with the tashilaga decoration, the actual singing effect will become a, ha, ha, and when singing the filler word ai with the tashilaga decoration, the actual singing effect will become ai, hai, hai. But not all filler words are decorated with tashilaga decorations. For example: i, hi, ou, za, eng, nia and other filler words will not be used at the same time as the tashilaga decoration.

The existing folk Urtiin Duu notation results do not pay enough attention to the backing words, so it is rare to see folk Urtiin Duu song scores with accurate and complete backing words. It is not difficult to record the backing words of folk Urtiin Duu, and there is no technical content. It is just repetitive and cumbersome, but the normative and practical value that the backing words bring to the inheritance of the traditional style of Urtiin Duu art cannot be ignored. Therefore, recording the full backing words is an indispensable and important part of protecting the traditional charm of folk Urtiin Duu. Recording the full

backing words as accurately as possible is the key to ensuring the correct inheritance of the traditional singing charm of folk Urtiin Duu.

6. Conclusion

As a precious intangible cultural heritage of the world, the inheritance and teaching of folk Urtiin Duu must have standards, especially the inheritance and teaching in modern colleges must be supported by textbooks, so the improvement of folk Urtiin Duu notation is crucial to the inheritance and protection of this traditional art form.

Through comprehensive consideration, the simplified notation method has become the preferred choice for recording folk Urtiin Duu because of its practicality, ease of learning and high adaptability to singing in tune. In view of the challenge of the free rhythm of folk Urtiin Duu, a flexible rhythm grouping strategy should be adopted, combined with actual singing practice, to accurately capture its internal rhythm, so as to achieve a notation effect that is both standardized and flexible. The systematic application of decorative symbols, especially the accurate recording of decorative techniques such as Tashilaga and Nogula, is the key to protecting the artistic characteristics of folk Urtiin Duu. In addition, as an indispensable element in Urtiin Duu singing, the standardized recording of the lining words has an important value in protecting the traditional charm and style characteristics.

Our country's protection of intangible cultural heritage is becoming more and more perfect, requiring holistic and systematic protection. As a world intangible cultural heritage project, the notation of folk Urtiin Duu needs to record its internal rhythm, decorative elements and backing words in detail to fully reflect the original appearance of the song and meet the requirements of integrity and systematization. Therefore, the notation of folk Urtiin Duu needs to integrate traditional wisdom and modern music theory, and fully record its core essence through scientific and reasonable notation methods, so as to realize the inheritance, protection and innovative development of this world intangible cultural heritage.

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SSOT-19

The relationship between temperament and occupation (On the example of Gyals Center employees)

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Abstract- Temperament is a persistent psychological trait that determines how a person thinks, feels, and communicates. Because it reflects decision-making and behavior, knowing a person's abilities and characteristics plays an important role in choosing a career. Therefore, the relationship between temperament and occupation was investigated using the temperament test developed by G. I. Eysenck, including doctors and administrative staff of the Gyals Center laboratory. A total of 91 employees participated in the survey, and 88 valid pages were digitized.

According to the results of the research, 53% of employees are Ambiverts, 36% Introverts, and the remaining 11% Extroverts. In the administration, the frequency of employees with extrovert type was high, while there were more employees with ambivert and introvert types in the laboratory. In terms of neuroticism, 73.8% of employees have low, average or balanced mental functioning, and 26.2% have unbalanced mental functioning. It is believed to be related to age.

Key words: laboratory, temperament, occupation, extrovert, introvert, ambivert

SSBA-20

Performance Based Financing System and Its Implementation and Results (On the Example of The Regional Diagnostic and Treatment Center in Orkhon Aimag)

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Abstract; Within the framework of the “Governance Strengthening Project in Mongolia” financed by the European Union from the Ministry of Finance of Mongolia, compliance with the priorities of social and economic development, efficient, sustainable and ethical management of public resources, delivery of public services, modern and future public finance. In order to create a budget and financial system aimed at meeting the needs, approving the reform strategy and medium-term plan of the Budget and Financial Management (BFM) in line with the “Sustainable Development Goals 2030” and the 2016-2020 Operational Plan of the Government was implemented. In addition to ensuring budget stability through medium and long-term budget planning, policy and budget coordination, evaluation and analysis of the results and efficiency of budget spending, and improving discipline, there are still requirements for accounting and reporting according to international standards.

In September 2022, the Standing Budget Committee of the Parliament organized a discussion on the topic of “Fiscal Policy Reform” and discussed the problems of budget and financial reform. The 2023 budget project is in line with the goals of the project by including 1) intensification of the public financing system based on the quality, performance, and results of services in the health and education sectors, and then introducing it to other sectors 2) performance-based civil service salary reform. Budget reforms in the education sector are being implemented in stages after 2022. Therefore, we have shown in this article that it is important to determine the performance, results, and progress of this budget reform.

Keywords: Result-based management, performance-based budgeting, traditional budgeting or input- budgeting

1. Introduction

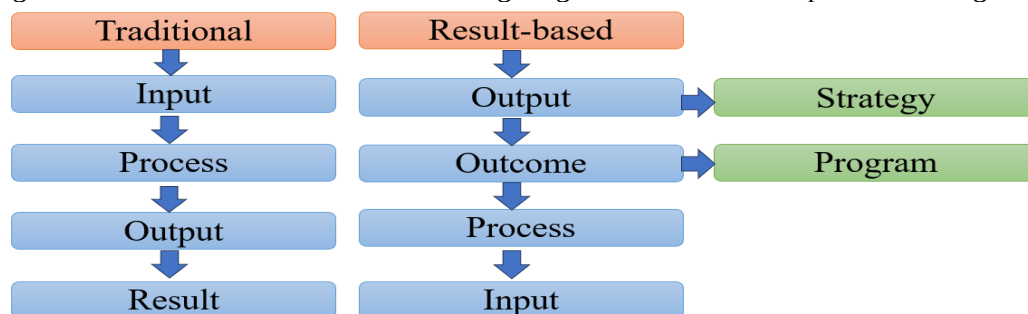
The purpose of this research is to study the implementation, results, and future trends of the performance-based financing system and budget reform of the Regional Diagnostic and Treatment Center in Orkhon aimag.

To achieve this primary goal, we have set the following objectives:

- To study the budget planning, allocation, utilization, and legal regulations based on traditional inputs.
- To study the current status of results-based budget reform and implementation

- To study the methods and approaches for further implementation

Fig.1 Difference between results-based budgeting and traditional or input-based budgeting



Brief introduction of Regional Diagnostic and Treatment Center in Orkhon Aimag. The first hospital was established in Erdenet khoroo of Bulgan aimag by the Resolution No. 105 of the Council of Ministers of the Mongolian People's Republic dated July 13, 1973 and the Resolution No. 149 of the Ministry of Health of 1973. Subsequently, in order to provide quality and equitable healthcare services to people and create a customer-friendly environment, the Regional Diagnostic and Treatment Center (hereinafter referred to as the RDTC) was expanded by the Resolution No. 56 of the Government of Mongolia in 2008.

2. Research Section

2.1. The Financial Statement

The financial statement for 2020-2023 has been prepared in accordance with the “Instructions on Accounting in Budgetary Institutions” approved by Order No. 388 of the Minister of Finance in 2006.

Table. 1. Indicators of Financial statement /thousand tugriks/

Indicators	2020	2021	2022	2023	Changes in 2020-2021	Changes in 2021-2022	Changes in 2022-2023
TOTAL CURRENT ASSETS	1,302,370.4	7,429,559.6	7,869,852.8	8,293,482.1	6,127,189.2	440,293.2	423,629.2
CASH	-	856.1	2,613,477.3	227,708.7	856.1	2,612,621.2	(2,385,768.6)
ACCOUNTS RECEIVABLE	69,287.3	5,755,408.7	3,036,619.6	5,291,889.3	5,686,121.4	(2,718,789.1)	2,255,269.7
INVENTORY	1,233,083.2	1,673,294.7	2,219,756.0	2,773,884.0	440,211.5	546,461.3	554,128.1
TOTAL NONCURRENT ASSETS	30,259,065.1	34,200,888.0	33,969,245.0	33,376,113.2	3,941,822.9	(231,643.0)	(593,131.8)
FIXED ASSETS	30,259,065.1	34,200,888.0	33,969,245.0	33,376,113.2	3,941,822.9	(231,643.0)	(593,131.8)
TANGIBLE ASSETS	27,395,345.1	31,337,168.0	31,105,525.0	30,512,393.2	3,941,822.9	(231,643.0)	(593,131.8)
INTANGIBLE ASSETS	2,863,720.0	2,863,720.0	2,863,720.0	2,863,720.0	-	-	-
SUM OF TOTAL ASSETS	31,561,435.5	41,630,447.6	41,839,097.8	41,669,595.2	10,069,012.1	208,650.2	(169,502.6)
TOTAL LIABILITIES	92.9	442,990.7	-	4,050,313.1	442,897.8	(442,990.7)	4,050,313.1
CURRENT LIABILITY	92.9	442,990.7	-	4,050,313.1	442,897.8	(442,990.7)	4,050,313.1
SUM OF NET ASSETS	31,561,342.6	41,187,456.9	41,839,097.8	37,619,282.1	9,626,114.3	651,640.9	(4,219,815.7)
STATE INTEREST	31,561,342.6	41,187,456.9	41,839,097.8	37,619,282.1	9,626,114.3	651,640.9	(4,219,815.7)
CUMULATIVE RESULTS	1,362,346.0	10,988,460.3	11,640,101.2	7,420,285.5	9,626,114.3	651,640.9	(4,219,815.7)
DEFICIT ON REVALUATION	19,901,844.6	19,901,844.6	19,901,844.6	19,901,844.6	(0.0)	-	-
TOTAL LIABILITY AND NET ASSETS	31,561,435.5	41,630,447.6	41,839,097.8	41,669,595.2	10,069,012.1	208,650.2	(169,502.6)

Sources: 2020-2023 Financial statements of Regional Diagnostic and Treatment Center in Orkhon province

As shown in the above figures, the total assets of the 2021 financial statement increased by 10,069,012.1 thousand tugriks, or 24.1 percent, from the previous year. This was due to an increase in cash, receivables, inventories, and fixed assets

The cash balance increased by 856.1 thousand tugriks in 2021 from 2020 and by 2,612,621.2 thousand tugriks in 2022 from 2021, which is due to the fact that the unspent budget was not transferred to the state budget.

According to the above statement, the 2020 financial statement was prepared using Traditional Input-Based Budgeting, but with the transition to Results-Based Budgeting from 2021, the budget allows the organization's current account balance to be spent in the following year without being withdrawn.

Accounts receivables increased by 5,686,121.4 thousand tugriks in 2021 compared to the previous year, while in 2022 they decreased by 2,718,789.1 thousand tugriks. In 2023, they increased by 2,255,269.7 thousand tugriks compared to the previous year, meaning that the balance of accounts receivables in 2023 was 5,686,121.4 thousand tugriks, while the balance of accounts receivables in 2023 was 4,050,313.1 thousand tugriks.

This is not consistent with the provision of Article 6.4.8 of the Mongolian Budget Law, which states that "The budget shall be managed properly and no receivables or liabilities shall be created." The receivables that arose in 2021 were related to Covid-financing. The existence of liabilities indicates that the income from the health insurance fund was not fully received.

In 2021, the fixed asset account balance increased to 3,941,822.9 thousand tugriks, which was due to the purchase of computer equipment through donations.

This means that the organization does not receive capital funding from the state budget, but receives it free of charge through transfers from local governments and other organizations.

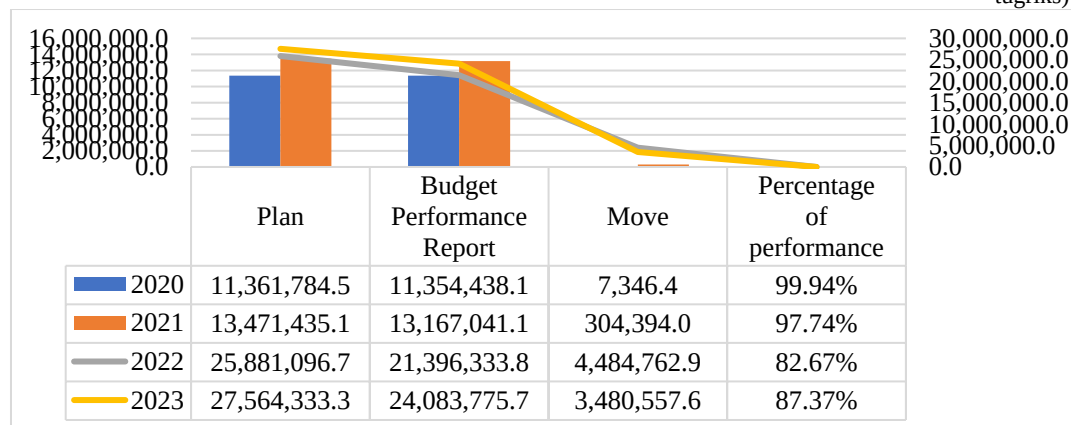
Their financial statements show that the organization's fixed assets increased only in 2021, while they did not purchase fixed assets in other years.

2.2. Budget planning and performance

The approved budget was reviewed twice in 2022 and three times in 2023.

The budget performance of the Ministry of Health of Mongolia is consistently lower than planned. The Regional Diagnostic and Treatment Center has underspent the approved budget for 2020-2023, with underspending rates ranging from 2 to 17 percent. The highest figure is 17 percent, 4,484,762.9 thousand tugriks, but it was not spent from the approved budget in 2022.

Fig. 1. Budget performance trends of Regional Diagnostic and Treatment Center (2020-2023, thousand tugriks)



Sources: 2020-2023 budget performance report of Regional Diagnostic and Treatment Center in Orkhon province

The largest underspending of current expenditures between 2020 and 2023, which amounted to 17 percent, was recorded in 2022. The goods and services budget was spent 7 percent less, while wages and salaries were spent 21.7 percent less than the approved budget.

According to the budget performance statement, among the current expenditure categories related to health, the gap between planning and performance is the highest for occupational safety equipment, which was spent 42 percent less than the planned budget.

Before the transition to the Results-Based Budgeting system from 2021, the budget performance in 2019 and 2020 was 98 to 100 percent, while in 2022 and 2023, the budget performance was 82 to 87 percent. This is due to the fact that direct funding is coming from the Health Insurance Fund, in other words, it indicates that the funding for that year was insufficient. This is confirmed by the receivables and liabilities in the above financial statement.

Table. 2 Operational expenditure trends, of Regional Diagnostic and Treatment Center (2020-2023, thousand tugriks)

Огноо	2020	2021	2022	2023
Total Operational expenditure				
Planning	11,361,785	13,471,435	25,881,097	26,036,083
Budget performance	11,354,438	13,167,041	21,396,334	24,083,776
The gap between planning and performance	(7,346)	(304,394)	(4,484,763)	(1,952,308)
The gap between planning and performance (in percent)	-0.1%	-2.3%	-17.3%	-7.5%
Goods and services				
Planning	11,351,684.50	13,461,335.10	25,210,996.70	25,990,583.30
Budget performance	11,344,713.10	13,156,966.27	20,806,072.19	24,054,794.72
The gap between planning and performance	(6,971.40)	(304,368.83)	(4,404,924.51)	(1,935,788.59)
The gap between planning and performance (in percent)	-0.1%	-2.3%	-17.5%	-7.4%
Wages				
Planning	7,067,539.2	8,048,473.7	13,978,253.3	15,812,463.3
Budget performance	7,062,848.9	8,007,630.5	10,950,422.1	14,916,088.8
The gap between planning and performance	(4,690.3)	(40,843.2)	(3,027,831.2)	(896,374.5)
The gap between planning and performance (in percent)	-0.1%	-0.5%	-21.7%	-5.7%
Occupational safety equipment				
Planning	2,775.00	8,000.00	8,000.00	(9,200.00)
Budget performance	2,775.00	300.00	4,605.00	-
The gap between planning and performance	-	(7,700.00)	(3,395.00)	9,200.00
The gap between planning and performance (in percent)	0.0%	-96.3%	-42.4%	-100.0%

Sources: 2020-2023 budget performance report of Regional Diagnostic and Treatment Center, Orkhon province

The transition to a Results-Based Budgeting System began in 2021, and the Ministry of Health decided to reduce spending on goods, services, and wages due to health sector reforms, and the funding of public hospitals has been transferred from the Ministry of Health to the State Health Insurance Fund. The category of current expenditures, which includes goods, services, and wages, of the Ministry of Health decreased significantly in the 2021 fiscal year, which is related to the health sector reforms introduced in that year.

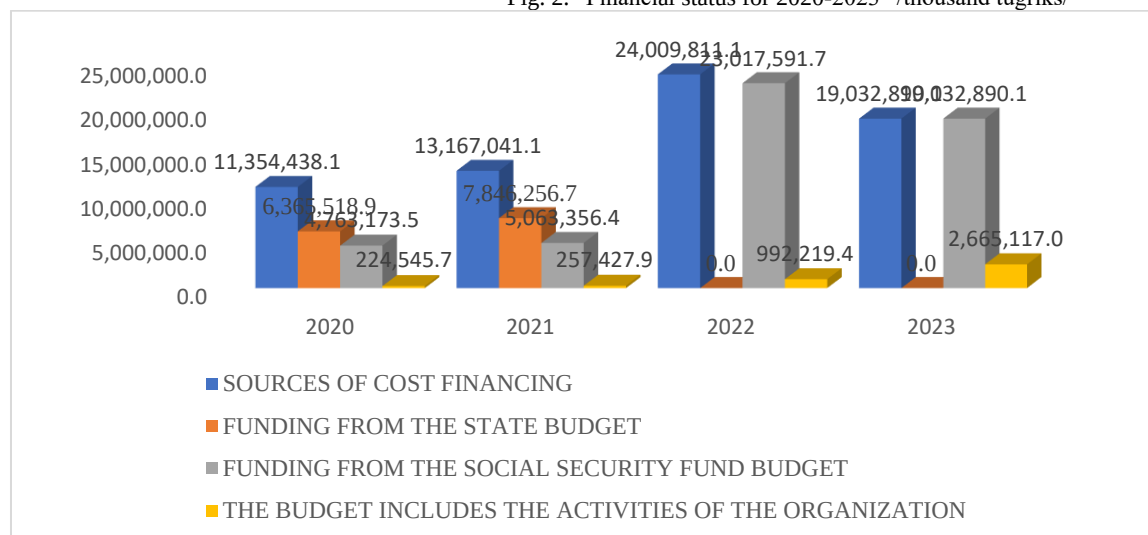
Table. 3 Approved budget and performance (2020-2023, thousand tugriks)

Indicators	2020		2021		2022		2023	
	Planning	Budget performance report	Planning	Budget performance report	Planning	Budget performance report	Planning	Budget performance report
Total Expenditure and Net Lending	11,361,784.5	11,354,438.1	13,471,435.1	13,167,041.1	25,881,096.7	21,396,333.8	27,564,333.3	24,083,775.7
Sources Of Financing	11,361,784.5	11,353,238.1	13,471,435.1	13,167,041.1	25,881,096.7	24,009,811.1	27,564,333.3	21,698,007.1
Financing from the State Budget	6,368,913.9	6,365,518.9	7,867,907.6	7,846,256.7	0.0	0.0	0.0	0.0
Financing from the Social Insurance Fund Budget	4,795,327.2	4,763,173.5	5,307,137.5	5,063,356.4	24,796,064.0	23,017,591.7	22,305,793.1	19,032,890.1
Financing from the Activities of Budgetary Institutions	197,543.4	224,545.7	296,390.0	257,427.9	1,085,032.7	992,219.4	5,258,540.2	2,665,117.0
Financing from Revenue From Primary Operations	164,543.4	191,545.7	230,000.0	191,438.3	593,610.0	613,371.6	600,000.0	710,630.7
Funded from Revenue From Supporting Activities	33,000.0	33,000.0	66,390.0	65,989.6	491,422.7	378,847.8	2,045,062.9	1,954,486.3
Funded from Previous Year's Balance	0.0	0.0	0.0	0.0	0.0	0.0	2,613,477.3	0.0
Closing Balance of Cash And Cash Equivalents								2,613,477.3
Closing Balance of Cash And Cash Equivalents	0.0	1,200.0	0.0	0.0	0.0	2,613,477.3	0.0	227,708.7

Sources: 2020-2023 budget performance report of Regional Diagnostic and Treatment Center, Orkhon province

The state of public funding for health services has changed due to legislative amendments.

Fig. 2. "Financial status for 2020-2023" /thousand tugriks/



Sources: 2020-2023 budget performance report of Regional Diagnostic and Treatment Center, Orkhon province

Before August 2020, healthcare funding was directly allocated to clients from the state budget, but now it is distributed through the state Health Insurance Fund. Therefore, hospitals will receive direct funding from the Health Insurance Fund based on the actual amount of health services provided, and the previous system of classifying hospitals according to the economic activities of the Ministry of Health and receiving funding in advance from the expenditure budget has been eliminated.

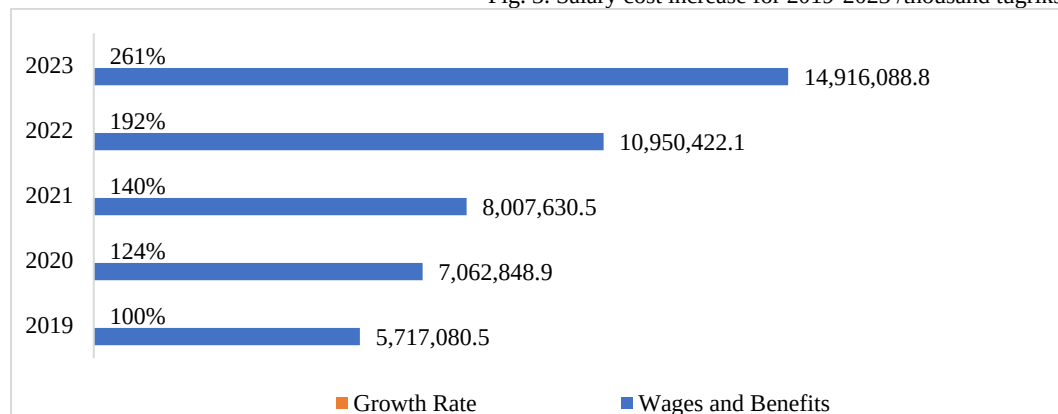
The General Health Insurance Agency receives funds from the state budget and the Health Insurance Fund and allocates them to hospitals based on the evaluation of the services they provide. As a result, there has been a decrease in salary costs in budget expenditures. As shown in the table above, from 2022, it will no longer be financed from the state budget, but will receive funding from the Health Insurance Fund and operating income of Budgetary Institutions.

Among all approved budget categories, the Ministry of Health has the highest gap between capital expenditure plans and execution. Specifically: In the Ministry of Health 2021 budget investment expenditure execution report, 29 projects did not execute their budgeted expenditures for the year as planned. These include projects such as the expansion of health centers, renovation of hospital buildings, and the purchase of medical equipment. The electronic system for public procurement shows that several of these projects have been completed with significant delays. The budget execution report of the Orkhon aimag's Department of Economic Development and Trade also shows that capital funding is very low for organizations.

In terms of capital expenditures, the Regional Diagnostic and Treatment Center has not funded capital expenditures from 2020-2022 to 2020-2023, but for 2023, the plan was to budget 400,000.0 thousand tugriks for major repairs and 1,128,250.0 thousand tugriks for equipment costs, for a total of 1,528,250.0 thousand tugriks, but this has not been implemented. When examining this, it was found that due to insufficient funding for salary expenses in 2023, it was allocated to employee salaries.

2.3. WAGES

Fig. 3. Salary cost increase for 2019-2023 /thousand tugriks/



Sources: 2019-2023 Budget performance report of Regional Diagnostic and Treatment Center, Orkhon province

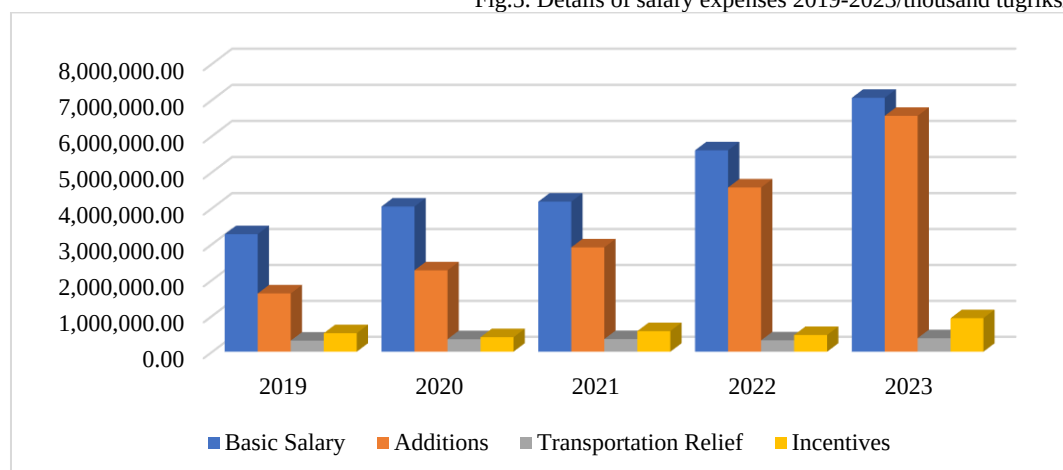
The Government of Mongolia and the Ministry of Health made a decision to implement performance-based financing starting from January 1, 2021, in order to realistically assess the activities of hospitals and health institutions financed from the state budget, ensure the source of salaries for medical staff, and create the opportunity to increase salaries in a certain range. Depending on their years of service and workload, the salaries of healthcare workers have been increased by 5-50 percent in 15 specialized hospitals and specialized centers under the Ministry of Health, three regional treatment and diagnostic centers, 5-40

percent in 11 aimag general hospitals and health centers, and 10-20 percent in three district general hospitals, or an average of 24.4 percent. In addition, monetary incentives for skill development have been increased by an average of 20-30 percent.

The implementation of Government Order No. 107 of 2022 has been implemented since March 1, 2022. From May 1, 2022, the salary scale of the organization's employees was re-established in accordance with the year of service, and from August 1, 2022, the basic salary was increased by another 10 percent. In accordance with Order No. A/192 of the Minister of Labor and Social Security of 2021, overtime pay was calculated as the average salary in consultation with the Ministry of Health and submitted to the budget allocation.

The details of salary expenses are shown in the figure below.

Fig.5. Details of salary expenses 2019-2023/thousand tugriks/



Sources: 2019-2023 Budget performance report of Regional Diagnostic and Treatment Center, Orkhon province

Considering the salary costs of the of Regional Diagnostic and Treatment Center, 2019-2023, if 2019 is taken as the base year, salary costs increased by 24 percent in 2020, 40 percent in 2021, 92 percent in 2022, and 161 percent in 2023.

The Government's Resolution No. 241 of June 21, 2023, revised the salary and minimum wage for civil workers. The resolution will come into effect on the 1st of this month, and the salaries of those in the healthcare sector have been revised as follows: The basic salary for civil workers in grades 1-9 of the civil service has increased to 1,000.0-1,548.0 thousand tugriks. The fringe benefits are included in accordance with the law.

2.4. Measures to be taken in the health sector from 2024

The Ministry of Health has submitted the 2025 budget draft and the 2026-2027 budget projection proposal in order to improve the reform of health sector financing and maintain the stability of the Health Insurance Fund. (Ministry of Health, 2024)

This shows the measures to be taken to implement the basic policy in health sector financing in the future.

This shows the measures to be taken to implement the basic policy in health sector financing in the future. If we consider only the provisions related to financing as a representative example:

Within the framework of the "Sustainable Development-2023 Program", a budget draft was developed to meet 13 objectives, 27 indicators and criteria of Goal 3 "Promoting Health".

Within the framework of the “Vision-2050” long-term development policy of Mongolia, “Develop a quality, accessible and effective health system by cultivating citizens with healthy habits and active lifestyles”.

To improve the quality of health care, implement accessible and effective system reforms within the framework of the five-year development program of Mongolia in 2021-2025.

Total health sector expenditure and Gross Domestic Product (GDP) in 2025, the total amount of funds spent on the health sector is estimated to be 4.4 percent of GDP. According to the budget performance at the end of 2023, health sector expenditure accounted for 2.9 percent of GDP.

To increase the effectiveness of the performance-based financing system within the framework of health sector financing reform.

The “citizen-based” financing system based on quality, results, and performance in the health sector has been implemented since 2021, and the current status of performance-based financing has been assessed and necessary policy adjustments have been made. The Resolution No. 06 of 2024 of the National Health Commission of Mongolia has revised the regulations and list of diagnostic groups, and some policy adjustments have been adjusted to be implemented in 2025, and the budget proposal has been included in the budget proposal to ensure and increase the balance of income and expenditure of the Health Insurance Fund.

Strengthen the system for monitoring citizen-based financing.

To improve the management of health care organizations by properly distributing resources and increase the efficiency of spending.

To make a reform of public health care and service financing and approve a methodology for calculating costs and financing programs and measures.

To increase the salary costs of health care organizations in connection with the increase in the salaries of civil workers by the Government Resolutions No. 12, 82, 83, and 128 of 2024.

Investment expenditures were increased by 44.8 percent in the 2025 budget proposal. When considering the economic category, “Supply and inventory costs”, “Normative costs”, “Appointment and guest costs”, “Routine and maintenance costs”, etc. were budgeted with an increase due to the inflation rate.

In connection with the new adoption of the Law on Public Health Care and Services, “Other costs of goods and services” and “Other costs of services performed by others” were also budgeted with an increase.

When calculating the percentage and amount of income generation of the Health Insurance Fund, the action program for implementation in 2021-2030 and the Government’s operation plan within the framework of the long-term development policy of Mongolia “Vision-2050” were calculated as a phased increase in the amount of health insurance premiums.

3. Conclusion

In order to ensure the implementation of the amendments and changes to the Law on Health, the Law on Medical Care and Services, and the Law on Health Insurance, approved by the Mongolian State Great Khural on August 28, 2020, the health sector financing reform has been implemented since January 1, 2021.

In order to study the current status of this financing reform, results-based budget reform, and implementation, the budget performance and results achieved by the Orkhon aimag RDTC were studied.

Although the Orkhon aimag RDTC was considered as a representative, in the process of conducting the study, it was examined whether the work being carried out on the sector financing reform in Mongolia has achieved some of the planned results. The following weaknesses are evident.

The financial position statement reflects accrued receivables and payables. In 2023, receivables of 5,291.9 thousand tugriks and outstanding liabilities of 4,050.3 thousand tugriks were reported. The work with receivables and liabilities was due to the fact that income from the health insurance fund was not fully concentrated.

The budget execution of the Ministry of Health of Mongolia is consistently lower than planned. The underspending rate of the approved budget of the Orkhon aimag RDTC for 2020-2023 was 2-17 percent. Also, due to the transition to the financing reform system, the budget performance was 82-87 percent in 2022 and 2023.

During the selected period of the study, 2019-2023, no investments were made from the state budget in RDTC. The Ministry allocates very little capital funding to organizations, and the expenditures budgeted according to the budget plan and performance were not implemented as planned. For example, in 2023, 1,528,250.0 thousand tugriks were allocated for salaries that were allocated for financing from the state budget.

Starting from 2022, funding will no longer be received from the state budget, but will be received from the Health Insurance Fund and the operating income of budgetary organizations. This has the disadvantage that if the Health Insurance Fund cannot earn its income, the organization will not be fully funded and a large amount of receivables and payables will arise.

There are the following advantages. These include:

Considering the salary costs of the Ministry of Health for 2019-2023, if 2019 is taken as the base year, salary costs increased by 24 percent in 2020, 40 percent in 2021, 92 percent in 2022, and 161 percent in 2023.

The salary and minimum wage of civil workers were revised by the Government Resolution No. 241 dated June 21, 2023. The resolution will come into effect from April 1, 2025, and the salaries of those in the Health sector have been revised as follows. Including: The basic salary for the 1st-9th category of the National Health Insurance Scheme is 1,000.0-1,548.0 thousand tugriks.

The General Health Insurance agency, which is the purchasing agency for health care and services, has launched a new process of selecting organizations that provide health care and services to the population, contracting health care and services to the population, and financing health care organizations based on the performance of care and services provided to the population, in other words, strategic procurement.

In order to successfully implement the reform process, trainings have been organized to strengthen the human resource capacity of health care organizations within the framework of the "Investment Program to Improve Access to Health Care and Services for Vulnerable Groups" 3843-MON, 3844-MON (COL) and "Improving Health Sector Financing" TA 9701 projects with the support of the Asian Development Bank.

4. Recommendations

Improve budget management, finance and accounting in line with audit recommendations. The Ministry of Health, the Health Insurance Fund and the Ministry of Finance should settle invoices submitted by health service providers in a timely manner and record accumulated arrears.

Improve the performance of capital expenditures. Organize procurement processes more efficiently. The gap between budget plans and performance has been consistently decreasing and this should be explained and how this affects the performance of health services and programs should be assessed.

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SSEC-21

Opportunities for developing the care economy: Mongolia

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Abstract: The demand for care work is increasing, but the value of the work is very low. This has the effect of losing the workforce and reducing the positive impact on the economy. In Mongolia, there is a paid mother program, but the salary is only 50,000 MNT, which shows that the care work of mothers is not appreciated. There are two types of care work: paid and unpaid. Also, the fact that the government does not support production and services in this area is a hindrance to the development of the nursing economy. In highly developed countries with proper government intervention and support, the labor value of care work is high, and production and services in this field are not only economically profitable but also can meet consumer needs. The purpose of this study is to analyze the impact of care work on the economy of Mongolia in the context of the forms and types of care work, care work and services, their legal regulations, and international experience, and investigate the possibility of developing the care economy. Sociological and statistical data from social sciences were used. The relationship between the variable "Legal environment supporting the care economy" and "Knowledge of the care economy and support of citizens" and the independent variable "Effect of the care economy" were analyzed using SPSS v25 and AMOS V26 software. Independently, the dependent variable (SEZUN) has a positive relationship with 4 variables (DISTRICT, INA, HCCA, GA, and AAU). The results of the research show that between 4 independent and dependent variables, the legal environment supporting the care economy (AEZDEZO) the knowledge of the care economy, and the support of citizens /AEZMIO/ will show the effect of the care economy (AEZUN). It is a theoretical study for the development of the concept of socio-economic theory, the evaluation of care work by citizens, and the concept of gender equality. As an important part of the welfare state, the care economy carries out activities aimed at improving the physical, social, mental, and emotional well-being of children, the elderly, sick and disabled people, adolescents, and other care groups. In this sense, this study is of practical importance in meeting the goal of sustainable development.

Keywords: Care economy, care, care work, childcare, care workplace.

1. Introduction

Caregiving is a fundamental issue of the quality of human life, and the lack of understanding and acceptance of its economic content is the reason for studying the topic. As defined by the International Labor Organization, caregiving includes the work of caring for children and the elderly, and the economic demand for caregiving is increasing. The researchers pointed out that the demand for nursing work is increasing due to factors such as human health, illness, disability, labor productivity, production, and people's busyness. The constituents of the care economy include services and production for the care of

essential groups, such as children, the elderly, the disabled, and the sick. In Mongolia, clothing, tools, and equipment factories (prosthetics), rehabilitation centers, and sanatoriums are engaged in nursing production and activities for disabled people. However, it is not accessible and sufficient for citizens.

