

## Educational Support to Agrarian and Agri-Food University Programmes in Mongolia



### Implementation of E-learning activities

**Name of the deliverable:** WP 2 Implementation of e-learning activities  
Project Erasmus + APFAA - 585593-EPP-1-2017-1-FR-EPPKA2-CBHE-JP  
2017 - 2020



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## List of Abbreviations

INRAE	Institute of Natural Resources and Agricultural Economics
ITE	Information Technologies Engineer
LMS	Learning Management System
M&E	Monitoring and Evaluation
MES	Ministry of Education and Sciences
MNUMS	Mongolian National University of Medical Sciences
MoFALI	Ministry of Food Agriculture and Light Industry
MULS	Mongolian University of Life Sciences
MULS	Mongolian University of Life Sciences
MUST	Mongolian University of Sciences and Technology
NGO	Non-Governmental Organization
NUM	National University of Mongolia
SEB	School of Economics and Business
SME	Small and Medium Enterprises

## Introduction

E-learning is a global phenomenon over the last decades in higher education and as stated in the project document E-learning initiatives can be a cost-effective method of delivering higher education in Mongolia that a country with vast territory and sparse population. E-learning development in Mongolia was comparatively at its beginning stage and it has accelerated during last two years.

The Mongolian three partner Universities pioneered to introduce the Blended E-Learning methodology to the Universities and it expanded into National higher education system. In the beginning of the project there was not clear and better understanding regarding blended e-learning and online training amongst in the leaders and faculty members of Mongolian University. This issue was one of the debatable issues between and within partner Universities and at the national level. In this connection, the project brings the right knowledge and wider information regarding the blended e-learning and online training. National project coordinator Dr. B.Ochirkhuyag had presentation in the national level discussion forum on online training that organized by the Ministry of Education and Science for mid and top managers of the Universities. In additionally series of trainings organized by the project team for the faculty members of the three Universities regarding better development of blended e-learning system in each institute. As a result, core team of e-learning and online education formed up with collaboration of three Universities. MULS and BUAS collaborated to introduce comparatively new learning method of simulation-based decision-making tool into the training programme of MULS. The teaching staffs, technical staffs and students have learnt the new methodology.

The project team members were contributed to development of two national level documents namely "Online training regulations of MES" and "E-Agriculture strategy of MoFALI" based on the gained experiences during the project implementation.

Within the the project framework total of 20 e-learning course materials newly developed by the Mongolian teachers with support of the European partner Universities. All courses being tested to deliver for bachelor and master students. And course materials were using Google Classroom and the Learning Management Systems (LMS) of each University in the beginning and since October 2020 the project team working on transferring the course materials into the unified Moodle platform (please use the link to explore <https://inrae.mn/moodle5593/login/index.php>). Development of E-course content has time and labor consuming activities that includes more than 70 teaching staffs, 5 technical workers and others for assistance. The detailed activities were trainings to introduce e-learning and e-content development, staff mobilities, converting developed materials into the appropriate digital means, installment of required software and equipment, training for use of new software and equipment, training for digitization and acquire technical skills. In order to examine the quality of courses feedback survey from students and faculty members have conducted two times from 44 teaching staff and 400 students.

In addition to E-Learning development activities MULS and BUAS collaborated to develop a decision-making learning tool. This tool introduced into training programme of MULS. In total of 8 teaching staff and 2 technicians participated from Mongolia to develop this tool. Three times interactive training for Mongolian faculty members which are supervised from BUAS professors that first training held place in BUAS, Europe and two others conducted in Mongolia. Until now total of 134 bachelor students and 23

master students have received three courses using this learning tool. The students and teaching faculties are eager to use this learning tool and develop its contents to enlarge including more products and sub sectoral data. Current tool includes dairy farm, vegetable growing and cheese factory scenarios for simulation. Database used this learning tool gathered from partner farms of Mongolian Universities. The decision-making tool, extended into developing two case studies for rural development. One case study is based on a comparatively large semi intensive mixed farm situated in 72 kilometers from Ulaanbaatar and other case study developed using information of a modern innovative farm that located 600 kilometers away from the Ulaanbaatar. These two cases are start using for the training which gave to the students pretty good insides of the different approaches of the rural development.

Due to unexpected impact of the Covid 19 pandemic there was increasing demand for using E-guidance to access developed course materials. The project developed 9 guides for students and faculty members upon their request and the project running a discussion forum to receive questions and requests.

## E-Course development

Each of three universities formed a team of faculty members for the selected courses to develop e-learning materials. Before start developing the contents series of trainings organized from the project.

The training organized in three levels i) training for IT engineers, developer or responsible faculty members of each University; ii) training for team leaders of each course; and iii) training for other faculty members in each institute. The first two training organized by the NUM as a coordinating institute of project in Mongolia and third training organized by the respective coordinators or faculty members of each institute.

The first training entitled “Open Education and Online Learning” has conducted for IT engineers on 23 and 24 February, 2019. The training was attended by the IT engineers or responsible lecturers from three partner universities namely NUM-National University of Mongolia, MULS- Mongolian University of Life Sciences, MUST- Mongolian University of Sciences and Technology. In addition to the project partners the project team included people from Mongolian National University of Medical Sciences (MNUMS) upon their request.

The list of course topics and sub topics are following

- 1 New Technological Era and Future of Education**
  - 1.1 Technological Disruption
  - 1.2 Internet for Education
  - 1.3 Mobile Learning
  - 1.4 Big Data
  - 1.5 Artificial Intelligence
  - 1.6 IoT
  - 1.7 Cloud Computing
- 2 Projects in Educational Convergence using Latest Technologies**
  - 2.1 Convergence of Educational Stakeholders
  - 2.2 Convergence of Educational Activities
  - 2.3 Convergence of Educational Technologies
  - 2.4 Convergence of Different Course Contents
  - 2.5 Convergence in Educational Levels (Lifelong Learning)
  - 2.6 Convergence in Online Learning
  - 2.7 Convergence in Borderless Research Activities
- 3 Cloud University and Credit Mobility**
  - 3.1 Academic Credit System
  - 3.2 University Management System
  - 3.3 Online Accreditation and Quality Control System
  - 3.4 Online Student
  - 3.5 Virtual Teacher
  - 3.6 Parents Information System
  - 3.7 University Information System and Labor Market Recruitment System
  - 3.8 Credit Mobility and Online Learning
- 4 Online Learning**
  - 4.1 Relationship between Academic Credit System and Online Learning

- 4.2 Basics of Online Learning
- 4.3 Online Learners
- 4.4 Online Teachers
- 4.5 Types and Levels of E-Content
- 4.6 Learning Management Systems – LMS
- 4.7 Massive Open Online Courses – MOOC
- 4.8 Blended Learning
- 4.9 Flipped Classroom
- 5 Open Education**
  - 5.1 Foundation of Open Education
  - 5.2 Success Factors in Open Education
  - 5.3 Connection between Technology, Education and Motivation
  - 5.4 Users of Open Education
  - 5.5 Model of Interaction in Open Education
  - 5.6 Future of Education

The second training with the same topic organized for teaching faculties on 2 and 3 March, 2019. The representatives from three partner universities have attended the training. The general topics of the training was the same as above listed but context within the topic was more focused on to consideration of developing of e-course contents and its deliverables.

### Open Education and Online Learning (IT engineers training)



### Open Education and Online Learning (lecturers training)

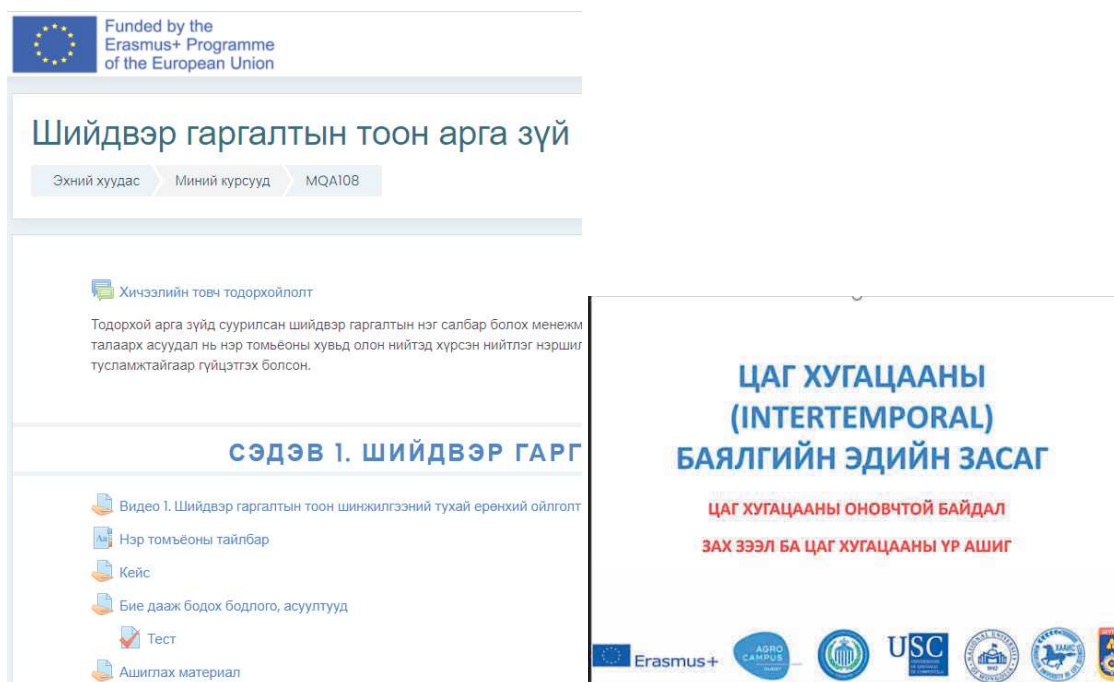


After first two trainings the third training conducted in each institute. That those who attended the first two trainings transfer their knowledge to his/her fellow faculty members. Knowledge transferring went through the introductory training for all interested faculty members from university then it splits to the team level in each e-course based on learning by doing activities.

The following list introduces the major learning tools in a content while the tools are slightly different with respect to the specialization and course topics. parts are the main art include short explanation of each course development.

- E course lecture notes
- Presentation (20-25 slides in each topics)
- Video tutorials
- Audio tutorials
- Brief explanation of PPT in word format (4-5 pages long)
- E-course practice/seminar
- Cases
- Exercises
- Tests (multiple choice, true and false)
- Quiz
- Self-evaluation tests for students
- References (Books, research reports and articles, degree dissertations and videos)





Picture 1. Sample screenshot of the E-course Source:  
<https://inrae.mn/moodle5593/course/view.php?id=11&lang=mn>

Total of 20 e-learning course materials newly developed with a team of faculty members from three partner universities in Mongolia. The course materials uploaded into the Moodle platform link specified above. The brief introduction of each course is attached as in annex (Annex 2: ).

One of the main achievements and results of E-Learning related activities is development and approval of “Temporary regulation of e-learning of the National University of Mongolia”. This regulation drafted by the working group lead by the Professor Ochirkhuyag (the national project manager) with assistances of the other team member in the project implementation unit. The regulation approved by the rector of NUM on April 20, 2020. This regulation became other state universities including MULS and MUST (Annex 3: Temporary regulation of e-learning).

## Establishing E-Learning center

The project coordinator at MULS consulted with rectorate of MULS and national project manager Dr. Ochikhuyag to set up a leading group for E Learning Center. Leading group has formed up with 6 persons lead by Mr. Ch.Batjargal, IT engineer and teaching faculty of MULS. Team includes vice dean of Training Affairs of School of Economics and Business, MULS and other training specialist, IT technicians. All faculty members who are involving and will involve the E content development should be support team for leading group.

MULS provided 102.6 (18x5.7) square meter space for E Learning center, and University also refurbished this space into three rooms for E classroom, E meeting and Studio. MULS spent 12 million MNT or 4045.9<sup>1</sup> EUR for maintenance, 5 million or 1686 EUR for furniture of the E Learning Center. The project 186,5 million MNT or approximately 54 thousands euros software and equipment's for the E Learning Center.



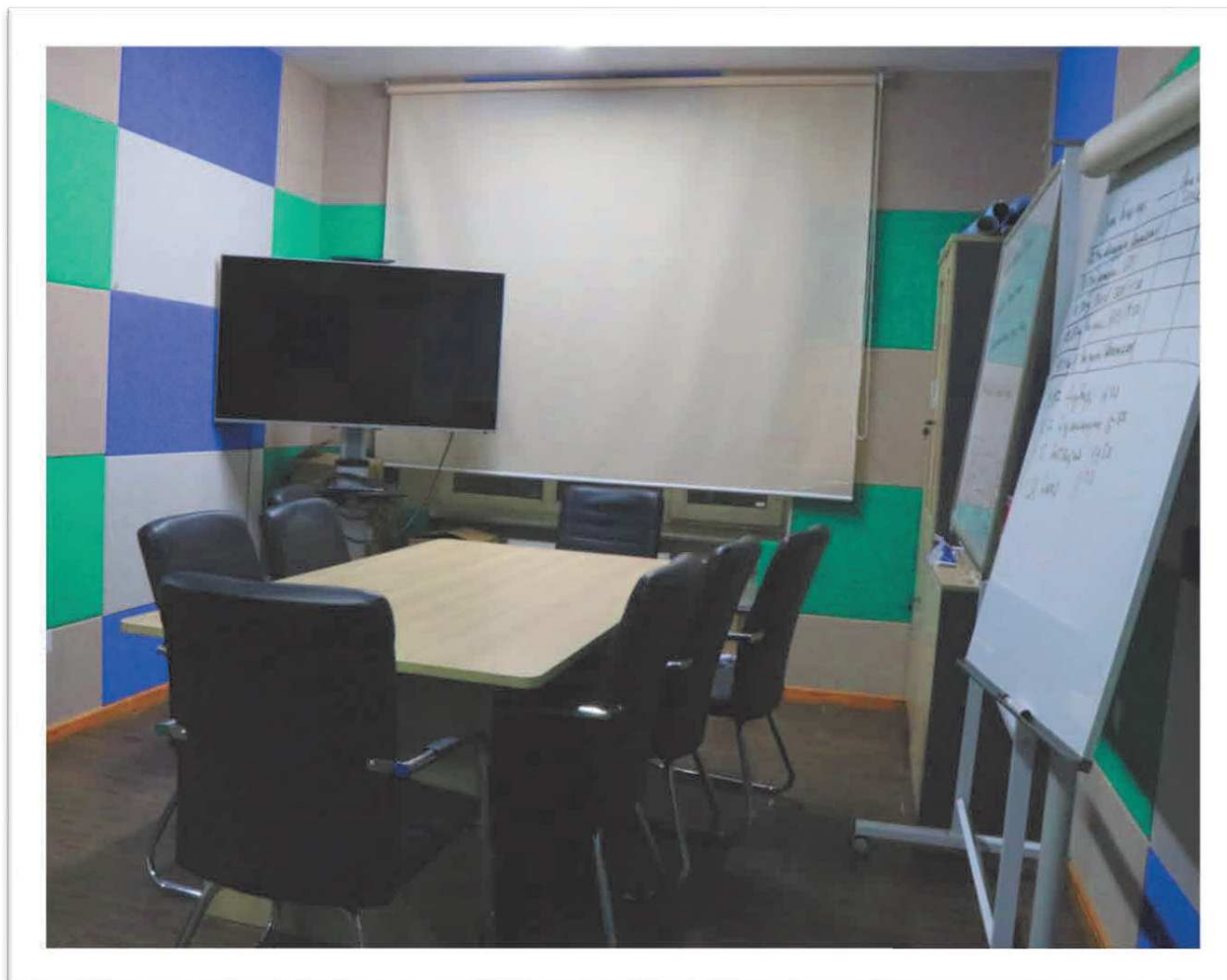
E-Learning center: training room

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<sup>1</sup> Daily Exchange Rate of Mongol Bank <https://www.mongolbank.mn/dblistofficialdailyrate.aspx>



E-Learning center: Studio room



E-Learning center: meeting room

The main purpose of the e-learning center is to support developing e-contents, e-learning course materials to teaching faculties from three partner universities. The e-learning center was trying to limit its activities within the selected courses of the project framework but due to circumstances of the Covid 19 pandemic occurrences the center has support whole University to develop and manage the E-course related activities. Therefore, the project team has to work more than the project planned activities by additional time and energy. According to approximate statistics the e-learning center provided service to more than 50 courses in terms of giving advices, developing part of their course materials.