Employment figures and other reports in many countries show that caregiving is predominantly done by women. In Mongolia, nursing work is economically very inadequate. The number of childcare job ads on social networks shows the demand for formal childcare services in Mongolia. An informal market for care work has emerged and wages are relative. The lack of development in this area does not have a significant impact on the economy. The assessment of employment in nursing is low, with 1.2-2 million MNT per month. However, in Mongolia, unpaid nursing work is predominant. According to the general results of the 2020 state census of population and housing, 92,462 people were counted as having housework (Education and Employment Statistics of the National Statistics Committee). Due to the low level of wages in Mongolia, women leave their families to take care of children and the elderly and go to developed countries. As of 2022, 63.4 (double the number) thousand citizens of Mongolia traveled abroad. Of these, 23.8 thousand, or 37.6 percent traveled for work or study. It is economically beneficial for the host country. In other words, they are getting a relatively cheap service. Also, it is important to reduce the pressure on the government of the country to provide subsidies to children's and elderly care homes, but it creates negative consequences for the employment and economy of the country that sends the workforce. The purpose of this study is to analyze the impact of care work on the economy of Mongolia in the context of the forms and types of care work, care work and services, their legal regulation, and international experience, and to investigate the possibility of developing the care economy. It is a theoretical study for the development of the concept of socio-economic theory, the evaluation of care work by citizens, and the concept of gender equality. As an important part of the welfare state, the care economy carries out activities aimed at improving the physical, social, mental, and emotional well-being of children, the elderly, sick and disabled people, adolescents, and other care groups. In this sense, this study is of practical importance in meeting the goal of sustainable development.

2. Research status (literature review)

2.1 Care work and the care economy

The concept of the care economy refers to the various types of work and employment that provide paid and unpaid care and welfare activities directly to people in need of support. They include children, disabled citizens, the elderly, and the sick. The concept of care also includes the concept of self-care so that people can fully utilize their skills and work in a comfortable and safe environment. Care can be direct or indirect, paid or unpaid. Social scientists are beginning to consider the implications of "global welfare networks" (Misra and Merz, 2004; Yeates, 2005). All forms of care work will be measured and unpaid care work will be taken into account when making decisions. As of 2022, 120,219 people are employed in caregiving in the United States, of which 83.6 percent are women and 16.4 percent are men. The average age of the above workers is 47, according to Zippia statistics. Personal care is one of the highest-paying jobs in the United States.

Table 1. Types and characteristics of care work

Type	Form	People who need care				
		Child	The elderly	Patients with disabilities	Adult	Personall y
Work without pay	Direct care	Changing diapers	Feeding or bathing	Feeding or bathing	Give advice	Going to the hospital, exercising
	Indirect care	Cooking, laundry, cleaning	Cooking, laundry, cleaning	Cooking, laundry, cleaning	Cooking, laundry, cleaning	Cooking, laundry, cleaning
	Direct care	Breastfeeding				
	Indirect care	Prepare food for your own needs, cut wood, carry water	Prepare food for your own needs, plant, cut wood, carry water	Planting food, harvesting wood and carrying water for your own needs	Planting food, harvesting wood and carrying water for your own needs	Planting food, harvesting wood and carrying water for your own needs
Informal market work	Direct care	Family day, childcare	Family day, childcare	Informal but paid care at home		
	Indirect care	Housekeeper	Housekeeper	Housekeeper	Housekeeper	Housekeeper
Paid work	Direct care	Babysitter and pediatrician	Elderly caregiver and psychologist	Nurse and doctor	Consultant and nutritionist	
	Indirect care	School administration, clerk, cleaner	Nursing home worker, clerk, cleaner	Hospital Administration, Clerk, Cleaner	The highest paying jobs are not included	

Source: N Folbre "Measuring Care: Gender, Empowerment, and the Care Economy", *Journal of Human Development* Vol. 7, No. 2, July 2006

Researcher D. Enkhjargal said, "The care economy includes caregiving work that is performed daily in the family and household, is not valued, and is unpaid." It also includes services and production for the care of groups in need of care, i.e. children, the elderly, the disabled, and the sick. In every country, there are vulnerable groups in need of care and support, and the interaction between these groups and the organizations that provide care and support is an indicator of the care economy. The main actors in the development of the care economy can be divided into two categories.

- Public and private sectors
- Individuals who care about others

2.2 Care Economics and Childcare Services

Childcare has a positive effect on the care economy and brings tangible benefits. It has many benefits, including supporting child development, creating jobs, reducing unpaid

caregiving for parents, and supporting women's employment and income throughout their lives (Center for Knowledge of the Care Economy, 2023). ILO 2023 data also show a strong and positive correlation between the employment and population ratio of women with young children and the number of children enrolled in early childhood education development programs for children aged 0-2. Poor and developing countries continue to miss opportunities for sustainable development and gender equality due to inadequate quality of childcare and poor working conditions (ILO 2023 report). The care economy includes paid (formal and informal) and unpaid labor through which care is provided to others. Caregiving responsibilities can generally be divided into two groups: responsibilities inside and outside the home. For example, childcare workers and health workers, preschool and school teachers provide paid care in the formal market, providing care outside the family and home, but this type of work is undervalued because of low wages and unfairness. On the other hand, caregivers may provide paid care in the informal market, where their labor rights are not recognized, properly regulated, or protected.

2.3 Care economics and gender

The care economy is directly related to feminism and women's rights. Women make up 46 percent of the global workforce and provide two-thirds of paid care. In addition, the absolute majority of people working in the health (89%) and childcare (94%) sectors are women (UN Development Programme-2023). Women are still mostly involved in unpaid work and family work. 75% of the unpaid work in the world is done by women. Women living in rural areas of low-income countries spend 14 hours a day on unpaid care work (Ana Sakvarreldze, 2023). Women in the care economy are an important care workforce globally, but they are not paid. Placing the burden of unpaid work primarily on women creates artificial barriers to their self-realization, promotion, and even their ability to enjoy personal entertainment and free time in a manner equal to that of men. The care economy needs to be developed healthily and democratically, and for this, countries must ensure social equality for those who participate in it (UNDP-2023).

Paid care work is undervalued and underpaid. The International Labor Organization also pointed out that low-paid care work in the informal sector is not accepted. This continued non-recognition leaves workers in this sector without adequate labor rights protection (ILO Report 2023).

2.4 Experience of other countries

Finland is one of the countries with a well-developed care economy and a leading state policy. In Finland, families with preschool children are supported to be educated at home (not in kindergarten). The government pays a benefit of 338 euros to raise a child under the age of 3 at home, and a smaller amount is paid to a child between 3 and 6 years of age. The purpose of this support is to empower the family and above all the woman to make a choice. In Finland, the majority of women are employed. Therefore, if a woman decides to take care of the child at home, the family's income decreases. Conversely, if a mother chooses to continue working after sending her child to kindergarten, her choice to stay at home is limited. To overcome this problem, Finland implemented a social assistance program for families who want to raise their children at home. Finland provides paid parental leave for fathers. There is also a package for mothers, which is an important social innovation, unmatched in the world in terms of its scope and content. It's a one-of-a-kind collection of quality, stylish, and practical clothes for moms and babies, baby care products, baby-friendly books, and other essentials. In addition to child care, Finland also provides care for relatives (family members and close relatives). This includes care services, payments, and other services. The minimum payment is 393 euros per month, and if a person is obliged to leave work temporarily, a fee of 784 euros will be charged. Other Scandinavian

countries have roughly similar social programs. For example, in Sweden there is a child care allowance up to the age of 8, which is paid to parents who, for this reason, stop working, studying, or looking for work (minimum daily amount 250 kroner, maximum - 952 kroner); housing allowance (payment of housing costs), temporary assistance to working parents when caring for a sick child under the age of 12 (up to the age of 16 or 18 if the child is seriously ill and needs constant care), etc. Both countries stand out for their gender balance, comprehensive social package, and variety of offers (Dr. Taipale Ilkka, 100 Social Innovations from Finland). In France, however, maternity benefits are provided not only to employed women but also to job seekers and temporary unemployed (within the last 12 months). In addition, the amount of support for mothers is quite high, the maximum amount is about 86 euros per day. Also, benefits are provided to fathers who have been temporarily unemployed (within the last 12 months). France has a social security code that provides several benefits to families (even if family members are unemployed). The average amount of a typical financial aid is 422 euros. Furthermore, there is a Fixed Allowance for families with at least 3 children (all under the age of 20 and whose income does not exceed €982.42). In addition, after the birth of a child, all families receive a one-time benefit of 970 euros. Interestingly, France, like Finland, provides support for families/parents with children up to 6 years of age. The government helps working parents cover childcare and daycare costs, with a maximum of around €481 (for children aged 0-3) and €240 (for children aged 3-6) (*Social Security Programs Throughout the World: Europe, 2018, France*).

Germany also offers several social packages, including the so-called parental allowance, which requires at least 67% of both parents' gross income in the 12 months before the birth of the child. Payments are capped at 1,800 euros per month. If the parent is unemployed, the payment is limited to 300 euros (*Social Security Programs Throughout the World: Europe, 2018, Germany*).

In the Czech Republic, families receive a one-time financial assistance of around 530 euros to help with essential expenses after the birth of a child. The Czech Republic has created a multifaceted system of financial assistance for parents in childcare, known as Flexible Parental Allowance. Parents can take parental leave with packages of 1, 2, 3, or 4 years until their child is 3 years old. In addition, parents can work while receiving child support. In the Czech Republic, there are occasional initiatives such as TV documentaries about fathers taking paternity leave, but the participation of men is relatively low. These campaigns generated a lot of interest and increased public awareness of the issue. Such information campaigns have led to significant positive results for gender equality. In the Czech Republic, there is a care allowance for people with family illnesses or children under the age of 10. There is a long-term care allowance (*Dlouhodobé ošetrovné*) when, for example, kindergartens and schools are closed due to quarantine and supervision is necessary, and the person's family member or relative is seriously ill and needs to be hospitalized for at least 7 days. Is granted in case of temporary inability to work due to /or at least 30 days of home care. In the Czech Republic, there is a concept of minimum guaranteed income. This means that the government provides financial assistance to households whose income is below the subsistence level. The government is responsible for the living wage and the gap between family incomes (*Social Security Programs Throughout the World: Europe, 2018, Czechia*).

In countries such as Canada, support for the development of the welfare economy is being implemented effectively. The country pays child support to their guardians until the age of 18. To receive benefits, the child's guardian must file an annual income tax return. This benefit is available to families with an annual income of up to CAD 31,120. If the income exceeds this threshold, the allowance will be reduced accordingly. The basic payment for a child under 6 is approximately CAD 6,639 per year, which translates to approximately CAD 553.25 per month. Child support for children aged 6 to 18 years is CAD 5,602 per year or approximately CAD 466.83 per month. In addition to government

benefits, there is an urgent need to gradually change deep-seated societal understandings of gender roles. This can be achieved by raising public awareness, increasing women's participation in the political, economic, and social spheres, and supporting them to take up well-paid and influential roles. It is necessary to consider the implementation of a practice similar to the highly effective "Pack for Mothers" in Finland.

2.5 Care services (Mongolia)

20 orphanages are operating in Ulaanbaatar, the capital of Mongolia, both state-funded and voluntary. According to the statistics of the National Statistics Committee, 171 organizations are operating in the field of care in Mongolia in 2021, 144 in 2022, and 150 in 2023 /Table 2/.

Table 2. Number of organizations in the nursing sector

Sector	2022	2023	2024
Care and nursing activities	97	97	103
Activities for the care and protection of people with mental disorders and intellectual disabilities	13	4	4
Care activities for the elderly and disabled citizens	33	23	23
Social activities without accommodation for the elderly and disabled	28	20	20
Household activities that employ people	0	0	0
All	171	144	150

Children's sanatoriums include "Gift of Love 1, 2", "Agar" sanatorium for mothers and babies, Beebi Sanatorium, Enkhjargalan Children's Air Resort, and "Khuskhan" Mother and Child Relaxation Resort.

2.6 Legal framework supporting the care economy (Mongolia)

In Mongolia, the "Salary Mother" program has been implemented, and citizens who receive childcare allowances between the ages of 0 and 3 will participate in this program. This allowance is given monthly and is 50,000 MNT. In Mongolia, the law on childcare services was approved in 2015. The Prosthetics and Orthopedic Factory of the Rehabilitation Training and Production Center (SZSTC) under the General Department for the Development of Persons with Disabilities (SZSTC) produced more than 1,500-2,000 prosthetic and orthopedic special equipment products per year (from the 2021 report of the Prosthetics and Orthopedics Industry of SZSTC). Many young women are still excluded from the labor market due to reproductive roles such as childbearing, caregiving, caregiving, and housework. Women spend 2.1 times more time on unpaid work caring for dependent family members than men. Men spend 117 minutes a day on unpaid household work, while women spend an average of 281 minutes a day. For young women and women with many children, the lack of availability and availability of childcare services and kindergartens limits their opportunities to participate in economic activities ("Reasons for the inability of young women who enroll their children in childcare services to participate in economic activities". ., 2023). Caregiving employment is economically valuable but not universally valued. Globally, if unpaid care workers were paid the minimum wage, they would add nearly \$11 trillion a year to the global economy (Global Health & Gender Policy Brief: The Global Care Economy). There are the following legal documents related to nursing employment in Mongolia.

Constitution of Mongolia (1992), Labor Law (revised 2021), Law on Social Insurance Fund Benefits (2024), Law on Gender Equality (2011), Law on Preschool Education (2008), Child Care Services Act (2015), Rights of Persons with Disabilities Act (2016), Child Rights Act (2016), The laws on child protection (2016), on child care services (2016), Vision 2050, Mongolia's long-term development policy (2020), and the Government's action program 2020-2024 have created a legal framework to support and protect care employment. Article 2 of the Law of Mongolia on benefits provided by the Social Insurance Fund provides for benefits, discounts, and premium payments provided by the Social Insurance Fund for temporary incapacity for work; pregnancy, and childbirth; payment to a family member of the deceased insured; includes the payment of insurance premiums for pensions and allowances of voluntarily insured mothers taking care of their children up to three years of age. In 2024, amendments were made to the "Regulations on child allowances" approved by the Government's Resolution No. 236 of 2023. The change in the regulation made it possible for children aged 14 and older living in specialized care homes to receive 20 percent of child benefits in cash, and the Ministry of Labor and Social Security, in cooperation with a commercial bank, provided each child with an electronic card and linked the remaining 80 percent of child benefits to the child's savings account. The principle of taking the form of deposits will still apply. The Law on Providing Allowances for Single Mothers and Fathers in Families with Multiple Children was approved by the Parliament in 2017. The Law on Providing Allowances for Single Mothers and Fathers in Families with Multiple Children...pregnant mothers, mothers taking care of children aged 0-3, regulate relations related to establishing allowances for mothers and fathers with twin children under the age of four, and single mothers and fathers with three or more children. The following four types of benefits are provided to persons dependent on the service of law:

- 1) Allowance for pregnant mothers - every month from the fifth month of pregnancy until childbirth;
- 2) Allowance for taking care of children under the age of 0-3-monthly for mothers taking care of their children under the age of 0-3;
- 3) Allowance for twins - once for a mother who gave birth to twins up to the age of 4;
- 4) Allowance for single mothers and fathers with three or more children - Single mothers and fathers with three or more children aged 0-18 will receive quarterly allowances, and the number of children includes children born, adopted, cared for, and supported. The amount of this benefit is equal to the minimum wage.

Childcare allowance for children aged 0-3, twin child allowance, single mother with three or more children, father's allowance in case of death of the mother, or case of avoidance of maintenance, the allowance is given to the child's father or legal guardian, supporter, adoptive mother, will be given to the father. Banks and financial institutions are prohibited from granting loans against the above benefits. Although the above-mentioned rights and regulations are in place, it is believed that the impact on the value of paid and unpaid caregiving employment and household income is low, and caregiving employment is not supported much.

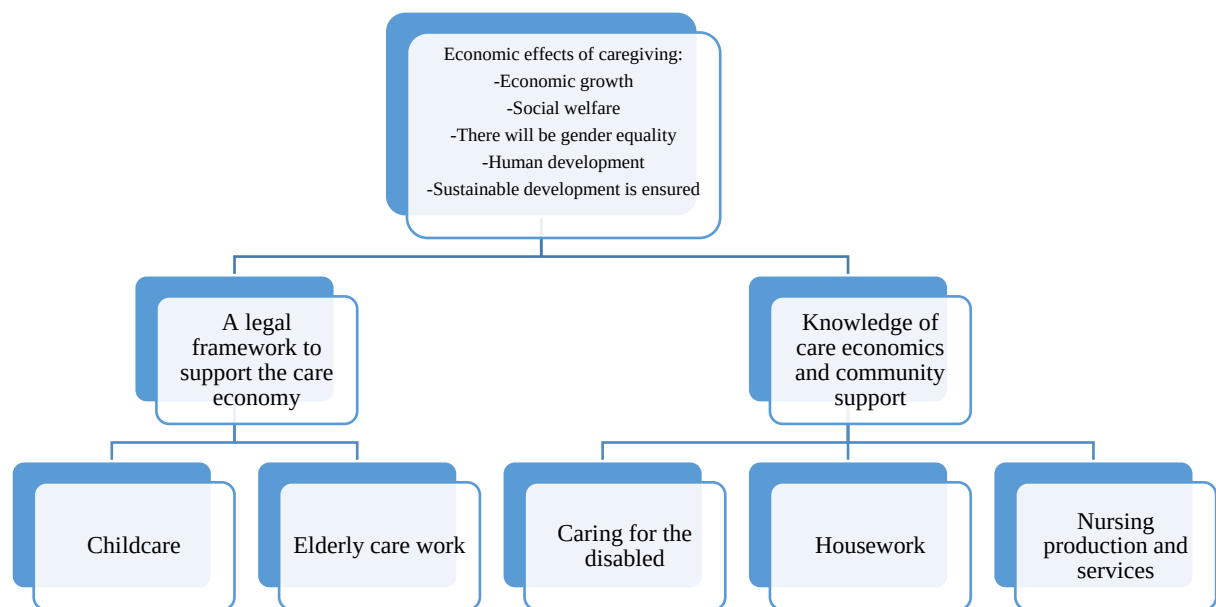
3. Research methodology

Quantitative social science research methods were used. A sample survey questionnaire was developed according to the type and characteristics of N Folbre's care work and was sent along with a letter requesting participation. According to the research questionnaire, the variable is "the economic effect of caregiving", and the independent variable is "Child care work-HAA", "Elderly care work-HANAA", "Care work for disabled people-HBAHAA", "Housework GHA", "Care production and services-AAU" and moderator variables are "AEZDEZ" and "AEZMIO". Also, the laws and regulations of Mongolia were

studied using document analysis. The scope of the research is defined as childcare, care for the elderly, care for the disabled, housework, legal framework supporting the care economy, knowledge of the care economy, and citizens' participation

1) Paid-unpaid

(Scheme1. Research framework)



This research made 5 hypotheses. It includes:

1. Childcare will have an impact on the care economy through a legal environment that supports the care economy.
2. Caring for the elderly will show the effectiveness of the care economy through a legal environment that supports the care economy.
3. Caring for the disabled will demonstrate the effectiveness of the care economy through knowledge of the care economy and citizens' participation.
4. The effectiveness of the care economy will be demonstrated through the knowledge of the economics of domestic work and the participation of citizens.
5. The effectiveness of the care economy will be demonstrated through the knowledge of the care economy and the participation of citizens in care production and services.

4. Research results

179 people participated in the study, 165 (92.2%) were women and 14 (7.8%) were men. In terms of age, 33.5 percent of the participants are 26-35 years old, 31.8 percent are 16-25 years old, 20.1 percent are 36-45 years old, 13.4 percent are 46-55 years old, and 2 percent are over 56 years old (Table 2).

Table 2. Descriptive statistics: Age of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16-25	57	31.8	31.8	31.8
	26-35	60	33.5	33.5	65.4
	36-45	36	20.1	20.1	85.5
	46-55	24	13.4	13.4	98.9
	56 up	2	1.1	1.1	100.0
	Total	179	100.0	100.0	

128 or 71.5% of the respondents are lawyers, 22 or 12.3% are teachers, 12 or 6.7% are doctors, 10 or 5.6% are economists, 1 or 0.6% are engineers, 6 or 3.4% are other professionals. /Table 3/.

Table 3. Occupation of the respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Doctor	12	6.7	6.7	6.7
	Jurist and lawyer	128	71.5	71.5	78.2
	Engineer	1	.6	.6	78.8
	Economist	10	5.6	5.6	84.4
	Teacher	22	12.3	12.3	96.6
	Other	6	3.4	3.4	100.0
	Total	179	100.0	100.0	

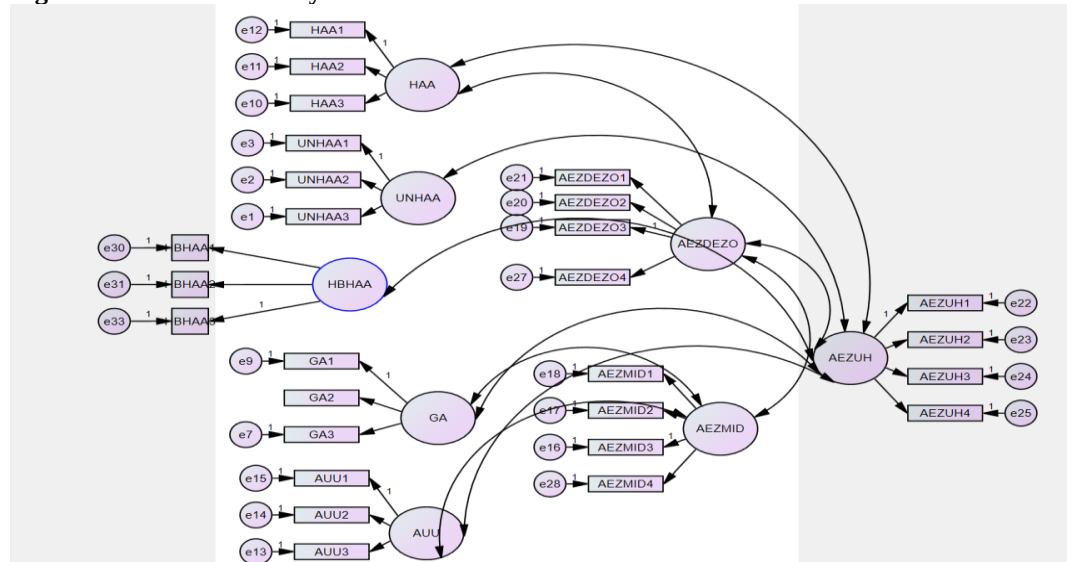
When checking the reliability of 8 variables in the study, the Cronbach alpha coefficient of all variables was higher than 0.6, so the conditions for further analysis were formed. /Table 4/

Table 4. Variable values, standard deviations, and reliability

№	Variable	Sample size	Number of questions	Meaning	Standard deviation	Cronba alpha
1	Babysitting services	179	3	3.87	1.625	0.718
2	Elderly care work	179	3	3.03	1.629	0.654
3	Caring for the disabled	179	3	3.44	1.595	0.609
4	Homework	179	3	3.53	1.534	0.790
5	Nursing production and services	179	3	3.30	1.901	0.600
6	Supportive legal framework for the care economy	179	4	2.80	1.533	0.820
7	Knowledge of care economics and community support	179	4	4.23	1.413	0.625
8	Economic effects of caregiving	179	4	3.93	1.521	0.609
	A total of 8 variables		27			

When checking the relationship between dependent and regulating variables and independent variables by regression analysis in AMOS program, the dependent variable (SEE) has a positive correlation with 4 independent variables (HAA, UA, ABAHAA, GA, AAU). 4 independent and dependent variables, the legal environment supporting the care economy (AEZDEZO) and the knowledge of the care economy and the support of citizens /AEZMIO/caregiving will show the effect of the care economy (AEZUN).

Figure 1. Correlation analysis of variables



5. Conclusion and Judgment

The results of the study show that there is a need to improve the public knowledge and participation of citizens in the care economy in Mongolia. Research results and statistics have shown that the type and amount of social care work is insufficient and does not meet international standards. From the point of view of women's rights and gender equality, it is mostly women who take care of children, the elderly, and the disabled, and this falls under the category of unpaid work. Therefore, the research shows that nowadays, when women are go other countries to work as caregivers, it is necessary to look at the economic content of nursing care make it pay, and implement relevant policies and decisions. Findings highlight the need for valuing and recognizing the importance of care work, emphasizing that most care work remains unpaid and mainly involves cooking, washing, tidying, cleaning, and caring for family members, including childcare. There is a lack of demand for research and marketing for the childcare industry and products. The research results show that the number of nursing homes has decreased and the lack of related statistics makes it impossible to calculate the economic efficiency of nursing care. The fact that the government does not fully implement the policy does not appreciate the economic turnover of nursing work and its contribution to the national economy.

6. Suggestions

In the framework of the study, the following suggestions were made. In this

1. Accurate statistics of business owners engaged in nursing work and services;
2. Compilation of paid employment statistics for caregivers;
3. Prepare statistics of unpaid care work, analyze them, and implement programs;
4. Tax exemption and support within the support of production and services of the care economy;
5. Enterprises providing care products and services should conduct demand and competition research;
6. Nursing homes develop and implement marketing strategies;
7. Take countermeasures against employment abroad;

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HSOT-22

Understanding Déjà Vu: Neurological and Psychological Perspectives[^]

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Abstract: Déjà vu is a feeling of familiarity, as if a person has experienced something before, even though it is a new experience. This phenomenon unexpectedly occurs, leaving an eerie yet intriguing feeling. As science has advanced, déjà vu has come to be explained in terms of brain activity. The two main scientific fields that study the brain and déjà vu are neurology and cognitive psychology. In neurology, many researchers explain déjà vu using the Temporal Lobe Activation Theory. It is claimed that déjà vu occurs when there are misfires in neurons in the hippocampus and parahippocampal gyrus—two areas in the temporal lobe responsible for memory formation. Moreover, many patients with temporal lobe epilepsy are reported to have experienced déjà vu more than average. In cognitive psychology, two theories are often discussed: Dual Processing Theory and Memory Mismatch Theory. Dual Processing Theory is the theory that déjà vu occurs when a person experiences a certain situation twice due to the difference in the speed of processing the situation in the two cognitive systems known as system 1 and system 2, and Memory Mismatch Theory is the theory that déjà vu occurs when a memory that should be stored in short-term memory is stored in long-term memory due to a misclassification of the brain. Déjà vu is a scientific phenomenon with various theories, and future research can be continued by understanding current thoughts more clearly.

Keywords: Déjà vu, brain, temporal lobe, hippocampus, parahippocampal gyrus, Dual Processing theory, Memory Mismatch Theory, cognitive system, memory.

1. Introduction

Déjà vu, a term derived from French meaning 'already seen,' describes the feeling that a current experience is oddly familiar, despite being new. In recent decades, researchers have attempted to understand déjà vu through neurological and psychological perspectives. Despite significant advances in the fields, the mechanisms underlying déjà vu remain partially understood, prompting ongoing investigation in both neurology and psychology. While significant progress has been made in the scientific study of déjà vu, key questions remain unresolved. It is still unclear why this sensation of familiarity occurs so vividly in the absence of a clear memory. Neurological studies have pointed to specific regions of the brain, such as the temporal lobe, as crucial in déjà vu experiences, yet the exact mechanisms remain elusive. Furthermore, cognitive theories propose intriguing but unverified explanations related to memory processing and categorization. Thus, understanding déjà vu requires a more integrated approach that considers both neurological and cognitive perspectives. This paper seeks to examine déjà vu through the lens of both neurological and cognitive theories. By reviewing existing research on Temporal Lobe Activation Theory, Dual Processing Theory, and Memory Mismatch Theory, this paper aims to synthesize current understandings of déjà vu and highlight areas where further investigation could deepen our comprehension of this phenomenon. This review will underscore the

contributions of each theory to the broader picture of memory and cognition, while identifying unresolved questions for future research.

2. About déjà vu

The term "déjà vu" was first formally coined by French philosopher and psychologist Émile Boirac in 1876, in his book *The Future of Psychology*. He described his experience of arriving in a new city but feeling as though he had visited it before. Whereas many before him had viewed déjà vu from a philosophical perspective, his work presented the first systematic approach to studying the phenomenon of memory in the broader context of memory studies and became a forerunner of later scientific investigation.

"About 60% of the population has experienced déjà vu" (Brown, 2003). Although Déjà vu is a phenomenon that is widely experienced around the world, the déjà vu known to the layperson in general and the déjà vu studied in academia are slightly different. In terms of "already seen", there could be various different "already" such as "already lived (Déjà vécu)", "already felt (Déjà senti)" and "already visited (Déjà visité)". Thus, academia studies the phenomenon "already", which must not be already.

There is no single theory that explains déjà vu perfectly with scientific evidence that everyone agrees on. However, there are several great theories that attempt to explain déjà vu, each with its own scientific basis. This paper will examine three main theories of déjà vu: Temporal Lobe Activation Theory, Dual Processing Theory and Memory Mismatch Theory by dividing them into two major scientific fields: neurology and cognitive psychology.

3. Neurology: Temporal Lobe Activation Theory

3.1. Role of temporal lobe

The temporal lobes are located deep in the brain, below the temples on either side of the head. There are two of them, one on the left and one on the right. The temporal lobes are generally known to be involved in memory processing, language skills, and recognizing objects and their properties, such as sounds, shapes, and touch.

The temporal lobe contains structures that are essential for forming new memories and recalling old ones. The most significant of these is the hippocampus, a small, seahorse-shaped structure that acts like the brain's memory "save button".

The hippocampus is responsible for encoding new experiences, meaning it helps convert short-term sensory information into long-term memories. For instance, the encoding process allows people to remember what they had for breakfast, recognize a friend's face, or recall their first day at school.

Another vital brain region is the parahippocampal gyrus (PHG). The parahippocampal gyrus is a cortical region in the medial temporal lobe that surrounds the hippocampus and plays an important role in both spatial memory (Squire, L. R. and Zola-Morgan, S., 1991) and navigation (Aguirre, G. K. et al., 1996). For example, when a person encounters a familiar scene, like walking into a coffee shop the person visits regularly, the hippocampus quickly retrieves related memories, giving him or her a sensation of familiarity. In general, When you encounter a familiar scene, like walking into a coffee shop you visit regularly, the hippocampus quickly retrieves related memories, giving you a sensation of familiarity. In general, The parahippocampal gyrus essentially encodes the "scene" or background details of memories, helping people recognize familiar settings or environments even if they don't remember specific details. Overall, Two parts of the temporal lobe are often associated with déjà vu. The PHG is thought to play a role in the sense of familiarity, which is the feeling of knowing something without recalling specific details. While the hippocampus is linked more to detailed episodic memory (recalling particular events), the PHG contributes to recognizing the general "feel" or familiarity of places and contexts.

3.2. déjà vu and temporal lobes

Since déjà vu is a “feeling” or “confusion” about memories, scientists began investigating the link between the temporal lobe and déjà vu.

In typical memory processing, the hippocampus and parahippocampal gyrus work in tandem to form a coherent memory of an experience. It is obvious that every part of the brain has its role and does not stop working as long as it is healthy. However, a glitch can occur in either or both of these areas similar to mutation in cells.

The hippocampus is crucial for forming episodic memories, which involve detailed recollections of events tied to specific contexts. During normal memory formation, neurons in the hippocampus engage in long-term potentiation (LTP), where repeated stimulation strengthens synaptic connections, creating a specific memory trace (Eichenbaum, 2004). In déjà vu, this structured firing pattern may be disrupted by hyperexcitability within hippocampal circuits, leading to false memory signals that give a sense of familiarity without actual recall (Bartolomei, 2004; Brown, 2003).

The PHG, particularly the parahippocampal place area (PPA), specializes in recognizing familiar scenes and contexts. This region, which is linked to spatial and scene processing, helps generate a sensation of familiarity based on environmental context (Voss & Paller, 2009). In déjà vu, overactivation of the PHG or irregular neural oscillations within the PPA can create an unwarranted familiarity signal. When combined with the hippocampus's failure to retrieve a corresponding memory, this overactivation leads to the illusion of déjà vu (Brown, 2003; Spatt, 2002).

Additionally, the entorhinal cortex plays a role by relaying context information between the hippocampus and PHG, allowing spatial and scene-related details to be associated with memories. If the PHG or entorhinal cortex experiences synchronous misfiring, it can lead to erroneous context signals that make a novel scene appear familiar, furthering the déjà vu experience (Moulin, 2005).

3.3. Synaptic and oscillatory interactions in déjà vu

Hippocampal-PHG circuits synchronize through theta (4-7 Hz) and gamma (30-100 Hz) oscillations, facilitating memory encoding by linking sensory input to memory traces (Gloor, 1997). During déjà vu, disruptions in these oscillations, often seen in epileptic or epileptiform activity, lead to phase-locking errors where the timing of oscillations becomes desynchronized (Bartolomei et al., 2004). This can produce a false sensation of familiarity by destabilizing the normal memory-matching process (Spatt, 2002).

3.4. Temporal lobe epilepsy

Research shows that individuals with temporal lobe epilepsy (TLE) report déjà vu occurrences at a significantly higher rate than those without the condition. This association is likely due to the abnormal electrical activity in the temporal lobe during seizures, which can stimulate areas like the hippocampus and parahippocampal gyrus, both essential in processing memory and familiarity (Bancaud & Brunet-Bourgin, 1994; Spatt, 2002). During TLE episodes, even brief seizures or microseizures may induce hyperactivity in these regions, causing feelings of misplaced familiarity that mirror the sensation of déjà vu (Gloor, 1997). This heightened déjà vu frequency in TLE patients supports theories linking temporal lobe activity, especially misfiring in memory-related circuits, to the déjà vu phenomenon (Bartolomei et al., 2004).

4. Cognitive Psychology: Dual Processing Theory

4.1. Overview of dual processing theory

Dual processing theory posits that cognitive processes are divided into two distinct systems: System 1 and System 2. This framework, articulated by Daniel Kahneman, provides a comprehensive understanding of human thought processes and decision-making.

System 1 operates automatically and quickly, with little or no effort and no sense of voluntary control. It is responsible for intuitive responses and relies heavily on heuristics—mental shortcuts that facilitate problem-solving and judgment. System 1 is fast, unconscious, and driven by emotions and past experiences (Kahneman, 2011).

System 2, in contrast, allocates attention to the effortful mental activities that demand it, including complex computations and logical reasoning. This system is slow, deliberate, and requires conscious thought. System 2 is invoked in situations that require analytical thinking, critical evaluation, and the overcoming of cognitive biases (Kahneman, 2011).

In déjà vu study, many researchers believe when there is a difference in the processing speed of these two systems, déjà vu occurs as one situation is processed twice. A similar example is the human ear. Humans process sound and recognize the exact direction of sound with only two ears, separated by a small distance of the head.

4.2. Dual processing in déjà vu phenomenon

Expanding on the Dual Processing Theory in the context of déjà vu, we see how Systems 1 and 2 work in parallel, but sometimes experience slight mismatches that lead to this intriguing sensation. The phenomenon begins when System 1, the intuitive, rapid-response system, identifies an aspect of the current situation as familiar. System 1 relies on heuristic shortcuts developed from accumulated experiences, enabling it to categorize sensory information efficiently and quickly (Kahneman, 2011).