E-Learning center team has developed 300 audio, video contents for new e-course materials for three MNG Universities, 5 interactive video guides for the students and faculty members to assist them working in new environment of blended E-Learning and 4 e-leaflets for new users of Google Classroom and Moodle (Annex 4: Moodle users guide for student and teachers).

The list of simplified pdf booklet and video guidelines are as following:

Simplified picture guides

- Moodle users guide for the students
- Google Classroom guide for students
- Moodle users guide for the teachers
- MOOC introductory leaflet

Interactive video guide:

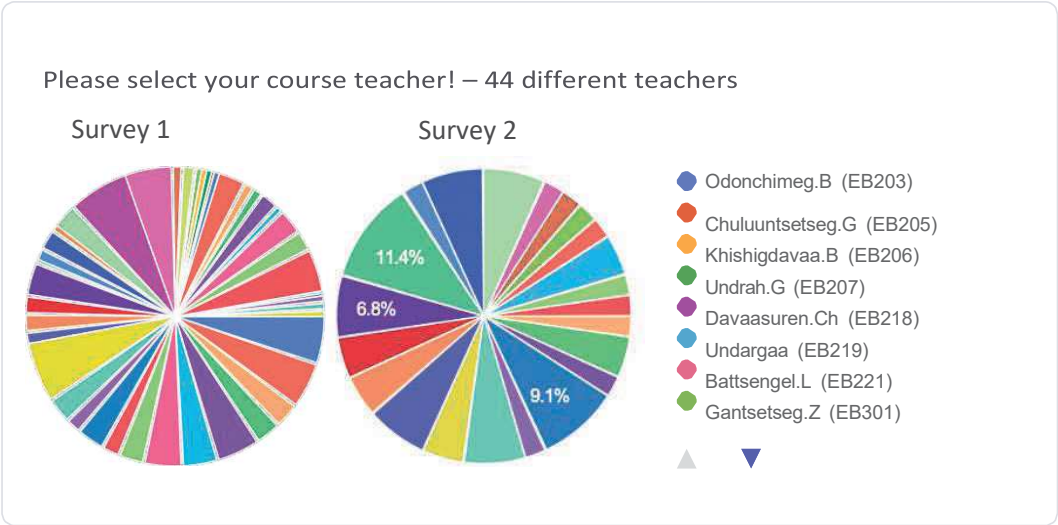
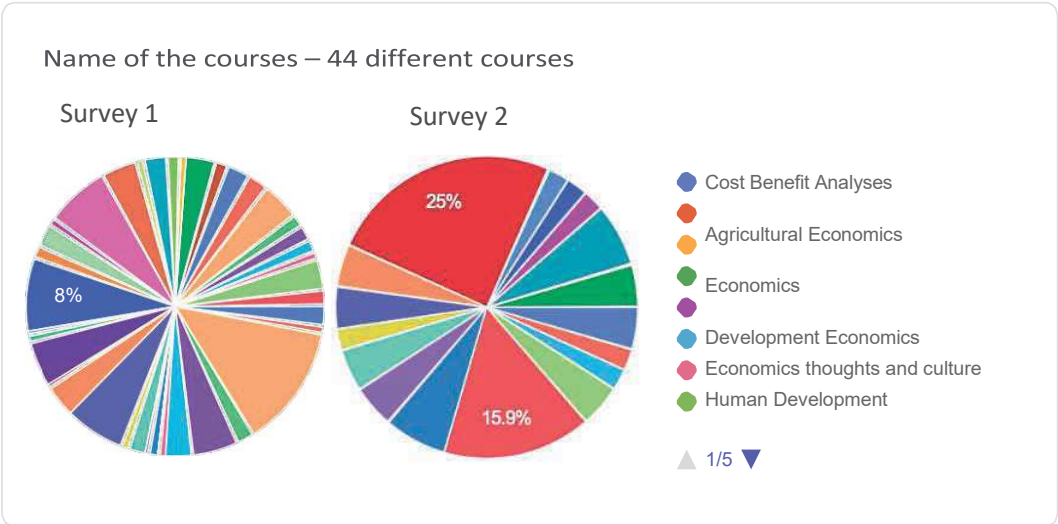
- Moodle guide 1 (26 minutes )
- Moodle guide 2 (9.24 minutes)
- eXe Learning Guide (8 minutes)
- Screen recording by the MS PowerPoint (8 minutes)
- Using Camtasia for developing course materials (10 minutes)

The project team facilitated to establish a student club named Digital solution under E-Learning center. The goal of the student club is to support students to adapt E-Learning environment and assist faculties of E-Learning center by bridging students and teaching faculties.

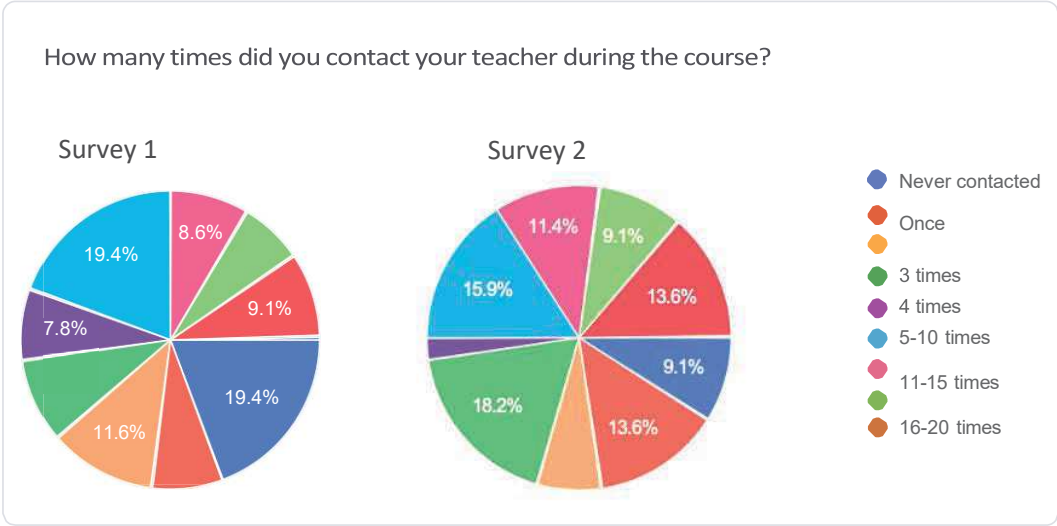


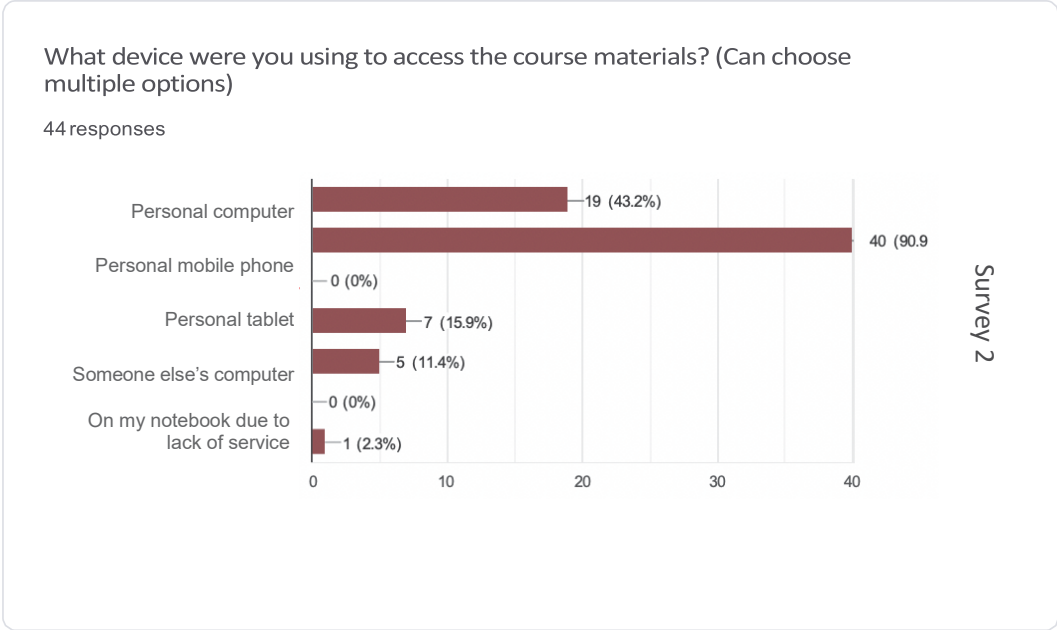
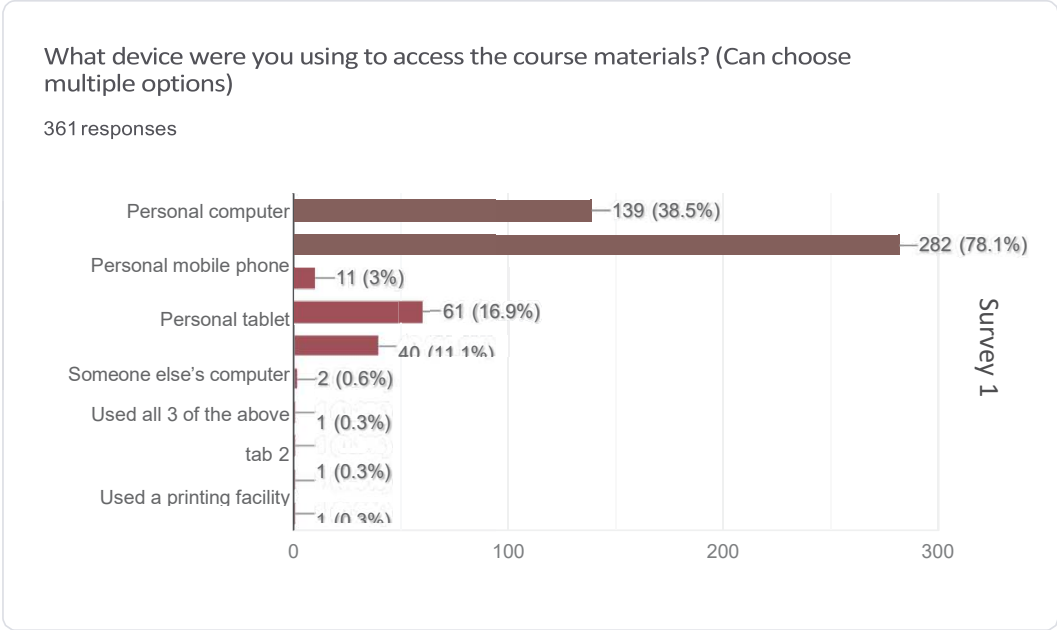
## Feedback survey on e-learning courses

Survey 1 consists of 361 responses      Survey 2 consists of 44 responses

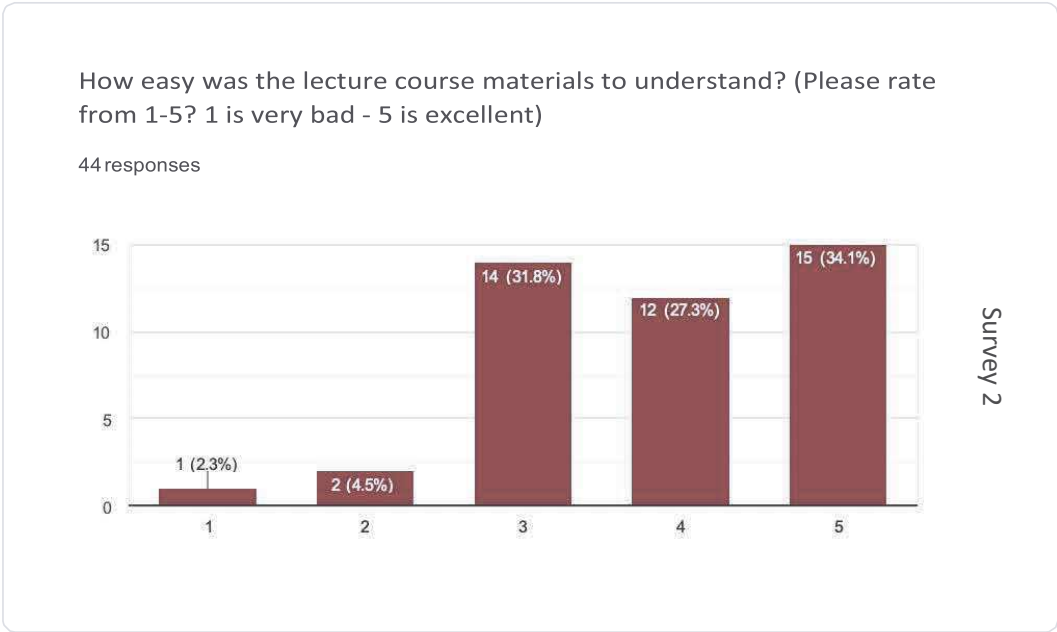
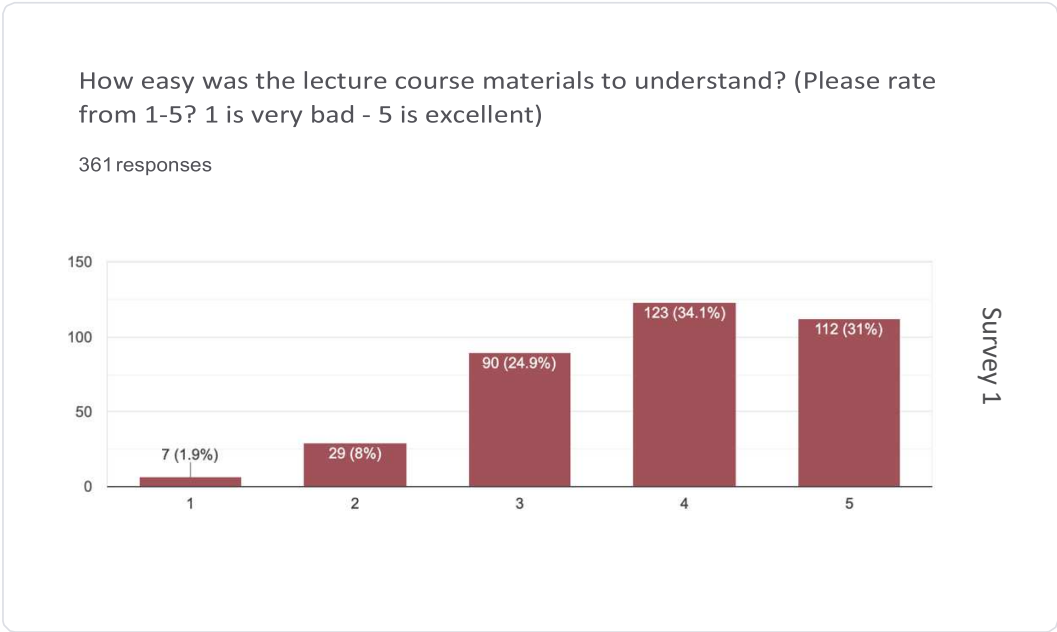


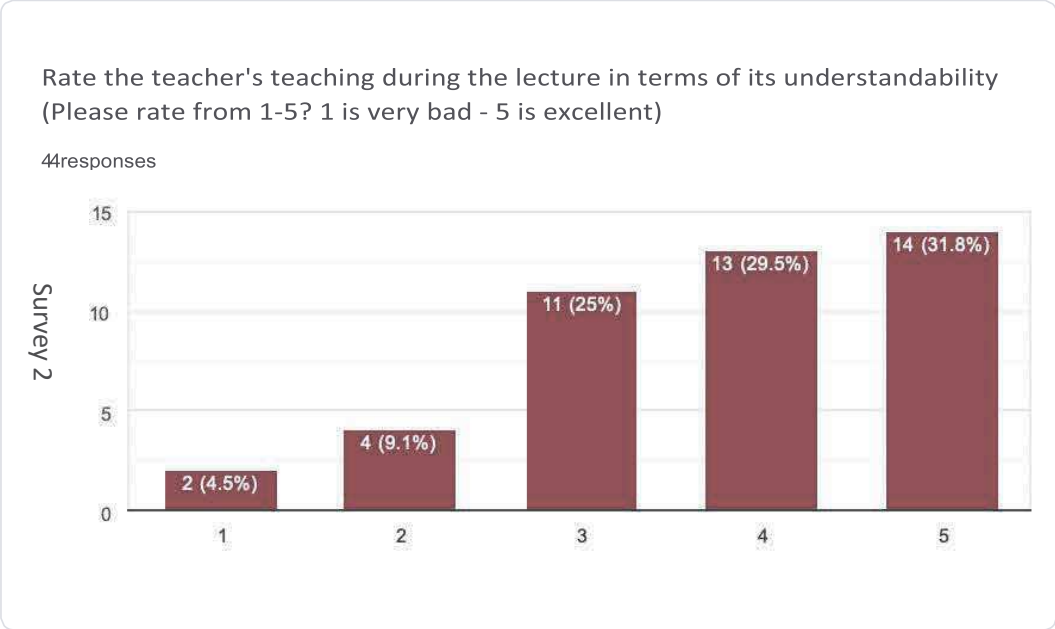
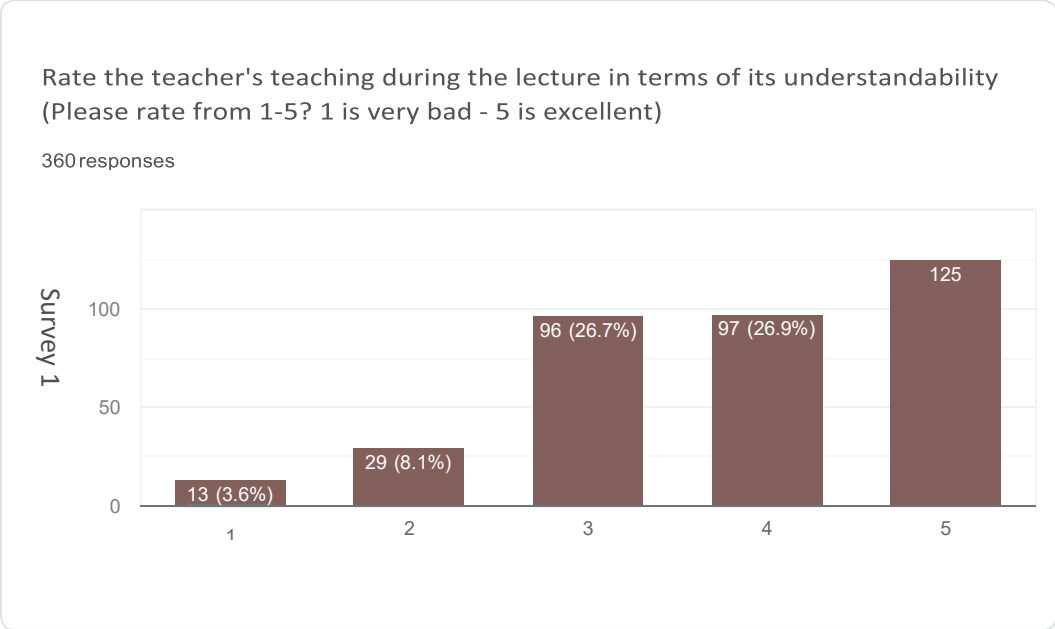
Students connected from all 21 aimags of Mongolia.

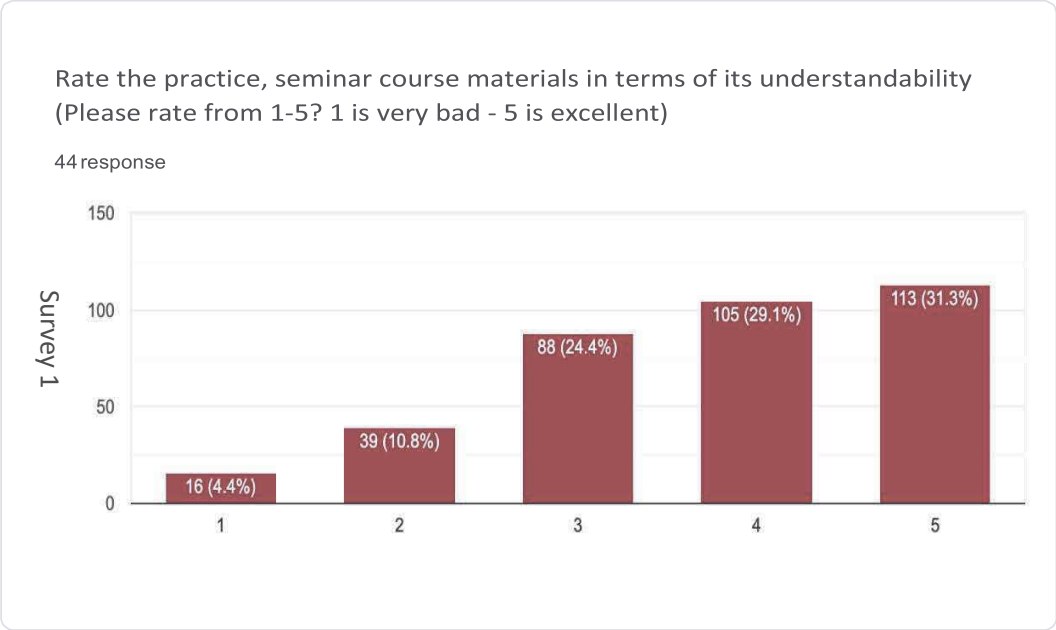


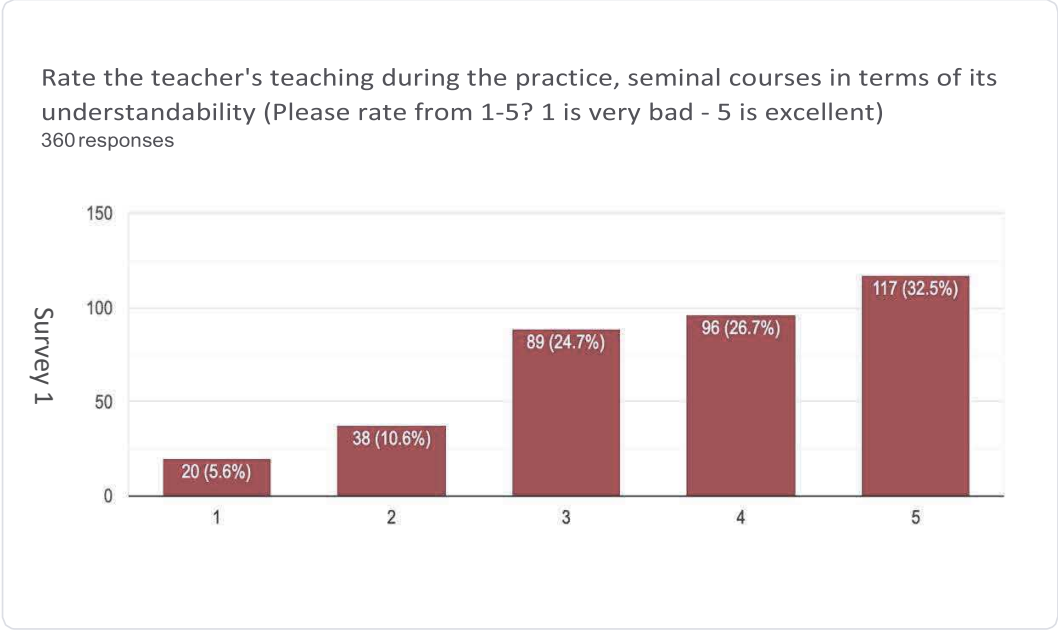


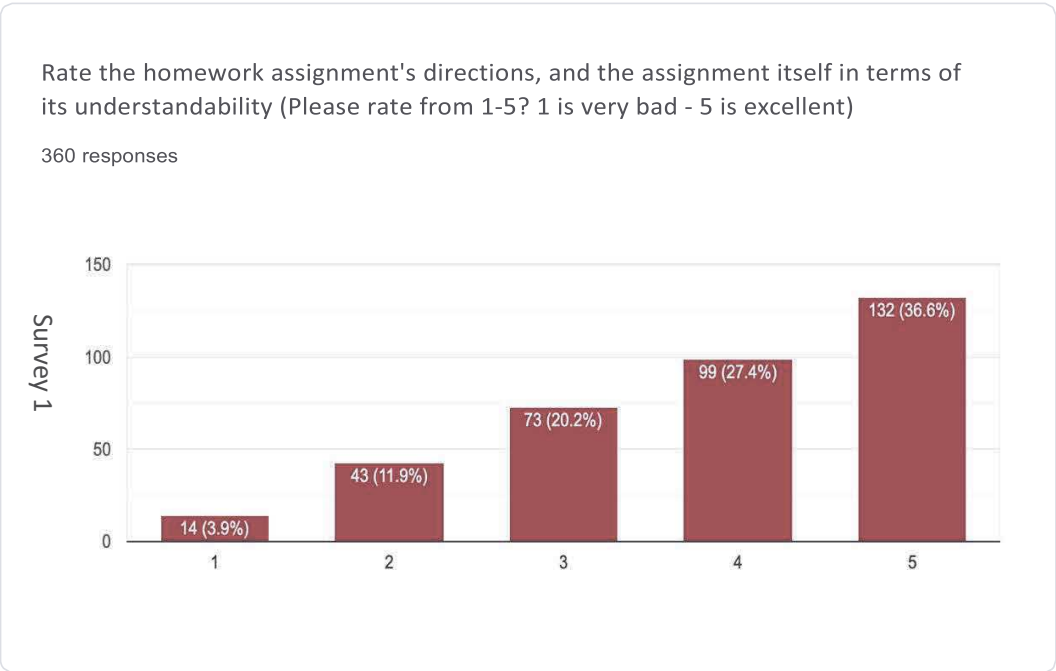
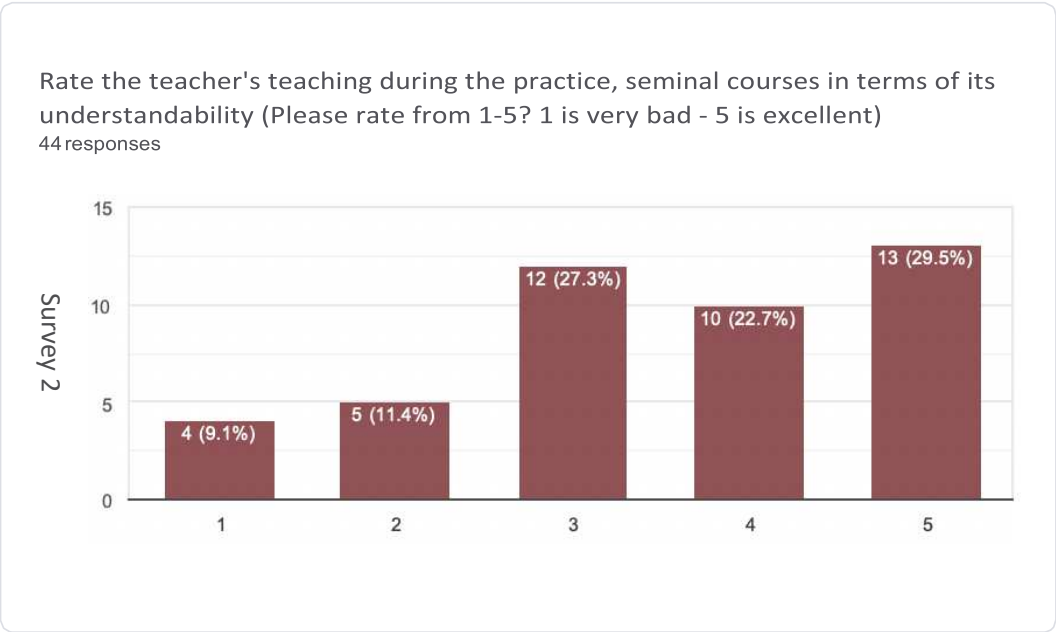