However, System 2—the slow, analytical, and detail-oriented system—plays a different role in confirming experiences as familiar or known. As it attempts to verify System 1's quick familiarity response, System 2 systematically searches for specific contextual memories that would explain why the current scene feels known (Kahneman, 2011). If System 2 cannot retrieve a corresponding memory to back up the feeling of familiarity created by System 1, a "memory conflict" arises, where the mind recognizes a sensation of familiarity without any traceable memory. This conflict is what many researchers propose as the basis for the sensation of déjà vu (Brown, 2003).

Brown (2003) described déjà vu in terms of an automatic familiarity process and a controlled memory retrieval process. He mentioned that déjà vu could arise when the brain erroneously flags a current experience as familiar due to cues that resemble past experiences, without the retrieval of specific episodic details. In this framework, the brain's automatic, rapid response to familiarity cues (what Kahneman later called System 1) triggers the feeling of déjà vu. However, the more deliberate, controlled retrieval process (similar to System 2) fails to locate an actual memory, leading to a mismatch between familiarity and recall.

Furthermore, research in cognitive psychology suggests that the slight delay in processing speeds between System 1 and System 2 may lead to this dissonance, which produces the sense of déjà vu. Studies indicate that this phenomenon could be associated with a "temporal processing lag" where System 1 processes information faster than System 2 can verify it (Voss & Paller, 2009). This lag is minor—often just milliseconds—but is sufficient to create the illusion that the current experience has happened before, even though it's actually the brain's processing that is out of sync (Jacobs, 2009).

5. Cognitive Psychology: Memory Mismatch Theory

5.1. Long-Term Memory and Short-Term Memory

Firstly, we must not forget that topics related to memory are about brain work. Short-term memory, sometimes called "working memory," temporarily stores small amounts of information for immediate use. It acts like a mental notepad, allowing people to hold information for short periods — typically seconds to a few minutes — without actively rehearsing it. STM is limited in both duration and capacity; it generally holds about 5 to 9 items at a time (Miller, 1956), known as the "magic number 7, plus or minus 2."

Long-term memory stores information for extended periods, from hours to a lifetime. Unlike STM, LTM has a seemingly unlimited capacity, storing everything from facts and experiences to learned skills. LTM can be further divided into explicit (declarative) memory, which includes facts and experiences (e.g., semantic and episodic memory), and implicit (non-declarative) memory, which includes skills and procedures (e.g., how to ride a bike). LTM is our permanent storage, allowing us to remember our past experiences, learn new skills, and apply acquired knowledge over time. While STM acts as a short-term holding area, LTM is more like a library where vast amounts of information are cataloged and stored.

5.2. Déjà vu, misclassification of memory

With the knowledge of short-term memory and long-term memory, a question occurs. What if the memory that should be classified in short-term after experience is classified in long-term memory.

Déjà vu can occur due to the misclassification of current sensory or contextual information with cues from existing memories. This happens because certain elements of a new experience might resemble those from a past memory. For instance, someone visits a new café that, unknowingly, shares a similar layout, smell, or color scheme with a café that someone visited in another city. The familiarity of these features can cause the brain to misfire, interpreting the experience as one it recognizes and has seen before.

Memory Mismatch Theory explains déjà vu as a result of classification errors in memory processing. The brain's familiarity and recollection systems misfire, primarily due to partial cue overlap and misaligned neural signals in the medial temporal lobe and frontal cortex. This cognitive error generates the sensation that a new experience has already been stored in memory, even though it has not, hence the feeling of déjà vu.

Cognitive psychology research suggests that the brain's sense of familiarity and recognition often relies on cues such as location, lighting, or spatial arrangement (Voss & Paller, 2009). When current environmental cues are similar to cues in stored memories, this overlap creates a false sense of familiarity. Memory discrepancy theory posits that cognitive fluency—the ease with which the brain processes familiar elements—plays a role in déjà vu. This cognitive fluency comes from the brain's efficiency in processing details that seem familiar, creating the impression of recognition.

A glitch occurs where STM mistakenly tags sensory details as already existing in LTM. This could happen due to overlapping cues or neural similarities with a past memory. The brain interprets the new experience as if it were a retrieval from LTM, producing an immediate but false sensation of familiarity (Brown, 2004).

5.3. mechanism leading to misclassification

The prefrontal cortex, which manages STM, typically works in sync with the hippocampus to categorize memories as either short-term or long-term. When the brain encounters

familiar elements (like similar smells or sounds), the hippocampus signals to the prefrontal cortex that something is known. If there's a misfire in these signals or a glitch in categorization, STM experiences may be misclassified as LTM, creating the illusion that "this has happened before." This similar environmental or sensory cues trigger this misclassification. (Voss & Paller, 2009).

6. Conclusion

In conclusion, *déjà vu* is a fascinating and complex phenomenon that reflects the intricate workings of our memory systems and brain regions. This uncanny feeling of having already experienced a moment stems from subtle interactions and occasional errors in how we process memories. Neurological studies reveal that key areas in the temporal lobe, such as the hippocampus and the parahippocampal gyrus, play significant roles. These areas are crucial for encoding new memories and generating familiarity signals, yet disruptions in their synchronization, often in the form of minor misfires, can create a misleading sense of recognition. Meanwhile, cognitive psychology offers additional insights through theories like the Memory Mismatch Theory and Dual Processing Theory. These theories suggest that *déjà vu* may result from a misclassification error, where our brains mistakenly process a current experience as if it were a long-term memory or recognize familiar elements without the conscious recall of specific details.

Déjà vu, therefore, is a prime example of how our brain's memory system isn't always foolproof. Our short-term and long-term memory systems typically work together to filter and store experiences accurately, but sometimes, new information is incorrectly labeled, creating a false sense of familiarity. This misclassification could happen due to overlapping sensory or contextual cues between a current experience and an actual past memory, leading the brain to "remember" something it has never actually encountered. In these cases, the prefrontal cortex attempts to verify the context, yet the hippocampus fails to retrieve any episodic memory, causing a conflict. This is further complicated by our brain's use of perceptual fluency—how smoothly we process familiar-seeming information—which can heighten this sensation, adding to the eerie yet intriguing experience of *déjà vu*.

Looking ahead, there are promising directions for future research that could deepen our understanding of *déjà vu*. Advanced neuroimaging techniques, such as high-resolution fMRI and EEG, hold the potential to observe *déjà vu* as it happens, providing clearer insights into the exact neural pathways involved. Understanding the synchronization patterns within the hippocampal-prefrontal and parahippocampal regions, particularly focusing on the role of theta and gamma oscillations, could clarify the timing errors that might contribute to *déjà vu*. Virtual reality (VR) also presents an exciting opportunity to study *déjà vu* in controlled environments by replicating cues and contexts that might trigger it, offering researchers a way to explore the phenomenon systematically.

Furthermore, exploring genetic and neurochemical influences could shed light on why some individuals experience *déjà vu* more frequently than others. Investigating how neurotransmitters like dopamine contribute to this sense of false familiarity could be particularly revealing. Age-related studies are also essential; *déjà vu* may change as memory-processing regions evolve over time, and longitudinal studies could show how shifts in brain function impact the experience. Overall, *déjà vu* research stands at a unique intersection of neuroscience, cognitive psychology, and genetics, offering insights not only into this peculiar memory error but also into the broader mechanisms of memory, perception, and self-awareness. By continuing interdisciplinary studies, researchers may one day fully unravel the neural and cognitive layers behind this universally intriguing experience.

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SSBA-23

Research On Consumer Behavior Of Cultivated Oyster Mushrooms

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Abstract: Oyster mushrooms (*Pleurotus* spp) are commonly cultivated in developing countries. Nowadays, consumers have become very knowledgeable about products and services, and the tendency to choose and use environmentally friendly products is increasing day by day. At a time when the issue of green sustainable development and healthy nutrition is a serious issue, mushrooms have become an essential food to meet human protein needs. Therefore, in order to study the consumer behavior and influencing factors of oyster mushroom cultivation in Mongolia in recent years, consumers buy mushrooms from fruit and vegetable stores and large chain stores for health purposes and to meet their protein needs for themselves and their families. Also necessary to organize the work of spreading information about mushrooms to the public.

Keywords: Oyster mushrooms, consumers, prices, quality, needs

1. Introduction

In addition to nutrients and food quality, oyster mushroom cultivation requires limited space, low initial investment, and easy-to-obtain cheap raw materials. Cultivation techniques are also simple and cheap, there is a wide variety of species that can be grown under different climatic conditions in the growing region (Quimio et al, 1990; Oei, 1996; Balakrishnan and Nair, 1997; Jandaik, 1997; Khare)., 2007; Khare et al., 2010a; Khare et al., 2010b). Mushrooms are world-renowned for their nutritional and medicinal value. Oyster mushrooms are an excellent source of several vitamins, including niacin (21% of your daily requirement), riboflavin (18%), and pantothenic acid (11%). Minerals in oyster mushrooms include phosphorus, potassium, and copper (your daily requirement 10%), including iron, magnesium, manganese, and selenium. Consumer behavior of mushrooms is hardly studied in Mongolia, but it is great importance to mushroom producers and those involved in the sale and processing of mushrooms.

2. Research objectives and methodology

The purpose of the study is to determine the factors influencing consumer sales of oyster mushrooms. Within this goal, the following goals will be proposed. It includes:

1. Study the current state of the mushroom market based on the works and research of mushroom researchers.
 2. Study and analyze consumer buying behavior research using questionnaires and interviews, determine consumer buying behavior and influencing factors.
- Collected data from a total of 200 users using google forms and determined the behavior of mushroom buyers.

3. Main part

Out of the 100,000 species of mushrooms recorded in the world, 630 species of macromycetes of 237 species belonging to 2 orders, 7 classes, and 31 groups belonging to 88 genera have been recorded in Mongolia. Of the above 630 species, 18.4% or 116 species are edible and medicinal mushrooms. Currently, 6 species of mushrooms are being cultivated and domesticated in Mongolia.

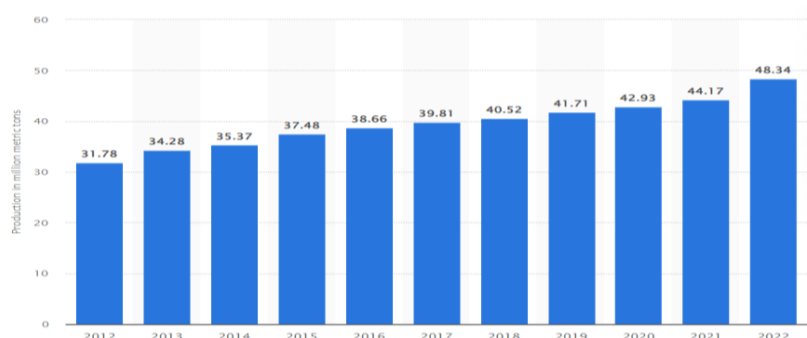


Figure 1. Total world mushroom production (2012-2022, in million tons)

Source: [statista.com/statistics/1018488/global-mushrooms-and-truffles-production/](https://www.statista.com/statistics/1018488/global-mushrooms-and-truffles-production/)
It can be seen that mushroom production and mushroom market is growing rapidly every year.

Table 1. Production trend & CAGR of Top 10 countries for fresh mushrooms in the world (2000-2021) (million tonnes)

Year	China	Japan	Poland	USA	Netherlands	India	Spain	Canada	Russia	France
2000	6.644	0.424	0.109	0.384	0.265	0.024	0.063	0.080	0.006	0.204
2001	7.828	0.427	0.110	0.377	0.275	0.030	0.110	0.086	0.006	0.196
2002	8.774	0.430	0.120	0.377	0.270	0.040	0.135	0.075	0.007	0.175
2003	10.396	0.434	0.135	0.388	0.263	0.040	0.129	0.088	0.006	0.170
2004	11.610	0.406	0.150	0.388	0.260	0.040	0.139	0.085	0.006	0.165
2005	13.360	0.420	0.160	0.387	0.245	0.040	0.138	0.080	0.005	0.139
2006	14.749	0.430	0.169	0.83	0.235	0.035	0.135	0.089	0.006	0.116
2007	16.829	0.440	0.180	0.36	0.240	0.037	0.132	0.083	0.006	0.132
2008	18.278	0.450	0.185	0.369	0.255	0.037	0.134	0.116	0.006	0.139
2009	20.214	0.460	0.207	0.372	0.230	0.037	0.131	0.114	0.006	0.114
2010	22.020	0.470	0.230	0.359	0.266	0.041	0.133	0.115	0.005	0.119
2011	25.726	0.470	0.220	0.391	0.304	0.041	0.146	0.122	0.004	0.116
2012	28.281	0.460	0.230	0.403	0.307	0.030	0.147	0.125	0.005	0.117
2013	31.705	0.460	0.249	0.408	0.323	0.017	0.150	0.120	0.008	0.104
2014	32.708	0.460	0.263	0.432	0.310	0.028	0.150	0.120	0.008	0.109
2015	34.772	0.450	0.269	0.421	0.310	0.051	0.219	0.115	0.009	0.101
2016	35.979	0.460	0.280	0.428	0.300	0.076	0.148	0.119	0.010	0.100
2017	37.130	0.459	0.291	0.423	0.300	0.102	0.159	0.120	0.016	0.086
2018	37.901	0.467	0.200	0.416	0.300	0.134	0.166	0.126	0.031	0.083
2019	38.981	0.470	0.235	0.384	0.270	0.182	0.170	0.132	0.048	0.088

2020	40.008	0.471	0.320	0.37	0.260	0.211	0.166	0.133	0.086	0.08
2021	41.127	0.469	0.379	0.344	0.260	0.243	0.164	0.138	0.111	0.099
CAGR	9.23	0.57	5.04	0.22	0.63	8.58	2.54	2.81	11.7	-3.91

Source: FAOSTAT, 2023

In 2023, 46 companies importing edible mushrooms imported mushrooms and mushroom products across the border of Mongolia. (Table 2)

Table 2. Types of mushroom products

Types of mushroom products	Amount /piece/	Import price \\$/
Lecho with mushrooms	332,824	1,089,869,440
Stuffed mushrooms	217,941	912,249,803
Frozen mushrooms	51,841	182,449,890
Fresh, cultivated, soup	12,793	72,946,199
Mushroom preparation, soup	2,908	15,404,528
Dried mushrooms	321	16,040,44
Total	618,628	2,288,959,904

Source: Mongolia Customs News, 2019

A study of mushroom consumer behavior

53.3% of our surveyed consumers say they use mushrooms and oyster mushrooms, and 20% of them have not made a purchase in the last 1 month. But 53.3% made purchases up to 30,000 MNT.

(Figure 2)

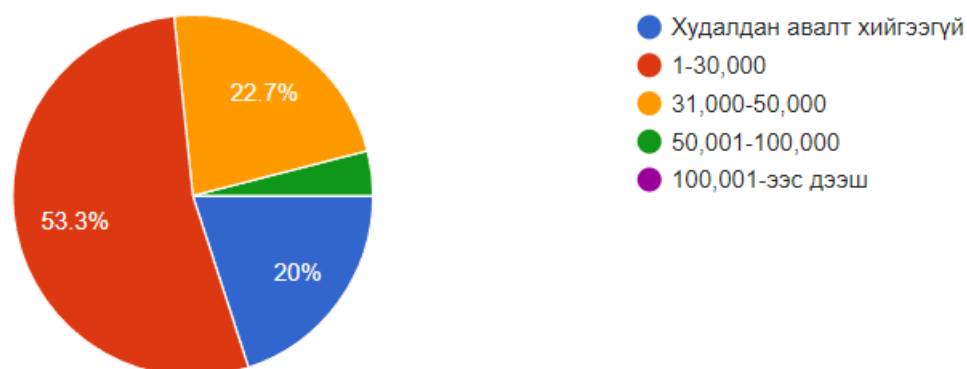


Figure 2. Mushrooms and mushroom products purchase price information

Imported brown mushrooms and lecho with mushrooms are named as the most purchased mushrooms, while Khan's mushroom grown in Mongolia accounts for the lowest amount.

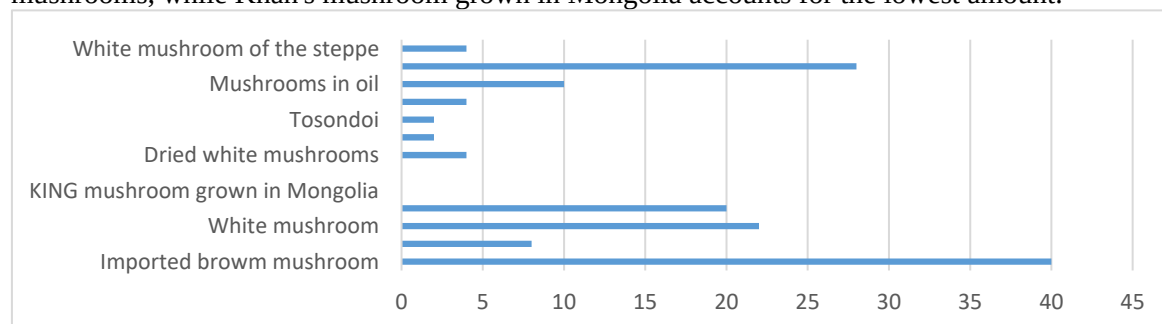


Figure 3. Selling mushrooms and mushroom products

32 percent of respondents make purchases every 2-14 days, and 36 percent make purchases 1-2 times a month. (Table 3)

Table 3. Frequency of purchase of mushroom products

	Daily	2-7 days	8-14 days	15-21 days	In month
1-2 times	4% or 6 users	18% or 21 users	16% or 9 users	4% or 4 users	36% or 19 users
3-4 times	0% or 1 users	2% or 2 users	2% or 6 users	2% or 5 users	8% or 5 users

72.5% of the consumers who participated in the survey answered with the choice of adding vegetables and 33.3% to meet their protein needs. (Figure 4)

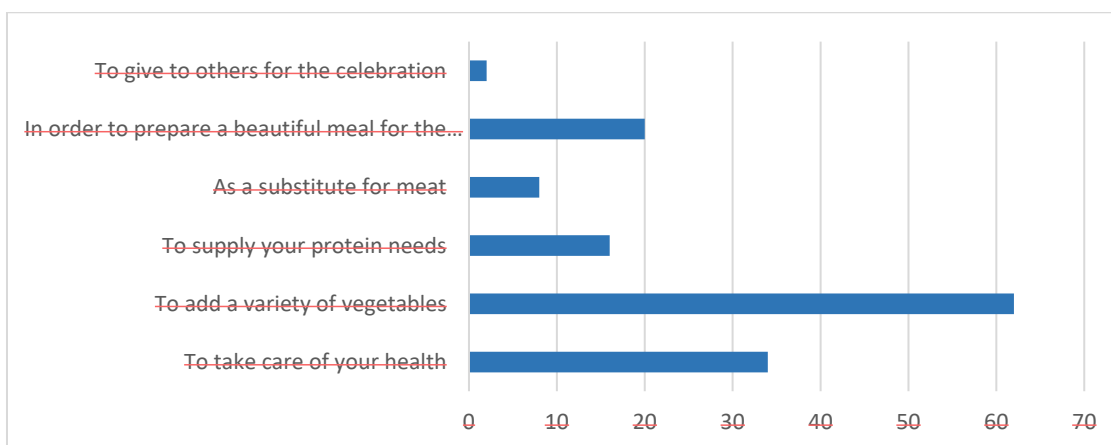


Figure 4. Reasons for purchasing oyster mushrooms and mushroom products
62.3 percent of the respondents answered that they bought mushrooms and mushroom products from fruit and vegetable stores (Figure 5).

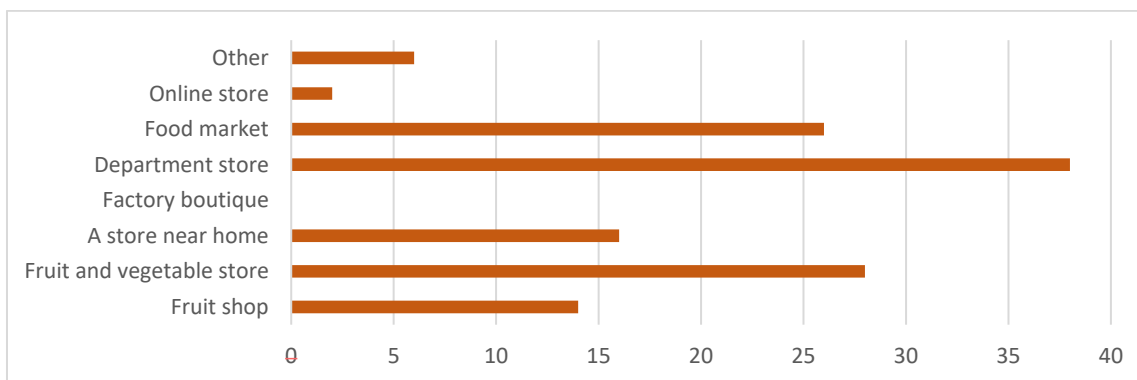


Figure 5. Location of buying mushrooms

21.4% or 43 of the consumers who participated in the survey answered that they received information about oyster mushrooms and mushroom products from their acquaintances, 20% or 40 consumers from their branch stores, and 57.1% or 1140 consumers from the Facebook page. (Figure 6)

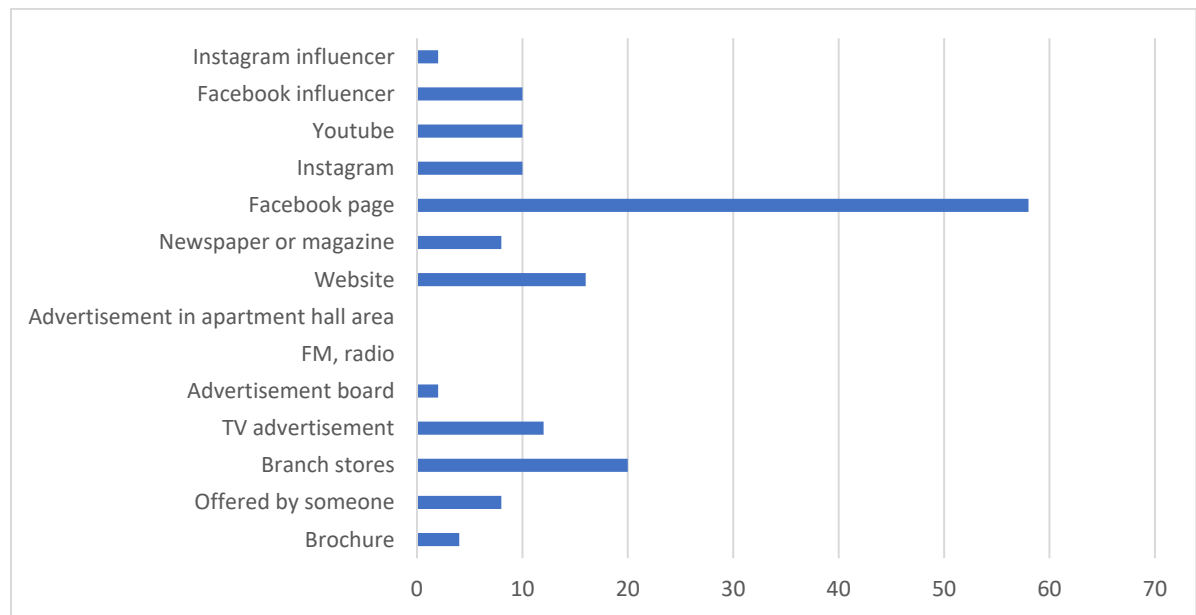


Figure 6. Sources of information about oyster mushrooms and mushroom products
151 consumers or 76.5 percent of the consumers who participated in the research consider price, quality, packaging, and time when buying oyster mushrooms. (Table 4)
Table 4. Factors considered when buying mushrooms

	Price	Date	Quality	Serving area	Package	Producted place	Total	Percentage
As a substitute for meat	1	2	4		2		9	10.59
Gift to others	2	1	3	3	4	2	15	17.65
Supply your protein needs	3	5	2	4	3	2	19	22.35
Add a variety of vegetables	3	2	2		4		11	12.94
To take care of health	5	7	4	6	6	3	31	36.47
Total	14	17	15	13	19	7	85	100.0
Percentage	16.47	20.00	17.65	15.29	22.35	8.24	100.0	

Conclusion:

- ✓ As of 2023, 46 enterprises and organizations importing edible mushrooms have imported mushrooms and mushroom products across the border of Mongolia.
- ✓ Oyster mushroom is a food product that needs to increase its production and cultivation as it is a plant that supplements protein and replaces meat.
- ✓ 53.3% of the respondents bought 30,000 MNT of mushrooms in the last month, and the most used type of mushroom is imported brown mushroom. Consumers buy mushrooms from fruit and vegetable stores and large chain stores for health purposes and to meet their protein needs for themselves and their families.
- ✓ 21.4% of the consumers who participated in the survey get information about oyster mushrooms and mushroom products from acquaintances, 20% from branch stores, and 57.1% from Facebook pages.

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HSCS-24

The ritual of purification by fire in Mongolian culture

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Abstract- One of the prominent traditions among Mongolians is the ritual of purification through fire. Mongolians have long revered fire as a sacred symbol, considering it a force that dispels darkness and cold while bringing light and warmth. Fire has been central to their beliefs as a representation of purity. To remove negative energy absorbed into the body or objects, purification rituals involve practices such as passing through the flames, circling around the fire, or leaping over it. In a typical ceremony, after the head of the household bows three times to the fire, all family members follow suit and circle the fire three times. Male participants leap over the flames, while women pass through the smoke. Another significant practice involves walking through a fire made of dried dung (argal) upon returning from burying the deceased. This is believed to harness the energy of the fire to dispel any harmful elements that might have been carried back from the realm of the dead, thus cleansing and purifying the body. Such fire purification rituals are abundant in Mongolian culture, each carrying profound symbolic meaning. This presentation delves into these rituals, exploring their origins and significance in Mongolian nomadic herding culture. It examines their role within traditional customs, drawing on historical sources and ethnographic research to analyze examples from Mongolian communities across the world.

SSD-25

The Outcome Of Conducting Mathematics Lessons Using the Flipped Learning Method

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Abstract:: The flipped classroom encourages active learning, student engagement, and individualized guidance. It is a form of blended learning that places lectures outside the classroom and shifts the majority of work into the classroom. Discrete mathematics course was organized for second-year students of engineering technology by the method of learning during one semester. Students studied the theoretical material of the course independently at home, and participated in the class using the blended learning method in the classroom. Student-centered training was organized in the classroom, such as discussion, teamwork, team teaching, teaching others, etc. At the end of the course, students were given a short online assessment to determine outcomes. At the end of the semester, the evaluation of students' knowledge and skills approach met the criteria modeled by Bloom's taxonomy. There is an improvement in the previous level of knowledge. In addition to the improvement of students' mathematical knowledge, their ability to use mathematical apparatuses in practice, their mastery of electronic technology, their ability to work in a team, their presentation skills, and their attitude have been improved.

1. Introduction

The flipped classroom teaching method was first introduced in 2007 by John Bergmann and Aaron Sams, high school chemistry teachers in the United States. They created video lessons for their students to watch at home before class. The primary objective of this approach is to dedicate classroom time to collaboratively addressing more complex and challenging concepts.

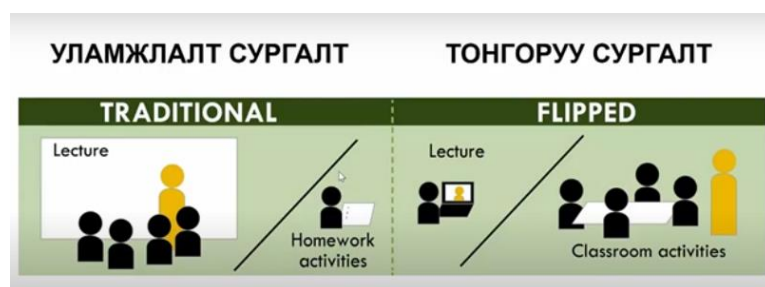


Figure 1. flipped design

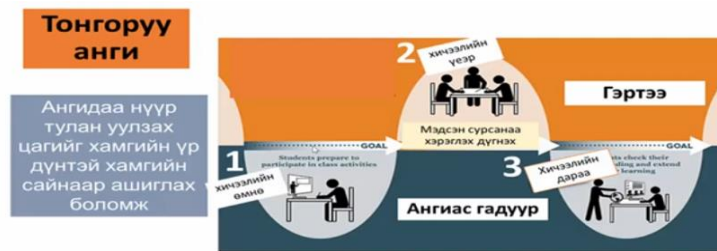


Figure 2. flipped classroom

2. Implementation methods

1. Prepare Teachers and Students for Flipped Learning
 - Includes psychological preparation and skill-building.
2. Select Appropriate Technologies
 - Educational and digital technologies, including:
 - Project-based learning approaches
 - Problem-solving techniques
 - Video-based training
 - Independent learning strategies
 - Other technologies tailored to professional requirements
 - Sharing successful experiences with others

Advantages of Flipped Learning

According to Kheyd S.F. (2013), Schiller N.A. (2013), and Mok H.N. (2014), the benefits of flipped learning include:

1. Students can progress at their own pace.
2. Classroom time is used for activities like homework, previously done outside class.
3. Teachers can adapt and innovate their teaching methods.
4. Students are no longer required to listen to long lectures during class.
5. Class time is utilized more effectively for meaningful learning.
6. The success of flipped learning depends on online technology.

Tips for Successfully Implementing Flipped Learning

By adopting this model, students will not only absorb information but also develop critical skills such as problem-solving, independent learning, and collaboration, leading to a deeper understanding of the subject matter.

1. Defining Objectives
2. Preparing Lesson Content and Video Lessons
3. Distributing Pre-Lesson Preparation Materials
4. In-Class Exercises and Collaborative Activities
5. Assessing Understanding and Reinforcing Learning
6. Reviewing and Improving Lesson Content

Relevance to Teaching Mathematics

Teaching mathematics in an engaging and understandable way is becoming increasingly important. The flipped learning approach, widely adopted in education globally, has been proven effective in making mathematics both accessible and enjoyable for students.

Video-Based Learning or Flipped Learning

Flipped learning is built on four core principles:

- **Flexible Environment:** Creating a learning environment that adapts to individual needs.
- **Learning Culture:** Encouraging an active and student-centered approach.
- **Intentional Content:** Delivering targeted and meaningful content.
- **Professional Educator:** Empowering skilled educators to facilitate learning.

(Nenso, 2014, p.184)

Objective of the Study

This study explores the implementation of the flipped learning method in mathematics lessons and evaluates its effectiveness to determine the potential for integrating this approach into the national education system.

3. Research methodology

A total of 40 students participated, divided into two groups:

- One group followed the **traditional learning method**, where lessons were delivered in class by the teacher.
- The other group adopted the **flipped learning method**, where students reviewed learning materials prior to class and worked collaboratively with the teacher on exercises during the lesson.

To evaluate outcomes, the study utilized diagnostic tests, surveys, and classroom observations.

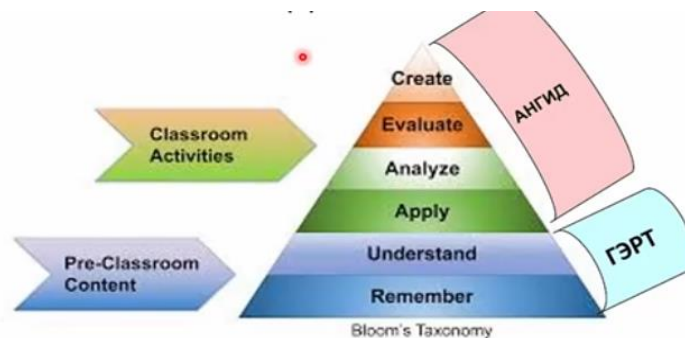


Figure 3. flipped classroom

Key Findings

1. Academic Achievement

Students in the flipped learning group achieved higher exam scores, demonstrating better comprehension of the subject matter and enhanced independent learning skills.

2. Active Engagement

The flipped learning group showed greater engagement, frequently sharing opinions and actively participating in problem-solving activities. Unlike the traditional group, these students moved beyond merely following teacher instructions and demonstrated increased enthusiasm for learning.

3. Independent Learning Skills

Students have demonstrated an ability to study independently and deeply understand the subject matter through the flipped learning method. They actively review previous lessons and use their accumulated knowledge to solve problems effectively.

4. Collaboration and Communication Skills

The flipped learning approach has enabled students to collaborate with their peers, working together to solve problems and supporting one another. This process has significantly improved their teamwork and communication abilities.

Post-Teaching Assessment Model

To effectively evaluate students' understanding, knowledge, and skills gained through flipped learning, it is recommended to use the following assessment guidelines:

1. Peer Assessment

- After group activities, students evaluate their peers' contributions.
- Provide clear assessment questions such as:
 - *“How actively did my partner participate?”*
 - *“What was their level of understanding of the topic?”*
 - *“What contributions did they make to problem-solving?”*
- Peer assessment fosters respect for others' perspectives and enhances collaboration skills.

2. Self-Assessment

- Allow students to reflect on their participation and learning process.
- Encourage journaling or answering questions like:
 - *“How well did I understand the topic?”*
 - *“What did I learn from this lesson, and what should I focus on improving?”*
- Self-assessment helps students monitor their progress and take responsibility for their learning.

3. End-of-Lesson Tests or Quizzes

- Conduct short tests or quizzes to assess understanding of the independently learned material.
- Design questions to evaluate key concepts and problem-solving skills, including theoretical, practical, or calculation-based problems.

4. Practical Assignments and Projects

- Assign tasks or projects that enable students to apply their learning to real-world scenarios.
- These activities help bridge the gap between theoretical understanding and practical application.

Practical Applications in Mathematics

- For mathematics, students can be encouraged to solve problems using innovative methods or work on research projects that involve tackling real-world issues.
- This approach enhances students' creative thinking and evaluates their ability to apply knowledge to practical situations.

Problem-Solving and In-Depth Analysis

- Engage students in problem-solving and critical analysis within the studied content using interactive learning methods.
- Deepen understanding by asking questions such as:
 - *“How could this problem be solved differently?”*
 - *“What methods were employed to address this issue?”*

Reviewing Acquired Knowledge

- Students can summarize their learning by writing essays answering questions like:
 - *“What did I learn in this lesson?”*
 - *“How did the interactive learning method influence my understanding?”*
- This encourages students to reflect on their knowledge and the effectiveness of the teaching approach.

Presentation and Explanation Tasks

- Assign tasks where students explain or present a topic to their peers, which helps clarify their level of understanding.
- This method also supports the development of communication and presentation skills.

4. Research Outcomes

1. Increased Engagement

Students come to class prepared with foundational knowledge, allowing them to actively engage in discussions, ask questions, and clarify concepts.

2. Enhanced Learning Quality

Students benefit from resolving challenges faced during independent study by discussing them with teachers during class, leading to improved comprehension.

3. Improved Collaboration

Classroom activities that encourage teamwork and peer support enhance students' communication and collaboration skills.

Challenges Identified:

1. Resource Constraints:

Limited access to laptops, software, and technology.

2. Skills Gaps:

- Some students lack confidence in independent learning.
- Weak teamwork abilities in certain groups hinder progress.

3. Preparation for Online Learning:

Students need support to adapt to virtual learning environments and build self-learning capabilities.

4. Teacher's Role:

Teachers must develop materials tailored to students' needs and ensure content aligns with learning goals.

For example, in mathematics, you can have students solve problems in new ways or solve problems as part of a research project. • This is useful for developing students' creative thinking and assessing their ability to apply their knowledge to practical situations.

5. Problem-Solving and In-Depth Analysis

- One practical activity could involve having students solve problems in new ways or tackle problems as part of a research project, specifically in mathematics.
- This helps develop students' creative thinking and assesses their ability to apply their knowledge in real-world situations.
- You can assess their problem-solving and analytical skills by engaging them in problem-solving tasks within the context of the content they studied using interactive learning methods.
- Ask questions like:
 - *"How could this problem be solved differently?"*
 - *"What methods did you use to solve this problem?"*
 - These types of questions help deepen their understanding.

6. Review of Knowledge Acquired During the Learning Process

- Ask students to write an essay responding to questions such as:
 - *"What did I learn in this lesson?"*
 - *"How did the interactive learning method affect my understanding?"*
- This allows them to reflect on their learning and evaluate the effectiveness of the teaching method.

7. Presentation and Explanation Tasks

- Assign tasks where students explain or present a topic to others. This is an effective assessment tool that helps clarify their level of understanding of the material.
- During the explanation process, it becomes evident how well they comprehend the content, and it supports the development of their communication and presentation skills.

Research Findings:

1. **Increased Engagement:**
Students come to class with prior knowledge, which makes them more active in the lessons. They are more likely to participate in discussions, solve problems with the teacher, ask questions, and seek clarifications.
2. **Improved Learning Quality:**
The ability to ask the teacher questions during the lesson about concepts they are studying or issues they face helps enhance their understanding.
3. **Collaboration:**
The increased opportunities for collaboration and helping each other during class have improved students' communication and teamwork skills.

5.Conclusion

The research shows that using interactive teaching methods in mathematics enhances students' knowledge levels and improves their learning activity, independence, creativity, and collaboration skills.

1. **Broad Applicability:**
This method can be successfully applied in our education sector, and it would be beneficial to try it in other subjects as well. Since lessons can be reviewed through videos and files, students can learn at their own pace.
2. **More Effective Class Time:**
Students come to class having mastered the key concepts, so more class time is spent on active learning and problem-solving.
3. **Increased Participation:**
During class, students are more engaged in both group and individual work.
4. **Peer Support:**
Helping each other in class has had a positive impact on students' learning progress.
5. **Teacher Preparation:**
Teachers are better prepared in terms of lesson planning and developing skills.
6. **Challenges:**
Some challenges include a lack of technological resources (e.g., laptops, software), students with weaker independent learning skills, and difficulty in teamwork.
7. **Required Skills and Preparation:**
For the method to be effective, students need to be confident in learning independently and prepared for online learning environments.
8. **Teacher's Role:**
It's important for teachers to create and develop the materials needed to implement this method and ensure that the content matches the needs of the students.

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OTOT-26

Recycling and Collection of Waste Material With System Dynamics Analysis

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Abstract: We witness the accelerating effects of climate change, pollution, and resource depletion, the need for effective management strategies has never been more urgent. On the other hand, re-manufacturing of used merchandise presents a compelling opportunity for Original Equipment Manufacturers (OEMs) to enhance their environmental footprint, bolster customer satisfaction, and optimize production costs. We are investigating and evaluating the system behavior of a mining manufacturing company as a case of study, by using System Dynamics (SD). VENSIM PLE software developed the simulation model. The research method presented offers a valuable tool for examining the intricacies of Closed-Loop Supply Chain (CLSC) systems. By simulating these systems, one can gain insights into their potential benefits and drawbacks before committing to real-world implementation. This pre-emptive analysis allows for informed decision-making, mitigating the risks associated with implementing complex systems without a thorough understanding of their dynamics.

Keywords: system dynamics; (CLSC) systems; supply support; supply chain

1. Introduction

Ulaanbaatar, the capital of Mongolia, faces a growing challenge in managing its urban waste. The city's population has increased in recent years, leading to a surge in waste generation. This has negatively impacted the city's appearance and cleanliness, contributing to environmental pollution and dissatisfaction among residents.

The increasing waste production has also resulted in the loss of valuable natural resources that could be conserved through recycling. This loss of resources has implications for future generations.

Numerous studies have been conducted on urban waste management, focusing on topics such as waste generation, classification, segregation, disposal, and incineration. These studies have also explored the role of advanced technologies in waste volume reduction and management. However, there is a gap in research regarding viable solutions for reducing waste production and its associated consequences [1].

This research aims to address this gap by presenting a systematic and comprehensive approach to urban waste management in Ulaanbaatar. It utilizes a system dynamics model to predict urban waste quantities and devise suitable waste volume reduction solutions. The goal is to promote sustainable urban development and resource conservation [2].

2. Dynamic hypothesis

This paper explores dynamic hypothesis, a conceptual model that utilizes reinforcing and balancing loops to analyze the relationship between key variables. This model serves

as a foundational tool for understanding complex systems, particularly in the context of sustainable urban growth [2,3]. The dynamic hypothesis, illustrated in Figure 1, focuses on the relationship between investment in waste collection, waste collection performance, volume of waste, resource saving, sustainable urban growth, and city beauty.

Key Variables and Relationships:

H1: Investment in waste collection positively impacts waste collection performance.

H2: Waste collection performance influences the volume of waste.

H3: Volume of waste directly impacts resource saving.

H4: Resource saving contributes to sustainable urban growth.

H5: Sustainable urban growth enhances the beauty of the city.

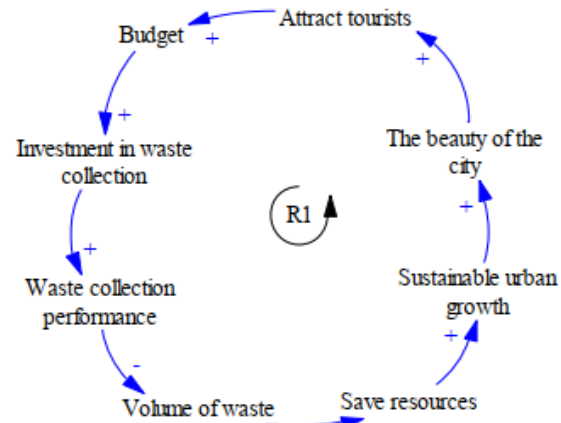


Figure 1. The feedback loop

The dynamic hypothesis reveals a positive feedback loop within the system. Increased investment in waste collection leads to improved performance, resulting in reduced waste volume [3,4]. This, in turn, promotes resource conservation and sustainable urban growth, ultimately enhancing the city's beauty and attracting more tourists. This positive feedback loop highlights the importance of investing in waste management for the long-term well-being of city.

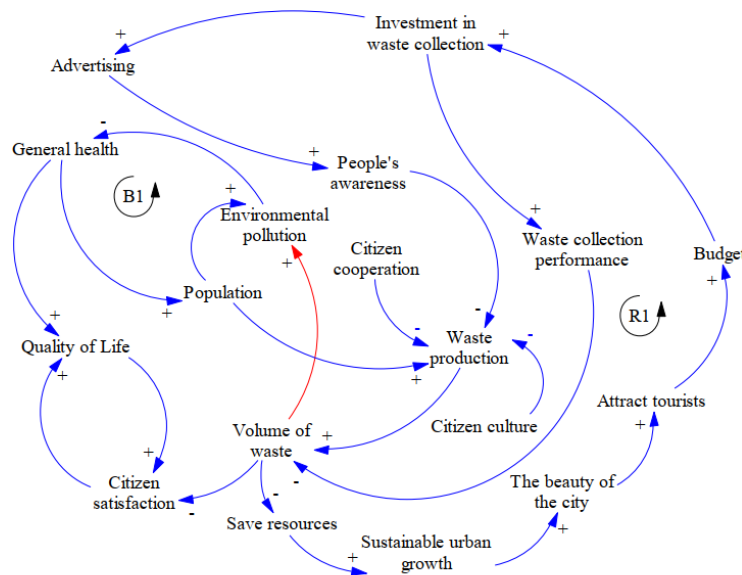


Figure 2. Causal loop diagram

3. Causal loop diagram

According to the determination of dynamic hypotheses and the identification of indigenous and exogenous variables of the model, the causal loop diagram is shown in Figure 2.

4. Stock and flow diagram

The stock and flow diagram, presented in Figure 3, is a visual representation of the interactions between variables related to the volume of waste. It serves as a foundation for constructing a quantitative model that analyzes the system over a 10-year timeframe, evaluated at 12-month intervals. This diagram was developed by establishing relationships and mathematical equations among the variables under investigation.

The diagram encompasses a total of 35 variables, with six being stock variables. These variables represent the key elements of the system, and their relationships are depicted through flows and connections. The development of the diagram involved careful consideration of both quantitative and qualitative relationships, as well as numerical functions.

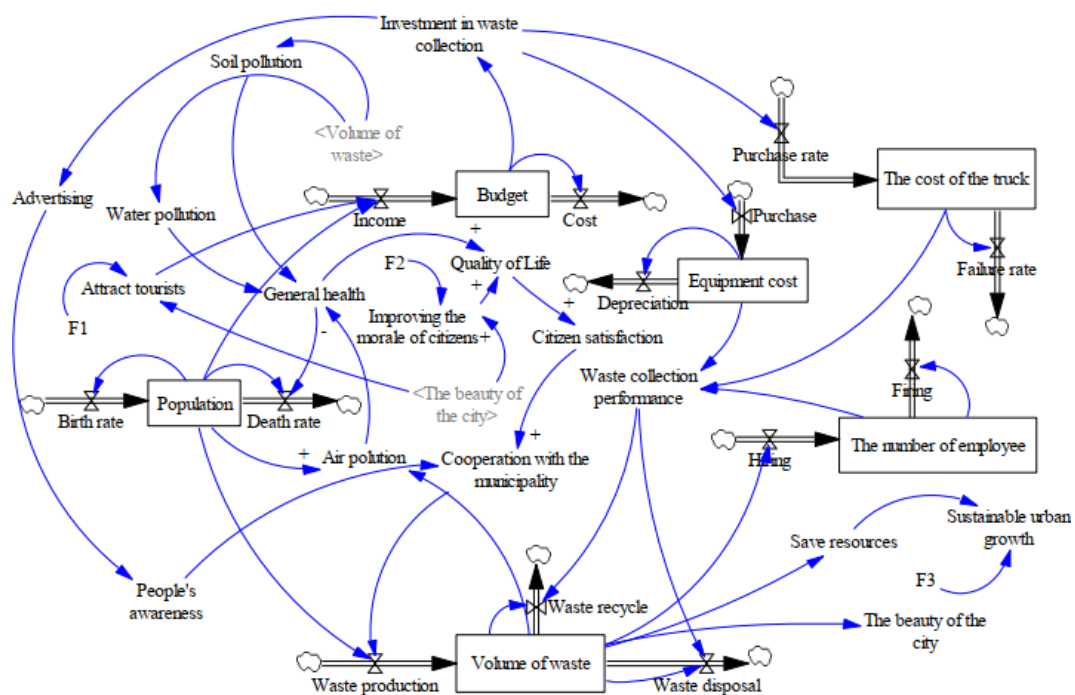


Figure 3. Stock and flow diagram

We found the process of creating the stock and flow diagram to be a valuable exercise in understanding the complex dynamics of waste generation and management. The diagram provides a clear and concise representation of the system, allowing for a more comprehensive analysis of the factors influencing waste volume [5]. The use of mathematical equations and numerical functions ensures that the model is grounded in data and can be used to make informed predictions about future trends.

4. Conclusion

This research, conducted using the system dynamics approach, aimed to optimize waste and urban waste management in Ulaanbaatar. The study began by identifying variables influencing waste volume, drawing upon existing literature and research. These factors were then refined and localized by incorporating insights from experts and city administrators in Ulaanbaatar. Dynamic hypotheses and causal loop

diagrams were constructed based on the combined knowledge from literature and expert opinions.

The study developed a stock and flow diagram by designing the causal loop diagram, exploring the quantitative relationships among the identified variables. This research established a comprehensive framework to reduce waste volume in Ulaanbaatar by formulating various scenarios. The research outcomes indicated that waste production and volume could be effectively controlled within the city, promoting resource conservation and sustainable growth.

I believe that future research should expand beyond the factors examined in this study. It could investigate additional aspects, such as the impact of immigration on waste production, considering waste generated by newcomers, and analyzing the potential role of government assistance in supporting the municipality's waste control efforts. By broadening the research focus, a more holistic understanding of waste management dynamics can be achieved, leading to the development of even more comprehensive strategies.

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SSSED-27

A Study of Factors Related to the Student's Feeling Of Happiness (Based on graduate students)

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Abstract: Happiness is more than just being emotionally well or having an unconcerned life, it's regarding the attitudes and ways of life that we can control. General mental state is influenced by genetics, but our personal choices also play an important role. Briefly, happiness is a choice anyone can make. The graduate students are people who have constituted a certain position in society, have achieved economic and financial freedom, and have had a certain amount of life experience in starting a family, make changes in their lives and learn more in turn. Furthermore, desire to be a good role model in the circle, to be a good reflection of the community and society; on the other hand, knowing what to do is a reason for happy, meaningful and effective learning.

Keywords: graduate students, feeling of happiness

1. Introduction

In addition to supporting people to be diagnosed and solve psychological problems, psychology can also improve individual feelings of well-being through positive psychological experiences. As psychologists led by Seligman began to explore the concept of the field of positive psychology, people gradually became aware of it and began to pay attention to it. It was aimed at helping everyone achieve happiness by taking people's strength and well-being as the object of study. (sheng, 2014)

The study on the feeling of happiness includes concepts such as people's perception of well-being, methods of achieving happiness, relation of factors affecting people's feeling of happiness, and concepts such as self-esteem, depression, and unhappiness that are directly or indirectly related to people's quality of life.

Study aim: The study is aimed to study and analyze the factors, influencing the feeling of happiness among graduate students. In the scope of this aim, we set the following objectives.

Objectives:

1. To study the feeling of happiness and analyze the theoretical concepts;
2. To analyze the psychological characteristics of the students;
3. To determine and study the feelings of happiness of graduate students using F. Fazio's method;
4. To investigate the factors influencing the feeling of happiness by means of a questionnaire;

5. To summarize the results and develop conclusions and recommendations.

Study subject: Graduate students' feelings of happiness and the influencing factors

Study method: Questionnaire method to study the factors, influencing happiness

Body of the study

"Happiness" is a concept that gives different feelings to everyone and is what everyone wants and dreams of. People want to live well and be happy. The main goal of science is to study the well-being of mankind and find and develop the factors leading to it. According to Aristotle, one's mind (wisdom, moral virtue, joy, etc.), body (beauty, health, etc.), environmental factors (wealth, sufficient material resources, good parents, friends, harmony, security, etc.) and successfully living a good life can be considered as happiness. (Dash-Yondon, 2009)

Psychological study on happiness is essential, and happiness is a priority for people, not just related to physical health and even longevity. Around the world, happiness is valued above other desired outcomes, such as a meaningful life.

According to Seligman, happiness is when our life fulfills our needs. It comes when we are satisfied. It's a sense of contentment that life meant to be. Perfect happiness and enlightenment come when all our needs are fully met. When Martin Seligman was elected president of the American Psychological Association in 1998, he shifted his focus from psychiatry and pathology to the study of the good and the positivity in life. Since then, theory and study have explored how to define, quantify, and create the positive psychological effects and well-being that help make life worth living. (Rusk & Waters, 2015)

Result

Total of 320 graduate students were included in the study, and the results of the study were analyzed using reliability analysis, descriptive analysis, factor analysis, chi-square test, and t-test in SPSS 26 software.

Moreover, 6.3% of the respondents were male and 93.8% were female. In terms of age, 27.5%, 14.4%, 20%, 36.3%, and 1.9% are 20-24, 25-29, 30-34, 35-39 and are over 39 years old, respectively. What do you think happiness is? 28.7%, 13.1%, 3.8%, 0.6%, 1.9%, 0.6%, 33.8%, 11.9%, 3.1% and 2.5% of participants answered positive emotions, relationship, love, friends, social participation, success, family, health, wealth and money and answered other, respectively. When do you feel unhappy? 35.6% answered when they felt negative, 19.4% when they were lonely, 11.3% when they were worried about the past and the future, 32.5% when they felt inadequate, and 1.3% at other times. Are you a happy person? 90.6% of the participants answered yes, 8.1% said no, and 1.3% did not know.

What do you think makes a person happy? 55.7% of respondents answered family, 53.1% health, 30.4% success, 29.4% positive emotions, 23.2% satisfaction, 22.7% goals and dreams, and 19.1% wealth. In the open-ended question, "What do you think makes people unhappy?" 42% of respondents said negative emotions (dissatisfaction, anger, stress, pressure, negative thoughts, feelings of neglect, etc.), 37% said health, and 21% said relationships (family and friends, misunderstandings at the workplace, unpleasant relationships, etc.) were answered, respectively.

Conclusion

A total of 320 graduate students from 6 public universities such as National University of Mongolia, University of Science and Technology, Mongolian State University of Education, Mongolian University of Life Sciences, Mongolian National University of Medical Science and University of Finance & Economics included in the study, and the majority of the participants were 30-40 years old. The study is aimed to investigate the factors that affect the happiness of graduate students, and within the framework of the study, questionnaire was developed by based on the PERMA model proposed by Seligman is based on the 5 factors that affect happiness: positive emotions, participation, relationships, meaning, and success. From the results of the study, it can be seen that the factors affecting the happiness of graduate students are family, positive emotions, health and success. The general characteristic of people in their 30s and 40s is that their work life is stable, and family is the most valuable thing for them, and a warm family atmosphere that is healthy and safe has a great impact on their happy life. This is also reflected in the study results.

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SSBA-28

The impact of influencer characteristics on influencer trust and purchase intention

(인플루언서 특성이 인플루언서 신뢰와 구매의도에 미치는 영향)

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1장. 서론

최근 인터넷 기술과 모바일은 일상생활의 필수품으로 자리 잡게 되었고 모바일의 보급으로 사람들의 라이프 스타일은 오프라인에서 온라인으로 자연스럽게 확장되었으며, 코로나19로 인해 소비자와 대면하지 않고 제품과 서비스를 제공하는 비대면 마케팅이 활성화되고 있다. 따라서 전자상거래 분야에서 실시간 영상을 통해 상품을 소개하고 판매할 수 있는 채널인 라이브 커머스가 급부상하고 있다(박진영, 신수연, 2021).

2024년 한국의 라이브 커머스 시장과 전자상거래 시장은 빠르게 확장하고 있으며, 모바일 인터넷 이용자와 비율도 꾸준히 증가하고 있습니다. 한국의 인터넷 사용자 수는 2023년에 약 5,400만 명에 달하며, 모바일 인터넷 이용 비율은 95%를 넘어서고 있습니다(한국인터넷진흥원, 2023). 또한, 전자상거래 거래액은 지속적으로 성장하고 있으며, 2022년에는 총 거래액이 약 170조 원을 기록하며, 2021년 대비 15% 성장했습니다. 특히, 모바일 쇼핑과 라이브 커머스의 성장이 두드러지며, 많은 소비자들이 모바일 플랫폼을 통해 다양한 상품을 실시간으로 구매하고 있습니다. 라이브 커머스는 2023년 한 해 동안 10조 원을 넘는 거래액을 기록하며, 한국의 전자상거래에서 중요한 부분으로 자리 잡았습니다(한국전자상거래학회, 2023). 최근에는 온라인쇼핑 기업부터 오프라인쇼핑, 백화점 등 전통적인 유통업체들도 라이브 커머스 시장에 진출하고 있으므로 라이브 커머스의 시장 성장성이 높다고 판단된다(오린아, 2020).

한국에서 라이브 커머스는 특히 소상공인에게 중요한 유통 채널로 자리 잡고 있습니다. 온라인 쇼핑과 모바일 기반의 상호작용적 쇼핑 경험이 인기를 끌면서, 소비자들은 실시간으로 상품 정보를 확인하고, 인플루언서를 통해 다양한 경험을 공유받을 수 있는 특성을 갖춘 라이브 커머스를 통해 상품을 구매하고 있다. 한국은 인구밀도가 높고, 모바일 인터넷 사용 비율이 매우 높아 라이브 커머스가 더욱 활성화되고 있으며, 많은 중소기업들이 이를 통해 시장에 접근하고 있다. 라이브 커머스는 경제성과 정보성, 오락성, 편의성 등의 특성을 통해 소비자들에게 더 많은 선택의 폭을 제공하고, 인플루언서의 상호작용성, 전문성, 매력성 등이 소비자의 신뢰 형성에 중요한 영향을 미친다고 연구되고 있다(박진영, 2023). 라이브 커머스를 통해 소비자와의 실시간 소통을 가능하게 하는 동시에, 브랜드에 대한 신뢰를 쌓을

수 있는 기회를 제공합니다. 또한, 인플루언서와의 관계가 소비자 신뢰에 미치는 영향은 점차 강조되고 있다(이동민, 2022).

본 연구는 인플루언서의 특성이 소비자의 신뢰와 구매 의도에 미치는 영향을 분석하고, 이를 바탕으로 소상공인들이 경쟁력을 갖추기 위한 전략을 도출하는 것을 목표로 한다. 라이브 커머스를 통해 다양한 경험과 정보를 제공하면서, 소상공인들이 시장에서 성장할 수 있는 방법을 모색하는 실무적 시사점을 제시할 것입니다.

2장. 이론적 배경

2.2 인플루언서 특성

인플루언서란 소셜미디어의 디지털 플랫폼 환경에 많은 팔로워를 가진 개인으로서 독특한 의견과 이야기를 통해 큰 영향력과 파급력까지 가지고 있다(한수정, 2020). 즉, 인플루언서는 많은 사람들에게 제품과 서비스에 대한 정보를 제공하고 다른 사람들의 제품에 대한 인식, 태도, 행동에 영향을 미치는 사람으로 해석될 수 있다(채혜숙, 2018). 이러한 인플루언서는 본인의 이미지와 개성에 상품 또는 상표를 접목해 구매자에게 상품을 광고하며(이재광 등 2019), 디지털 콘텐츠를 제작하고 양방향으로 소통하며 사용자에게 정보를 제공한다(오지연, 2019).

2.2.1 상호작용성

인플루언서들은 제품 시연 등 다양한 방식으로 질문에 답하고 의견을 공감하는 등 적극적으로 대응한다. 이 과정에서 발생하는 모든 상호작용을 인플루언서와 소비자간의 상호작용성이라고 할 수 있다(차혜원, 2021; 김설예 외, 2016). 라이브 커머스 인플루언서들은 소비자와의 상호작용을 통해 상품을 홍보할 뿐만 아니라 소비자들에게 흥미를 주고 친밀한 관계를 형성하며, 이러한 모든 활동들은 최종적으로 상품 구매를 이끌어내는 원동력이 된다(차혜원, 2021).

2.2.2 전문성

전문성은 설득하는 메시지의 정보원이 자신의 분야에 대해 잘 알고 있어야 하며, 정확한 지식을 가지고 있을 것으로 소비자가 인식하는 것을 의미한다(김영석, 2005). 전문성은 제품과 서비스를 고객에게 제공하는 데 필요한 정확한 지식, 정보 및 기술을 의미하며, 소비자의 성공적인 구매행위에 영향을 미치는 판매원의 중요한 요인이라고 볼 수 있다(You, Lee, 2014). 또한, 소비자들은 제품을 구매할 때 일반적으로 판매자에 대한 전문성이 높다고 인식될수록 해당 판매자가 전달하는 정보가 정확하다고 생각된다. 따라서 정보를 전달하는 판매자들이 풍부한 지식이나 전문성을 보유하고 있다고 판단 된다면 그 설득 효과가 높아 결국 해당 정보나 판매자에 대한 태도에 영향을 미치게 될 것이다.

2.2.3 매력성

매력성은 사람들의 마음을 끌 수 있는 힘이며, 이를 통해 상대방이 좋은 태도와 반응을 보이게 된다(Jung, Kim, 2013). 이에 따라 매력성은 인플루언서의 정보전달력과 설득력을 높이는 중요한 요소로 작용하여 소비자는 매력적인 인플루언서가 소개하는 제품과 서비스에 대해 긍정적이고 쉬운 구매의사결정을 할 수 있다(차혜원, 2021).

구매의향을 높이는데 소비자의 유명 인플루언서에 대한 높은 관심과 그 사람에 대한 호의적인 감정이나 태도는 소비자와 인플루언서 간에 매우 긍정적인 영향을 미칠 수 있다(허종호 외, 2013). 또한, 인플루언서의 매력성이 높으면 메시지를 전달할 때 더 수용성이 높다(안광호, 유창조, 2002).

2.3 인플루언서 신뢰성

신뢰성은 정보의 원천에 해당하는 요소 중 하나로, 과거에는 전문가나 유명인을 정보 전달자로 내세웠다. 그러나 최근에는 인플루언서를 정보의 원천으로 삼는 경향이 증가하고 있다(오지연, 성열홍, 2019). 인플루언서의 신뢰성은 소비자가 정보가 편향되지 않고 진실이라고 믿는 정도라고 정의된다(Ohanian, 1991). 인플루언서에 대한 신뢰감이 높으면 정보에 대한 의구심이 줄어들어 설득 효과가 높아지는 것으로 나타났다. 인플루언서의 신뢰도가 높을 때 사람들이 정보에 대한 의심을 덜하기 때문이다(김봉준, 황의록, 2007). Ridings et al.,(2002)은 이러한 인플루언서의 신뢰가 온라인 환경에서 소비자들의 지속적인 구매를 유도하는 중요한 개념이라고 강조하였다. 라이브 커머스에서는 거래하는 상대방과 직접 만나기 힘든 상황이므로, 이러한 거래가 원활히 이루어지기 위해서는 신뢰가 바탕에 있어야 하기 때문이다.

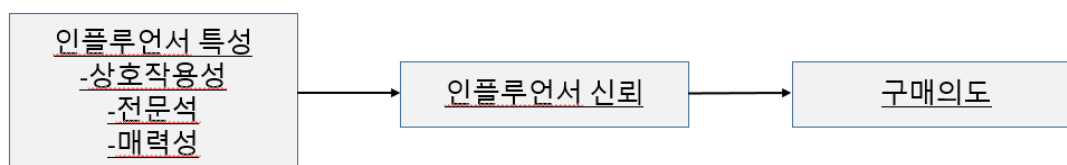
2.4 구매의도

구매의도란 특정한 행위를 기대하거나 계획한 미래 행위에 대한 신념과 태도를 실제 행위로 바꿀 가능성을 의미하며, 이는 실제 구매행위와 밀접한 관련이 있어 구매의도가 실제 구매행위의 예측으로 사용할 수 있다(Engel et al., 1995). 또한 구매의도는 제품이나 서비스를 구매하려는 개인적인 의도가 활성화될 가능성 정도로 정의될 수 있다(Dodds et al., 1991).

김효경, 손수진(2010)은 구매의도를 구매욕구, 추천의도, 이용가능성 및 우선적고려 등을 브랜드에 대한 종합적인 평가로 소비자의 구매의지에서 발생하는 심리적 태도라고 정의하였다. 또한, Bickart와 Schindler(2001)의 선행 연구에 따르면, 온라인상 구매의도는 소비자들 간의 자유로운 의사소통을 촉진하며, 온라인에서 획득한 정보를 신뢰하는 경향이 높아 구매의도에 큰 영향을 미친다고 한다. 따라서 온라인에서 구매의도는 온라인 사이트를 통해 사용자가 상품을 구매할 가능성의 정도를 의미한다(Poddar, Donthu, Wei, 2009).

3장. 연구설계

3.1 연구모형 및 가설



본 연구는 인플루언서의 특성이 인플루언서 신뢰를 통해 구매의도에 어떠한 영향을 미치는지를 분석하고자 한다. 이를 위하여 인플루언서 특성 요인들은 상호작용성, 전문성, 매력성으로 살펴보고자 한다.

본 연구의 가설은 다음과 같다.

H1-1: 상호작용성은 인플루언서 신뢰에 정(+)의 영향을 미칠 것이다.

H1-2: 전문성은 인플루언서 신뢰에 정(+)의 영향을 미칠 것이다.

H1-3: 매력성은 인플루언서 신뢰에 정(+)의 영향을 미칠 것이다.

H2: 인플루언서 신뢰가 구매의도에 정(+)의 영향을 미칠 것이다.

3.2 연구측정 문항

상호작용성	라이브 커머스에서 인플루언서가 본인의 감정 및 소식을 시청자들에게 자주 전달하고 알린다.
	라이브 커머스 시청자가 인플루언서에게 실시간 의사소통이 가능하다.
	라이브 커머스의 인플루언서는 나의 의견과 질문에 신속하게 응답한다.
	라이브 커머스에서 시청자는 인플루언서에게 적극적으로 질문하고 의견을 제시한다.
	라이브 커머스는 다른 이용자와 공감대를 형성할 수 있어서 좋다
	라이브 커머스는 다른 이용자와 소통할 수 있어서 좋다.
전문성	라이브 커머스의 인플루언서는 제품에 관한 전문적 지식을 가지고 있다.
	라이브 커머스의 인플루언서는 새로운 트렌드에 대해 잘 알고 있다.
	라이브 커머스의 인플루언서는 자신의 콘텐츠에 프로다운 자세로 임한다.
	라이브 커머스의 인플루언서는 자기가 전달하는 내용에 대해서 잘 알고 있다
	라이브 커머스의 인플루언서는 설득력이 있다.
	라이브 커머스의 인플루언서는 제품에 관한 객관적인 정보를 제공한다
매력성	라이브 커머스의 인플루언서는 세련된 이미지를 가지고 있어서 이 인플루언서에게 호감이 간다.
	라이브 커머스의 인플루언서는 친화력이 뛰어나다.
	라이브 커머스의 인플루언서는 패션 등 스타일이 멋지고 따라하고 싶다.
	라이브 커머스의 인플루언서는 사람들이 대화를 나누고 싶어 만든다.
	라이브 커머스의 인플루언서는 말솜씨가 뛰어나다.
	라이브 커머스의 인플루언서는 제스처 등의 표현력이 좋다.
인플루언서 신뢰성	라이브 커머스의 인플루언서는 성실하고 솔직해 보인다.
	라이브 커머스의 인플루언서는 믿을 수 있다.
	라이브 커머스의 인플루언서는 고객과의 약속을 지키려고 노력한다.
	라이브 커머스의 인플루언서가 제시하는 정보를 신뢰하는 편이다.
	라이브 커머스의 인플루언서는 정직한 편이다,
구매의도	라이브 커머스에서 상품을 구매할 것이다.
	라이브 커머스에서 추천한 상품을 구매할 것이다.
	라이브 커머스에서 구매하는 상품을 다른 사람에게 추천할 것이다.
	나는 쇼핑할 때 라이브 커머스를 가장 첫 번째 선택으로 고려할 것이다.
	나는 다른 판매 채널보다 라이브 커머스를 통해 상품을 우선적으로 구매할 것이다.

4장. 실증분석

4.1 표본의 특성

문항	내용	빈도	비율
현재 귀하께서 가장 자주 이용하시는 라이브커머스는 무엇입니까?	네이버 쇼핑 라이브	6	1.5
	카카오 쇼핑 라이브	4	1.0
	쿠팡 라이브	9	2.3
	롯데 온 라이브(ON LIVE)	3	0.8
	인스타그램	140	35.1
	Facebook 라이브	220	55.1
	기타	17	4.3
	전체	399	100.0
귀하께서는 라이브커머스를 처음에 어떠한 계기로 방문하셨습니까?	온라인 사이트에서 광고를 접해서	25	10.4
	앱 이용 중 우연히 발견해서	82	34.2
	기존에 팔로우했던 스토어에서 알람을 받아서	99	41.3
	주변 지인의 추천을 받아서	28	11.7
	기타 ()	6	2.5
귀하께서는 라이브커머스를 얼마나 자주 이용하십니까?	3개월에 1번 미만	19	7.9
	3개월에 1~2번	79	32.9
	한달에 1~2번	118	49.2
	일주일에 1~2번	15	6.3
	일주일에 3번 이상	9	3.8
귀하께서는 라이브커머스를 하루에 대략 어느 정도 이용하십니까?	5분 미만	20	8.3
	5분~30분 미만	26	10.8
	30분 이상~1시간 미만	123	51.2
	1시간 이상~1시간 30분 미만	61	25.4
	1시간 30분 이상	10	4.2
귀하께서는 지금까지 라이브커머스에서 몇 번 구매 해보셨습니까?	10번 이하	59	24.6
	11~20번	49	20.4
	21~30번	98	40.8
	31번 이상	34	14.2
귀하께서는 라이브커머스에서 방송진행자(연예인, 쇼호스트 등)를 얼마나 많이 팔로우하십니까?	팔로우하지 않음	19	7.9
	1개이상~5개 미만	104	43.3
	5개이상~10개 미만	109	45.4
	10개 이상	8	3.3
총합		240	100.0

4.2 신뢰도분석

요인		문항수	Cronbach's Alpha
인플루언서특성	상호작용성	6	.905
	전문성	6	.909
	매력성	6	.924
인플루언서 신뢰성		5	.910
구매의도		5	.906

4.3 요인분석결과

	요인			공통값
	1	2	3	
상호1			.746	.742
상호2			.713	.671
상호3			.786	.823
상호4			.725	.796
전문성3		.709		.744
전문성4		.743		.707
전문성6		.651		.653
매력성1	.677			.740
매력성2	.687			.685
매력성3	.640			.670
매력성4	.750			.766
매력성5	.768			.758
매력성6	.795			.794
전체	3.977	3.564	2.006	
%분산	30.595	27.417	15.432	
누적%	30.595	58.011	73.443	
KMO=.955, 카이제곱= 2297.868, DF=78, p=.000				

	1	2	공통성값
인플루언서신뢰성1		.791	.876
인플루언서신뢰성2		.839	.877
인플루언서신뢰성3		.770	.746
인플루언서신뢰성4		.722	.751
구매의도3	.858		.855
구매의도4	.788		.850
구매의도5	.594		.696
전체	2.521	2.346	
%분산	22.916	21.330	
누적%	56.259	77.589	

4.4 상관관계분석

	상호성	전문성	매력성	브랜드 신뢰도	인플루언서 신뢰도	구매 의도
상호성	1					
전문성	.805**	1				
매력성	.802**	.787**	1			
인플루언서 신뢰도	.808**	.768**	.786**	.842**	1	
구매의도	.710**	.697**	.726**	.763**	.760**	1

4.5 가설검증

본 연구의 가설검증은 먼저 인플루언서 특성 중 상호작용성이 인플루언서 신뢰도에 미치는 영향(표준화계수=.395, $t=6.033$, $p=.000$)은 채택되었다. 전문성이 인플루언서 신뢰도에 미치는 영향(표준화계수=.211, $t=3.317$, $p=.000$)은 채택되었다. 매력성이 인플루언서 신뢰도에 미치는 영향(표준화계수=.303, $t=4.814$, $p=.000$)은 채택되었다.

모형		비표준화 계수		표준화 계수	t	유의확률	결과
		B	표준화 오류	베타			
1	(상수)	.137	.168		.818	.414	
	상호작용성	.428	.071	.395	6.033	.000	채택
	전문성	.215	.065	.211	3.317	.001	채택
	매력성	.302	.063	.303	4.814	.000	채택
a. 종속변수: 인플루언서 신뢰도, R제곱=.719, F=201.427							

인플루언서 신뢰도가 구매의도에 미치는 영향(표준화계수=.760, $t=18.027$, $p=.000$)은 채택되었다.