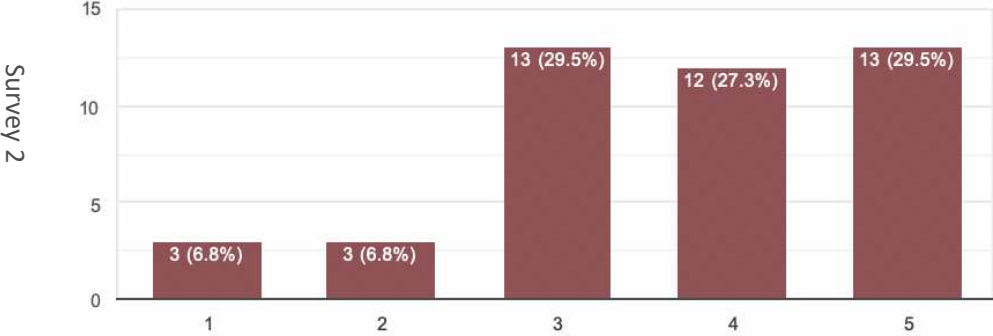


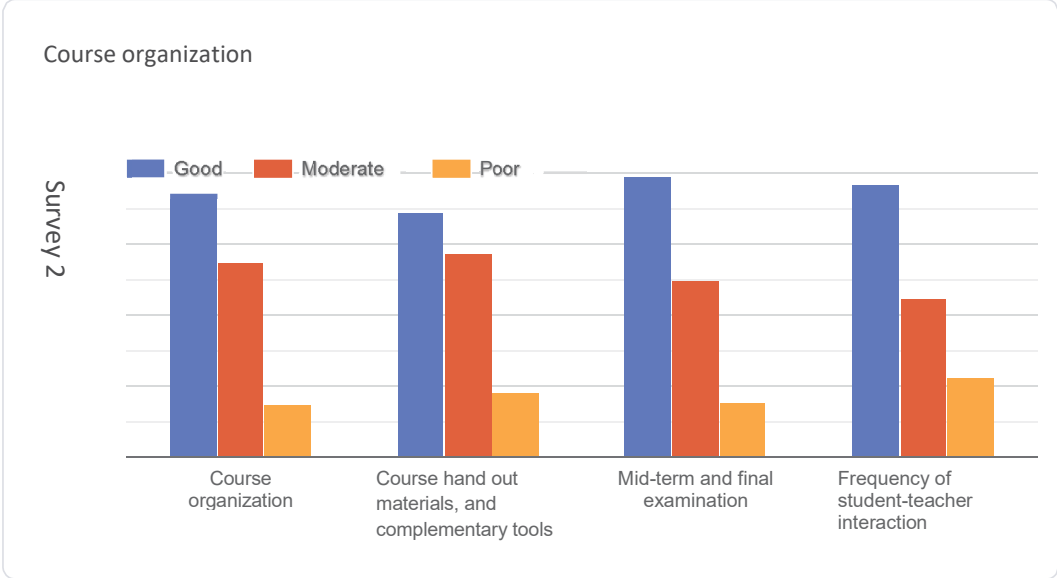
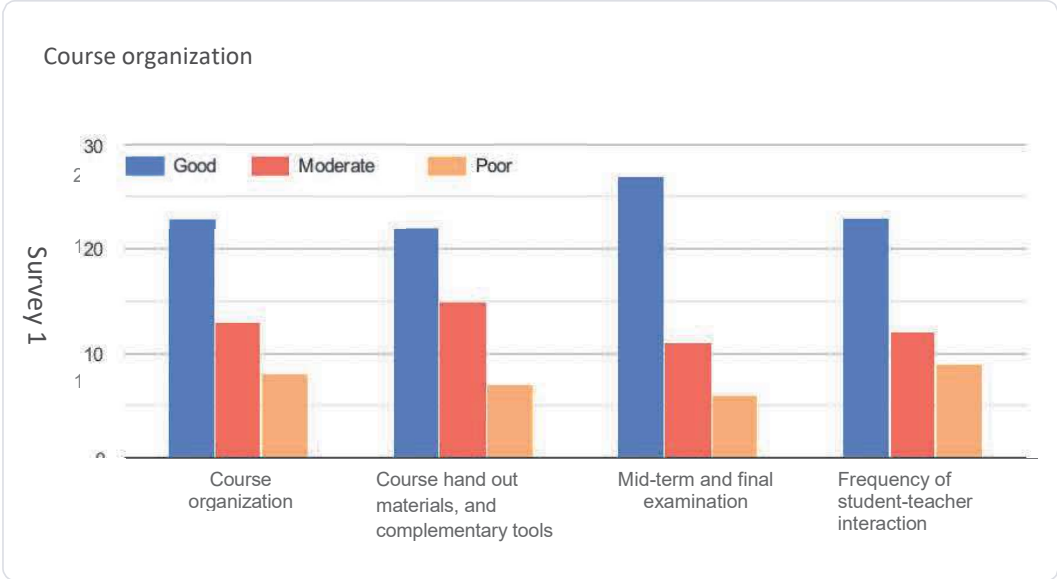


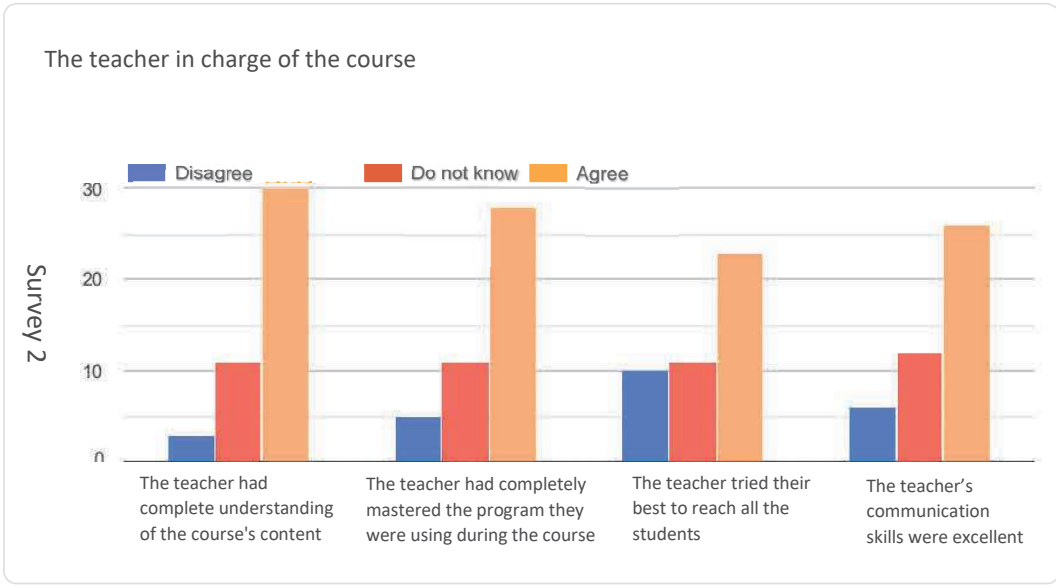
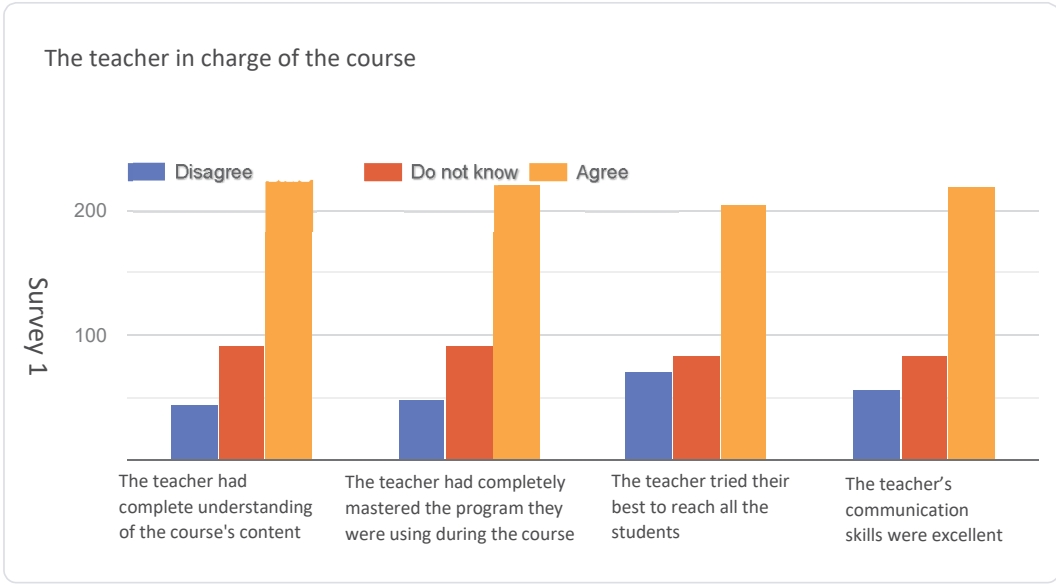


Rate the homework assignment's directions, and the assignment itself in terms of its understandability (Please rate from 1-5? 1 is very bad - 5 is excellent)

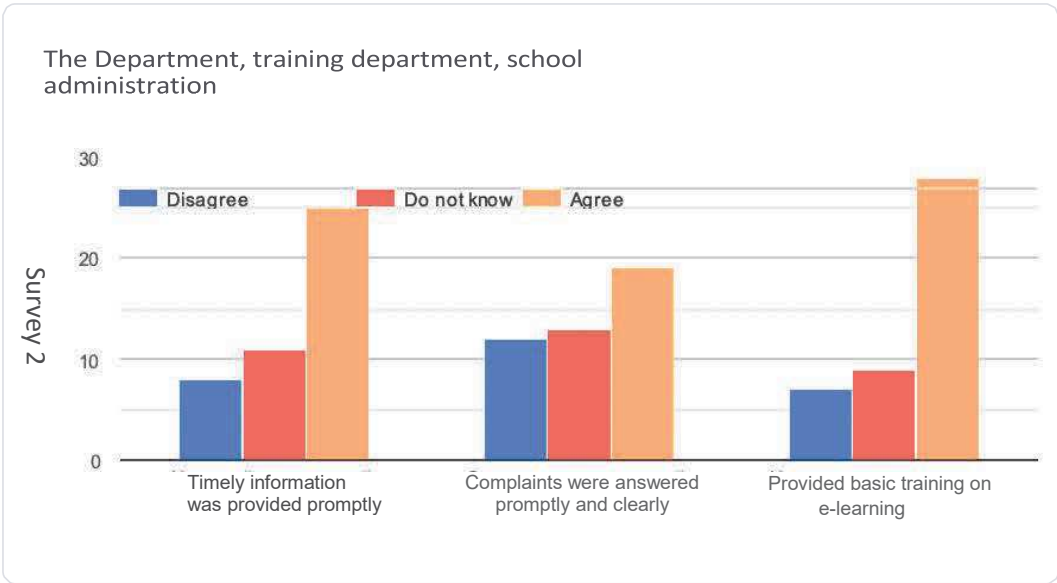
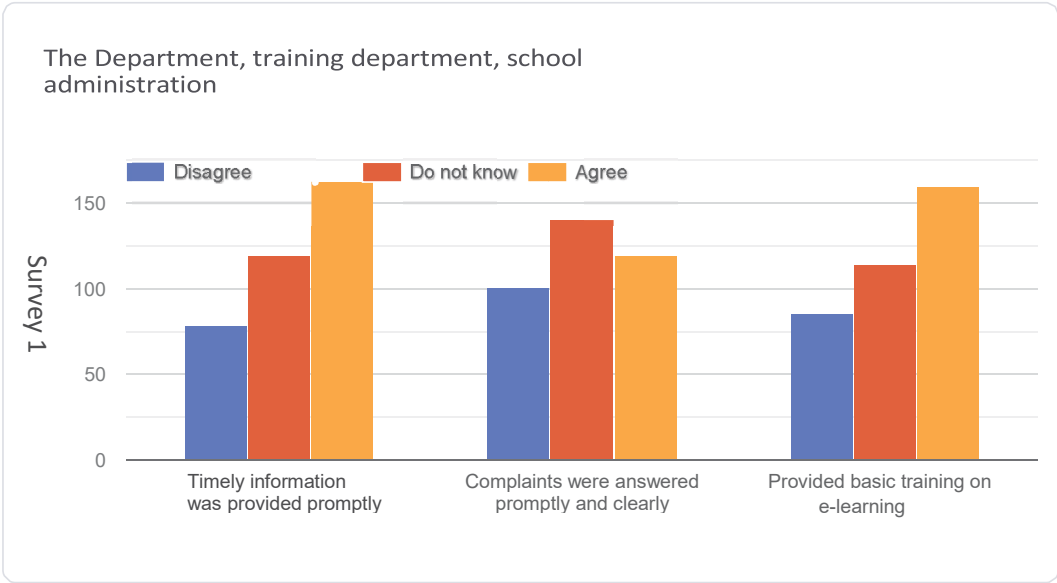
44 responses