모형		비표준화 계수		표준화 계수	t	유의확률	결과
		B	표준화 오류	베타			
1	(상수)	.914	.188		4.858	.000	
	인플루언서 신뢰도	.797	.044	.760	18.027	.000	채택
a. 종속변수: 구매의도, R제곱=.577, F=324.989							

5장 결론

본 연구는 인플루언서의 특성이 신뢰도와 구매 의도에 미치는 영향을 분석한 결과, 다음과 같은 가설들이 채택되었습니다:

0 상호작용성이 인플루언서 신뢰도에 미치는 영향($\beta = .395$, $t = 6.033$, $p < .001$)

1 전문성이 인플루언서 신뢰도에 미치는 영향($\beta = .211$, $t = 3.317$, $p < .001$)

2 매력성이 인플루언서 신뢰도에 미치는 영향($\beta = .303$, $t = 4.814$, $p < .001$)

3 인플루언서 신뢰도가 구매 의도에 미치는 영향($\beta = .760$, $t = 18.027$, $p < .001$)

이 연구는 인플루언서의 특성인 상호작용성, 전문성, 매력성이 모두 신뢰도에 긍정적인 영향을 미치며,

그 신뢰도가 소비자의 구매 의도에 중요한 영향을 미친다는 결과를 도출했습니다.

5.1 이론적 시사점

첫째, 상호작용성: 인플루언서와 소비자 간의 소통이 강화될수록 신뢰도가 높아진다는 결과는, 소비자와의 적극적인 소통 및 피드백을 중요시하는 마케팅 전략의 필요성을 시사합니다. 이는 소비자 참여를 유도하고, 더 깊은 관계를 형성하는데 중요한 요소로 작용할 수 있습니다. 전문성: 인플루언서의 전문성이 신뢰도에 영향을 미친다는 사실은, 소비자들이 자신이 신뢰하는 제품에 대한 전문가의 의견을 중요하게 여기고 있다는 점을 보여줍니다. 이는 인플루언서가 특정 분야에서의 전문성을 바탕으로 신뢰를 얻을 수 있는 기회를 제공하며, 제품 추천에 있어서 보다 신뢰할 수 있는 목소리로 작용할 수 있음을 의미합니다. 매력성: 인플루언서의 매력성이 신뢰도에 미치는 영향을 확인한 연구는, 인플루언서가 단순히 제품을 추천하는 것 이상의 역할을 한다는 점을 강조합니다. 인플루언서의 매력적이고 친근한 이미지가 소비자와의 관계 형성에 큰 영향을 미친다는 점에서, 브랜드 마케팅에서의 인플루언서 선택 기준에 영향을 줄 수 있습니다.

둘째, 인플루언서 신뢰도가 구매 의도에 미치는 영향: 마지막으로, 인플루언서의 신뢰도가 소비자의 구매 의도에 미치는 영향은, 인플루언서 마케팅이 소비자 행동에 중요한 영향을 미친다는 것을 보여줍니다. 이는 브랜드가 인플루언서와의 협업을 통해 소비자의 신뢰를 쌓고, 더 나아가 실제 구매로 이어지도록 유도할 수 있음을 의미합니다.

5.2 실무적 시사점

첫째, 상호작용성 강조: 인플루언서의 상호작용성이 신뢰도에 미치는 영향($\beta = .395$)은 매우 강하게 나타났습니다. 이는 소비자와 인플루언서 간의 소통 및 실시간 반응이 신뢰를 구축하는 데 중요한 역할을 한다는 것을 의미합니다. 실시간 댓글, Q&A, 라이브 스트리밍 중 소비자와의 대화 증진 등 상호작용적인 콘텐츠를 강화하는 것이 효과적입니다. 이는 소비자에게 신뢰감을 줄 수 있으며, 기업은 인플루언서를 활용한 마케팅에서 소비자와의 교감을 강화해야 합니다.

둘째, 전문성의 중요성: 전문성이 인플루언서 신뢰도에 미치는 영향($\beta = .211$)도 유의미한 것으로 나타났습니다. 따라서 기업은 인플루언서가 해당 분야에서 실제적인 전문성을 갖추고 있음을 강조할 필요가 있습니다. 예를 들어, 특정 산업이나 제품에 대한 깊은 이해를 가진 인플루언서를 선정하고, 그들의 전문 지식이나 경험을 콘텐츠에 통합하는 전략이 필요합니다. 이는 소비자에게 더 높은 신뢰를 부여할 수 있습니다.

셋째, 매력성의 영향력: 인플루언서의 매력성($\beta = .303$)이 신뢰도에 미치는 영향 또한 중요한 요소로 작용합니다. 기업은 인플루언서의 매력적인 이미지, 성격, 커뮤니케이션 스타일을 활용하여 소비자와의 긍정적인 감정적 연결을 강화할 수 있습니다. 매력적인 인플루언서가 제품을 추천할 경우, 소비자들의 신뢰도가 높아지고, 이는 최종적인 구매 의도에도 긍정적인 영향을 미칠 수 있습니다.

넷째, 신뢰도가 구매 의도에 미치는 강력한 영향: 인플루언서 신뢰도($\beta = .760$)는 소비자의 구매 의도에 매우 강력한 영향을 미친다고 밝혀졌습니다. 이는 소비자가 신뢰하는 인플루언서가 추천하는 제품에 대해 구매 의도가 크게 증가함을 시사합니다. 따라서, 브랜드는 신뢰할 수 있는 인플루언서와 협력하여 신뢰 구축을 최우선 전략으로 삼아야 하며, 이는 소비자들에게 긍정적인 구매 결정을 유도할 수 있습니다.

SSBA-29

A study on the impact of the psychological characteristics of entrepreneurs on service management and business performance

(창업자의 심리적특성이 서비스관리와 사업성과에 미치는 영향에 관한 연구)

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1장. 서론

2019년 코로나19 발생 이후 급격히 위축되었던 음식점 및 주점업 시장은 2024년 방역 규제 완화와 소비 심리 회복에 힘입어 매출액 규모가 전년 대비 소폭 증가하고 있다. 업종별로 차이는 존재하지만, 음식점 및 주점업 생산지수는 대체로 2024년 1분기를 기점으로 전년 대비 완만한 상승세를 보이고 있다. 2024년 연간 외식업 종사자 수는 전년 대비 소폭 증가하여 고용 회복세를 나타내고 있으며, 음식서비스의 온라인 쇼핑 비중은 모바일 거래 중심으로 지속 확대되고 있다. 특히, 모바일 거래는 외식업의 주요 소비 채널로 자리 잡으며 업계 전반에 걸쳐 디지털 전환이 가속화되고 있는 추세다.

KREI(한국농촌경제연구원)의 2024년 보고서에 따르면, 음식점 및 주점업의 2021~2023년 기간 동안 매출액은 연평균 2% 증가세를 보였으나, 경제적 불확실성과 물가 상승 등의 영향으로 2024년 음식점 및 주점업의 실질 매출액은 2023년 대비 5% 감소한 약 115조 원으로 추정된다. 이는 2019년 대비로는 여전히 낮은 수준이며, 업계의 전반적인 회복이 더딘 것으로 평가된다. 2024년 음식점 및 주점업의 인허가 업체 수는 1,050개로 2019년 대비 5%, 2023년 대비 2% 감소하였고, 같은 해 폐업 업체 수는 2019년 대비 40% 증가한 480개로 집계되었다(한국농촌경제연구원, 2024).

한편, 온라인 쇼핑물 음식서비스 거래액은 2023년까지 연평균 15% 이상 성장세를 유지하며, 비대면 소비 트렌드가 지속 확산되고 있다. 2019년 9조 7천억 원에 불과하던 온라인 거래액은 2024년 약 32조 원까지 증가하여 2019년 대비 약 230% 성장했다. 이는 전체 온라인 쇼핑물 거래액에서 음식서비스 거래액이 차지하는 비중을 2024년 기준 18%까지 끌어올린 결과로, 전년 대비 2%p 상승한 것으로 나타났다(한국농촌경제연구원, 2024).

모바일 쇼핑을 통한 음식서비스 거래액은 2024년 약 30조 원으로 전체 온라인 쇼핑물 음식서비스 거래액의 98% 이상을 차지하며, 인터넷 쇼핑 비중은 2017년 14%에서 2024년 2% 이하로 크게 감소하였다. 이는 모바일 쇼핑이 음식서비스 분야에서 온라인 거래의 핵심 플랫폼으로 자리 잡았음을 보여준다(한국농촌경제연구원, 2024). 그러나 국내 외식 창업은 양적 성장에 비해 질적 수준을 대변하는 정보 인프라가 매우 부족한 실정이며, 다른 창업 분야에 비해 상대적으로 높은 비효율성이 드러나고 있다. 이에 따라 외식 창업의 비효율적인 투자와 창업 실패를 줄이기 위해, 외식 창업 이해관계자들에게 실질적이고 시의적절한 외식 창업 경영성과에 관한 정보 제공이 필요하다.

외식창업업체의 경영 관리 개선을 위한 정책 개발과 지속적인 정보 제공은 외식 창업의 무분별한 진입을 방지하고 경영 효율화를 유도하는 데 핵심적인 역할을 한다. 현재 외식 창업은 예비 창업자들의 증가, 업종 및 업태의 다양화, 그리고 글로벌화의 영향으로 시장 규모가 꾸준히 확대되고 있다. 그러나 내수 시장의 제한적 성장, 소비 양극화, 낮은 진입장벽, 그리고 치열한 경쟁 환경 등으로 인해 외식업은 여전히 저부가가치 산업구조에서 벗어나지 못하고 있다. 초기 시장 진입이 비교적 용이해 보이지만, 창업 기업이 성공적으로 자리 잡고 지속 가능한 성과를 창출하기 위해서는 체계적인 노력과 지속적인 연구가 필수적이다. 외식업계가 현재의 경쟁적이고 변화무쌍한 시장 환경에 효과적으로 대응하기 위해서는, 변화하는 소비자 기호와 욕구를 철저히 분석하고 이에 부합하는 차별화된 전략을 통해 소비자 만족도를 극대화해야 한다.

본 연구의 구체적인 연구목적은 제시하면 다음과 같다. 첫째, 외식창업 및 창업에 대한 이론적 고찰을 통해 창업자의 심리적특성, 서비스관리 및 외식사업성과 등의 선행연구들을 세부적으로 검토하여 정의 및 개념을 제시하고자 한다. 둘째, 선행연구를 바탕으로 추출한 요인들로 연구모형 및 가설을 설정하여, 연구 설문지는 온라인 및 오프라인 형식으로 배부를 하여 모집하였다. 셋째, 본 연구가설 검증을 위하여 창업자의 심리적특성이 서비스관리에 미치는 영향과 이러한 서비스관리는 외식사업성과에 미치는 영향 관계를 검증하고자 한다. 마지막으로, 창업자의 심리적특성, 서비스관리 및 외식사업성과 간의 실증분석 결과를 바탕으로 연구 시사점을 제시하고자 한다.

2장. 이론적 배경

2.1 외식업의 현황

외식업 경영실태 조사(2024)에 따르면, 총 750,000개의 외식 사업체 중 한식 일반 음식점업이 여전히 가장 큰 비중을 차지하며 195,000개(26.0%), 다음으로 커피 전문점 80,000개(10.7%), 기타 주점업 78,000개(10.4%), 한식 육류요리업 76,000개(10.1%)로 나타났다. 규모별로 살펴보면, 1인 사업체가 27.0%, 2인 사업체가 29.0%, 3~4인 사업체가 28.5%로, 종사자가 1인 이상 4인 이하인 소규모 사업체들이 전체 외식 사업체의 84.5%를 차지하고 있다. 업종별로 종사자 규모를 분석한 결과, 1인 종사자가 운영하는 업체 중에서는 커피 전문점(30,000개), 기타 주점업(36,000개), 기타 음식점업(15,000개), 유흥 주점업(11,000개)이 주요 비중을 차지했다. 2인 종사자로 운영되는 업체에서는 치킨 전문점(18,000개)이 두드러졌다. 3~4인 종사자가 운영하는 업체는 한식 일반 음식점업(62,000개), 한식 육류요리업(28,000개), 해산물 요리 전문점(11,500개), 중식 음식점업(10,000개), 한식 면요리업(7,500개)으로 구성되어, 이들 업종이 외식업 내에서 중소규모 사업체를 대표하고 있는 것으로 나타났다.

지역별 외식 사업체 규모를 비교하면, **2024년 기준** 경기도는 전체 외식업 사업체의 21.2%에 해당하는 **159,000개** 업체를 보유하고 있으며, 서울은 17.5%에 해당하는 **131,000개**, 세종시는 0.6%에 해당하는 **4,000개** 업체로 집계되었다. 전국적으로 외식업 사업체 수와 종사자 수는 지속적으로 증가세를 보이고 있다. 사업체 수는 **2019년 조사 기준 727,014개**에서 **2024년 조사 기준 750,000개**로 증가하여, 최근 5년간 약 3.2%의 증가율을 기록했다. 종사자 수는 **2019년 기준 2,190,660명**에서 **2024년 기준 2,400,000명**으로 증가해 5년간 약 9.6%의 증가율을 나타내었다. 이는 외식업의 지속적인 성장과 더불어 종사자 규모의 확대로 인해 고용 측면에서도 중요한 산업임을 보여준다.

2024년 기준, 외식업 사업주의 평균 연령은 **54.0세**로 조사되었으며, 연령대별 분포에서는 **50대**가 40.5%로 여전히 가장 높은 비중을 차지하고 있다. 업종별로는 일반 음식점의 한식(57.0세)과 중식(54.5세), 일반 음식점 외 업종에서는 기관 구내식당업(56.2세), 김밥 및 기타 간이 음식점업과 간이 음식 포장

판매 전문점(각각 55.0세), 주점업(53.5세)의 사업주 연령이 상대적으로 높은 것으로 나타났다. 총 외식업 종사 기간은 평균 12.0년으로 나타났으며, 사업 연수 분포별로는 5~10년 미만비중이 30.5%로 가장 높았다. 일반 음식점 중에서는 중식(15.5년)과 한식(14.0년), 일반 음식점 외 업종 중에서는 김밥 및 기타 간이 음식점업(13.0년), 출장 및 이동 음식점업(12.0년), 간이 음식 포장판매 전문점(12.0년)의 사업주가 비교적 긴 외식업 종사 기간을 보였다. 현 사업장 운영 기간은 평균 8.5년으로 조사되었으며, 5년 미만비중이 42.0%로 가장 높은 것으로 나타났다. 일반 음식점 중에서는 중식(11.5년)과 한식(9.8년), 일반 음식점 외 업종에서는 김밥 및 기타 간이 음식점업(9.0년), 치킨 전문점(8.5년), 간이 음식 포장판매 전문점(8.5년)이 상대적으로 긴 운영 기간을 보였다.

2.2 창업자의 심리적특성

Hodgetts & Kuratko(2006)는 ‘창업자(Entrepreneur)’란 일반적으로 사업기회를 인식하고 획득하며, 이러한 기회를 실제로 실현하거나 시장가치가 있는 아이디어로 바꾸며, 노력, 시간, 기술 및 자본 등을 통해 가치를 창출하고, 뿐만 아니라 아이디어의 실천으로 인해 경쟁이 치열한 시장에서 위험을 감수하며, 이러한 노력으로부터 보상을 얻어내는 개발자 및 혁신자로 정의하였다. 또한 구체적으로, 창업가는 기업자원의 새로운 결합이며, 혁신을 수행하는 사람으로서 창업자만이 가져야 할 특유의 정신을 발휘하여 새로운 환경변화에 적응하고 사업영역을 개척하여 성공적인 기업을 경영 및 운영하는 개척자이고, 모험가이며 혁신가로서 기업을 운영하는 사람이라고 정의하고 있다.

2.2.1 성취욕구

Gartner(1985, 1989)는 창업자의 심리적 특성이 ‘창업자와 비창업자를 구별하는 특징’뿐 아니라 ‘성과에 영향을 미치는 개인특성’으로 주목을 받아왔다고 하였다(정성한·김해룡, 2001; 김완재, 2007; 김의근·배금연, 2010; 정성영, 2011). Gartner(1985)는 이 특성들에 대해서 ‘기업가 정신의 현상을 설명하기엔 불충분하다’며 그의 1994년 연구에서 창업자의 행동(behavior)이 창업자를 알아보는 것이며, Stewart et al.(1996)은 사업을 설립하는 행동이야말로 기업가 정신을 정의하는 것이라 하였다(Becherer & Maurer, 1999).

2.2.2 위험감수성

위험감수성에 대한 Slevin & Covin(1989)은 낮은 위험의 프로젝트보다 높은 위험의 프로젝트를 선호하는 경향으로 도전적인 정신으로 적극적으로 기회를 모색하고 탐색하고자 하는 것으로 이는 혁신성을 연계하여 위험감수성향을 정의하였으며, 이는 위험을 편안히 받아들이며 위험에 대해 두려워하지 않고 오히려 흥미 있는 자극으로 받아들이는 것이 위험감수성향이다. 위험감수성(risk-taking propensity)은 어려운 환경에서도 창업가들은 처한 기회를 얻고 가치를 창조하기 위해 위험을 감수하려는 의도를 말하는 개념이라 볼 수 있다.

2.2.3 창의성

창의성은 만들다(Make)라는 의미의 라틴어이며 ‘create’와 수행하다(fulfil)의 의미를 가진 그리스어인 ‘Krainein’에서 유래한 것이다. 창의성이 사전적 의미는 ‘창의적인 사람이 무엇을 만들다’라는 관점으로 해석을 하며, 또한 창의성을 새로운 더 좋은 것을 만드는 힘으로 정의할 수 있다. 또 다른 관점에서는 창의적인 사람이 생존에 대한 표현과 존재하는 방식(way of being)으로 정의할 수도 있다(Kokot & Colman, 1997). Zhou & Shalley(2003)는 창의성을 새로운 아이디어 개발 및 성과, 혹은 더 좋은 문제

해결 능력 등을 통해 평가되고, 상황에 얼마나 유용하고 적절한지를 포함한 개념이라고 정의하였다.

2.3 서비스관리

고객 및 서비스관리는 차별화를 기반으로 한 고객 및 서비스관리로서 메뉴의 다양화 및 차별화를 예로 들면 시간대별 특성에 맞춘 메뉴 구성으로 소비자들을 끌어들이며 데드타임을 없애 고객층을 널리 확보하고 매출 증대에도 기여하는 방법이 될 수 있다. 또한, 외식업 소비자의 욕구와 수요는 시간대, 연령대 등 다양하다. 이는 상품 자체가 경쟁업체와 차별화 될 수 있는 기회가 될 수 있다.

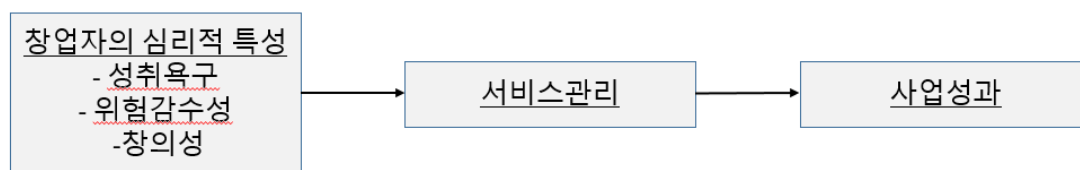
외식산업의 서비스는 인적 물적 서비스의 조화를 통해 고객에게 전달되고 평가되므로 이런 요소들의 종합적인 차원에서 정의되어지고 관리, 통제, 측정되어야 한다. 또한 서비스품질은 사용자의 지각에 의하여 결정되며, 서비스의 속성은 하나의 다발로서, 개별적인 것이 아닌 전체로서 사용자를 만족시키는 정도에 따라 품질을 구분한다.

2.4 사업성과

성과의 기준은 기업이 경영 목표에 얼마나 도달하였나를 볼 수 있는 척도이며, 경영목표의 달성도를 나타내는 것이라고 할 수 있다. 기업의 성과를 정의하여 측정하는 것은 성과 향상을 위한 기본 단계이므로 성과측정은 매우 중요한 의미를 갖고 있다. 기업성과는 일반적으로 재무적 성과(총자산순이익률, 자기자본순이익률, 매출액성장률, 매출액 수익률 등)와 비재무적 성과(종업원증가율, 사회기여도, 기업의 학습정도, 성장잠재력 등), 객관적 성과와 주관적 성과로 구분된다(Stuart & Abetti, 1987). 성과의 측정은 항상 인과관계가 불명확하기는 하나, 만족과 밀접하거나 지대한 영향이 있을 것이라는 가정하에 거의 반세기동안 학자들과 경영자들 사이에서 주된 관심사였다(김지윤, 2000).

3. 연구 설계

3.1 연구 모형 및 가설



본 연구는 선행연구를 바탕으로 외식창업자의 심리적특성(성취욕구, 위험감수성, 창의성)과 서비스관리 및 사업성과 등의 변수들을 선정하였다. 선행연구를 바탕으로 다음과 같은 <그림 1> 연구모형을 설정하였다. 본 연구의 가설은 다음과 같다.

가설1-1: 성취욕구가 서비스관리에 긍정적인 영향을 미칠 것이다.

가설1-2: 위험감수성이 서비스관리에 긍정적인 영향을 미칠 것이다.

가설1-3: 창의성이 서비스관리에 긍정적인 영향을 미칠 것이다.

가설2: 서비스관리는 사업성과에 긍정적인 영향을 미칠 것이다.

3.2 연구의 측정 문항

요인	문항
성취욕구	나는 경쟁자보다 잘되기 위해 노력한다.
	나는 사업 문제를 해결하려고 적극적으로 노력한다.
	나는 사업목표를 높이 세우고 달성하기 위해 노력한다.
	나는 사업을 성공시키기 위해 최선을 다 한다.
위험감수성	나는 위험이 높더라도 수익이 큰 사업을 선호한다.
	나는 목적달성을 위해 광범위한 경영활동을 수행한다.
	나는 안정보다는 성장을 지향하는 편이다.
	새로운 사업 분야에 적극적으로 지원하려고 노력한다.
창의성	나는 평소에도 창의적인 생각을 많이 한다.
	나는 차별적인 제품과 서비스를 탐색한다.
	나는 논리적인 사고보다 창의성을 더 중요시 한다.
	아이디어 발굴을 위해 아이템 관련 견학을 자주 한다.
서비스관리	음식에 이상이 있을 때 음식 값을 받지 않는다.
	고객이 불평을 제기할 때 신속히 서비스를 제공한다.
	주문한 음식이 아닌 다른 음식이 나왔을 때 양해를 구한 후 주문한 음식을 제공한다.
	종업원의 실수로 고객의 의복에 음식물을 묻혔을 때 세탁비를 지급한다.
사업성과	창업 후 현재 매출에 만족하고 있다.
	창업 후 현재 순이익이 증가하고 있다.
	음식점 창업에 대해 만족하고 있다.
	투자금을 회수할 수 있다.

4장. 실증분석

4.1 표본의 특성

문항	응답	명	%
성별	남자	127	44.3
	여자	160	55.7
나이	20대	23	8.0
	30대	30	10.5
	40대	84	29.3
	50대	116	40.4
	60대 이상	37	11.8
업소의 업종	한식(일반)	99	34.5
	한식(고기집)	68	23.7
	양식	41	14.3
	중식	20	7.0
	일식	20	7.0
	기타	39	13.6
합계		287	100%

4.2 신뢰도분석

본 연구에서는 개별 변수의 항목들에 대한 내적일관성을 타나내는 Cronbach's α 계수를 이용하였다. 내적일관성은 항목들 간의 상관관계로써 평가되는데, 항목들 간의 상관관계가 높을수록 내적일관성이 높다. 일반적으로 0.8~0.9이상이면 바람직하고, 0.6~0.7 수준이라면 수용할 만한 것으로 여겨진다. 신뢰성을 분석한 결과 <표 3>와 같다. 본 연구의 신뢰성 계수는 모두 0.6 이상을 넘어서 문항의 내적 일관성이 높은 것으로 볼 수 있다.

요인		문항 수	Alpha 계수
심리적특성	성취욕구	4	.853
	위험감수성	4	.798
	창의성	4	.808
서비스관리		4	.727
사업성과		4	.844

4.3 탐색적요인분석

본 연구에서는 고려된 변수의 타당성을 검증하기 위해 요인분석을 실시하였다. 요인을 결정하기 위해 관측된 요인의 선형결합인 주성분 분석(PCA)과 함께 의미 있는 요인추출을 위해 직교회전 방식의 하 나인 직각회전(varimax) 방식을 사용하였다. 또한 이를 이용하여 개별요인의 상대적 중요도를 나타내 는 고유치(eigen value) 1이상의 요인만을 추출하였다. 고유치는 해당 요인이 설명하는 분산의 양을 나타내므로 큰 값을 가진 요인이 중요한 요인이 된다. 분석절차는 독립변수 설문문항을 모두 투입하여 해당변수의 특성을 제대로 반영하지 못하는 문항을 제거하는 방법을 적용하였다.

	1	2	3	4	5
성취욕구1			.747		
성취욕구2			.793		
성취욕구3			.699		
성취욕구4			.772		
위험감수성1					.852
위험감수성2					.755
위험감수성3					.729
위험감수성4					.568
창의성1	.705				
창의성2	.634				
창의성3	.837				
창의성4	.677				
서비스관리1				.756	
서비스관리2				.548	
서비스관리3				.743	
서비스관리4				.639	
사업성과1		.837			
사업성과2		.815			
사업성과3		.763			
사업성과4		.733			

전체	3.192	2.959	2.952	2353	2.310
분산	10.641	9.864	9.839	7.843	7.702
누적	10.641	20.505	30.344	38.187	45.888

4.4 상관관계분석

본 연구의 상관관계분석은 두변수 간의 상관관계를 확인하였다. 상관계수는 0.1~0.5 간에 적당한 상관계수를 보였다.

요인	(1)	(2)	(3)	(4)	(5)
(1) 성취욕구	1				
(2) 위험감수성	.246	1			
(3) 창의성	.379	.421	1		
(8) 서비스관리	.516	.395	.421	1	
(9) 사업성과	.173	.164	.224	.171	1

4.5 가설 검증분석

창업가의 성취욕구가 서비스관리에 유의한 영향을 미친다는 가설 H1-1(표준화계수=.408, $t=4.060$, $p=.000$)는 채택되었다. 또한 창업가의 위험감수성이 서비스관리에 유의한 영향을 미친다는 가설 H1-2(표준화계수=.139, $t=2.016$, $p=.044$)는 채택되었다. 창업가의 창의성이 서비스관리에 유의한 영향을 미친다는 가설 H1-3(표준화계수=.609, $t=4.289$, $p=.000$)는 채택되었다. 다음으로 서비스관리는 사업성과에 유의한 영향을 미친다는 가설2(표준화계수=.791, $t=5.745$, $p=.000$)는 채택되었다.

가설	독립변수	종속변수	표준화계수	오차	t값	유의확률	결과
H1-1	성취욕구	서비스관리	.408	.101	4.060	.000	채택
H1-2	위험감수성	서비스관리	.139	.069	2.016	.044	채택
H1-3	창의성	서비스관리	.609	.142	4.289	.000	채택
H2	서비스관리	사업성과	.791	.138	5.745	.000	채택

5장. 결론

창업가 특성이 서비스 관리와 사업성과에 미치는 영향을 분석한 결과, 다음과 같은 가설들이 채택되었다:

0 창업가의 성취욕구는 서비스 관리에 유의한 영향을 미침($\beta = .408$, $t = 4.060$, $p < .001$).

1 창업가의 위험감수성은 서비스 관리에 유의한 영향을 미침($\beta = .139$, $t = 2.016$, $p < .05$).

2 창업가의 창의성은 서비스 관리에 유의한 영향을 미침($\beta = .609$, $t = 4.289$, $p < .001$).

3 서비스 관리는 사업성과에 유의한 영향을 미침($\beta = .791$, $t = 5.745$, $p < .001$).

결론적으로, 창업가 특성(성취욕구, 위험감수성, 창의성)은 서비스 관리에 긍정적인 영향을 미치며, 서비스 관리는 사업성과로 이어지는 중요한 요인임이 확인되었다.

5.1 이론적 시사점

첫째, 창업가 특성과 서비스 관리 간 연계의 중요성. 성취욕구, 위험감수성, 창의성이 각각 서비스 관리에 유의미한 영향을 미치는 것으로 나타났다. 이는 창업가 개인의 내재적 특성이 조직 차원의 운영 능력, 특히 서비스 관리 역량에 직접적인 영향을 미칠 수 있음을 시사한다. 기존 연구에서는 창업가 특성과 사업성과 간의 직접적 연계를 주로 다루었으나, 본 연구는 서비스 관리가 이 두 요소를 매개할 수 있는 중요한 중간 변수임을 입증한다. 이는 창업가 특성이 조직적 성과로 전환되는 과정을 이해하는데 기여한다.

둘째, 서비스 관리의 매개 역할. 서비스 관리가 사업성과에 강력한 영향을 미치는 요인으로 확인되었으며($\beta = .791$), 이는 창업가 특성과 사업성과 간 관계를 설명하는 매개 변수로서의 서비스 관리의 중요성을 강조한다. 즉, 창업가의 역량과 특성이 조직의 구체적인 관리 활동(예: 서비스 품질, 고객 대응)으로 전환될 때 사업성과로 연결될 가능성이 높아진다는 점을 보여준다. 이러한 결과는 창업 관련 이론에서 서비스 관리의 전략적 중요성을 한층 더 부각시킨다.

5.2 실무적 시사점

첫째, 창업가 역량 강화 프로그램 개발. 창업가의 성취욕구, 창의성, 위험감수성이 서비스 관리에 유의미한 영향을 미치는 것으로 나타난 만큼, 창업 초기 단계에서 창업가의 핵심 역량을 강화할 수 있는 교육 및 훈련 프로그램이 필요하다. 특히 성취욕구와 창의성을 강화할 수 있는 목표 설정 워크숍, 창의적 문제 해결 훈련, 혁신적 사고 기법 교육 등을 도입하여 실질적 역량 개발을 도모할 수 있다.

둘째, 서비스 관리 역량 강화. 서비스 관리가 사업성과에 직접적인 영향을 미친다는 결과는 서비스 관리 역량이 조직 성공의 핵심임을 시사한다. 창업자와 직원들이 고객 경험, 서비스 품질, 운영 효율성을 개선할 수 있는 도구와 방법론에 익숙해지도록 서비스 관리 전문 교육과정을 제공해야 한다. 이를 통해 사업성과를 증대할 수 있는 구체적 실행 전략을 마련할 수 있다.

셋째, 위험감수성 관리와 균형 전략. 창업가의 위험감수성이 서비스 관리에 영향을 미치지만 그 효과가 상대적으로 낮은 점을 감안할 때, 리스크를 최소화하면서도 창업가의 도전 정신을 유지할 수 있는 균형 전략이 필요하다. 이를 위해 체계적인 리스크 관리 시스템을 도입하고, 창업자가 전략적 위험을 감수할 수 있도록 데이터 기반 의사결정 지원 도구와 전문가 자문 기회를 제공하는 것이 효과적이다.

넷째, 서비스 중심의 조직문화 구축. 서비스 관리가 사업성과에 가장 큰 영향을 미치는 요인으로 나타난 만큼, 서비스 품질과 고객 만족을 우선으로 하는 조직문화를 구축하는 것이 중요하다. 창업 단계에서부터 서비스 중심의 비전과 목표를 명확히 설정하고, 이를 조직 전반에 걸쳐 내재화하도록 교육과 내부 커뮤니케이션을 강화해야 한다.

다섯째, 성과 관리 체계 도입. 서비스 관리가 사업성과로 이어지는 과정을 실시간으로 점검할 수 있는 성과 관리 체계를 구축해야 한다. 이를 통해 창업가는 서비스 품질과 고객 만족도를 지속적으로 모니터링하고 개선하여, 사업성과를 극대화할 수 있는 피드백 루프를 활성화할 수 있다.

SSSED-30

Changes in Social Studies Education in Elementary and Middle Schools in Mongolia and main contents of the 2019 Curriculum Revision

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I. 서론

1. 연구의 목적과 연구 문제

오늘날 몽골은 교육, 경제, 정치, 사회 등 측면에서 러시아의 영향을 많이 받아 왔다. 특히 정치, 교육에 큰 영향을 받으며 발전하였다. 1921년부터 몽골 정부는 모든 국민의 교육을 위한 교육부가 구성되며, 최초의 초등학교도 설립되었다. 또한 교사 양성을 위해 사범학교도 설립되었다. 그때의 전통적 교육을 공식적 교육으로 바꾸고 인구 밀집지역에 의무교육을 시행하기 시작하였다. 1940년에 몽골 정부에서 4·3·3 중등 교육체제를 마련하여 몽골 국민이면 누구나 초등학교부터 대학교까지 무료로 교육을 받을 수 있는 제도를 시행하기 시작하였다.

몽골의 교육제도 발전을 세 시대로 구분되며, 첫째 근대학교의 태동 시기(1921~1940)에최초의 학교가 울란바토르에 설립되고, 교육부가 조직되어 전통적 교육을 공식적 교육으로 전환하였다. 둘째, 사회주의 교육체제의 발달 시기(1940~1990)에 정부는 인구 밀집 지역에 의무교육을 도입하고, 1942년부터 모든 국민에게 초등학교부터 대학교까지 무상 교육을 제공하였다. 셋째, 시장경제 교육체제로의 전환 시기(1990~)에사회주의 체제에서 시장경제 체제로 전환하면서 교육 개혁이 이루어졌다. 1995년에는 여러 교육법이 개정되었고, 이후 교육체제가 여러 차례 변경되어 2008년부터 12년제가 시행되었다.

몽골은 1998년에 초·중등 교육 내용을 표준화했고, 2002년부터 교육내용, 평가, 교육활동을 전반적으로 표준화하는 작업을 시작하였다. 이후 2004년 교육 표준을 바탕으로 2008년 교육과정 초안을 마련하고, 2012년부터 교육과정을 개정하였다. 2014년에는 초등학교, 2015년에는 중등학교 교육과정을 개발했으며, 2019년에는 교육과정을 개선하여 국가 교육과정에 반영하였다.

1990년에 몽골교육이 자유화되면서 사회과 교육이 도입되었다. 2002년 교육법에 사회과 교육의 주요 목적은 시민교육으로 시민 양성과 애국심, 공동체 의식을 발전하는 관점을 강조하였다.

이에 본 연구의 목적은 몽골교육 발전의 역사적 시기를 분석하며, 교육과정이 어떻게 변천해 왔는지를 고찰하여, 특히 개혁·개방 정책 이후 사회과 교육과정의 변천 특징을 중점적으로 검토하고서, 몽골의 사회과 교육과정 개발 방향과 시사점을 탐구하고자 한다. 이러한 목적을 달성하기 위하여 다음과 같은 연구 문제를 설정하였다.

첫째, 몽골교육 발전의 역사적 시기는 언제인가?

둘째, 몽골의 교육과정 변천과 변화는 무엇인가?

셋째, 개혁·개방 정책 이후 사회과 교육과정의 변천 및 변화는 무엇인가?

넷째, 몽골의 사회과 교육과정을 분석해 볼 때 어떤 개발 방향 및 시사점을 가지고 있는가?

이러한 연구 문제를 중심으로 몽골 교육과정의 특징을 살펴보고자 한다.

2. 연구 내용과 방법

1) 연구 내용

본 연구에서 몽골 교육과정의 발전을 살펴보고 교육의 발전 배경, 학제의 구성과 변천의 내용, 교육과정의 편제와 사회과의 위상 특징, 사회과 교육의 기본 방향과 편제, 목표와 목표 특징을 분석하여, 몽골의 사회과 교육과정 개발 방향을 위해 중요한 시사점을 탐구하고자 한다. 본 연구의 구성은 다음과 같다. 제 I 장 서론의 연구 목적과 연구 문제, 연구 내용과 방법, 선행 연구 검토 등의 기술에 이어, 제 II 장에서는 몽골의 사회과 교육의 제도적 배경에 대해 분석하기 위하여 몽골교육 체제의 역사적 변천과 교육 이념의 변화, 몽골교육 학제의 구성과 변천, 몽골 교육과정의 편제, 몽골 '사회'의 구성과 내용 등을 검토하고자 하였다. 제 III 장에서는 몽골의 2019 년 사회과 교육과정 개정의 주요 내용을 연구하기 위해 사회과 교육의 기본 방향, 목표, 과목 편제 등을 분석하고 2019 년 사회과 교육과정 개정을 밝히고자 하였다. 마지막으로 몽골의 초·중등학교 사회과 교육 변화에 대한 분석을 요약하며 결론을 내리고자 하였다.

2) 연구 방법

본 연구의 문제에 답하기 위한 연구 방법으로는 주로 문헌 연구법과 비교 분석법을 사용하였다.

먼저, 몽골의 초·중등교육 발전, 또는 초·중등학교 사회과 교육을 주제로 한 선행 연구들을 검토하며 연구 방향에 대한 시사점을 얻고 참고할 만한 지식이나 정보를 추출·수집하였다. 검토할 선행 연구들 가운데 몽골 문헌은 '몽골교육 발전', '몽골의 교육현황', '몽골교육의 특징', '몽골교육의 실태', '몽골 초·중등교육의 제도와 발전', '몽골 초·중등교육의 발전', '초·중등교육의 시행', '초·중등교육의 현황', '초·중등 교육과정의 발전', '초·중등 교육과정의 정책', '초·중등 교육과정의 변화', '초·중등학교 사회과 교육의 발전과 특징', '초·중등학교 사회과 교육의 시행과 실태', '초·중등학교 사회과 교육의 현황', '초·중등학교의 사회과 교육에 대한 정책과 특징' 등을 검색어로 찾아서 제목과 목차 및 요약을 일별함으로써 선정하였다. 한국 문헌은 주로 경상국립대학교 전자도서관(한국 학술연구정보서비스 간접 연결)에서 '몽골의 교육 발전', '몽골의 초·중등학교 교육과정', '몽골의 초·중등학교 사회과 교육' 등을 검색어로 찾아서 마찬가지로 선정하였다. 이렇게 선정한 선행 연구들은 몽골의 역사적 교육 발전, 초·중등학교 교육과정 발전, 초·중등학교 사회과 교육과정 발전이라는 주제별로 분류하여 주요 논지를 파악하고 논문 작성에 필요한 정보를 추출하여 사용하였다.

다음으로, 초·중등교육에 관한 자료는 몽골교육과학부, 몽골 국방부 등의 인터넷 데이터베이스 사이트에서 초·중등학교 교육과정 및 초·중등교육 관련 법률에 관한 정보를 찾아서 수집하였다. 본 연구에서는 필요에 맞게 정리하거나 재가공하여 거기에 담긴 정보의 이해와 논문 서술에 활용하였다.

II. 몽골의 사회과 교육의 제도적 배경: 역사와 구조

1. 몽골교육 체제의 역사적 변천과 교육 이념의 변화

1.1. 몽골교육 체제의 역사적 변천

몽골교육은 독립 후에 근대학교의 태동·사회주의 교육체제의 발달·시장 경제 교육체제의 전환 등 크게 세 차례의 역사적으로 나뉘어 발전해 왔다. 세 차례 역사를 보면 다음과 같다.

1.1.1. 근대학교의 태동(1921~1940)

몽골의 근대 교육은 1921년 인민혁명으로 시작되었다. 이전에는 티베트어로 진행된 라마교 승려 교육이 주류였으나, 혁명 후 국민 교육을 위해 교육부가 구성되었다. 울란바토르에 첫 초등학교가 설립되어 7년제 중등학교로 발전했고, 학생들이 학교에 올 수 없을 때 교사들이 게르나 집을 방문하여 가르쳤다. 문맹퇴치를 위해 모든 문해자가 비문해자를 가르쳐야 한다는 슬로건을 내걸었으며, 목축업자와 소련의 지원 덕에 교육이 확산되었다. 1922년에는 사범학교가 설립되어 교사를 양성했고, 1930년에는 첫 유치원이 세워졌다.

1.1.2. 사회주의 교육체제의 발달(1940~1990)

1940년 몽골 정부는 4·3·3 중등 교육체제를 도입하고, 1942년부터 의무교육을 시작하여 1958년에는 지방으로 확대하였다. 1960년대에는 무상교육 체제를 마련했고, 기술 교육 중심의 교육과정으로 개편되었다. 1972·1973년에 역사와 사회 과목이 개편되었고, 1987·1988년에는 교육 내용이 크게 수

정되었다. 사회주의 사회에서 교육은 사상을 보급하고 국가 발전을 촉진하는 수단으로 여겨졌다. 1991년 교육법 개정으로 초·중등교육체제가 3·5·2제로 바뀌고, 사상 교육이 배제되며 미래지향적 교육이 강조되었다. 1995년과 2002년에는 "국가교육정책법" 등 여러 교육법이 개정되었다.

1.1.3. 시장경제 교육체제로의 전환(1990~현재)

1991년 교육법 개정으로 초·중등교육체제가 3·5·2제로 바뀌고, 사상 교육이 배제되며 미래지향적 교육이 강조되었습니다. 1995년과 2002년에는 "국가교육정책법" 등 여러 교육법이 개정되었습니다.

1.1.3.1. 몽골교육발전 마스터플랜 2000~2005년

2000년 2월 2일에 몽골 정부에서 교육 분야의 2000~2005년 발전전략을 승인하였다. 이 발전전략은 기획 행정, 취학전교육, 초·중등교육, 기술교육, 직업기술교육, 고등교육, 과학·기술, 비공식 교육 등 7분야의 23개 전략으로 구성되었다.

1.1.3.2. 몽골교육발전 마스터플랜 2006~2015년

2005년에 5·4·2제가 시행되었으며, 중등교육을 12년제로 전환하고 취학 연령을 6세로 변경하는 등 학습자의 기본 지식과 창의력 개발에 중점을 두었다.

1.1.3.3. 교육 부문 중기 개발 계획 2021~2030

2020년에 승인된 이 계획의 목표는 디지털 기술 시대에 필요한 능력을 발전시키고, 평생교육과 포괄적인 교육 서비스를 통해 전 국민의 발전을 보장하는 것이다. 정책의 주요 방침으로는 교육 기회의 평등 제공, 교육 시스템과 서비스 질 향상, 교육의 형평성 및 포용성 강화, 교육 거버넌스 개선이 포함되었다.

1.2. 교육 이념의 변화

1991~2002년 몽골 교육법에 따라 몽골교육의 목적

	법	목적	가치
1	1991년 몽골인민공화국 교육법	몽골인민공화국의 교육은 인도적·민주적이어야 하며, 국가와 인류의 문화와 과학을 기본으로 한다.	• 문화와 과학을 기본으로 하였다.
2	1995년 몽골 교육법	과학적 지식을 습득하고, 정의와 법을 존중하며, 미적 감각을 갖고, 독립적으로 학습하고, 일하고, 생활하는 능력을 발전시킨다.	• 시민의 습득해야 하는 능력에 대해 강조하였다. • 법을 준수하는 시민을 기른다.
3	1998년 몽골 교육법 개정	시민은 건강한 신체적, 지적 적절한 능력을 습득하고, 법을 존중하여 도덕적, 미적 감각을 갖고, 독립적으로 생활하는 능력을 발전시킨다.	• 법을 존중하는 시민으로 기른다는 관점을 강조하였다. • 독립적으로 생활할 수 있는 능력을 발전시킨다.
4	2002년 교육법	몽골교육의 목적은 정신적·신체적·도덕적으로 적절한 능력을 발전시키고, 인도주의를 존중하여 준수하고 독립적으로 학습하고, 생활하는 능력을 습득하는 시민으로 기른다.	• 인도주의를 준수하는 시민으로 기른다. • 일하고 생활하는 능력을 습득한다.

*출처: E.Chuluuntsetseg, 2019: 97

2.2. 몽골 학제의 구성과 변천

몽골교육의 발전은 1921년 초등교육, 1923년 중등교육, 또 1930년 최초의 유치원 설립 시행으로 시작하였다. 1951~현재까지 시행해 왔던 몽골 학제의 변천을 보면 다음과 같다.

2.2.1. 10년제(1951~1998)

1942년부터 의무교육을 인구 밀집지역에 시행하고 1958년에 지방에도 실시하였다. 1955년에 4년제 보통교육을 완성하고 제3차 경제 문화개발 5개년 계획 기간(1961~1965)에 의무교육을 7년 간에 시행하고 몽골 국민 누구나 초등학교부터 대학교까지 무료로 교육을 받을 권리에 대한 제도를 마련하였다. 1973~1990년 정부에서 3·5·2제를 공포하고, 1995년에 4·4·2제를 실시하여 몽골은 '초·중등교육법', '고등교육법', '교육법', '국가교육정책법' 등으로 구분한 교육법 개정각종 교육법 개정을 시행하였다.

2.2.2. 11년제(2005~2008)

2002년 교육법 개정 후 2005년에 정부에서 5·4·2제를 발표하였다. 이 학제는 2005~2008년 시행하

였으며, 초·중학교는 1학년~9학년, 고등학교는 2년제로 구성되었다. 이에 따라 교육과정과 교과서도 개정되었다. 이는 몽골의 교육체제에 대한 중요한 변화를 의미한다.

2.2.3. 12년제(2008~현재)

2008년부터 6·3·3제(12년제), 5·4·3제로 학교 교육과정을 시행하기 시작하였다. 이에 따라 초·중학교는 1학년~9학년 의무교육을 제공하고, 고등학교는 3년제로 구성되었다. 또한, 초·중등학교의 학년은 1학년~12학년으로 확대되었다. 이러한 변화는 몽골의 교육체제에 대한 중요한 발전을 나타내었다.

3. 교육과정의 편제와 ‘사회과’의 위상

몽골에서는 11학년제를 12학년제로 전환하기 위해 2004년 교육표준을 기반으로 2008년에 초·중등 교육과정의 초안을 마련하였다. 이후 2012년부터 교육표준과 교육과정을 포함하는 개혁정부 정책 실행 계획(action plan)에 따라 교육문화과학부는 교육과정 개정 사업을 시작하였고, 이를 단계적으로 진행하여 이번에는 교육과정을 단계적으로 진행하여 2014년에 초등학교 중학 교육과정, 2015년에 중학교 중학 교육과정, 2016~2018까지 고등학교 중학 교육과정을 개발하였다. 또한, 2019년에 초·중·고등학교 교육과정이 개정되었다. 1990년대 민주주의로의 전환 이후 몽골은 네 차례에 걸쳐 교육과정을 개편하였는데, 주요 개편 내용을 살펴보면 다음과 같다.

I) 1차 초·중등 교육과정 개발은 2004년부터 2008년까지 몽골에서는 국가 차원에서 교육표준을 바탕으로 초·중등교육 활동의 교육활동의 기준을 마련하였고, 이를 토대로 각 학교와 교사가 자체적으로 교육과정을 개발하여 시행하도록 하였다. 세계 교육 발전의 방향은 세계화, 경쟁력, 지속가능발전, 인간 개발, 창의성 등을 포함하였다. 이러한 맥락에서 초·중등교육 교육과정 및 교육표준 개발은 신자유주의적 이념을 기반으로 하여 교육의 목적과 역할을 경제적인 원리인 수요와 공급에 따라 설명하고, 교육활동 및 성과를 표준화하고 측정화하는 방향으로 진행되었다.

현재 초·중·고등학교에서 운영되고 있는 교육과정은 다음과 같다.

초등학교:

0) 초등학교의 수업 시간은 40분이다.

1) 인간과 환경 과목은 I, II, III 학년에 102시간씩 들어가고 IV, V 학년에 인간-사회, 인간-환경, 보건 등으로 구분되어 34시간씩 들어간다.

2) IV 학년의 총 수업 시간은 714시간이고 인간-사회과목은 34시간으로 시행한다. V학년의 총 수업 시간은 748시간이고 인간-사회과목은 34시간으로 시행한다.

중학교:

1) 중등교육의 목적은 학습자들에게 일반교육 습득, 애국심, 인도주의, 자기개발, 생활과 근무를 통한 평생교육에 자기 자신을 준비하는 데 있다.

2) 중학교의 수업 시간은 45분이다.

3) 문명(사회) 과목은 VI 학년, VII 학년, VIII 학년, IX 학년에 35시간씩 들어가며, 일주일에 1시간으로 시행한다.

4) VI 학년의 총 수업 시간은 945시간이고 문명과목은 35시간으로 시행하여, VII 학년의 총 수업 시간은 1,050시간이고 문명과목은 35시간으로 시행한다. VIII 학년의 총 수업 시간은 1,120시간이며, 문명 과목은 35시간으로 시행하고, IX 학년의 총 수업 시간은 1,120시간이고, 문명과목은 35시간으로 시행한다.

각 학년마다 문명 과목의 수업 시간이 동일하게 35시간으로 유지되고 있다.

고등학교:

고등학교(2년제)에서 운영되고 있는 교육과정은 필수과목, 선택과목, 기초전문교육과목으로 구분되었다. 학생들은 교육지침을 참고하여 자신의 흥미나 미래 계획에 따라 과목을 선택할 수 있다.

2006~2007학년도부터 실행하는 고등학교 교육과정을 보면 다음과 같다.

0) 고등학교의 수업 시간은 45분이다.

1) 학생은 3개의 선택과목을 선택할 수 있으며, 선택과목당 140시간을 이수한다.

2) 사회과 과목은 X, XI 학년에 필수과목으로 105시간씩, 선택과목으로 140시간씩 들어간다.

II) 2차 초·중등 교육과정 개발은 2008년부터 2014년까지 몽골의 교육과정은 국가 차원에서 교육표준을 기반으로 설정되었다. 이 기간동안 국가는 교육과정의 개발 방향과 이념을 결정하고, 교과별로 구체적인 예시를 제공하였다. 그때의 초·중등 교육과정의 목적은 몽골의 교육 발전과 질 향상, 학습자

의 요구를 충족시키며 사회참여 능력을 강화하고, 몽골의 지속적인 발전을 보장하는 것이다. 현재 12년제(1~12학년) 초·중·고등학교에서 운영되고 있는 교육과정은 다음과 같다.

- 1) 수업 시간은 I, II 학년 45분, III~XII 학년까지 40분이다.
- 2) 인간-사회과목은 I, II, III 학년에 인간-환경으로 34시간씩, IV, V, VI 학년에 34시간씩 들어간다. 사회학 과목은 VII, VIII, IX 학년에 35시간씩, X 학년에 35시간씩, XI, XII 학년에 105시간씩 들어간다.
- 3) 구학제에서 VI, VII, VIII, IX 학년에 가르쳤던 문명과목이 신학제에서 VII, VIII, IX 학년에서 가르치는 사회과목으로 변화되었다.
- 4) 고등학교 신학제에서는 선택과목으로 단 하나의 과목만 선택할 수 있게 되었다.
- 5) 고등학교에서 사회과목은 XI, XII 학년에는 일주일에 3시간으로 증가한다.
- 6) 역사 과목은 X 학년에만 일주일에 2시간씩 시행하며 XI, XII 학년에 역사 과목이 사라지는 반대로 사회과목 시간이 늘어난다.

III) 3차 교육과정은 2014~2016년까지 초·중등 교육과정이 개발된 시기이다. 이때 몽골 교육부에서 초·중등교육의 ‘핵심 교육과정’을 발표하였다. 몽골에서는 2014년부터 초등 교육과정의 개발로 시작하여, 2015년에 중학교 교육과정과 2016년에 고등학교 교육과정을 단계적으로 개발하였다. 이 교육과정은 교사가 학생들이 스스로 학습할 수 있도록 지원하며, 학생들은 이를 통해 지식과 능력, 역량을 개발하게 되었다. 2014학년도부터 시행하는 초·중·고등학교 교육과정을 살펴보면 다음과 같다.

초등학교:

- 1) 초등학교의 수업 시간은 I, II, III 학년 35분이고, IV, V 학년 40분이다.
- 2) 인간과 환경, 인간과 사회과목은 따로 계획되었다.
- 3) 인간과 사회과목은 IV, V 학년에 33시간씩, 66시간씩으로 시행한다. IV 학년에는 일주일에 1시간씩 있는데 V 학년에는 2시간으로 늘어난다.
- 4) 인간과 사회과목은 각 학생이 인격적으로 발달하고 성숙하여, 공동체(집단이나 사회)의 구성원이 되어 사회적·역사적 과정에 관심을 가지며 이해하고 참여하면서 규범에 따라 의사소통을 하는 그들의 능력을 개발하는 데 이바지한다.

중학교:

- 1) 중학교의 수업 시간은 40분이다.
- 2) 사회학 과목은 역사와 사회과목으로 구분되었다. 역사 과목은 VI 학년에 35시간씩, VII, VIII, IX 학년에 70시간씩 들어간다. 또한, VI 학년에는 일주일에 1시간이 있다가 VII, VIII, IX 학년에 2시간으로 늘어난다. 사회과목은 VII, VIII, IX 학년에 70시간씩 들어가며 일주일에 1시간으로 실시한다.
- 3) 사회학 목적은 학생을 역사적·사회적 사건과 현상을 인식할 방법을 가지며, 민족적 자부심과 문화 및 전통을 존중하여 계승하여, 인류 공통 가치를 존중하는 시민으로 기른다.

고등학교:

- 0) 고등학교의 수업 시간은 40분이다.
- 1) 이 교육과정은 필수과목과 선택과목으로 구분되었다.
- 2) 필수과목에서 사회학 과목은 몽골역사, 지리학, 사회학 등으로 나뉘며, X 학년에 105시간씩, XI 학년에 70시간씩 들어간다. 또한, 몽골역사, 지리학, 사회학은 X 학년에는 일주일에 3시간으로, XI 학년에는 2시간으로 늘어난다.
- 3) 선택과목에서 사회학 과목은 역사, 지리학, 사회학, (사업, 자율, 능력) 등을 나뉜다. X 학년에는 주당 1~2시간으로 2과목, XI 학년에는 주당 2시간으로 3과목, 3시간으로 1과목, 총 4과목, XII 학년에는 5시간으로 4과목을 선택해야 한다.

IV) 2019 개정 교육과정은 2019~현재까지 초·중등 교육과정 개발된 시기이다. 2016년에 개편된 초·중등 교육과정을 2019년 3월에 두 번째 개선을 위한 초·중등교육의 “핵심 교육과정”에 대한 전국적인 논의를 시행하였다. 이 논의에서는 전국에서 선발된 최고의 교사 72명으로 구성된 팀이 핵심 교육과정의 실행에 직면한 문제점을 파악하고 추가 개선 방안을 모색하기 위해 5일간의 국민적 대화를 시행하였다. 이 결과에 2019개정 초·중등교육의 핵심 교육과정을 발표하였다. 2019학년도부터 시행하는 초·중·고등학교 교육과정을 살펴보면 다음과 같다.

초등학교:

- 0) 초등학교의 수업 시간은 I, II 학년 35분이고, III~V 학년 40분이다.

1) IV 학년의 총 수업 시간은 768시간이고 인간-사회과목은 32시간씩, V 학년의 총 수업 시간은 864 시간이고 인간-사회과목은 64시간씩으로 시행한다. IV 학년에는 일주일에 1시간씩 있는데 V 학년에는 2시간으로 늘어난다.

중학교:

- 1) 중학교의 수업 시간은 40분이다.
- 2) 사회학 과목은 시민윤리교육, 지리, 역사, 사회 등으로 구분되었다. 역사는 VI~IX 학년에 66시간씩, 지리는 VII~IX 학년에 33시간씩, 역사는 VI 학년에 33시간씩, VII~IX 학년에 66시간씩 들어간다. 또한, 사회는 VII~IX 학년에 33시간씩 들어간다.

고등학교:

- 1) 고등학교의 수업 시간은 40분이다.
- 2) 필수과목에서 사회학 과목은 X, XI 학년에 66시간씩 들어가며, 일주일에 2시간으로 늘어난다.
- 3) 선택과목에서 사회학 과목은 역사, 지리학, 사회학, 비즈니스학 등으로 구분된다.
- 4) X 학년 학생은 주 1~2시간(2회 2시간, 2회 1시간), XI 학년 3회(1회 3시간, 2회 2시간) XII 학년 주4~8시간 수업 총3회(1회 4시간씩 두 번, 1회 3시간씩 두 번, 1회 4시간 한번) 선택적으로 학습해야 한다.

III. 몽골의 2019년 사회과 교육과정 개정의 주요 내용

3.1. 사회과 교육의 기본 방향(성격)

초등학교 사회과 교육의 목적 변화는 2014년에 있었던 ‘인격적으로 발달하고 성숙한다.’, “공동체”, “이해하고”, “능력을 계발하는 데 이바지한다.” 부분은 2019년에 삭제되었다. 2014년에 없었던 “사람들”, “국가적”, “자신 및 국가의 가치” 부분은 2019년에 새롭게 추가되었다. 2014년에 있었던 “과정”에와 “관심”을 부분은 2019년에 “사건들에 대한”과 “초보적 이해를” 부분으로 변경되었다. 이런 변화는 학생들이 개인적인 성장뿐만 아니라 사회 및 국가적인 가치에 대한 이해와 존중을 강조하는 방향으로 교육 목표가 조정되었음을 보여준다. 학생들은 사건들에 대한 이해와 초보적인 지식을 통해 다양한 사회적 상황과 국가적인 가치에 대해 더 깊이 이해하고 존중할 수 있도록 유도된다.

고등학교 사회과 교육의 목적 변화는 2016년에 없었던 “태도를 가진” 부분은 2019년에 새롭게 추가되었다. 이러한 변화는 학생들이 사회적 문제에 대한 태도와 관점을 가지며 학습하고, 사회에 대한 긍정적이고 적극적인 태도를 형성하도록 유도하는 것을 강조하였다.

3.2. 사회과 교육의 목표

초등학교 사회과 교육 목표 변화는 2014년에 있었던 “즐거운 활동에” 부분은 2019년에 삭제되었다. 그리고 2014년에 없었던 “국가의 중요한”과 “가족·학교·고장의 사회생활에 참여하여, 규범을 따라 역사와 전통 및 문화를 존중하고서, 국가 발전에 이바지하며, 긍정적인 태도를 발전시킨다.” 부분은 2019년에 새롭게 추가되었다. 2014년에 있었던 “과목을 통해 얻을 능력을 각 학생이 독립적으로나 협력을 한 결과로서”, “이를 위해 학생의 환경”, 증거를 바탕으로 사례 분석, 관찰, 탐구, 비교, 문제 해결, 평가 등 활동적인 방법을 사용한다. 각 학생이 그룹 활동, 토론, 과제를 하고, 역할극 등 재미있고” 부분은 2019년에 “그들의 관계, 국가의 중요한 역사적 사건과 역사적 인물에 대한 기본 지식을”, “인간과”, “역사적 인물의 활동을 잘 이해하여, 상상력을 습득하고, 개인 및 국가적 가치를 존중하며, 고장 사회와 사람들의 삶에” 부분으로 변경되었다. 이 변화를 살펴보면 국가의 중요한 역사적 사건과 인물에 대한 이해를 중시하고, 학생들이 사회생활에 참여하면서 규범을 따르고, 역사와 전통을 존중하여, 국가 발전에 기여하는 태도를 기르도록 하는 데 중점을 두고 있다. 이러한 변화는 포괄적 역사적 지식과 사회적 책임감을 가질 수 있도록 교육의 방향을 조정한 것이다.

중학교 사회과 교육 목표 변화는 2015년에 있었던 “문제 해결과 설명 등의 능력을 개발하는 방법으로 지식을 습득한다.”, “일어나는”, “자국 및 세계의 과거와 현재의 사회적·역사적 사건을 발견하고 이해하는 데 관심을 가지며, 학습 활동을 스스로 주도한다.” 부분은 2019년에 삭제되었다. 그리고 2019년에 “연구, 문제 해결과”, “개발하는 방법으로 지식을” 부분은 새롭게 추가되었다. 2015년에 있었던 “분석” 부분은 2019년에 “이해” 부분으로 변경되었다. 중학교의 이러한 변화는 연구와 문제 해결 능력을 강조하면서도, 학생들이 지식을 개발하는 방법에 대한 명확한 지침을 추가하고 있다. 또한, “이해”라는 용어를 사용함으로써 보다 포괄적이고 깊이 있는 학습을 목표로 하고 있다. 이러한 변화는 학생들이 사회적·역사적 사건을 검토할 때 그 맥락과 의미를 깊이 이해할 수 있도록 돕기 위한 것이다.

고등학교 사회과 교육 목표 변화는 “정보기술” 부분은 2019년에 새롭게 추가되었다. 이러한 변화는 전통적인 사회과학 지식뿐만 아니라 디지털 시대에 필요한 정보기술에 대한 이해와 능력을 강조한다.

이는 학생들이 현대 사회에서 필요한 기술적 역량을 적극적으로 개발하고, 정보화 사회의 변화에 대응할 수 있도록 하는 데 중점을 두고 있다.

3.3. 사회과 교육의 과목 편제

2014~2016년 사회과 교육은 인간과 사회, 일반사회, 역사, 지리, 교과 지원 활동을 통해 이루어지며, 사회과 교육과정의 편제는 학교 급별에 따라 달리 나타난다. 초등학교 교육과정의 사회과 편제는 4~5학년은 필수과목으로 ‘인간과 사회’를 배우며, 교과 지원 활동으로 시민교육, 과외활동, 자율 활동을 통해 사회과 교육을 접한다. 중학교 사회과 교육과정에서는 초등학교 때 배우던 사회과와 교과 지원 활동(시민교육, 과외활동, 자율활동)을 기본으로 하며, 역사와 지리 과목이 추가된다. 그리고 고등학교 10~11학년에서는 필수과목으로 사회과, 지리, 몽골의 역사 과목을 배우며, 선택과목으로 지리(몽골 지리, 세계 지리), 역사(국사, 세계사, 근대사, 현대사), 사회와 사회관계, 문화, 법, 경제, 정치와 민주주의, 국제 교류 등 과목이 추가된다.

2019년의 사회과 교육은 인간과 사회, 일반사회, 역사, 지리, 시민윤리교육을 통해 구성된다. 초등학교 4~5학년은 필수과목으로 인간과 사회와 시민윤리교육을 통해 사회과 교육을 진행한다. 중학교 사회과 교육과정에서는 사회과와 시민윤리교육을 필수과목으로 하며, 추가적으로 지리와 역사 과목을 학습한다. 또 고등학교 10~11학년에서는 사회과, 지리, 몽골의 역사, 시민윤리교육(10~12학년)을 필수과목으로 하며, 선택과목으로 지리(몽골 지리, 세계 지리), 역사(국사, 세계사, 근대사, 현대사), 사회와 사회관계, 문화, 법, 경제, 정치와 민주주의, 국제 교류 등 포함된다.

2019년 이후 교육과정에서는 시민윤리교육이 강화되어 학생들이 윤리적 가치와 시민으로서 역할을 더 깊이 이해할 수 있도록 교육이 보강되었다.

IV. 결론

본 연구는 몽골 초·중등학교 사회과 교육의 변화를 분석함으로써, 몽골교육이 역사적 배경과 사회적 요구에 따라 어떻게 진화해 왔는지를 밝히는 것을 목표로 하였다. 주요 연구 결과는 다음과 같다.

첫째, 몽골은 1921년 인민혁명 이후 근대교육 체계의 기초를 마련하고, 이후 사회주의 이념을 강조하는 교육체제로 발전하였다. 1990년대 이후 민주주의와 시장경제로의 전환을 겪으면서 교육도 몽골의 전통적 가치와 민주주의적 원칙을 융합한 형태로 변화하였다. 이러한 역사적 흐름은 몽골교육이 사회 변화와 국가적 필요에 따라 유연하게 진화해왔음을 보여준다.

둘째, 교육법의 개정과 학제 개편을 통해 국제화와 정보화에 대비하고, 학생들이 글로벌 환경에서 경쟁력을 갖추도록 교육체계가 재정비되었다. 2002년과 2008년 개정은 12년제 학제 도입 및 교육체계의 현대화를 통해, 미래 지향적인 인재를 양성하려는 노력을 반영한다.

셋째, 몽골은 민주주의 전환 이후 네 차례의 교육과정 개편을 통해 국가 발전에 기여할 수 있는 인재 양성에 집중하였다. 특히 2019 개정 교육과정은 전통과 현대적 요구를 조화하여 학생들이 창의성과 문제 해결 능력을 키우고, 학습자 중심의 교육환경에서 성장할 수 있도록 지원하였다. 이를 통해 몽골의 사회과 교육이 학생들의 전통적 가치 존중, 세계 시민 의식, 정보기술 역량을 함양하는 데 기여함을 확인할 수 있다.

넷째, 2019년 몽골 사회과 교육과정 개정은 시대적 요구에 맞춰 초·중·고등학교 교육 목표를 변화시켜 학생들이 국가적 책임감, 전통에 대한 존중, 연구 및 문제 해결 능력, 정보기술 활용 역량을 갖추도록 하고 있다. 초등학교에서는 국가와 공동체에 대한 존중을 강조하고, 중학교에서는 자율적 학습에서 문제 해결로 초점을 이동하였으며, 고등학교에서는 디지털 사회에 맞는 정보기술 능력을 추가하였다. 또한 시민윤리교육이 초등학교와 중학교에 필수과목으로 도입되고, 고등학교에서도 확대되어 사회과 교육이 윤리와 시민성 교육을 강화하도록 방향이 조정되었다. 초등학교 교육은 국가적 가치와 사회적 이해에 중점을 두고, 고등학교는 성숙한 사회적 태도 형성을 강조하여 지식 습득과 태도 함양을 동시에 추구하고 있다. 이러한 변화는 몽골의 사회과 교육이 학생들이 사회적 책임감과 국가적 정체성을 이해하고, 성숙한 시민으로 성장할 수 있는 기반을 마련하고자 하는 방향으로 진행되었음을 보여준다.

본 연구는 몽골교육 발전의 역사적 시기, 교육과정 변천과 변화, 특히 개혁·개방 정책 이후 사회과 교육과정의 변천 특징을 중점적으로 살펴보았다. 이를 통해 2019년 몽골의 사회과 교육과정 개발 방향과 시사점을 얻을 수 있다.

첫째, 학생 중심 교육을 강화한다. 학습자가 능동적으로 참여하고 문제를 해결하는 환경을 조성하여 자율적 학습 태도와 실생활 문제 해결 능력을 키운다.

둘째, 전통과 현대를 조화한다. 몽골의 전통적 가치와 현대적 요구를 융합하여 학생들이 문화적 뿌리를 이해하고 글로벌 사회에서도 경쟁력을 갖출 수 있도록 지원한다.

셋째, 정보기술 능력을 강화한다. 디지털 사회에 맞는 정보기술 역량을 개발하여 학생들이 미래의 직업 세계에서 필요한 기술적 능력을 습득할 수 있도록 한다.

넷째, 윤리와 시민성 교육을 강화한다. 시민윤리교육을 필수과목으로 도입하여 학생들이 사회적 책임감과 윤리적 사고를 기르고, 성숙한 시민으로 성장할 수 있는 기초를 제공한다.

다섯째, 지식과 태도가 통합한 교육을 제공한다. 초등학교에서는 국가적 가치와 사회적 이해에 중점을 두고, 고등학교에서는 사회적 태도 형성을 강조하여 지식 습득과 사회적 책임을 다할 수 있는 태도를 함양하도록 유도한다.

이상과 같이 개발 방향과 시사점은 몽골 사회와 교육이 학생들의 사회적 책임과 시민 의식을 증진시키고, 정보기술을 활용하여 현대 사회에 적응할 수 있는 능력을 길러주는 데 기여하고 있음을 보여준다.

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Some Issues of Food Nutrition in Mongolia

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Abstract: As per the most recent statistics, 28.4 percent of the Mongolian population continues to live below the poverty line and approximately 22 percent do not have sufficient dietary energy regularly to lead a normal, active, and healthy life. Based on the Food Insecurity Experience Scale, nearly one in four Mongolians experience moderate or severe food insecurity 1. In 2016, it was estimated that globally Mongolia incurred the second-highest national fraction of age-standardized cardiovascular mortality attributable to dietary risk factors. Diabetes is estimated to affect 11.2% of adult women and 12.2% of adult men. Part of this is at least due to the country's historic dependence on animal source foods and increasing rates of urban sedentary life 2. Therefore, it is necessary to consume a wide range of nutritious and high-quality foods, increase the amount of essential nutrients in the daily diet, disseminate information on healthy food ingredients to the public, and educate and introduce them to proper nutrition. The Asian Food and Agriculture Cooperation Initiative (AFACI) is funding a project called the "Establishment of Asian Food Composition Database" in 2021-2024 years, completed from Ulaanbaatar, Darhan capital city, 11 provinces, and food industry 15 companies the collection of 108 food items on major production of plant and animal origins, strategies, and export foods. A total of 21 nutrients such as Moisture, Fat, Protein, Carbohydrates, Ash, Folic Acid, Vitamins B1, B2 and C, Minerals (Na, Ca, K, P, Fe, Mg), Dietary Fiber, Fatty acids are analyzed in 108 products of the twelve groups and created a composition database/table for Mongolia.

Keywords: vitamin, protein, daily diet, food nutrition, food supply

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NGOT-32

Study of the Soils Heavy Metal Distribution

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Abstract: Soil pollution refers to the process in which the natural functions of soil are disrupted due to external influences, leading to the loss of its inherent properties. Generally, soil becomes contaminated by harmful substances released into the air, such as smoke and particulate matter, as well as dry and wet waste deposited on the ground. In the capital city, where the population is most densely concentrated, particularly in the ger (traditional dwelling) districts, heavy metal soil pollution was mapped using ArcGIS software based on data from 45 monitoring points as of 2019. The distribution of pollution was categorized by land use zones, with levels classified into four groups: 0–10 mg/kg, 10–20 mg/kg, 20–30 mg/kg, and above 40 mg/kg. The highest concentration of pollutants was found in the light industrial zones, while the lowest levels were observed in the mid-rise residential areas.

Keywords: soil pollution, land use zones

NGOT-33

Improper Conservation Management Affecting Biodiversity

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Abstract: Fifty-eight diatom species belonging to 34 genera, 20 families, 11 orders, and one class are identified in the diatom survey of mineral springs near Uvs and Khyargas lakes in northwest Mongolia. The water quality of the mineral springs of Uvs Lake is fresh, and the mineral spring belonging to Khyargas Lake is fresh to brackish based on the diatom community. The environmental well-being of those springs is 78.5-83.5. Conservation management must be based on aquatic diversity studies to restore these springs to nature. Conservation management of springs based on algae communities is an issue that is being raised for the first time in Mongolia.