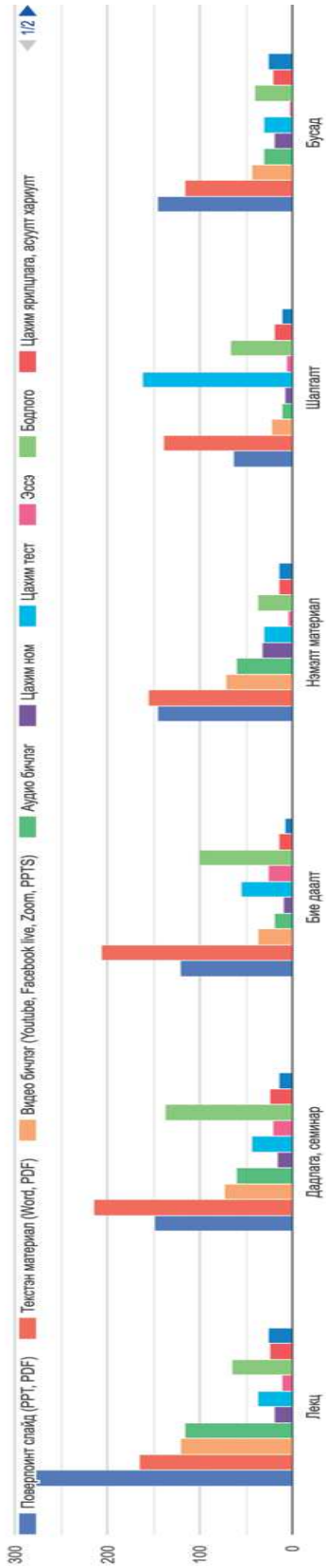


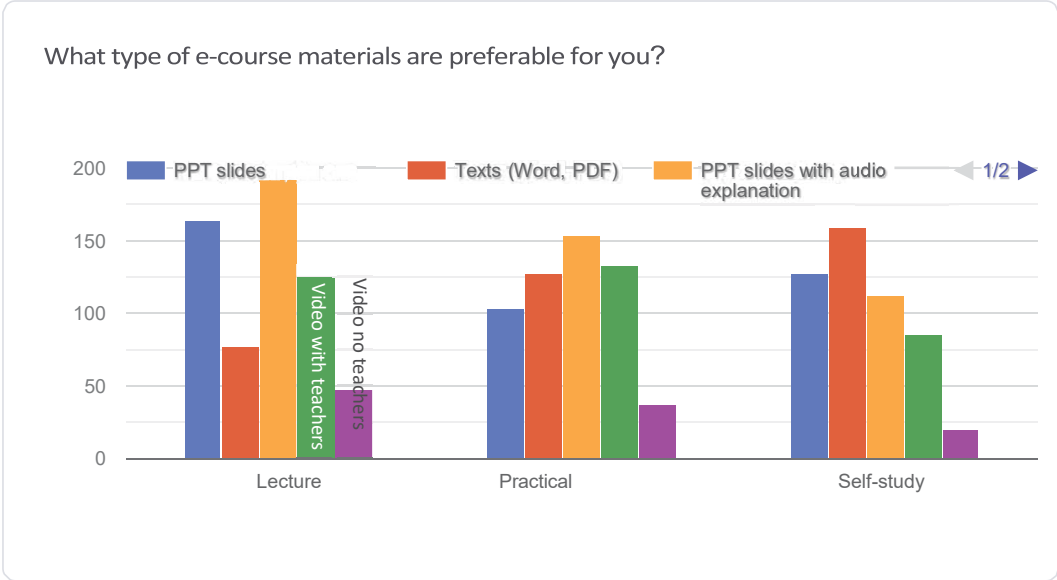


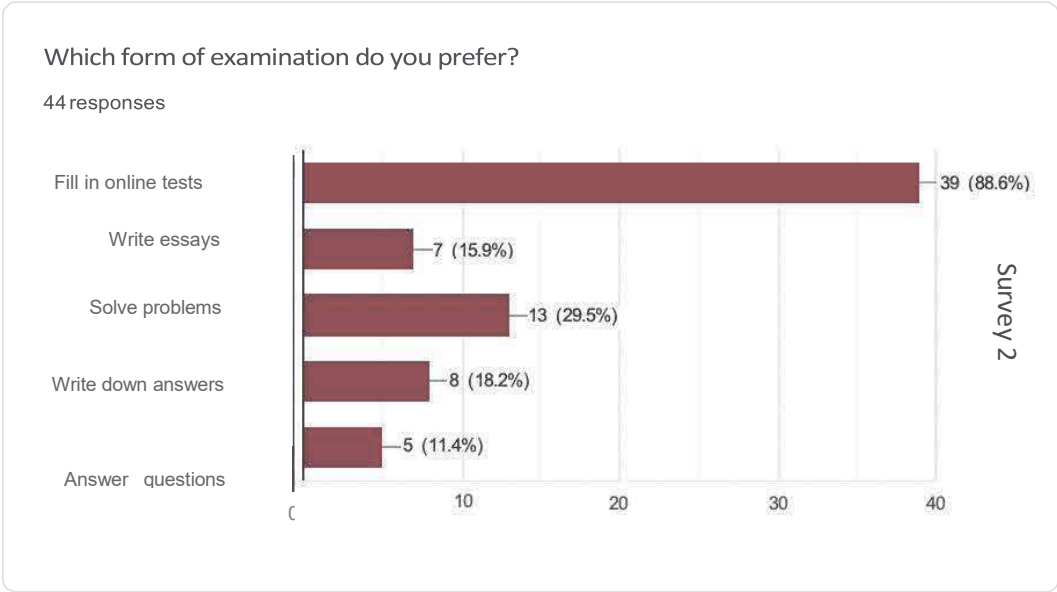
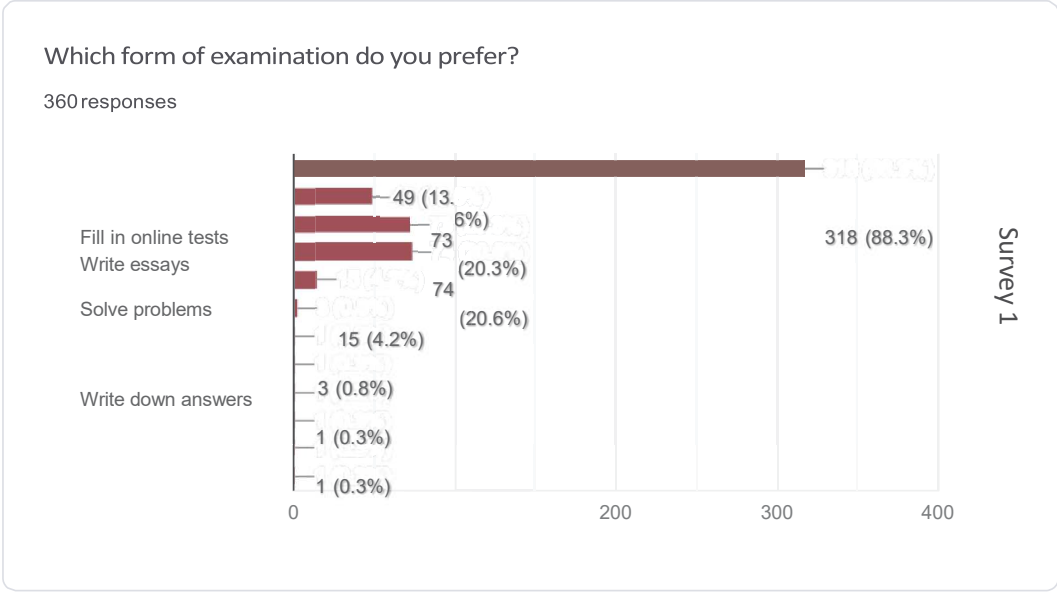


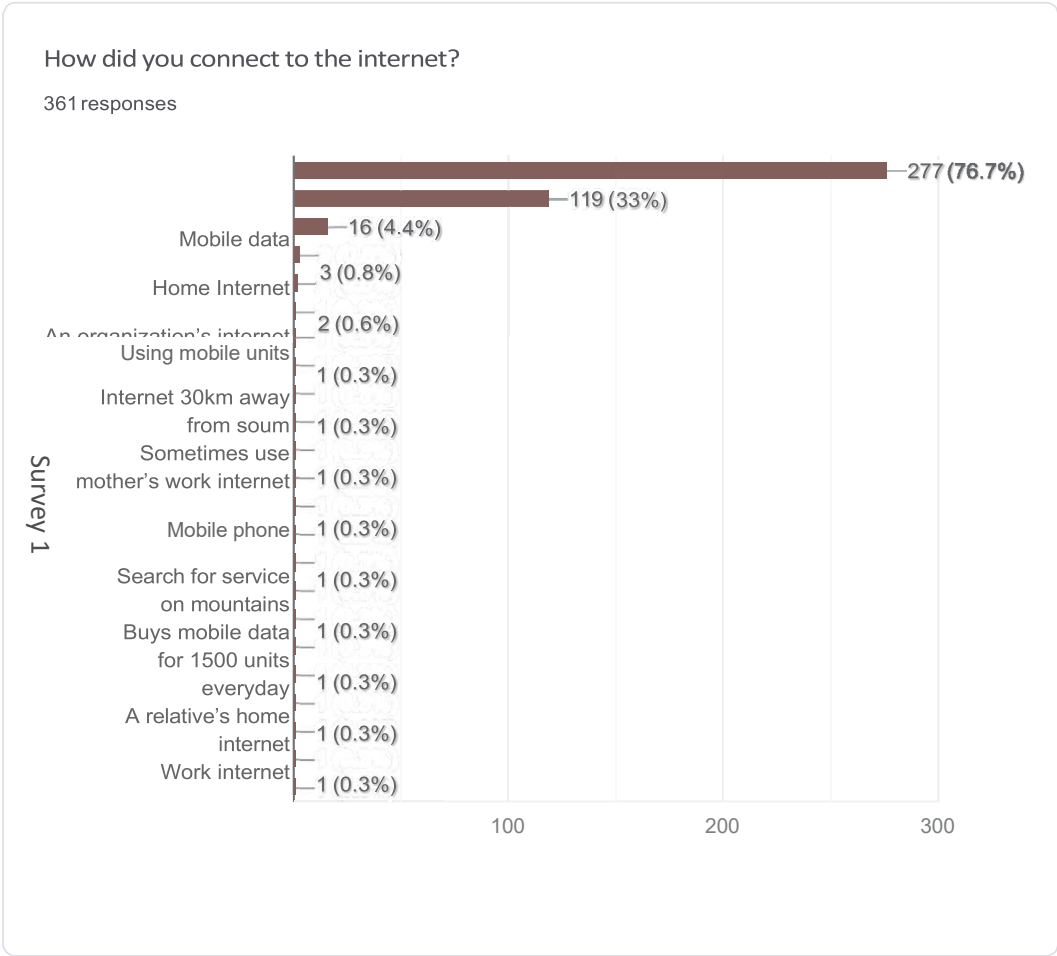


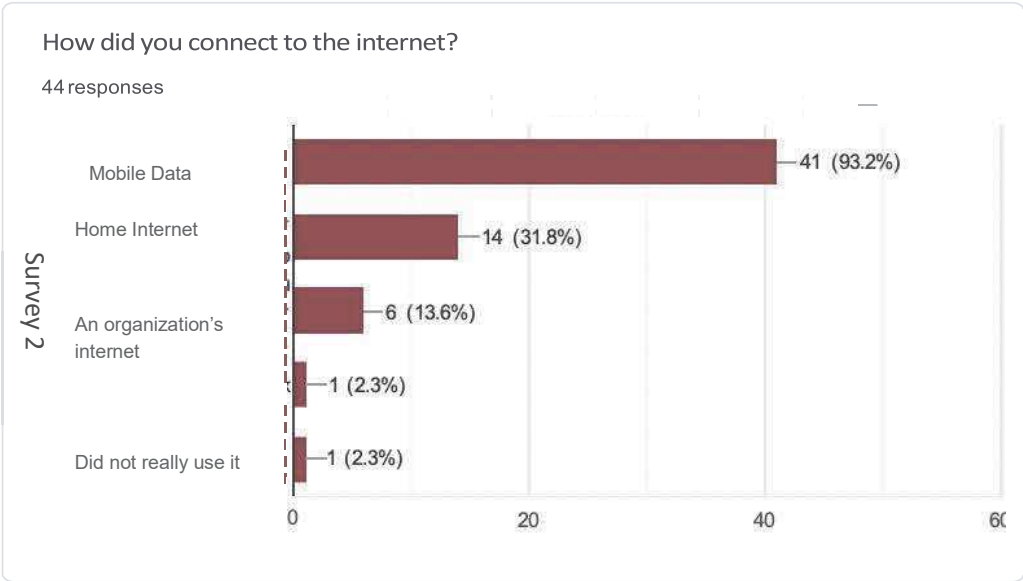
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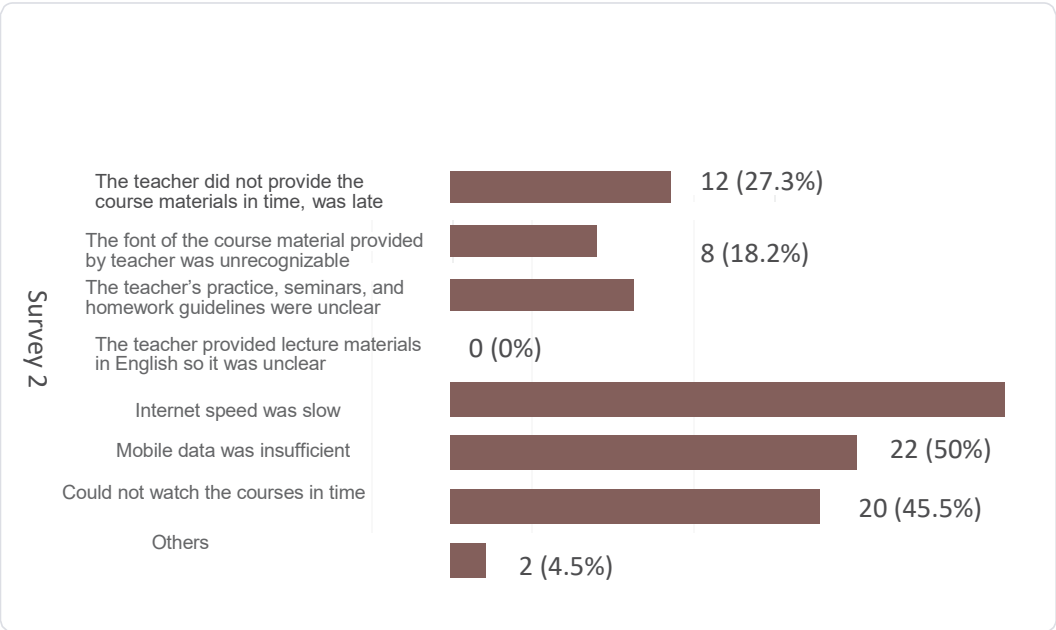
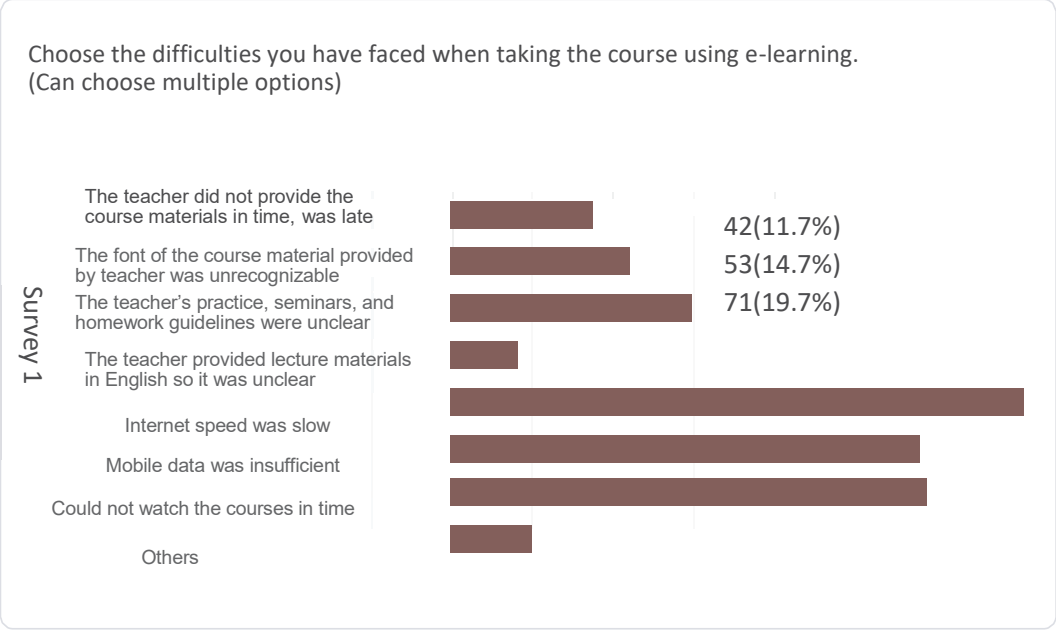