SSLS-34

몽골의 유전자원 및 전통 지식 관리 체계 현황과 개선 방향

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초록

본 논문은 한국과 몽골의 유전자원 관리체계를 비교 분석하고, 몽골의 유전자원 및 전통지식 관리체계 개선 방향을 제시한다. 한국은 유전자원의 접근 및 이용을 규제하고 공정한 이익 공유를 통해 생물다양성을 보전하는 법적 체계를 구축하였으며, 나고야 의정서 이행을 기반으로 전통지식 보호와 지역사회의 이익 증진을 도모하고 있다. 반면, 몽골은 법적 체계와 전통지식 보호가 미흡하여 유전자원 남용 및 유출 문제가 발생하고 있다. 이를 해결하기 위해 몽골은 한국의 사례를 참고하여 법적 체계 강화, 국제 협력 확대, 데이터베이스 구축 등을 통해 지속 가능한 유전자원 관리 시스템을 확립해야 한다.

키워드: 유전자원, 나고야 의정서, 전통지식, 한국, 몽골, 이익 공유, 생물다양성

SSBA-35

경력 크래프팅과 경력 자기관리가 개인 경력 적합성을 통해 경력만족도와 심리적 웰빙에 미치는 효과에 대한 연구: 몽골 사무직 직원을 대상으로

Bat-Erdene Munkhgerel

[국문요약]

본 연구의 목적은 경력 크래프팅에 관한 문헌들을 분석하고 이를 바탕으로 개인-경력 적합성, 경력 만족도, 심리적 웰빙, 경력 자기관리의 핵심 요인들을 발굴한 후 학술적 및 실무적으로 기여할 수 있는 연구모형 및 연구가설을 구성하여 이들 간에 인관관계를 분석하고자 한다. 경력 크래프팅에 대한 이론적 고찰을 통해 개인-경력 적합성, 경력 만족도, 심리적 웰빙, 경력 자기관리 등의 선행연구들을 세부적으로 검토하여 정의 및 개념을 제시하고자 하였다. 또한 선행연구를 바탕으로 추출한 요인들로 연구모형을 설정하였고 본 연구의 가설검증을 위하여 경력 크래프팅과 개인-경력 적합성의 영향 관계, 이어서 개인-경력 적합성과 경력 만족도 및 심리적 웰빙의 영향관계, 마지막으로 경력 크래프팅과 개인-경력 적합성 간 경력 자기관리의 조절효과를 검증하였다. 본 연구의 목적을 달성하기 위해서 몽골 직장인들을 대상으로 하였으며, 설문조사는 2023년 12월 18일부터 2024년 1월 7일까지 21일 동안 실시하였다. 회수된 430부의 설문지 중 불성실하거나 결측치를 포함한 설문지를 제외하고, 총 426부의 유의한 설문 응답을 확보하여 실증분석에 사용하였다. 본 연구에서는 몽골 직장인들의 일반적인 사항과 표본의 특성을 확인하기 위한 빈도분석, 문항의 신뢰 및 타당성을 확인하기 위해 신뢰분석(Reliability Analysis), 탐색적 요인분석(Factor Analysis), 문항의 판별 타당성을 확인하기 위해 확인적 요인분석(Confirmatory Factor Analysis) 및 상관관계분석(Correlation Analysis)을 실시하였다. 또한 연구의 가설검증을 위하여 경로분석(Path Analysis)을 실시하였으며 집단분석을 위하여 조절효과분석(Moderator effect analysis)을 실시하였다. 실증분석 결과 경력 크래프팅이 경력 만족도 및 심리적 웰빙에 미치는 영향과 매개변수인 개인-경력 적합성에 미치는 영향력을 검증하였다. 또한 경력 크래프팅이 매개변수인 개인-경력 적합성에 영향을 미칠 것을 검증하였다. 다음으로 매개변수인 개인-경력 적합성이 종속변수인 경력 만족도와 심리적 웰빙에 영향을 미칠 것을 검증하여, 경력 크래프팅이 매개변수인 개인-경력 적합성을 통해 종속변수인 경력 만족도에 미치는 간접효과가 있는지를 확인하였다. 분석 결과는 변수들 간에 관계가 있고 매개효과도 있는 것으로 나타났다. 마지막으로 경력 크래프팅과 개인-경력 적합성의 관계에 영향을 미치는 맥락적 요인으로 경력 자기관리를 정하고 조절효과를 검증하였다. 경력 자기관리에 따른 경력 크래프팅과 개인-경력 적합성 간에는 상호작용효과가 있는 것으로 나타났다.

핵심주제어: 경력 크래프팅, 개인-경력 적합성, 경력만족도, 심리적 웰빙, 경력 자기관리

I. 서론

1.1 연구배경

현대 경력 환경은 팬데믹과 디지털 전환, 급변하는 경영 환경 속에서 불안정성과 예측 불가능성이 커지며, 개인의 경력 인식과 행동에도 변화를 가져왔다. 특히, 경력 크래프팅(career crafting)은 기존의 안정적인 경력 개발 모델에서 벗어나 개인의 필요, 가치, 강점에 따라 경력을 계획하고 조정하는 과정으로 주목받고 있다. 이는 직무 단위의 조정에 초점을 맞춘 잡 크래프팅(job crafting)과 달리 경력 전반의 재구성과 장기적 발전을 목표로 한다(Xiaolin et al., 2023; Lee et al., 2021). 코로나 19 이후 근로자들은 AI를 활용한 경력 조언에 의존하는 경향이 증가하며, 경력 성공의 기준도 일과 삶의 균형, 정신 건강, 유연성 등으로 변화했다. 이에 따라, 스스로 경력 개발의 주도권을 되찾고 지속 가능한 경력을 구축하는 것이 더욱 중요해졌다(Oracle, 2021).

프로티언 경력(protean career) 개념은 이러한 변화된 경력 패러다임을 반영하며, 외부적 성공보다는 개인적 성취와 자기 성장에 초점을 맞춘다. 이는 조직 중심적 경력 개발에서 개인 중심의 주도적 경력 행동으로 전환을 의미한다(Hall, 1996; Tims & Akkermans, 2020). 국외 연구에서는 CCA(Career Crafting Assessment)와 같은 도구를 개발해 경력 크래프팅을 측정하고 긍정적 경력 경험을 평가하고자 했으며, 미국과 캐나다를 중심으로 그 타당성을 검증했다. 그러나 몽골과 같은 다른 문화권에서는 경력 크래프팅 개념 및 측정 도구의 활용 가능성에 대한 연구가 부족하다. 따라서, 몽골에서도 경력 크래프팅의 적용 가능성을 검증하고, 이를 통해 근로자의 적극적인 경력 개발 행동을 촉진할 필요가 있다(Lee et al., 2021; Tims & Akkermans, 2020).

1.2 연구목적

현대 조직 구성원들은 단순한 성과와 보상을 넘어 개인적 가치 실현과 일과 생활의 균형을 중요시하며, 이러한 변화 속에서 상향식 접근 방식인 경력 크래프팅(career crafting)의 필요성이 부각되고 있다(장가 외, 2021; Wrzesniewski & Dutton, 2001). 경력 크래프팅은 개인이 자신의 경력을 능동적으로 조정하여 경력 만족과 성과를 높이는 과정으로, 이는 전통적인 직무 설계의 한계를 보완하며 현대 조직 환경에서 중요한 경력 관리 전략으로 주목받고 있다(Tims et al., 2012; Oldham & Hackman, 2010). 본 연구는 다음과 같은 연구 질문과 목적을 바탕으로 경력 크래프팅의 개념과 영향을 탐구한다. 첫째, 기존 연구를 바탕으로 경력 크래프팅의 정의와 구성 요소를 체계화하고, 이 개념이 경력 만족, 심리적 웰빙, 개인-경력 적합성에 미치는 영향을 검증한다(Xiaolin et al., 2023; Lee et al., 2021). 특히, 경력 크래프팅이 개인의 심리적 웰빙에 미치는 영향을 체계적으로 분석하며, 이론적 기반을 확립하고자 한다. 둘째, 개인-경력 적합성이 경력 크래프팅과 경력 만족 및 심리적 웰빙 간의 관계에서 중요한 매개 역할을 하는지를 실증적으로 검토한다. 이를 통해 경력 크래프팅이 긍정적 효과를 발휘할 수 있는 기제를 명확히 하고, 개인-경력 적합성의 중요성을 입증한다(Seibert et al., 2001; Huang & Bowling, 2016). 셋째, 경력 크래프팅과 개인-경력 적합성 간의 관계의 경력 자기관리의 조절 역할 검증한다. 특히, 경력 자기관리가 높을수록 두 변수 간의 긍정적 관계가 약화된다는 가설을 검증하여, 자기관리의 조절적 효과를 규명한다(Kilic & Kitapci, 2024). 넷째, 몽골 직장인들을 대상으로 경력

크래프팅의 특징과 패턴을 실증적으로 검토하며, 이를 바탕으로 조직 내 경력 개발 전략을 제시한다. 이를 통해 경력 크래프팅의 문화적 적용 가능성을 확인하고, 몽골 조직 환경에 적합한 경력 관리 방안을 도출한다.

II. 이론적 배경

2.1 경력 크래프팅

경력 크래프팅은 개인이 경력에 의미를 부여하고, 자신의 관심과 가치를 경력과 일치시키며, 적극적으로 경력을 개발하는 행동을 의미한다(Tims & Akkermans, 2020; Lee et al., 2021). 이는 전통적인 경력 관리 방식을 넘어 경력 개발을 개인 주도적 활동으로 전환시키며, 개인의 주도성과 일치성을 통합하여 개인-경력 적합성을 향상시키고, 경력 만족 및 성공을 지원한다(De Vos et al., 2019). 최근 연구들은 다음과 같은 특징과 변화를 강조한다. 경력 크래프팅의 중요성은 경력 개발의 경로가 유동적으로 변화함에 따라, 안정적 경로를 넘어선 경력 계획의 필요성이 증가하고 있다. 개인은 경력 개발 과정에서 변화하는 필요, 가치, 관심을 반영해 스스로 적합한 경력 옵션을 탐색하고 자원을 조정해야 한다(Xiaolin et al., 2023). Tims 와 Akkermans(2010)는 경력 크래프팅을 경력을 스스로 관리하고 최상의 개인-경력 적합성을 달성하기 위해 적극적으로 행동하는 것으로 정의했다. Lee et al.(2021)은 경력 관련 자원을 창출하거나 확장하고 변화하는 요구에 부합하는 경력 옵션을 적극적으로 탐색하는 활동으로 설명한다. 이는 직업 크래프팅(job crafting) 개념을 확장한 것이다(Tims & Akkermans, 2020; Lee et al., 2021). 경력 크래프팅은 외부 자원과의 연결을 촉진하는 주도성(proactivity)과 개인의 가치 및 관심과의 일치를 강조하는 일치성(congruence)을 통합한다. 이를 통해 개인은 조직적 기회와 자신의 내적 필요를 조화롭게 결합해 최적의 경력 적합성을 달성할 수 있다(De Vos et al., 2019; Kristof & Guay, 2011). De Vos et al.(2010)은 경력 크래프팅을 개인이 자신의 경력 포부와 동기를 반영해 단기 및 장기 목표를 구축하는 과정으로 정의했다. 이를 통해 경력 결과를 최적화하며, 조직적 환경과 개인적 요구 간의 조화를 이루는 데 기여한다고 언급한다(De Vos et al., 2010). 결론적으로, 경력 크래프팅은 경력의 역동적 변화 속에서 개인의 적극성과 적응성을 통해 경력 적합성을 최적화하는 전략적 접근법으로 자리 잡고 있다. 이는 경력 만족, 고용 가능성 인식, 심리적 웰빙 등 다양한 긍정적 결과로 이어질 수 있음을 선행연구가 시사한다(Tims & Bakker, 2010; Xiaolin et al., 2023).

2.2 개인-경력 적합성

개인-경력 적합성(person-career fit)은 개인과 경력 간의 호환성을 의미하며, 개인의 특성과 경력 기회 간의 상호작용에서 발생하는 적합성을 강조한다(Kristof et al., 2005; Parasuraman et al., 2000.) 이는 개인-환경 적합성 이론의 하위 개념으로, 경력 성공을 위한 개인의 필요를 충족시키는 환경과 개인의 재능이나 능력이 경력 기회를 활용할 수 있는 정도를 포함한다(Parasuraman et al., 2000). 개인-경력 적합성은 개인의 경력 요구와 조직이 제공하는 경력 개발 기회 간의 호환성을 뜻하며, 강한 적합성은 개인의 직무 만족과 조직 헌신에 긍정적인 영향을 미친다(Cable & Edwards, 2004; Katz, 2004). 특히, 기술적 또는 관리적 경력

지향을 가진 개인들은 자신에게 적합한 경력 개발 기회를 제공받을 때 긍정적인 업무 태도와 조직 소속감을 보인다(Katz, 2004). 높은 개인-경력 적합성을 가진 직원들은 조직이 기술 개발 또는 관리적 개발 기회를 제공할 때 더 높은 직무 만족도와 헌신도를 나타낸다. 반면, 적합성이 낮을 경우 직무 불만족, 낮은 조직 헌신, 이직 의도로 이어질 수 있다(Boon et al., 2011). Ballout(2007)은 개인-경력 적합성을 직원의 지식, 능력, 관심과 직무 간의 호환성으로 정의하며, 이는 취업 탐색 행동과 직장 행동에 영향을 미친다고 밝혔다. 나쁜 적합성은 조직 내 불만족과 낮은 헌신을 초래할 가능성이 크다(Caldwell & O'Reilly, 1990; Ehrhart, 2006). 본 연구에서는 개인-경력 적합성을 개인의 특성과 경력 간의 호환성으로 정의하며, 이는 경력 개발 기회와 개인의 재능, 선호도 간의 조화를 중심으로 한다(Parasuraman et al., 2000; Ballout, 2007). 결론적으로, 개인-경력 적합성은 경력 성공과 조직 내 긍정적 행동에 중요한 역할을 하며, 이를 강화하려면 조직이 직원의 경력 요구를 충족시키고 개인이 제공되는 기회를 효과적으로 활용할 수 있도록 지원해야 한다(Kristof et al., 2005; Parasuraman et al., 2000).

2.3 경력 만족도

경력 만족은 개인이 경력과 직무에서 느끼는 전반적인 감정적 또는 정서적 반응으로, 경력 성공과 깊이 연관된다. 경력은 일과 관련된 평생의 종합적 경험이며, 경력 성공은 경력 과정에서 특정 시점에 도달한 바람직한 업무 결과로 정의된다(Arthur et al., 1989; 2005). 경력 만족은 개인이 자신의 가치와 경력의 부합도를 기반으로 경력에 대해 느끼는 심리적 지향성(Gattiker & Larwood, 1988)과 경력 과정에서 목표 달성 및 기술 개발과 같은 성과와 관련된 만족감(Seibert et al., 1999)으로 정의된다. 개인의 경력에서 중요한 가치가 얼마나 잘 반영되었는지를 나타내며(Hall, 1990; Greenhaus et al., 1990), 이는 주관적 경력 성공을 평가하는 주요 지표로 여겨진다(Heslin, 2005). 경력 만족은 승진, 임금, 기술 개발, 경력 목표 달성 등 개인이 경력에서 성취한 결과에 대한 만족도를 포함하며, 개인이 자신의 축적된 경력을 경쟁력으로 인식하고 이를 지속적으로 유지할 자신감을 제공한다(Kong et al., 2016). Abele & Spurk(2009)는 개인이 조직이 아닌 스스로 경력 목표를 설정하고 이를 달성하려고 노력할 때 더 높은 경력 만족을 느낀다고 주장했다. 이는 개인의 지식과 능력 투입 결과에 대한 긍정적 정서 반응과 직결된다(최재영, 2004). 경력 만족은 개인의 성공 여부뿐 아니라 조직의 유효성을 평가하는 중요한 요소이다. King(2004)에 따르면 조직은 직원들의 경력 개발을 지원함으로써 경력 만족도를 높이고, 이를 통해 구성원들이 다른 기회를 찾아 이탈하지 않도록 해야 한다. Baruch(2006)는 조직의 역할은 지시보다는 지원에 중점을 두어야 한다고 설명했다. 본 연구에서는 경력 만족도를 개인의 직무 또는 경력 역할에 대한 전반적인 감정적 또는 정서적 반응으로 정의하며, 이는 개인이 경력을 통해 얻는 가치와 기대를 반영한 심리적 동일시를 기반으로 한다(Greenhaus et al., 1990; 배을규, 2009). 결론적으로, 경력 만족은 조직과 개인

모두의 성공과 경쟁력을 높이는 핵심 요인으로, 조직은 직원들이 스스로 경력을 개발하고 이를 통해 만족감을 느낄 수 있도록 적극 지원해야 한다(Baruch, 2006).

2.4 심리적 웰빙

심리적 웰빙은 개인의 심리적 건강 상태를 측정하는 변수로, 긍정적 및 부정적 측면을 모두 포함한다. 심리적 웰빙은 자존감, 생활 만족, 우울감, 무력감 등 심리적 상태를 반영하며, 이를 주관적 웰빙과 유사한 개념으로 해석하기도 한다(김미숙 & 원영희, 2003). Ryff(1989)는 심리적 웰빙을 6 개의 주요 구성 요소로 정의하였다. 긍정적 인간관계는 사회적 관계에서 긍정적 상호작용을 통해 개인은 더 나은 삶을 살아갈 수 있다. Maslow(1968)는 자기를 실현하는 개인이 깊은 우정과 사랑, 친밀한 관계를 형성한다고 보았다. 환경 통제력은 Jahoda(1958)의 연구에서 환경을 선택하거나 창조할 수 있는 능력을 정신 건강의 주요 특징으로 보았다. 환경 통제력이 높은 사람은 외적 환경을 조절하고 효과적으로 기회를 활용할 수 있다고 밝혔다(정태호, 2013). 개인적 성장 지속적인 자기 계발과 잠재력 실현을 통해 자아실현과 밀접히 연결된다(Ross, 1956; 박미선, 2010). 이는 새로운 경험을 추구하고 자신을 발전시키려는 노력을 포함한다고 설명하였다. 자아 수용은 자신의 행동, 감정, 동기를 조건 없이 받아들이고, 과거와 현재를 평가하며 스스로를 인정하는 것을 의미한다(김석일, 2004). 삶의 목적은 정신적으로 건강한 사람은 명확한 삶의 목적을 추구하고, 이를 통해 성장과 자기 변화를 이루려는 진취적 행동을 보인다(Wadsworth & Ford, 1983). Frankl(1985)는 역경 속에서도 삶의 의미를 찾는 것이 중요하다고 강조했다. 자율성은 독립적 사고와 결단력, 외부 압력에 저항하며 스스로 행동을 조절하는 능력을 (Roger, 1961). 이는 자아실현과 관련된 중요한 심리적 요소로, 자신의 기준에 따라 행동을 규명한다. 결론적으로, 심리적 웰빙은 개인의 심리적 건강을 반영하는 다차원적 개념으로, 긍정적 관계, 환경 통제, 성장, 자아 수용, 삶의 목적, 자율성을 통해 개인의 전반적 삶의 질과 만족도를 측정하는 데 중요한 지표로 활용된다.

2.5 경력 자기관리

경력 자기관리는 현대 직업 세계에서 필수적인 기술로, 목표 설정, 경력 계획, 실행, 자기 모니터링 등의 과정으로 정의된다(King, 2004). 이는 성격 요인, 자기효능감, 적극성, 자기 통찰, 경력 명확성, 메타 인지 기술 등 다양한 요인에 의해 영향을 받으며, 이러한 요인은 효과적인 경력 자기관리를 지원한다(Hesketh, 2001; Strikanth, 2012; Jeon & Kim, 2015). Kossek et al.(1998)은 경력 자기관리를 경력 문제 해결 및 의사결정을 위한 정보 수집과 경력계획 수립 활동으로 정의하며, 이를 발전적 피드백 추구 행동과 직업 이동성 준비 행동 두 가지 요소로 구분했다. 발전적 피드백 추구 행동은 현재 직업 향상을 위해 피드백을 구하는 행동이며, 직업 이동성 준비 행동은 새로운 기회를 찾고 활용할 준비를 하는 행동을 의미한다. 최근 연구는 경력

자기관리를 다양한 인지 및 행동 활동을 포괄하는 개념으로 간주하며, 예기치 않은 경력 사건이나 도전에 대처하는 방식을 포함한다고 보았다(Wang & Wanberg, 2017). Lent 와 Brown(2013)은 경력 행동에 중점을 두며, 경력 목표 설정, 계획 수립, 전략 설계와 같은 인지적 구성 요소도 경력 자기관리의 핵심임을 강조했다. 또한, 자기 주도적 경력 태도가 높은 개인은 자기효능감과 경력 자기관리 행동을 통해 주관적 경력 성공과 경력 만족에 긍정적인 영향을 미치는 것으로 나타났다(신소연, 2017). 결론적으로, 경력 자기관리는 개인이 경력 개발 및 전환 과정에서 적극적으로 자신의 목표를 설정하고 이를 실행하는 중요한 활동으로, 개인적 성공뿐만 아니라 조직적 성과에도 중요한 영향을 미친다.

III. 연구 방법

3.1 연구대상

본 연구의 목적을 달성하기 위해서 몽골에서 직장에서 소속되어 정기적인 급여를 받는 직장인을 대상으로 2023 년 12 월 18 일부터 2024 년 1 월 7 일까지 3 주간 설문을 배포하였다. 성실한 답변을 취합하기 위해 온라인과 오프라인 설문을 사용하고 총 430 부의 설문지를 배포하였다. 회수된 430 부의 설문지 중 불성실하거나 결측치를 포함한 설문지를 제외하고, 총 426 부의 유의한 설문 응답을 확보하여 실증분석에 사용하였다.

3.3 가설설정

3.3.1 경력 크래프팅과 경력 만족도의 관계

경력만족은 조직에서 개인이 경험한 것을 직무수행 평가를 통해 경력 성과로 얻을 수 있는 요소 중 하나이다. 즉, 개인이 내부적 관점에 의해 판단한 경력의 결과를 말한다(Greenhaus et al., 1990). Judge et al.(1995)은 경력이나 경력 경험의 평가에서 비롯되는 긍정적인 정서 상태로 정의하였다. 경력만족은 Greenhaus et al.(1990)에 의해 측정 도구가 개발되어 다수의 연구에서 타당성을 인정받았다. 개인은 조직이 아닌 본인이 주체가 되어 경력목표를 설정하고 목표를 달성하고자 할 때 경력에 더 만족한다(Abele & Spurk, 2009). Tims 와 Akkermans(2020)의 연구에 따르면 직원의 적극적인 행동은 개인이 경력의 어느 시점에서든 자신에게 맞는 직무를 만들 수 있는 중요한 방법을 나타내고 있으며, 직무 크래프팅, 경력 역량, 경력 자기관리와의 유사성에 기반하여, 본 선행연구에서는 경력 크래프팅(career crafting)을 도입하고 두 가지 차원을 사용하여 이를 정의했다. 즉, 경력 동기와 기술을 적극적으로 성찰하고, 네트워킹을 통해 경력을 발전시키려는 사람들이 더 만족스러운 경력을 달성할 가능성이 높다는 것이다.

최명빈 외(2019)와 Ng 와 Feldman(2014)들은 경력만족은 자신이 지나온 경력에 대해 개인이 갖는 주관적인 태도로 정의하였으며, 특히 경력만족은 경영 환경과 개인의 경력에 대한

가치관의 변화에 따라 경력성공에 대한 평가 기준이 다양해지면서, 개인의 경력개발과 관련된 노력에 대한 결과 변인으로 주로 다뤄지고 있다. Kilic 와 Kitapci(2024)은 경력 크래프팅의과업 경계 확장(expanding task boundaries)하위 차원은 경력 만족도에 유의한 영향을 줄 것으로 기대된다. 즉, 직장인이 스스로 추가적인 업무 선택, 경력에 기여하는 추가 업무 선택 등은 직장인의 경력만족을 증가시키는 것으로 보인다. 따라서 개인이 조직이 아닌 본인 스스로 주체가 되어 경력 목표를 설정하고 이를 달성할 때, 경력 만족도가 높아질 것이고, 개인이 경력 동기와 기술을 적극적으로 성찰하고 네트워킹을 통해 경력을 발전시키는 것이 경력 만족도와 긍정적인 상관관계를 가질 것이다. 개인의 경력 과정이 성공적이라고 지각하는 정도와 개인의 가치가 경력에 적응된 정도가 경력 만족도를 결정하는 중요한 요소가 될 것으로 다음과 같은 가설 설정하였다.

가설 1: 경력 크래프팅은 경력 만족에 정(+)의 영향을 미칠 것이다.

3.3.2 경력 크래프팅과 심리적 웰빙의 관계

최근 몇 년간 경력 주관적 웰빙은 많은 연구자들의 주목을 받아왔다(Currie, 2001; Baptiste, 2008). 주관적 개인-환경 적합성은 많은 연구자들로부터 상당한 관심을 받은 중요한 주제이며, 지식 근로자들이 고용 결정을 내릴 때, 그들 및 조직 간의 가치 일치(value congruence)는 개인-환경 적합성의 중심적인 요소이다(Chatman, 1989; Ostroff et al., 2005). 따라서 직원들의 개인-경력 적합성은 경력 심리 웰빙을 촉진하는 데 중요한 역할을 할 수 있다. 주관적 개인-경력 적합성은 직원들이 자신의 기술과 능력이 경력과 얼마나 잘 맞는지를 개인적으로 인식하는 것을 의미한다고 한다. Wrzesniewski 와 Dutton(2001)의 연구에서는 직원들이 자신의 일을 조작하고 개조하는 과정에서 경력 크래프팅이 어떻게 발생하는지를 검토하였으며, 이러한 크래프팅이 심리적 웰빙에 어떤 영향을 미치는지에 대해서도 논의되고 있다. 본 선행연구에서는 직원들은 단순히 주어진 업무를 수행하는 것이 아니라, 자신의 일을 조작하고 개조하는 과정에 참여하고, 이는 다양한 방식으로 나타날 수 있으며, 예를 들어 업무 범위의 조정, 업무의 내용 변화, 그리고 업무의 의미 부여 등이 해당된다고 한다. 또한 저자들은 직원들이 자신의 일을 조작함으로써 직업 만족도를 높일 수 있으며, 이는 자신의 능력과 가치를 더욱 향상시키고 조직 내에서 더욱 유연하고 창의적으로 일할 수 있는 가능성을 제공한다고 하였다.

Tims et al.(2013)의 연구에서는 경력 크래프팅이 직무 요구사항과 직무 자원에 어떤 영향을 미치는지, 그리고 이를 통해 개인의 심리적 웰빙이 어떻게 변화하는지를 조사하였다. 연구 결과, 경력 크래프팅이 직무 요구사항을 감소시키고 직무 자원을 증진시키며, 이는 개인의 심리적 웰빙을 향상시키는 것으로 나타났다. Slemp & Vella-Brodrick(2013)의 연구에서는 경력 크래프팅을 측정하기 위한 새로운 도구를 개발하였다. 이 도구는 개인이 직무를 어떻게 조정하고 개선하는지를 측정하여 경력 크래프팅과 심리적 웰빙 간의 관계를 연구하는 데

활용되었다. Kilic & Kitapci(2024)은 경력 크래프팅의 4 가지 하위 차원 중 긍정적인 경력 의미 반영(reflecting positive career meaning)이라는 하위 차원은 향후 심리적 웰빙에 유의한 효과를 줄 것으로 기대된다. 즉, 경력은 직장인의 삶의 질에 긍정적인 영향을 주고, 또한 경력이 전반적인 웰빙에 미치는 역할이 증가하는 것으로 보인다. 따라서 직원들이 자신의 일을 조작하고 개조하는 과정에서 경력 크래프팅을 통해 직무 범위의 조정, 업무 내용의 변화, 업무의 의미 부여 등을 시행할 때, 이 과정이 직원의 심리적 웰빙을 향상시킬 것이고, 경력 크래프팅이 직무 요구사항을 감소시키고 직무 자원을 증진시키며, 이러한 변화가 개인의 심리적 웰빙을 향상시키는 데 기여할 것으로 보고 다음과 같은 가설을 설정하였다.

가설 2: 경력 크래프팅은 심리적 웰빙에 정(+)의 영향을 미칠 것이다.

3.3.3 경력 크래프팅과 개인-경력 적합성의 관계

경력 크래프팅은 개인-경력 적합성을 향상시켜 경력 결과를 최적화하려는 능동적인 활동을 의미하였다(Lee et al., 2021; Tims, M. Akkermans 2020). Parasuraman(2000) 따르면 경력 조정은 개인-경력 적합성의 최적화를 향한 개인의 주도적 활동을 말하며, 이는 개인의 경력 경험이 그들의 가치, 필요, 관심사, 역량과 얼마나 잘 맞는지를 의미한다. 따라서 개인-경력 적합성은 지속적으로 변화하는 경력 요구(예: 기술 및 지식)와 개인의 성향 사이에서 최적의 역동적인 균형을 필요로 하고, 잘 설계된 개인-경력 적합성은 지속가능한 경력 개발의 본질을 반영한다(De Vos et al., 2020).

또한, 최근 연구에서는 크래프팅과 적합성의 관계에 기여하여, 잡크래프팅이 개인-직무 적합성에 유의한 영향을 미친다는 연구 결과가 도출되었으며, 개인-직무 적합성은 개인의 능력이 본인의 직무와 부합되는 느낌을 경험한 경우, 개인은 직무수행 과정에서 가치와 믿음을 충분히 발휘할 수 있다고 밝혔다(Li et al., 2022). 이는 크래프팅이 적합성에 영향을 미치는 것을 의미한다. 이현웅(2017)은 한국에서 잡 크래프팅 척도를 개발하고 타당성을 검증하는 연구를 수행하였다. 이 선행연구에서는 잡 크래프팅이 개인-직무 적합성을 높이는 것이 동기부여를 위한 당연한 과정이라고 주장하며, 조직 구성원들이 자발적인 동기부여를 위해 개인-직무 적합성을 향상시키기 위해 자신의 직무를 재설계하는 과정으로 잡 크래프팅을 정의했다.

특히, 개인의 성격과 기질에 따라 잡 크래프팅 행동이 다양하게 나타날 수 있다는 점을 강조하며, 개인-직무 적합성을 높이는 행동인 잡 크래프팅에 초점을 맞추었다. 이러한 크래프팅과 적합성의 관계에 대한 여러 선행 연구들을 통해 살펴보았을 때, 경력 크래프팅이 개인의 경력 적합성에 미치는 다양한 영향들을 확인할 수 있었다. 구체적으로, 크래프팅을 통해 개인은 경력을 스스로 설계하고 조정하면서 더욱 효과적으로 자신의 적성과 일치하는 방향으로 경력을 형성해 나갈 수 있으며, 이는 궁극적으로 경력 적합성을 높이는 결과로 이어질 수 있다. 이에

따라, 경력 크래프팅이 개인의 경력 적합성에 미치는 긍정적인 영향을 고려한 접근이 필요하다고 볼 수 있다.

Kilic & Kitapci(2024)은 경력 크래프팅과 개인-경력 적합성 간의 관계를 검증하였으며, 정의 영향을 미치는 것을 보였다. 본 연구에서는 경력 크래프팅은 업무 및 가족 요구와 자원이 경력 주도성을 촉진하여, 경력 자원을 보존하고 획득함으로써 개인의 필요와 경력 요구 간의 적합성을 높이고, 이를 통해 행복, 건강, 생산성 등 경력 지속 가능성 지표를 최적화할 수 있다고 하였다. 연구 결과에 따르면, 직장과 가정에서 더 많은 자원을 인식하는 개인이 경력 크래프팅에 더 많이 참여하고, 이로 인해 개인-경력 적합성을 향상시킬 가능성이 높다는 것을 나타냈다. 경력 크래프팅과 개인-경력 적합성은 경력 지속 가능성 지표와 직접적 및 간접적으로 관련이 있으며, 경력 크래프팅은 경력 자원을 획득하고 활용하여 건강, 행복, 생산성을 개선하는 주도적 메커니즘으로 작용된다.

따라서 경력 크래프팅이 경력 요구에 대처하기 위해 경력 자원을 획득하고 능동적 메커니즘을 반영하며, 건강, 행복, 생산성 지표 측면에서 개인의 경력 지속 가능성을 향상시킨다는 것이다. 개인의 성격과 기질에 따라 경력 크래프팅 행동이 다양하게 나타날 수 있으며, 이러한 개인화된 경력 크래프팅이 개인-경력 적합성을 향상시키는 데 중요한 역할을 할 것이라고 보며 다음과 같은 가설을 설정하였다.

가설 3: 경력 크래프팅은 개인-경력 적합성에 정(+)의 영향을 미칠 것이다.

3.3.4 개인-경력 적합성과 경력 만족도의 관계

개인-경력 적합성은 또한 직무에서의 몰입을 높이는 요인이 되고 결과적으로 직무만족(Warr & Inceoglu, 2012), 경력만족(Reh fuss et al., 2012), 직무성과(Chou et al., 2022) 등에 유의한 정적인 영향을 미치는 것으로 연구되었다. Judge et al.(2000)의 연구에서는 취업 면접과 경력만족도 사이의 관계를 검증하였으며, 취업 면접에서 개인-경력 적합성이 적절히 평가되고 고려된 경우, 이는 경력만족도에 긍정적인 영향을 미칠 수 있다는 것을 검증하였다. 면접에서 개인-경력 적합성을 적절히 평가하는 것은 조직이 직원들의 경력만족도를 높이기 위해 중요한 요소로 작용할 수 있음을 시사하였다. 최재영(2004)은 조직과 상사의 지원이 주관적 경력 성공 요인 중 경력만족과 직무만족에 어떤 영향을 미치는지에 대해 연구하였다. 그는 개인 특성과 직무 요구 간의 적합도가 높을수록 조직 구성원의 경력만족을 향상시킬 수 있다고 주장하였다. Lauver 와 Kristof-Brown(2001)은 직무 적합성을 높이 인식하는 조직 구성원은 경력만족 및 직무만족과 같은 주관적인 경력 성공을 더욱 높게 느낀다고도 언급되었다(김성남과 이규만, 2012).

선행연구들은 개인-직무 적합성이 높을수록 개인 성과 및 조직 성과뿐만 아니라 경력만족, 고용 가능성, 직무만족과 같은 주관적인 경력 성공에도 긍정적인 영향을 미치는 것으로

보여지고 있다. 한 조직에서 장기간 경력을 쌓아온 과거와는 달리, 현재는 개인의 경력 관리와 전문성에 보다 큰 관심을 가지고 있다. 조직 충성보다는 자신에게 적합한 직무를 선택하는 것이 경력에 매우 중요하다는 인식이 있으며, 개인의 특성과 맞지 않는 직무는 직무 불만과 부정적인 영향을 초래할 가능성이 높다(Tims et al, 2016). 성공과 만족을 경험한 사람들은 자신의 업무에 더 몰입하고, 의지도 강하며, 이직 가능성도 낮다는 연구 결과가 있으며 따라서 개인은 직무와의 적합성을 고려한 경력관리 전략을 따라야 한다(Bretz & Judge, 1994). 따라서 개인-경력 적합성이 높을수록 경력 만족도가 증가할 것이며, 개인의 경력과 직무 간의 적합성이 높아지면, 경력 만족도가 긍정적인 영향을 받을 것으로 보며 다음과 같은 가설을 설정하였다.

가설 4: 개인-경력 적합성은 경력 만족에 정(+)의 영향을 미칠 것이다.