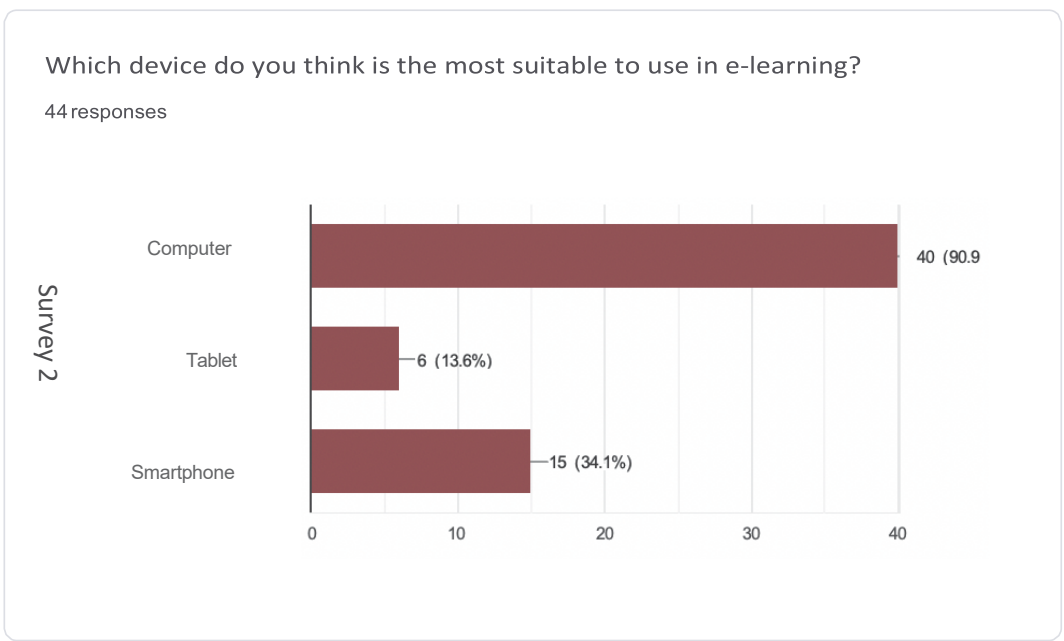
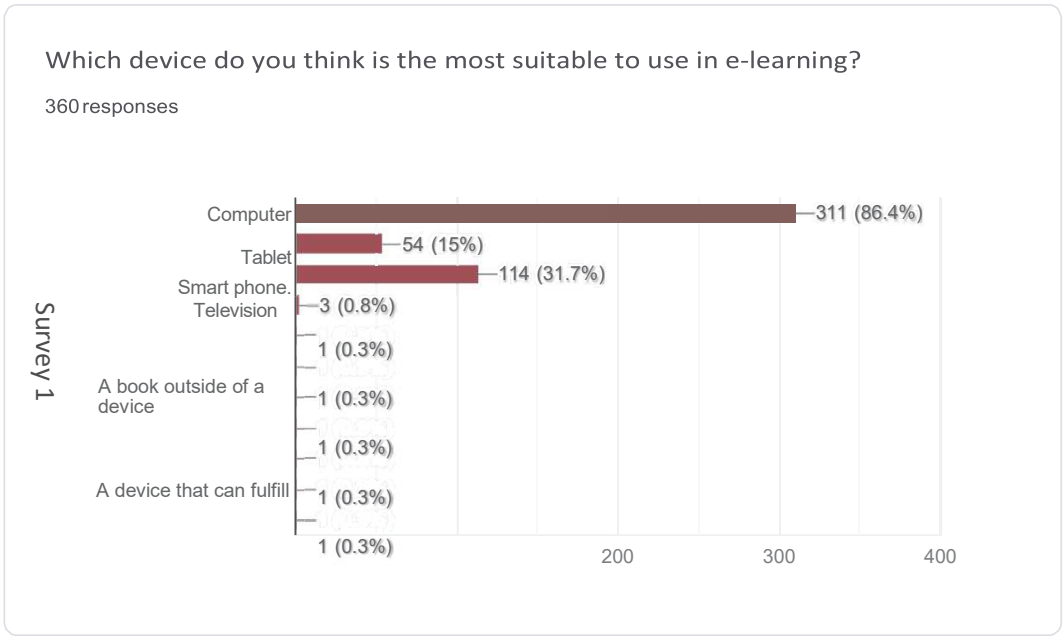






According to the question "How much expenses did you spend per month per course for E-Learning?" students spend average of 50239 tugruks per month on internet servies during the e-learning. Comparing to two periods costs for internet slightly increased.







## Annexes

### Annex 1 The list of participants in training entitled “Open Education and Online Learning” and a sample of the “certificate of attendance”

#	Last Name	First Name	Title	University	Department
Participants for the first training (IT engineers, developers and other respective faculties)					
1	Gansukh	Baasansuren	Ph.D.	NUM	Information technology department (ITE)
2	Nujgar	Purevtsogt	Ph.D.	NUM	Office of Curriculum and Quality Assurance (ITE)
3	Duger	Ulamorgikh	Ph.D.	NUM	School of Arts and Sciences
4	Dashdondog	Erdenebaatar	Ph.D.	NUM	School of Arts and Sciences
5	Tumenjargal	Turtogtokh	Ph.D.	NUM	School of Arts and Sciences
6	Janchiv	Temuujin	MBA	NUM	School of Arts and Sciences
7	Chuluunbor	Batjargal	MBA	MULS	School of Economics and Business (ITE)
8	Zorigbaatar	Sainjargal	MBA	MULS	School of Economics and Business (ITE)
9	Otgondemberel	Amartuvshin	MBA	MULS	School of Economics and Business (ITE)
10	Batbaatar	Battsetseg	MBA	MNUMS	International Cyber educational Department (ITE)
11	Maidar	Iveelbold	MBA	MNUMS	International Cyber educational Department (ITE)
Participants for the second training (Teaching faculties)					
1	Davaasuren	Tumenjargal	Ph.D.	NUM	School of Arts and Sciences
2	Batdorj	Batjargal	Ph.D.	NUM	School of Arts and Sciences
3	Damdindorj	Lkhagvasuren	Ph.D.	NUM	School of Arts and Sciences
4	Urnukhsaikhan	Enerel	Ph.D.	NUM	School of Arts and Sciences
5	Purev	Munkherdene	MBA	NUM	School of Arts and Sciences
6	Janchiv	Temuujin	MBA	NUM	School of Arts and Sciences
7	Dashdondog	Enkhbat	Ph.D.	NUM	School of Arts and Sciences
8	Batzorig	Enkhmunkh	Ph.D.	NUM	School of Arts and Sciences
9	Byambasuren	Nyamdavaa	MBA	NUM	School of Arts and Sciences
10	Khmt	Ali	MBA	NUM	School of Arts and Sciences
11	Purevjal	Ouynchimeg	Ph.D.	NUM	School of Arts and Sciences
12	Janchiv	Khulan	Ph.D.	NUM	School of Arts and Sciences
13	Tumur	Erdenechuluun	Ph.D.	MULS	School of Economics and Business
14	Otgondemberel	Amartuvshin	MBA	MULS	Economic Statistics and Mathematical Modelling
15	Tseren	Tserendavaa	MBA	MULS	School of Economics and Business
16	Batkhuu	Ariunbold	MBA	MULS	School of Economics and Business
17	Gurjav	Enkh-Amgalan	MBA	MULS	School of Economics and Business
18	Tsambaa	Gantulga	MBA	MULS	School of Economics and Business
19	Gonchigsumlaa	Ganzorig	MBA	MULS	School of Economics and Business
20	Nergui	Sugar	Ph.D.	MUST	School of Industrial Technology
21	Ganbold	Solongo	Ph.D.	MUST	School of Industrial Technology
22	Dorjgotov	Dulguun	Ph.D.	MUST	School of Industrial Technology
23	Duger	Ulamorgikh	Ph.D.	NUM	School of Arts and Sciences
24	Dashdondog	Erdenebaatar	Ph.D.	NUM	School of Arts and Sciences

Training Adviser: Prof. Dr. B.Ochirkhuyag, NUM  
Facilitator: Prof.Dr. Gunjee ZORIG, MUST

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WP 2bis 1  
Implementation of a Food Analysis Platform

Secretary: Mr. T.Saya-Erdene, NUM  
Organizer: Prof. Dr. J.Khulan, NUM



## Annex 2 The cover page of the E-courses

Module Details					
Short Title:	Agricultural economics APPROVED				
Full Title:	Agricultural economics				
Module Code:	AGE	NFQ	Advanced	ECTS	6.0
Valid From:	Semester 1, 2019				
Module Coordinator:	Lkhagvadorj.D				
Module Author:	Munguntsetseg.P				
Description:	Agricultural economics, study of the allocation, distribution, and utilization of the resources used, along with the commodities produced, by farming.				

Learning Outcomes:	
<i>On successful completion of this module the learner will be able to</i>	
<ol style="list-style-type: none"> <li>1. The module covers the concept of production economics, the factors of production and also the theory of production economics.</li> <li>2. Students will be able to identify food security concepts and indicators on different system levels that could be used to monitor or evaluate impact</li> <li>3. Ability to recognize, identify and solve problems in the area of agricultural economics.</li> <li>4. Ability to analyze social phenomena, products, processes and methods in agriculture and rural areas.</li> <li>5. Ability to select analytic methods and procedures in finding practical solutions.</li> </ol>	
Pre-requisite learning	
Module Recommendations	
It will be useful for students requiring exposure to the fundamental competences required on agricultural economics analysis issues and concepts in order to manage agricultural discussion.	
	Theory of economics
	Microeconomics
Incompatible Modules	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module. You may not earn additional credit for the same learning and therefore you may not enrol in this module if you have successfully completed any modules in the incompatible list.</i>	
No incompatible modules listed	
Requirements	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.</i>	
No requirements listed	
Co-requisites	
No co-requisites listed listed	
Resources	
<i>Recommended Book Resources</i>	

David Colman, Trevor Yang 1989, *Principle of Agricultural Economics* [ISBN 0 521 33664 3]  
John B. Penson, Oral Capps, Jr.C. Parr Rosson III, Richard T. Woodward, *Introduction to Agricultural Economics* [ISBN 13: 978-1-292-07306-4]

**Module Details**

<b>Short Title:</b>	Business research methods <b>APPROVED</b>
<b>Full Title:</b>	Business research methods

<b>Module Code:</b>	BSM	<b>NFQ Level:</b>	Advanced	<b>ECTS Credits:</b>	5.0
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<b>Valid from:</b>	Semester 1, 2020
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<b>Module Coordinator:</b>	ERDENE BAYAR MASHIR
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<b>Module Author:</b>	ERDENE BAYAR MASHIR, BATJARGAL CHULUUNBOR, ENKH-AMGALAN GURJAV, BUMANJARGALGOMBODORJ
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<b>Description:</b>	Business Research Methods equips students with the skills to develop and undertake a research dissertation. It provides the theoretical and practical preparation for business research. The course covers the necessary skills and
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**Learning Outcomes:**

- On successful completion of this module the learner will be able to*
1. Write a literature review that synthesises and evaluates literature in a specific topic area to justify a research questions
  2. Apply appropriate research design and methods to address a specific research question and acknowledge the ethical implications of the research
  3. Develop a research proposal as the basis for a thesis
  4. Present and defend a research proposal

**Pre-requisite learning**

**Module Recommendations**  
*This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named CIT module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).*

**Incompatible Modules**  
*These are modules which have learning outcomes that are too similar to the learning outcomes of this module. You may not earn additional credit for the same learning and therefore you may not enrol in this module if you have successfully completed any modules in the incompatible list.*

No incompatible modules listed

**Requirements**  
*This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.*

No requirements listed

**Co-requisites**

No co-requisites listed

**Resources**

*Recommended Book Resources*

1. William G. Zikmund, Jon C. Carr, Barry Babin, Mitch Griffin 2013, Business Research Methods [ISBN 9781285401188]
2. Donald Cooper, Pamela Schindler 2013, Business Research Methods [ISBN 9780077774431]
3. Mark Saunders, Philip Lewis, Adrian Thornhill 2009, Research Methods for Business Students [ISBN 9780273716860]

**Module Details**

<b>Short Title:</b>	Advanced CBA
<b>Full Title:</b>	Advanced Cost-Benefit Analysis

<b>Module Code:</b>	AEC706	<b>NFQ Level:</b>	Advanced	<b>ECTS Credits:</b>	3.0
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<b>Valid From:</b>	Semester 1 2019
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<b>Module Coordinator:</b>	Dr. Ganzorig Gonchigsumlaa
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<b>Module Author:</b>	Dr. Ganzorig Gonchigsumlaa, Dr. Purev Byamba, Mr. Batnaran Tsubatshir
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<b>Description:</b>	The theory and methodology of the Cost-Benefit Analysis and its use for the decision making of policies, programmes and projects
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**Learning Outcomes:**

<i>On successful completion of this module the learner will be able to</i>
<ol style="list-style-type: none"> <li>1. Analyze the costs and benefits of policies and projects in terms of both private and social perspectives;</li> <li>2. Make decision whether to implement the policies or projects based on the CBA analysis;</li> <li>3. Calculate and estimate the costs and benefits using primary and secondary data</li> <li>4. Develop skills of team work to identify the policy and project scenarios, and their impacts;</li> <li>5. Distinguish the costs and benefits of any policies and projects;</li> </ol>

**Pre-requisite learning**

**Module Recommendations**  
*The students who choose to take this course should have taken courses listed below, although it is also better if he/she have taken the course of "Introduction to Cost-Benefit Analysis".*

	AAE310	Introduction to Economics,
	AAE310	Microeconomics and

**Incompatible Modules**  
*These are modules which have learning outcomes that are too similar to the learning outcomes of this module. You may not earn additional credit for the same learning and therefore you may not enrol in this module if you have successfully completed any modules in the incompatible list.*

No incompatible modules listed

**Requirements**  
*This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.*

No requirements listed

**Co-requisites**

No co-requisites listed listed

**Resources**

*Recommended Book Resources*

Boardman,A.E., D.H. Greenberg, A.R. Vining,D.L. 2006, 2011, 2018, Cost-Benefit Analysis. Concepts and Practice  
Jenkins, G..P., Ch.Y. Kuo, and A. C. Harberger 2011, Cost-Benefit Analysis for Investment Decisions

**Module Details**

<b>Short Title:</b>	eMarketing
<b>Full Title:</b>	eMarketing

<b>Module Code:</b>	eMRT700	<b>NFQ Level:</b>	Advanced	<b>ECTS Credits:</b>	5.0
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<b>Valid From:</b>	Semester 1, 2020
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<b>Module Coordinator:</b>	Altantuya.D
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<b>Module Author:</b>	Altantuya.D, Otgonjargal.L
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<b>Description:</b>	leading businesses successfully in the online environment in a market, defining the business environments, selecting targeted markets, planning, implementing and monitoring marketing mix will be learnable during this model
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**Learning Outcomes:**

<i>On successful completion of this module the learner will be able to</i>	
1.	Will be learn to lead their own businesses such as to design their own business models, to evaluate their market as well as business environment.
2.	Will be able to develop and implement a marketing strategy related to any business sector
3.	Will be able to identify customers and define factors that influence the process of customer’s purchase
4.	Will be able to plan and manage the marketing mix such as product, price, place and promotion etc.
5.	Will be able to implement and administer the Facebook marketing appropriately as well as effectively

**Pre-requisite learning**

**Module Recommendations**  
*Students are recommended to have a fundamental knowledge of the basic concepts of Marketing that will affect the outcome of learners in certain levels*

	MRT200	Basic marketing
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**Incompatible Modules**

- *It is not possible for learners to obtain the assigned credits of this model without attending classes and passing the module requirements*
- *It is not eligible for learners to gain the assigned credits of this model by taking the similar courses or models as it is not compensated and is a mandatory subject for students at Mongolian University of Life Science*

No incompatible modules listed

**Requirements**  
*Students are obligated to attend and pass the subjects listed in the curriculum of Mongolian University of Life Science at their departments before enrolling in this model*