3.3.5 개인-경력 적합성과 심리적 웰빙의 관계

Kristof-Brown et al.(2005)의 연구 개인과 직무, 조직, 그룹, 상사의 적합성 사이의 관계에 대한 메타분석을 수행하였으며, 연구 결과는 적합성이 높을수록 개인의 심리적 웰빙이 향상되는 것으로 나타났다. Cable 와 DeRue(2002)들은 개인이 조직에 대해 얼마나 적합하다고 느끼는지에 대한 주관적인 인식이 개인의 심리적 웰빙과 관련이 있는지를 조사하였다. 연구 결과는 개인의 주관적인 적합성 인식이 개인의 심리적 웰빙과 밀접한 관련이 있음을 밝혔다. Dobrow & Tosti-Kharas(2011)의 연구는 개인-경력 적합성과 직업적인 calling(충동 및 욕구) 사이의 관계를 조사하였으며, 개인의 자기에 일에 대한 충동은 개인이 자신의 직업을 더 높은 목적과 의미를 갖고 소명과 같이 경험하는 개념이다. 연구 결과는 개인-경력 적합성이 직업적인 충동에 영향을 미치며, 이를 통해 직업적인 충동이 개인의 직무만족, 직업적인 헌신, 심리적 웰빙 등에 긍정적인 매개효과를 발휘한다는 것을 보여주었다. 이 연구는 개인-경력 적합성과 심리적 웰빙 사이에 매개효과를 제시하는 중간 변수로서 충동을 다루고 있으며, 개인의 직업적인 목적과 의미를 강조하는 측면에서 심리적 웰빙에 영향을 미칠 수 있다는 인사이트를 제공하고 있다. Yu(2017)은 자가 지식인 직원의 개인-경력 적합성을 촉진하는 방법으로 경력 자기관리와 인지된 조직 지원을 조사하였다. 분석결과 경력 자기관리와 기업지원은 모두 개인-경력 적합성에 유의한 영향을 보였고 이어서 개인-경력 적합성은 경력 주관적 웰빙에 유의한 영향을 미치는 것으로 검증하였다. 따라서 개인-경력 적합성이 높을수록 개인의 심리적 웰빙이 향상될 것이고, 개인과 경력 간의 적합성이 높아지면, 개인의 심리적 웰빙이 긍정적으로 영향을 받을 것이며 다음과 같은 가설을 설정하였다.

가설 5: 개인-경력 적합성은 심리적 웰빙에 정(+)의 영향을 미칠 것이다.

3.3.6 개인-경력 적합성의 매개효과

Seibert et al.(2001)의 연구는 개인-경력 적합성을 매개효과로 사용하여, 적극적인 성격과 경력만족 간의 관계를 조사하였다. 연구 결과는 적극적인 성격이 개인-경력 적합성과 경력만족

사이의 관계를 매개하는 역할을 한다는 것을 보여주었다. 즉, 적극적인 성격이 경력 성공에 직접적인 영향을 미치는 것이 아니라, 개인-경력 적합성을 통해 경력만족에 영향을 미친다는 것을 발견하였다. 따라서 개인-경력 적합성을 매개효과로 사용하여 적극적인 성격과 경력 성공 사이의 관계를 이해하는 데 기여하였으며, 개인-경력 적합성이 어떻게 적극적인 성격과 경력만족도 사이의 관계를 중재하는지에 대한 이해를 높일 수 있는 연구이다. Felfe et al.(2012)의 연구에서는 개인-경력 적합성을 매개효과로 사용하여, 직업적 동기와 자기효능감 간의 동적 관계를 조사하였다. 연구 결과는 개인-경력 적합성이 직업적 동기와 자기효능감 사이의 관계를 매개하는 역할을 하였다. 즉, 개인-경력 적합성이 직업적 동기와 자기효능감 간의 상호작용에 영향을 미친다는 것을 발견하였다. Huang 와 Bowling(2016)의 연구는 개인-경력 적합성을 매개효과로 사용하여 직무 자원과 직무 요구 사이의 관계와 이들 요인이 경력만족도에 미치는 영향을 검토하였다. 연구 결과에 따르면, 개인-경력 적합성은 직무 자원과 직무 요구 사이의 관계를 매개하는 역할을 하며, 이러한 관계가 경력만족도에 영향을 미친다는 것을 확인하였다. Yu(2017)의 연구에 따르면 개인-경력 적합성을 매개효과로 봤으며, 독립변수로 경력 자기관리와 조직지원으로 설정하고 결과변수로 경력 심리적 웰빙을 검증하였다. 분석결과 경력 자기관리와 기업지원은 모두 개인-경력 적합성에 유의한 영향을 보였고 이어서 개인-경력 적합성은 경력 주관적 웰빙에 유의한 영향을 미치는 것으로 검증하였다. 따라서 개인-경력 적합성은 매개 역할을 보였다. 김동윤(2017)의 경력계획이 주관적 경력 성공에 미치는 영향을 검토하였으며, 이 연구에서는 경력계획이 개인-직무 적합성을 통해서 경력만족도에 미치는 영향을 매개효과로서 검증하였다. 분석결과 경력계획은 개인-직무적합성을 매개변인으로 하여 경력만족도에 유의한 영향을 미치는 것으로 나타났다. Kilic 와 Kitapci(2024)은 개인-경력 적합성을 매개변수로 검증하였으며, 분석결과 매개변수인 개인-경력 적합성은 종속변수인 지속 가능한 경력 지표를 향상시키며, 경력주도성이 개인의 삶의 영역 간 균형을 맞추고, 경력 역량을 개발하며, 고용 가능성과 건강을 최적화하는 데 기여한다는 개념적 전제를 지지한다. 이러한 결과는 전반적으로 경력 크래프팅이 개인-경력 적합성을 최적화함으로써 경력 지속 가능성 지표와 관련이 있음을 보여주었다. Judge et al.(2000)의 연구에서는 경력만족도에 긍정적인 영향을 미칠 수 있다는 것을 검증하였다. 이러한 결과는 개인-경력 적합성은 경력 크래프팅과 경력 만족도 간에 매개효과를 보일 것으로 예측된다. 따라서 다음과 같은 가설을 설정하였다.

가설 6a: 개인-경력 적합성이 경력 크래프팅과 경력 만족 간의 관계를 매개할 것이다.

가설 6b: 개인-경력 적합성이 경력 크래프팅과 심리적 웰빙 간의 관계를 매개할 것이다.

3.3.7 경력 자기관리의 조절효과

Lee et al.(2021)의 연구에서는 경력 크래프팅(career crafting)과 경력 자기관리(career self-management)는 서로 관련이 있다고 하였으며, 경력 자기관리는 개인이 경력 의사결정과 문제 해결에 기여하기 위해 자원을 수집하고 정보를 탐색하는 자발적인 행동이고 경력 크래프팅은 경력 의사 결정 과정에서 경력 자기관리와 유사한 자율적인 행동을 보일 가능성이 높다. 그러나

경력 크래프팅은 자율적인 행동을 넘어서는 개념이며 경력 크래프팅자는 자신의 경력을 가치에 맞추고 의미를 창출하기 위해 인지적으로 재구성한다고 한다. 따라서 본 선행연구에서는 경력 크래프팅이 경력 자기관리와 긍정적으로, 중간 정도의 강도로 관련이 있다고 하였다.

Mirza 와 Tasleem(2024)은 경력 자기관리의 조절 효과에 따른 자신의 경력과 경력지향성의 차이를 검증하였다. 즉, 자신의 경력을 마음챙김, 대처 전략, 자기조절로 구분하여 경력지향성에 미치는 영향과 경력 자기관리의 조절효과를 실증적분석을 검토하였다. 분석결과 경력 자기관리에 따른 대처전략과 경력지향성에 따른 차이가 있는 것으로 나타났다. 이러한 결과는 개인이 경력 크래프팅을 통해 자신만의 경력 경로를 적극적으로 만들어나갈 때, 자기관리 능력과 전략적 대처가 핵심적인 성공 요소가 될 수 있음을 보여준다.

Yu(2017)은 자가 지식인 직원의 개인-경력 적합성을 촉진하는 방법으로 경력 자기관리와 인지된 조직 지원을 조사하였다. 분석결과 경력 자기관리와 기업지원은 모두 개인-경력 적합성에 유의한 영향을 보였고 이어서 개인-경력 적합성은 경력 주관적 웰빙에 유의한 영향을 미치는 것으로 검증하였다. 따라서 경력 자기관리는 직원의 경력과 개인-경력 적합성 간에 정적인 상관이 있는 것으로 판단되며, 또한 심리적 웰빙에도 이러한 개인-경력 적합성은 상관이 있는 것으로 보인다.

경력 크래프팅은 개인이 자신의 직무를 능동적으로 조정하고 경력 방향을 스스로 설계하는 활동으로, 개인-경력 적합성을 강화하는 데 중요한 역할을 하며, 이를 통해 개인은 직무를 조직의 요구가 아닌 자신의 목표와 가치에 맞출 수 있으며, 결과적으로 직무와 경력 간의 일치가 높아진다. 경력 크래프팅은 자기 주도적인 경력 개발을 촉진하며, 개인이 자신의 역할과 목표를 능동적으로 조정할 수 있도록 하고, 이러한 과정에서 개인의 경력 목표와 직무 환경 간의 적합성이 높아지며, 이는 개인이 직무와 경력에서 더 큰 만족감을 느끼게 한다. 또한, 성장과 발전의 기회를 제공하는 경력 크래프팅은 개인이 경력을 스스로 관리하고 필요한 역량을 쌓아가며, 경력 목표와의 적합성을 강화한다. 이 과정에서 개인이 주도적으로 발전을 추구하고 성취감을 느낄 때 개인-경력 적합성은 더욱 높아지며, 개인의 가치와 목표에 맞춘 성장과 발전을 촉진하여, 경력 만족도와 개인-경력 적합성을 함께 강화하는 중요한 요인이다.

경력 자기관리가 높은 개인은 자신의 경력 경로를 명확히 설정하고, 목표를 달성하기 위한 구체적인 전략을 세우며, 지속적으로 자신의 성과를 모니터링하면서 필요한 조정을 수행하는 특징을 보인다. 또한 경력 자기관리가 높은 집단은 이미 자신의 경력 경로에 대해 명확한 목표와 전략을 설정하고 있는 경우가 많으며, 이들은 이미 자신의 경력과 잘 맞는 직무를 수행하거나 경력 경로를 구축하고 있는 경우가 많다. 이에 따라서 경력 크래프팅에 대한 필요성이 상대적으로 적을 수 있다. 따라서 경력 자기관리 수준이 높은 구성원일수록 경력 크래프팅이 높아질 때 개인-경력 적합성이 상대적으로 약해진다. 즉, 경력 자기관리가 이미 높은 구성원은 경력 크래프팅을 통해 개인-경력 적합성을 어느 정도 확보하고 있기 때문에, 추가적인 경력 크래프팅 지원이 필요하지 않을 수 있다.

경력 자기관리가 낮은 집단은 이러한 계획적이고 체계적인 접근이 부족하여 자신의 경력 개발을 수동적으로 받아들이는 경향이 있다. 이들은 외부 환경에 따라 경력 경로를 따르거나, 주어진 역할과 업무에 순응하는 모습을 보일 가능성이 크다 (King, 2004). 이러한 상황에서 경력 크래프팅(career crafting)이 개인-경력 적합성에 중요한 영향을 미칠 수 있다. 경력 자기관리가 낮은 집단은 자신의 경력 경로를 관리하는 데 능동적이지 않기 때문에, 경력 크래프팅을 통해 경력을 재구성할 때 자신의 직무와 경력 간의 적합성이 증가할 가능성이 높다. 따라서 경력 자기관리 수준이 낮은 구성원일수록 경력 크래프팅이 높아질 때 개인-경력 적합성이 크게 증가한다. 즉, 경력 자기관리가 부족한 구성원은 경력 크래프팅을 통해 개인-경력 적합성을 더 효과적으로 향상시킬 수 있다고 보인다. 따라서 선행연구를 바탕으로 다음과 같은 가설을 설정하였다.

가설 7: 경력 자기관리는 경력 크래프팅과 개인-경력 적합성의 관계를 부(-)적으로 조절할 것이다. 경력 자기관리가 높을수록, 경력 크래프팅과 개인-경력 적합성의 정(+)의 관계는 약화될 것이다.

IV. 분석 결과

4.1 측정도구

본 연구는 다음과 같이 주요 개념을 조작적으로 정의하고 이를 측정하였다. 경력 크래프팅은 개인이 자신의 일과 경력에 대한 열정을 반추하며 목표와 중요한 요소를 신중히 평가하고, 지속적인 발전을 위해 기회를 탐색하는 적극적인 행동을 의미하며, Tim & Akkermans(2013)의 개발한 10 문항을 몽골어로 번역하여 사용하였다. 개인-경력 적합성은 개인이 직장에서의 경험을 통해 전문 분야에 대한 흥미와 자신감을 높이고, 해당 분야에서 지속적으로 성장하려는 의지와 자신감을 갖는 상태이며 David et al.(2012)의 연구에서 사용한 3 개 문항을 몽골어로 번역하여 측정하였다. 경력 만족도는 개인이 경력에서 이룬 성과에 대한 만족감, 경제적 목표 달성의 진전, 전반적인 경력 목표 달성, 발전 목표 달성 노력, 기술 및 능력 개발에 대한 만족을 느끼는 정도로 정의하여, Greenhaus et al.(1990)의 측정도구와 Joeri et al.(2008)의 연구에서 사용한 5 개 문항을 몽골어로 번역하여 사용하였다. 심리적 웰빙은 개인이 삶을 학습, 성장 과정으로 인식하고, 자아 신뢰, 새로운 경험을 통한 자기 인식 확장, 책임감, 가치 기반 행동, 타인과의 긍정적 관계 형성, 자기 수용, 일상 도전 대처 능력을 포함하는 상태이며, Ryff(2023)이 개발하고 Danilo et al.(2023)의 연구에서 사용한 18 개 문항을 몽골어로 번역하여 측정하였다. 마지막으로 경력 자기관리는 네트워킹 구축, 기회 탐색, 피드백 요청 및 인정, 기술 개발 의지, 경력 목표에 맞지 않는 역할 거부, 외부 채용 모니터링, 자기 개발을 위한 외부 학습 참여를 포함하는 행동이며, Gould et al.(1984)가 개발하고 Jane et al.(2002)의 연구에서 사용한 16 개 문항을 몽골어로 번역하여 활용하였다.

4.2 인구통계학적 분석

이 연구에서는 몽골의 직장인을 대상으로 수집한 426 명의 데이터를 SPSS v25.0 과 AMOS v26.0 프로그램을 사용해 분석했다. SPSS 로는 빈도분석, 신뢰도 분석, 상관관계 분석, 위계적 회귀분석을,

AMOS 로는 확인적 요인분석과 구조방정식 경로분석을 수행했다. 응답자의 인구통계학적 특성을 보면, 연령대는 20-40 대가 가장 많았으며, 성별은 여성이 66%를 차지했다. 결혼 여부는 기혼이 73.2%였고, 학력은 학사 이상이 92.3%였다. 직장 경력은 5-15 년이 가장 많았으며, 근속연수는 9 년 이상이 32.6%로 높았다. 직위는 사원급이 58.5%, 월 평균 급여는 100-200 만 원이 61.3%로 가장 많았다. 산업군은 공공기관, 서비스업, 제조업 순으로 분포되었다.

4.3 타당성, 신뢰도 및 상관관계 분석

4.3.1 탐색적 요인 분석

본 연구에서는 측정 도구의 타당성 확보를 위해 선행연구에 이해 다수의 검증이 진행된 도구를 사용하여 경력 크래프팅, 개인-경력 적합성, 경력 만족도, 심리적 웰빙, 경력 자기관리 등으로 구성된 측정모형을 설정하고 탐색적 요인분석과 측정모형에 대한 확인적 요인분석을 실시하였다. 탐색적 요인분석은 주성분 분석, 베리맥스(varimax) 회전방식을 적용하고, 고유값(eigen-value) 1 이상을 요인 추출의 기준으로 설정하였다. 이 과정에서 분석에 사용된 표본의 적절성을 확인하기 위해 KMO(Kaiser-Meyer-Olkin) 측도와 Bartlett 구형성 검정 통계 값의 기준 충족 여부를 확인하였다. 일반적으로 사회과학 분야에서는 KMO(Kaiser-Meyer-Olkin) 0.5 이상, Bartlett 구형성 검정의 p-value 가 0.05 미만으로 나타나면 적절한 표본으로 판단한다. 본 연구에서는 KMO 값과 Bartlett 구형성 검정 통계 값이 각각의 기준치(0.5 이상, 0.05 미만)를 충족하고 있어 이상이 없음을 확인하였다. 탐색적 요인분석을 실시한 결과 고유값(eigen-value) 1 을 기준으로 5 개 요인이 도출되었다. 요인별 고유치는 경력 크래프팅 6.949, 개인-경력 적합성 6.310, 경력 만족도 5.848, 심리적 웰빙 5.180, 경력 자기관리 4.421 로 확인되었다. 이들은 전체분산의 55.207%를 설명하는 것으로 나타났다.

4.3.2 신뢰도 분석

신뢰도 분석은 측정하고자 하는 개념이 설문 응답자로부터 정확하고 일관되게 측정되었는가를 확인하는 것으로, 문항들 간의 동질성을 나타내는 문항의 내적일치도를 Cronbach's alpha 계수를 활용하여 검정하게 된다(송지준, 2019). 신뢰도 분석은 독립변수인 경력 크래프팅과 매개변수, 종속변수, 조절변수들에 대하여 요인분석후 최종 선별된 항목들에 대하여 변수별로 신뢰도 분석을 실시하였으며, 신뢰도 분석결과 독립변수인 경력 크래프팅은 .920, 매개변수 개인-경력 적합성은 .802, 종속변수인 경력 만족도는 .909, 심리적 웰빙은 .917, 조절변수인 경력 자기관리는 .919 로 나타났다. 모든 변수의 값이 일반적으로 사회과학 분야에서 0.6 이상이면 신뢰도가 있다고 보기 때문에 다른 항목 제거 없이 신뢰성은 확보된 것으로 판단하였다.

4.3.3 상관관계 분석

상관관계 분석 결과, 연구에서는 주요 변수 간 유의한 정적 상관관계를 확인했다. 독립변수인 경력 크래프팅과 매개변수인 개인-경력 적합성($r=.495$, $p<.01$) 간, 개인-경력 적합성과 경력 만족도($r=.516$, $p<.01$), 심리적 웰빙($r=.614$, $p<.01$) 간에 높은 정적 상관이 나타났다. 또한, 경력

크래프팅과 경력 만족도($r=.502$, $p<.01$), 심리적 웰빙($r=.633$, $p<.01$), 경력 자기관리($r=.521$, $p<.01$) 사이에서도 정적 상관이 확인되었다. 연령, 성별, 학력 등 인구통계학적 변수를 통제하였다.

<표 2> 상관관계 분석

	평균	표준 편차	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	3.704	.910	-													
2	3.679	.601	.521**	-												
3	3.959	.619	.495**	.466**	-											
4	3.866	.677	.502**	.640**	.516**	-										
5	3.896	.488	.633**	.572**	.614**	.601**	-									
6	3.23	1.036	-.116*	.015	.102*	.043	-.012	-								
7	1.66	.474	-.072	-.039	-.082	.003	-.088	.051	-							
8	1.27	.443	.059	-.034	-.129**	-.070	-.054	-.392**	.054	-						
9	2.28	.670	.042	.146**	.151**	.114*	.041	.149**	.142**	-.122*	-					
10	3.12	1.630	-.163**	-.008	.068	.027	-.065	.817**	.011	-.381**	.125**	-				
11	3.71	1.913	-.102*	-.002	.071	.031	.008	.527**	-.029	-.382**	.057	.620**	-			
12	3.37	.959	.006	-.022	.025	.016	.010	.061	.109*	-.059	.160**	.081	.118*	-		
13	1.82	1.198	.123*	.107*	.133**	.145**	.051	.170**	-.169**	-.109*	.169**	.231**	.120*	-.076	-	
14	1.60	.916	.094	.064	.125*	.151**	.096*	.104*	-.207**	-.100*	.098*	.149**	.114*	-.100*	.430**	-

1=경력크래프팅, 2=경력 자기관리, 3=개인-경력 적합성, 4=경력 만족도, 5=심리적 웰빙, 6=연령대, 7=성별 더미, 8=결혼 더미, 9=학력, 10=경력, 11=근속연수, 12=사업체단위, 13=직급, 14=급여

* $p < .05$, ** $p < .01$, *** $p < .001$

4.4 가설검증 분석

몽골의 조직 구성원이 인식하는 경력 크래프팅이 경력 만족도 및 심리적 웰빙에 미치는 영향 관계에서 이를 매개하는 변수로 개인-경력 적합성, 조절하는 변수로 경력 자기관리를 검증하고자 하였다. 이 과정에서 성별, 연령대, 학력, 직급, 근속연수, 결혼 여부, 급여, 경력 등은 통제변수로 사용하였다. 이는 독립변수인 경력 크래프팅이 종속변수인 경력 만족도에 영향을 미치는 가설 1은 $\beta = .287$, $t = 4.806$, $p < .000$ 로 지지되었다. 다음으로 경력 크래프팅이 심리적 웰빙에 영향을 미치는 가설 2는 $\beta = .421$, $t = 7.747$, $p < .000$ 로 지지되었다. 이는 경력 크래프팅이 높을수록 경력 만족도와 심리적 웰빙이 높아진다는 것을 의미하고 이에 따라서 가설 1과 가설 2는 지지되었다. 마지막으로 독립변수인 경력 크래프팅이 매개변수인 개인-경력 적합성에 영향을 미치는 가설 3은 $\beta = .580$, $t = 9.390$, $p < .000$ 로 지지되었다. 이러한 결과는 경력 크래프팅이 높을수록 개인-경력 적합성이 높아진다는 것을 의미하고 따라서 가설 3은 지지되었다. 다음 단계로 매개변수 역할을 하는 개인-경력 적합성이 종속변수 역할을 하는 경력 만족도와 심리적 웰빙에 미치는 영향력을 검증하였다. 그 결과 개인-경력 적합성이 경력 만족도에 영향을 미치는 가설 4는 $\beta = .457$, $t = 6.859$, $p < .000$ 로 지지되었으며 개인-경력 적합성이 심리적 웰빙에 영향을 미치는 가설 5는 $\beta = .518$, $t = 8.383$, $p < .000$ 로 지지되었다. 이는 경력에 적합할수록 경력 만족도와 심리적 웰빙이 높아진다는 것을 의미하고 따라서 가설 4와 가설 5는 지지되었다.

<표 3> 가설검증 결과

독립변수	종속변수	β	S.E	t	p
경력 크래프팅	경력 만족도	.287	.044	4.806	.000***
	심리적 웰빙	.421	.027	7.747	.000***
	개인-경력 적합성	.580	.034	9.390	.000***
개인-경력 적합성	경력 만족도	.457	.089	6.859	.000***
	심리적 웰빙	.518	.056	8.383	.000***

*p<.05, **p<.01, ***p<.001

4.5 개인-경력 적합성의 매개효과

개인-경력 적합성의 매개효과를 검증하기 위해 AMOS 를 활용하여 구조방정식 경로분석을 실시하였다. 개인-경력 적합성의 매개효과 검증을 위해 경로분석을 실시한 결과 먼저 직접적인 효과를 살펴보면, 독립변수인 경력 크래프팅은 매개변수인 개인-경력 적합성($\beta = .580$, $p < .001$) 직접효과는 유의한 영향을 미치는 것으로 나타났나, 이러한 매개변수인 개인-경력 적합성은 종속변수인 경력 만족도($\beta = .457$, $p < .001$) 직접효과는 유의한 영향을 미치는 것으로 나타났다. 또한 매개변수인 개인-경력 적합성은 종속변수인 심리적 웰빙($\beta = .518$, $p < .001$) 직접효과는 유의한 영향을 미치는 것으로 나타났다. 매개효과를 살펴보면 독립변수인 경력 크래프팅이 매개변수인 개인-경력 적합성을 통해 종속변수인 경력 만족도에 미치는 간접효과($\beta = .198$, $p < .001$)가 있는 것으로 나타났다. 이는 경력 크래프팅이 개인-경력 적합성에 영향을 미치고 개인-경력 적합성이 높아지면 이에 따라서 경력 만족도도 더 영향을 받고 경력에 대한 만족도가 높아진다는 것을 의미한다. 또한 독립변수인 경력 크래프팅이 매개변수인 개인-경력 적합성을 통해 종속변수인 심리적 웰빙에 미치는 간접효과($\beta = .151$, $p < .001$)가 있는 것으로 나타났다. 이는 경력 크래프팅이 개인-경력 적합성에 영향을 미치고 개인-경력 적합성이 높아지면 이에 따라서 심리적 웰빙에 더 영향을 미치고 구성원의 심리적 웰빙이 더 좋아진다는 것을 의미한다.

경로	Estimate	S.E	t	p
경력 크래프팅->개인-경력 적합성	.580	.034	9.390	.000***
개인-경력 적합성->경력 만족도	.457	.089	6.859	.000***
개인-경력 적합성->심리적 웰빙	.518	.056	8.383	.000***
매개 효과	간접 효과			
경력 크래프팅이->개인-경력 적합성 -> 경력 만족도	.198***			
매개 효과	간접 효과			
경력 크래프팅이->개인-경력 적합성 -> 심리적 웰빙	.151***			
AFI(절대적합지수)	→ $\chi^2/df = 4.123$, RMSEA = .086			

4.6 경력 자기관리의 조절효과

경력 크래프팅과 개인-경력 적합성의 관계에 미치는 경력 자기관리의 조절효과를 검증하였다. 이는 경력 크래프팅과 개인-경력 적합성의 관계에 영향을 미치는 맥락적 요인으로 경력 자기관리를 정하고 조절효과를 검증하였다. Process macro 회귀분석을 바탕으로 조절효과 분석을 실시하였고 결과는 [표 5]과 같다. 경력 자기관리에 따른 경력 크래프팅과 개인-경력 적합성 간에는 경로계수가($\beta = -.138$, $t = -3.357$, $p = .000$)으로 상호작용효과가 있는 것으로 나타나 가설 7은 지지되었다. 즉, 경력 자기관리가 낮은 집단의 경우 경력 크래프팅의 높아지면 개인-경력 적합성도 높아지는 것을 확인할 수 있다. 또한 경력 자기관리가 높은 집단의 경우 경력 크래프팅의 높아질수록 개인-경력 적합성은 약해지는 것으로 확인되었다. 이러한 결과는 경력 자기관리는 높은 집단일수록 두 변수 간에 부(-)의 영향을 주는 것으로 판단된다.

구분	변수명	Coeff	S.E	t	LLCI	ULCI
통제변수	(상수)	3.967	.186	21.269***	3.601	4.334
	연령	.054	.415	1.306	-.027	.136
	성별	-.074	.053	-1.385	-.179	.031
	결혼 여부	-.117	.061	-1.905	-.239	.004
	학력	.069	.038	1.809	-.006	.144
	총 직장경력	-.004	.028	-.145	-.060	.052
	근속연수	.011	.016	.648	-.022	.043
	급여	.016	.028	.590	-.038	.071
	산업군	-.012	.006	-1.819	-.025	.001
독립변수	경력 크래프팅	.262	.032	8.091***	.198	.325
조절변수	경력 자기관리	.275	.048	5.677***	.179	.370
상호작용	경력 크래프팅 경력 자기관리	-.138	.041	-3.357***	-.218	-.057
		F=21.643 R=.604 R ² =.365				

V. 결론

5.1 연구 결과 요약

이 연구는 몽골 조직 구성원들의 경력 크래프팅이 경력 만족도와 심리적 웰빙에 미치는 영향을 탐구하고, 이러한 관계에서 개인-경력 적합성의 매개효과와 경력 자기관리의 조절 효과를 검증하였다. 주요 결과는 다음과 같다. 첫째, 경력 크래프팅은 경력 만족도와 심리적 웰빙에 긍정적인 영향을 미쳤다. 이는 개인이 자신의 경력을 적극적으로 설계할 때 더 높은 만족감과 심리적 웰빙을 느낀다는 점을 강조하며, 조직 차원의

경력 크래프팅 지원 필요성을 시사한다. 둘째, 경력 크래프팅은 개인-경력 적합성을 높이며, 이는 경력 만족도와 심리적 웰빙 향상으로 이어졌다. 이를 통해 조직은 구성원들에게 적합성 증진을 위한 훈련과 지원 프로그램을 제공할 필요가 있다. 셋째, 개인-경력 적합성과 경력 만족도 및 심리적 웰빙 간의 관계를 검증하여 개인-경력 적합성이 높을수록 경력 만족도와 심리적 웰빙이 향상된 것으로 나타났다. 이는 구성원의 역량과 가치관에 적합한 직무 배치 및 경력 개발 프로그램 제공의 중요성을 강조하였다. 넷째, 경력 크래프팅의 매개효과를 검증하였다. 매개변수인 개인-경력 적합성이 경력 크래프팅과 경력 만족도 및 심리적 웰빙에 긍정적인 간접효과를 미치고 매개하는 것을 확인하였다. 조직은 멘토링, 경력 상담 등으로 경력 크래프팅을 지원하며 적합성을 높여야 한다. 경력 자기관리가 낮은 구성원은 경력 크래프팅이 개인-경력 적합성에 더 큰 영향을 미쳤다. 경력 자기관리가 높은 구성원은 추가적인 경력 개발 기회나 도전 과제를 통해 더 높은 성과를 달성할 가능성을 보였다. 결론적으로, 조직은 구성원들이 경력 크래프팅을 통해 경력 만족도와 심리적 웰빙을 향상할 수 있도록 지원하고, 경력 자기관리 수준에 따른 차별화된 경력 개발 전략을 수립할 필요가 있다

5.2 시사점

5.2.1 이론적 시사점

본 연구는 경력 크래프팅이 경력 만족도와 심리적 웰빙에 미치는 영향을 탐구하고, 개인-경력 적합성의 매개효과와 경력 자기관리의 조절효과를 검토함으로써 경력 개발에 관한 이론적 기반을 확장했다. 경력 크래프팅은 개인이 경력 자원을 활용하고 자신의 경력을 능동적으로 관리하여 경력 만족과 심리적 웰빙을 증진시키는 주도적 메커니즘으로 작용한다(Xiaolin Ge et al., 2023). 이는 경력 개발과 성공에 중요한 역할을 하며, 경력 관리의 새로운 핵심 요소로 평가될 필요성을 시사한다. 개인-경력 적합성은 경력 크래프팅과 경력 만족 및 심리적 웰빙 간의 관계를 매개한다(Kilic et al., 2024). 개인이 자신의 가치관과 목표에 부합하는 방식으로 경력 크래프팅을 수행할 때 더 높은 만족과 웰빙을 경험한다. 이는 적합성을 최적화하는 경력 크래프팅의 역할을 강조하며, 지속 가능한 경력 개발의 중요성을 부각시킨다. 경력 자기관리는 경력 크래프팅과 개인-경력 적합성 간의 관계를 조절하며, 자기관리 역량이 낮은 경우 경력 크래프팅 효과가 더욱 두드러진다(Seibert et al., 2001; Lee et al., 2021). 이는 경력 개발 과정에서 자기관리의 중요성을 부각시키며, 개인의 자기주도적 행동을 촉진하는 경력 전략이 필요함을 시사한다. 본 연구는 경력 크래프팅, 경력 만족, 심리적 웰빙 간의 관계를 체계적으로 검토하여 경력 발달 이론의 틀을 확장했다. 조직과 개인 모두 경력 크래프팅을 경력 성공과 웰빙의 핵심 전략으로 활용할 필요가 있으며, 이를 위해 조직 차원의 지원이 중요함을 강조한다. 이 연구는 경력 크래프팅과 관련된 다양한 요인들이 경력 개발 및 개인의 웰빙에 미치는 영향을 다각도로 분석하여 경력 관리 분야의 이론적 발전과 실무적 적용 가능성을 높이는 데 기여하였다.

5.2.2 실무적 시사점

본 연구의 실무적 시사점은 다음과 같다.

첫째, 개인이 스스로 경력 목표를 설정하고 이를 달성하려 할 때 경력 만족도가 높아지며, 경력 크래프팅이 경력 만족도와 심리적 웰빙에 긍정적인 영향을 미친다는 점에서 몽골 조직은 구성원들의 경력 크래프팅을 지원하는 교육 프로그램, 멘토링, 코칭을 제공하여 경력 만족도와 웰빙을 향상시킬 필요가 있다. 또한 경력 크래프팅이 개인-경력 적합성을 높인다는 점을 고려해, 조직은 구성원들에게 적합한 경력 기회를 마련하고 역량과 가치관에 부합하는 경력 개발 경로를 제공해야 한다.

둘째, 개인-경력 적합성은 직무 몰입, 직무 및 경력 만족도, 그리고 직무 성과에 긍정적 영향을 미치며, 본 연구는 개인-경력 적합성이 높을수록 경력 만족도와 심리적 웰빙이 향상된다는 결과를 보여준다. 따라서 몽골 조직은 구성원의 강점과 관심사, 장기적 경력 목표에 맞춘 경력 개발 프로그램과 멘토링 시스템을 마련하고, 정기적 피드백을 통해 개인-경력 적합성을 높이는 노력이 필요하다.

셋째, 본 연구는 경력 크래프팅이 개인-경력 적합성을 매개로 하여 경력 만족도와 웰빙에 간접적으로 긍정적인 영향을 미친다는 점을 강조한다. 몽골 조직은 구성원이 자신의 경력을 능동적으로 크래프팅하도록 돕기 위해 경력 개발 워크숍, 자아 탐색 세션, 맞춤형 교육 기회를 제공해야 하며, 이를 통해 구성원이 강점에 맞는 역할을 찾고 경력 만족도와 웰빙을 증진할 수 있도록 지원할 필요가 있다.

마지막으로, 경력 자기관리가 경력 크래프팅과 개인-경력 적합성 간의 관계에 영향을 미친다는 결과는 실무적 시사점을 제공한다. 경력 자기관리가 낮은 구성원에게는 경력 크래프팅의 필요성과 방법을 교육하고 경력 개발 과정에서 더 많은 지원을 제공하며, 자기관리가 높은 구성원에게는 자율성을 부여하여 경력 개발의 기회를 제공하는 것이 효과적이다.

5.3 연구의 한계점 및 연구방향

본 연구는 경력 크래프팅이 개인-경력 적합성을 매개로 경력 만족 및 심리적 웰빙에 미치는 영향과 경력 자기관리의 조절효과를 실증적으로 검증하였으나 다음과 같은 한계점을 가진다. 첫째, 조직 문화, 리더십 스타일, 업무 환경 등 다양한 변수가 경력 크래프팅과의 상호작용에 미치는 영향을 추가로 연구할 필요가 있다. 둘째, 경력 크래프팅과 직무 자원, 직무 요구 간의 상호작용을 개인과 조직 차원에서 분석하여 경력 만족에 미치는 영향을 확인할 필요가 있다. 셋째, 본 연구는 다양한 직종을 대상으로 했기 때문에 특정 직종에 대한 연구가 부족하며, 특히 자율성이 낮은 직종에서의 경력 크래프팅 연구가 필요하다. 넷째, 감정의 발생 시점이나 부정적 감정의 원인을 구체적으로 고려하여 연구함으로써 감정 변화에 따른 영향을 분석할 필요가 있다. 다섯째, 상사와 조직 차원의 변수를 추가로 탐구하여, 리더십 유형과 인사 제도, 교육 훈련 등의 요소가 경력 발전에 미치는 영향을 심층적으로 연구할 필요가 있다. 이를 통해 경력 크래프팅과 관련한 조직 및 상사 차원의 구체적 메커니즘을 명확히 이해할 수 있을 것으로 기대된다.

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