No requirements listed

**Co-requisites**

No co-requisites listed listed

**Resources**

*Recommended Book Resources*

**Rob Stokes 2018, The essential guide to marketing in a digital world, Red and Yellow, [ISBN: 978-0-620-780558-2]**



Module Details	
Short Title:	Financial management
Full Title:	Financial management
Module Code:	FIN 400
NFQ Level:	Advanced
ECTS Credits:	4
Valid From:	Semester 1, 2020
Module Coordinator:	Bat-Ulzii Jargal
Module Author:	Bat-Ulzii Jargal, Ariunbold Batkhuu, Yadmaa Zandan
Description:	This course examines corporate financial decision making and the valuation of firms.
<b>Learning Outcomes:</b>	
<i>On successful completion of this module the learner will be able to</i>	
<ol style="list-style-type: none"> <li>1. the valuation of stocks and bonds</li> <li>2. the valuation of corporations and capital investment projects</li> <li>3. the analysis of financial planning problems</li> <li>4. students will learn to analyze the relative desirability of strategic investments in real and financial assets</li> <li>5. become proficient in estimating both the required return for the financial instruments used to finance the firm's operations</li> </ol>	
<b>Pre-requisite learning</b>	
<b>Module Recommendations</b>	
<i>This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named CIT module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).</i>	
	Finance
	Financial Accounting
<b>Incompatible Modules</b>	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module. You may not earn additional credit for the same learning and therefore you may not enrol in this module if you have successfully completed any modules in the incompatible list.</i>	
No incompatible modules listed	
<b>Requirements</b>	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.</i>	
No requirements listed	
<b>Co-requisites</b>	
No co-requisites listed listed	
<b>Resources</b>	
Recommended Book Resources	

Eugene F. Brigham Fundamentals of Financial Management ISBN-13: 978-1337395250

**Module Details**

<b>Short Title:</b>	NRE
<b>Full Title:</b>	Natural Resource Economics

<b>Module Code:</b>	NRE	<b>NFQ Level:</b>	Advanced	<b>ECTS Credits:</b>	5.0
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<b>Valid From:</b>	February 1 - 2019
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<b>Module Coordinator:</b>	Tserendavaa Tseren
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<b>Module Author:</b>	Erdenechuluun Tumur, Batjargal Natsagdorj, Amar Uuld , Munguntsetseg Puntsagsuren
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<b>Description:</b>	The course aims to provide students with an understanding of natural resource economics, sustainability and resource scarcity, and resource use patterns, as well as the ability to evaluate natural resources.
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**Learning Outcomes:**

<i>On successful completion of this module the learner will be able to</i>
<ol style="list-style-type: none"> <li>1. Understanding the economics of natural resources</li> <li>2. Sustainability and scarcity of natural resources</li> <li>3. Ethics, economics, and the environment: Concepts of sustainability</li> <li>4. Welfare economics and the environment</li> <li>5. Design and calculate economic models of natural resource use</li> <li>6. Project approach: natural resource assessment</li> </ol>

**Pre-requisite learning**

<b>Module Recommendations</b>	
	Economics
	Microeconomics

**Incompatible Modules**

No incompatible modules listed

**Requirements**

No requirements listed

**Co-requisites**

No co-requisites listed listed

<b>Resources</b>
<i>Recommended Book Resources</i>
Roger Perman 2003, Natural Resource and Environmental Economics, (ISBN 0273655590)

<b>Module Details</b>
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<b>Short Title:</b>	Production and Operation Management
<b>Full Title:</b>	Production and Operation Management

<b>Module Code:</b>	POM301	<b>NFQ Level:</b>	Advanced	<b>ECTS Credits:</b>	5.0
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<b>Valid From:</b>	September 2020
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<b>Module Coordinator:</b>	Munkhbat.J
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<b>Module Author:</b>	Munkhbat.J, Chinzorig.N, Munkhbat.J, Baasansuren.S, Kaderbiyek.D
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<b>Description:</b>	The lesson is set of activities that creates value in the form of goods and services by transforming inputs into outputs.
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<b>Learning Outcomes:</b>
<i>On successful completion of this module the learner will be able to</i>
<ol style="list-style-type: none"> <li>1. What is production and operations management</li> <li>2. How to increases productivity in business organizations?</li> <li>3. Differentiation, low cost, and can be achieved when managers make effective decisions in production management.</li> <li>4. Determine the demand, capacity, and location of the organization's products.</li> <li>5. Understanding of the production process and the creation of new products</li> </ol>

<b>Pre-requisite learning</b>
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<b>Module Recommendations</b> <i>In order to participate in this training, it is necessary to have a basic knowledge of economics.</i>
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	ECO201	Micro, macro economics
	MGT201	Fundamental management

<b>Incompatible Modules</b> <i>This training is not required if you have studied production and operations management</i>
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<b>Requirements</b> <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.</i>
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<b>Resources</b>
<i>Recommended Book Resources</i>

Jay Heizer 2011, Operation Management, [ISBN10: 0-13-511143-9]  
Lee J.Krajewski 2013, Operations Management, [ISBN-10: 0-273-76683-X]

**Module Details**

<b>Short Title:</b>	Quantitative approaches to decision making
<b>Full Title:</b>	Quantitative approaches to decision making

<b>Module Code:</b>	MGT712	<b>NFQ Level:</b>	Advanced	<b>ECTS Credits:</b>	3.0
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<b>Valid From:</b>	September 1 – 2018/19 (September 2018)
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<b>Module Coordinator:</b>	Chinzorig Namsrai
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<b>Module Author:</b>	Munkhbat.J, Chinzorig.N, Munkhbat.J, Baasansuren.S, Kaderbiyek.D
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<b>Description:</b>	A step-by-step study of quantitative decision-making approaches in various fields of management science such as demand forecasting, production planning, inventory planning and controlling, quality control, etc.
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**Learning Outcomes:**

*On successful completion of this module the learner will be able to*

1. To understand the application of quantitative analysis in a real situation
2. To describe the use of modelling in quantitative analysis
3. To use computers and spreadsheet models to perform quantitative analysis
4. To describe possible problems in using quantitative analysis

**Pre-requisite learning**

**Module Recommendations**  
*This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named CIT module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).*

	MGT301	Production and operations management 1
	MGT302	Production and operations management 2

**Incompatible Modules**  
*These are modules which have learning outcomes that are too similar to the learning outcomes of this module. You may not earn additional credit for the same learning and therefore you may not enrol in this module if you have successfully completed any modules in the incompatible list.*

No incompatible modules listed

<b>Requirements</b> <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.</i>
No requirements listed
<b>Co-requisites</b>
No co-requisites listed listed

<b>Resources</b>
<i>Recommended Book Resources</i>
Barry Render, Ralph M.Stair, JR, Micheal E. Hanna 2012, <i>Quantitative analysis of Management</i> , [ISBN-13: 978-0-13-214911-2]

**Module Details**

<b>Short Title:</b>	Riv
<b>Full Title:</b>	RuralInvest

<b>Module Code:</b>		<b>NFQ Level:</b>		<b>ECTS Credits:</b>	5.0
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<b>Valid From:</b>	February 1 - 2018
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<b>Module Coordinator:</b>	Tserendavaa Tseren
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<b>Module Author:</b>	FAO, Investment Centre & RuralInvest club at MULS
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<b>Description:</b>	This course provides the knowledge, skills, and abilities needed to identify the needs of local community groups and household investment projects, and to develop, implement, and evaluate projects.
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<b>Learning Outcomes:</b>
<i>On successful completion of this module the learner will be able to</i>
<ol style="list-style-type: none"> <li>1. Using participatory identification of local investment priorities</li> <li>2. Preparing and use project profiles</li> <li>3. Formulating and analysis detailed projects</li> <li>4. Monitoring and evaluate detailed projects and project profiles</li> </ol>

<b>Pre-requisite learning</b>
<i>Module Recommendations</i>

<b>Incompatible Modules</b>
No incompatible modules listed
<b>Requirements</b>
No requirements listed
<b>Co-requisites</b>
No co-requisites listed listed

<b>Resources</b>
<i>Recommended Book Resources</i>
<b>FAO 2007, RuralInvest Module 1,2,3</b>

<b>Module Details</b>	
<b>Short Title:</b>	Strategic Management
<b>Full Title:</b>	Strategic Management

<b>Module Code:</b>	MGT714	<b>NFQ Level:</b>	Master	<b>ECTS Credits:</b>	6.0
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<b>Valid From:</b>	Semester 1, 2019
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<b>Module Coordinator:</b>	Tsambaa Gantulga
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<b>Module Author:</b>	Tsambaa Gantulga, Gombodorj Ganchimeg, Damdinsuren Myagmarsuren
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<b>Description:</b>	The course emphasizes the value and process of strategic management. The Strategic Management course is designed to explore an organisation’s vision, mission, examine principles, techniques and models of organisational and environmental analysis, discuss the theory and practice of strategy formulation and implementation such as corporate governance and business ethics for the development of effective strategic leadership.
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<b>Learning Outcomes:</b>
<i>On successful completion of this module the learner will be able to</i>
<ol style="list-style-type: none"> <li>1. Understand the strategic decisions that organisations make and have an ability to engage in strategic planning.</li> <li>2. Explain the basic concepts, principles and practices associated with strategy formulation and implementation.</li> <li>3. Integrate and apply knowledge gained in basic courses to the formulation and implementation of strategy from holistic and multi-functional perspectives</li> <li>4. Analyze and evaluate critically real life company situations and develop creative solutions, using a strategic management perspective.</li> <li>5. Analyze external and internal environment of company.</li> </ol>

<b>Pre-requisite learning</b>		
<b>Module Recommendations</b>		
<i>This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. Before learning the Strategic Management course, we recommend that you learn the following courses.</i>		
1	MGT301	Basic Management
2	MGT311	Strategic Management. (Bachelor level)

<b>Incompatible Modules</b> <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module. You may not earn additional credit for the same learning and therefore you may not enrol in this module if you have successfully completed any modules in the incompatible list.</i>
No incompatible modules listed
<b>Requirements</b> <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.</i>
No requirements listed
<b>Co-requisites</b>
No co-requisites listed listed
<b>Resources</b>
<i>Recommended Book Resources</i>
A. Thompson, A.Peteraf, E.Gamble,J.Strickland. Crafting and Executing Strategy, 21th ed. : ISBN 978-1-259-89969-0 B. Fred R David, Forest R David. Strategic Management, 16 th ed. : ISBN 13: 978-1-292-14849-6

**Module Details**

<b>Short Title:</b>	Novel Product Development, Innovation, Marketing
<b>Full Title:</b>	Novel Product Development

<b>Module Code:</b>	BIBM612	<b>NFQ Level:</b>	advanced	<b>ECTS Credits:</b>	3
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<b>Valid From:</b>	Fall term 2020
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<b>Module Coordinator:</b>	Enkhtsetseg E
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<b>Module Author:</b>	Enkhtsetseg E, Altantsetseg Ya, Selenge Ts
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<b>Description:</b>	Learn theoretical basis of food novel product development, innovation, and marketing
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<b>Learning Outcomes:</b>
<i>On successful completion of this module the learner will be able to</i>
<ol style="list-style-type: none"> <li>1. Assign development options and innovation trends for food industries</li> <li>2. Describe specifications, advantages and disadvantages of functional, nano, and organic foods currently available in the local market</li> <li>3. Plan approaches to introduce advanced technology in food industries, estimate economical benefits and formulate marketing program</li> <li>4. Conduct study of consumer demands and local market</li> <li>5. Develop novel food producing technology, transfer and localize it</li> </ol>

<b>Pre-requisite learning</b>
<b>Module Recommendations</b>

<b>Incompatible Modules</b>
No incompatible modules listed
<b>Requirements</b>
No requirements listed
<b>Co-requisites</b>
No co-requisites listed
<b>Resources</b>
<i>Recommended Book Resources</i>
Earle M, Earle R, and Anderson A, 2001, <i>Food Product Development</i> [ISBN: 978-1855734685] Earle M and Earle R, 2007, <i>Case Studies in Food Product Development</i> [ISBN: 978-1845692605] Galanakis Charis, 2016, <i>Innovation Strategies in The Food Industry</i> [ISBN: 978-0128037515] Varzakas T and Tzia C, 2014, <i>Food Engineering Handbook</i> [ISBN: 978-1482261660]

**Module Details**

<b>Short Title:</b>	Food preservation and packaging
<b>Full Title:</b>	Food preservation and packaging

<b>Module Code:</b>		<b>NFQ Level:</b>	Advanced	<b>ECTS Credits:</b>	2
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<b>Valid From:</b>	Fall term 2020
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<b>Module Coordinator:</b>	Solongo Ganbold
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<b>Module Author:</b>	Solongo Ganbold
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<b>Description:</b>	Methods used to extend the shelf life of food, basic principles and features of food packaging materials and technology
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<b>Learning Outcomes:</b>
<i>On successful completion of this module the learner will be able to</i>
<ol style="list-style-type: none"> <li>1. Familiarize various theoretical and practical aspects of food preservation.</li> <li>2. Determine the appropriate storage method to extend the shelf life and to ensure the quality of the food.</li> <li>3. Understand the properties and uses of food packaging materials.</li> <li>4. Select of appropriate packaging materials and effective packaging methods for the specific food product.</li> </ol>



<b>Pre-requisite learning</b>		
<b>Module Recommendations</b> Basic knowledge of chemistry, biochemistry, microbiology. Specific knowledge of food chemistry, food microbiology and food processing is recommended but not required.		
<b>Incompatible Modules</b>		
No incompatible modules listed		
<b>Requirements:</b>		
No requirements listed		
<b>Co-requisites</b>		
No co-requisites listed.		

<b>Resources</b>	
<b>Recommended Book Resources</b>	
<ol style="list-style-type: none"> <li>1. P.J Fellows. Food Processing Technology: principles and practice, 4th Edition, 2016</li> <li>2. M. Shafiur Rahman. Handbook of food preservation, CRC Press, 2007</li> <li>3. Mark, Richard Coles, Kirwan, J. Food and Beverage Packaging Technology, Blackwell Publishing, London, 2011</li> <li>4. Otto G. Piringier., A.L. Baner. Plastic food packaging materials: Barrier functions, mass transport, quality assurance, legislation, 2005</li> </ol>	

**Module Details**

<b>Short Title:</b>	Business project methodology
<b>Full Title:</b>	Business project proposal methodology

<b>Module Code:</b>	614	<b>NFQ Level:</b>	Advanced	<b>ECTS Credits:</b>	3.0
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<b>Valid From:</b>	Semester 2-2021/01
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<b>Module Coordinator:</b>	Dulguun
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<b>Module Author:</b>	Yadamsuren Oyuntungalag
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<b>Description:</b>	Graduate student shall acquire extensive knowledge such as main structure and content of the business project, methodology on project research, economic effectiveness estimation of the project and methodology on making appraisal
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<b>Learning Outcomes:</b>	
<i>On successful completion of this module the learner will be able to</i>	
<ol style="list-style-type: none"> <li>1. Environmental analysis of Food Sector</li> <li>2. Market research and analysis</li> <li>3. Technical feasibility</li> <li>4. Financial analysis parameters</li> </ol>	

<b>Pre-requisite learning</b>		
<b>Module Recommendations</b>		
Graduate student shall acquire extensive knowledge such as main structure and content of the business project, methodology on project research, economic effectiveness estimation of the project and methodology on making appraisal		
		<b>Non</b>
<b>Incompatible Modules</b>		
No incompatible modules listed		
<b>Requirements</b>		
No requirements listed		
<b>Co-requisites</b>		
No co-requisites listed listed		
<b>Resources</b>		
<i>Recommended Book Resources</i>		
<ol style="list-style-type: none"> <li>1. PROJECT MANAGEMENT: A Systems Approach to Planning, Scheduling, and Controlling, HAROLD KERZNER, ISBN 978-0-470-27870-3, 2009</li> <li>2. Philip Kotler, Kevin Lane Keller, <i>Marketing management</i>. Pearson Education. 2006</li> <li>3. Ya.Oyuntungalag, <i>How to Write a Business plan, Handbook</i>, 2012</li> </ol>		

## Annex 3 The temporary regulations for e-learning at the National University of Mongolia UNIVERSITY OF MONGOLIA

### DIRECTOR'S ORDER

Ulaanbaatar city

Approval of temporary regulations for e-learning at the National University of Mongolia

Article 10.1 of the Law on Education, Article 12.1.2 of the Law on Higher Education, Article 4.3.8.4 of the Charter of the National University of Mongolia, Objectives of the Strategic Plan of the National University of Mongolia 2.3.12, Minutes of the Administrative Council of the National University of Mongolia dated April 14, 2020 Based on the ORDER:

1. To approve the “Temporary regulation of e-learning of the National University of Mongolia” in the appendix and to follow it from April 20, 2020.
2. Organize e-learning at the National University of Mongolia using the OpenEdx e-learning platform.
3. In connection with the approval of the regulation, the Deputy Director for Education and Student Affairs /B.Ochirkhuyag/ should make a work plan, determine the amount of relevant funding and include it in the annual budget, and specify the amount of expenditures in the 2020 budget of the National University of Mongolia. The Deputy Director for Finance and Planning /N.Burmaa/ shall be responsible for preparing and discussing.
4. The Head of the Admissions and Registration Division /M. Itgel/, the Head of the Information Technology Department /A. Baatarbileg/, the Head of the Program and Quality Assurance Division /N. Purevtsogt/, the Head of the Student and Alumni Division are responsible for delivering, promoting and implementing this regulation to the relevant units. /M. Erdenechimeg/, staff and branch school principals /D. Zayabaatar, N. Baatarbileg, Ch. Enkhbayar, J. Erdenebulgan, S. Battulga, D. Altankhuyag, T. Enkh-Amgalan /.

5. Instruct the Deputy Director for Education and Student Affairs /B.Ochirkhuyag/ to monitor the implementation and results of the regulation.

#### TEMPORARY PROCEDURE FOR ELECTRONIC TRAINING OF NUM

##### ONE. General grounds

1.1. The purpose of this regulation is to conduct e-learning at the National University of Mongolia within the framework of the Law on Education of Mongolia, the Law on Higher Education, the Law on Copyright and Related Rights, the NUM Intellectual Property Policy and the internal rules and regulations of the NUM. to regulate the relationship that arises.

1.2. The main purpose of the e-learning program is to provide educational services to students who plan to study electives in the curriculum of the National University of Mongolia, regardless of time or place.

1.3. The activities of conducting e-learning courses other than those offered by the National University of Mongolia will be regulated separately.

1.4. The e-learning process has two main stages: transferring the course content to electronic form and conducting the learning process in electronic form.

##### TWO. Terms of the procedure

2.1. Course content - All the materials a teacher needs to prepare for a course. These include the following types and forms.

Number	Type	Form
A	Course content materials	Lecture and seminar materials and manuals
B	Independent study materials	Basic and additional books, textbooks and electronic resources that students need to read and study in connection with the course
C	Exam materials	Progress and quarterly examinations (questions, tests), assignments, homework assignment database and methodology for its evaluation

2.2. Online course - A course designed to enable students to study independently using information technology, regardless of time, place or distance. E-learning can be in the form of full e-learning or mixed learning. In either case, the lecture content is required to be fully electronic.

2.3. Full online course - A course designed to organize all types and forms of course materials in electronic form.

2.4. Blended course - A course that has not been converted to an electronic format other than a set of course materials, or is designed to be taught in the classroom.

2.5. Communication in the learning process - The relationship between the teacher and the learners in the learning process, which includes the following types and forms.

Number	Type	Form
A	Give lesson content	Lecture, seminar
B	Give advice	Give advice, discussion
C	Evaluate	assessment and quarterly exams, assignments, and homework assignments

2.6. (online learning) - The process of delivering e-learning to students electronically. E-learning can be full or mixed.

2.7. (full online learning) - Full online learning based communication education process

2.8. (Blended learning) - A learning activity that requires some form of communication to take place in the classroom.

2.9. (Flipped classroom) - A form of mixed e-learning that delivers lectures electronically and conducts reinforcement seminars and labs in the classroom.

2.10. (Instructional design) - A detailed instruction on how to organize all types of interactions in the learning process, depending on the type and nature of the e-learning.

2.11. Content Requirements - Requirements to determine whether the syllabus fully covers the content.

2.12. Technology requirements - Requirements for e-learning structure and its video recording.

### THREE. To process e-learning

3.1. To process E-learning activities

3.1.1. E-learning can be developed by a full-time or part-time teacher at the National University of Mongolia, or by a team led by a full-time or part-time teacher.

3.1.2. Proposals for new e-learning or modifications may be made by the faculty, department, or program unit, and the proposal shall be decided by the department meeting, and if supported, the decision shall be submitted to the school board.

3.1.3 Based on the decision supported by the department meeting, the composition shall be finalized by the administrative board of the school.

- 3.1.4 Proposals for e-learning will be submitted in September and March of each year and will be discussed and decided by the school board within one month.
- 3.1.5 E-learning will be developed only in accordance with the curriculum of the National University of Mongolia.
- 3.1.6 Laboratory forms will not be transferred to e-learning.
- 3.1.7 The e-learning developer shall enter into an agreement with the principal of the component school in accordance with the procedure form (Form 1).
- 3.1.8 E-learning shall be developed in accordance with the content and technological requirements (Annex 1 to the Regulation).
- 3.1.9 During the e-learning process, the e-learning unit will provide technological advice and the department will monitor the content.
- 3.1.10. Once the e-learning course is fully posted on the e-learning platform, the application for the e-learning course will be submitted to the component school in accordance with the contract performance form (Form 2).
- 3.1.11. The e-learning unit will issue a conclusion on compliance with the technological requirements. If the technological standard is passed based on the conclusion of the meeting of the relevant department on the content requirements, the administrative board of the component school shall conclude the agreement.
- 3.1.12. The e-learning course, which fully meets the content and technology requirements, will be handed over to the e-learning unit. The contract performance agreement (Form 2) will be reviewed and the contract with the component school will be terminated.
- 3.1.13. If one of the technological and content requirements is not met, as well as other requirements specified in the contract, the decision on how to take the course shall be made by the school administration.
- 3.1.14. All intellectual property rights related to e-learning are owned by the National University of Mongolia.
- 3.1.15. Additional explanations and enrichments can be made without changing the main content of the lesson.
- 3.1.16. E-learning may be modified due to changes in the curriculum, in which case the contracting parties will agree.
- 3.2. Rewards for e-lesson developer teachers
- 3.2.1. Teachers who develop and submit e-learning will receive a cash bonus.

3.2.2. Incentives for teachers are calculated based on the following standard hours, depending on the number of hours of the course and the type and format of the course materials transferred to electronic form.

Types of course materials	Note	1 w/d/time				16w/d	Credit hour
		Prepare	Write	Break	Total		
Lecture	2 sets of credit hours	4	3	2	9	144	3
Seminar	1 sets of credit hours	2	3	1	6	96	2
Examination fund	Full time lessons	3	0	0	3	48	1

3.2.3. The value of one set of hours will be equal to the value of overtime training at the National University of Mongolia.

#### FOUR. Organize e-learning

##### 4.1. E-learning organization

4.1.1. E-learning will be conducted on a quarterly basis based on department recommendations.

4.1.2. One lesson can be taught in one semester in both classroom and electronic formats.

4.1.3. E-learning will be carried out using the e-learning platform of the National University of Mongolia and following the instructions in the "E-learning Guidelines".

4.1.4. At the beginning of the full e-learning course, at least 2 semesters will be organized in the form of a round-the-clock training.

4.1.5. Registration, selection, and student assessment for e-learning courses are governed by the NUM Curriculum.

##### 4.2. Calculate the performance of an e-learning teacher

4.2.1. A set of training hours will be calculated depending on which type of e-learning is delivered to the e-learning teacher.

4.2.2. If there are 1-25 students, the number of students per unit, if there are 26 or more students, the number of hours per student with 25 students is considered as the standard amount and multiplied by the coefficient corresponding to a certain interval.

4.2.3. In the case of e-learning with 1-25 students, the performance of the teacher training credit hour is calculated as follows. Total time spent by the teacher (in minutes):

$$T=N*(t_1*x_1+t_2+n_2+t_3*n_3)$$

Type	Explanation	Form	Үсгэн тэмдэглэгээ	Хугацаа /minutes/
Give advice	For 2 credit hours lecture sets	Give advice, discussion	$t_1$	12
Evaluate <sup>1</sup>	For 1 credit hour seminar set	Assignment for each topic	$t_2$	3
	Full e-lesson	On-going and quarterly written exams / homework	$t_3$	16

$n_1, \dots, n_3$  are the frequency of recurrences in a given quarter of the activity and are defined in the e-Learning Guidelines. N is the total number of students selected. Assuming that one hour of training is 50 minutes and the 48-hour training activity is 1 set of hours, the performance of the teacher's set of training hours will be as follows<sup>2,3</sup>.

$$CH = T / 50/48$$

4.2.4. For a teacher selected by more than 25 students, after calculating the standard amount of hours for 25 students, according to the methodology specified in 4.2.3 of the regulation, multiply it by the following coefficient depending on the number of students and determine the performance of the set of hours<sup>4</sup>.

Number of Students	26-40	41-70	71-100	101-160
Multiply coefficient	1,1	1,2	1,3	1,4

### 4.3. E-learning quality assessment

4.3.1. The unit in charge of learning technology will monitor the progress of e-learning activities and the teacher's performance data will be submitted to the relevant department from time to time.

4.3.2. Integrated analysis of e-learning performance and student quality at the end of each term

<sup>1</sup> Understands how much time is spent on reviewing (correcting) assignments, tests, and assignments with the teacher's participation, and the e-learning platform does not have time for automatic grading, such as e-tests and exams.

<sup>2,3</sup> Credit hours Full-time e-learning for 25 students (according to the e-learning guidelines) for 16 weeks of weekly counseling, review of written seminar assignments, 1 written course and 1 quarterly written test, and 1 homework test. The following set of time calculations is shown as an example. N = 25, the frequency of counseling is  $n_1 = 16$ , the frequency of checking assignments is  $n_2 = 16$ , and the total



number of frequencies for examinations and homework is  $n_3 = 3$ , so the teacher's time is  $T = 7200$  minutes. Converting this to a set time,  $CH = 7200/50/48 = 3$ . (For this example, if  $N = 1$ , or the number of hours per unit of learner is  $CH = 288/50/48 = 0.12$ .)

<sup>3</sup>The mixed or only 2credit hours lectures were converted to electronic format, and the 1credit hour seminar showed the performance of a set of teacher training hours taught to 25 students for a total of 3credit hours in the classroom. The e-learning guidelines define  $n_1 = 16$  as the 16-week lecture course, and the frequency of other activities is  $n_2, n_3 = 0$ . Therefore, the total time spent on the teacher's e-lecture will be  $T = 4800$  minutes, and if converted to a set of hours,  $CH = 4800/50/48 = 2$ . Since the set of seminar lessons in the teacher's hall is 1 hour, the total performance of the teacher's training work will be LGM. (If  $N = 1$ , the number of hours per lecture will be:  $CH = 192/50/48 = 0.08$ .)

<sup>4</sup>Assume that 50 students have completed a full e-learning course since the standard set of hours for  $N = 25$  is 3 Credit hours 2, the total performance of the teacher's set of set hours is  $3 * 1,2 = 3,6$  Credit hours. If 50 students are enrolled in a mixed e-learning course, the standard set of  $N = 25$  generation lectures will be 2credit hours 3, so the lecture performance will be  $2 * 1.2 = 2.4$ . Assuming that there are two groups in the workshop, the total performance will be:  $2.4 + 1 + 1 = 4.4$ CH.

Make a unit in charge and submit relevant suggestions and recommendations to the relevant department.

4.3.3 The department will evaluate the teacher's performance based on the information and suggestions related to the e-learning activities.

4.3.4. Based on the decision of the department, the component school will confirm the performance of the teacher's training hours and make the relevant decision.

4.3.5. Based on the results of research and analysis on e-learning performance, the e-learning unit will develop a proposal to update the relevant regulations and technological requirements and submit it to the NUM administration for discussion.

#### FIVE. Rights and responsibilities of e-learning participants

5.1. Rights and responsibilities of the component school:

5.1.1. The department has the right to discuss and decide on the development of e-learning and to conclude a joint agreement with the developer.

5.1.2. Has the right to monitor the performance of teachers who have contracted to develop e-learning, and to make decisions on acceptance, extension, and termination.

5.1.3. Responsible for financing the costs associated with developing e-learning.

5.1.4. Responsible for creating an environment and conditions for e-learning.

5.1.5. Responsible for evaluating and evaluating the implementation of e-learning;

5.1.6. Responsible for studying the experience of e-learning in foreign and domestic universities and organizations, establishing relationships, and implementing joint programs and projects.

5.2. Rights and responsibilities of the department:

5.2.1. You have the right to propose to transfer your course to electronic format.

5.2.2. The department is responsible for developing a plan for the transfer of subjects to electronic form.

5.2.3. It is the responsibility of the school administration to make a decision on e-learning.

5.2.4. Responsible for reviewing and reviewing e-learning content;

5.2.5. It is responsible for submitting proposals for e-learning to the unit in charge of training technology.

5.2.6. Responsible for monitoring, evaluating and evaluating the implementation of e-learning.

5.3. Rights and responsibilities of e-learning teacher:

5.3.1. You have the right to use the NUM electronic recording studio.

5.3.2. The e-learning team is responsible for contracting with the school.

5.3.3. Responsible for developing e-learning according to content and technology requirements

5.3.4. Responsible for e-learning development

5.4. Responsibilities of the e-learning unit:

5.4.1. To organize quarterly trainings for teachers and students on the development of e-learning and e-learning methods, and to prepare instructions, manuals and recommendations;

5.4.2. Provide technological advice to e-learning teachers;

5.4.3. Evaluate whether the e-learning meets the technological requirements and submit it to the component school;

5.4.4. Record data and facts related to e-learning;

5.4.5. Archive the original version of the e-learning;

5.5. Duties of the information technology unit:

5.5.1. Prepare and update e-learning platforms to ensure stable and reliable operation;

5.6. Rights and responsibilities of the program and quality assurance unit:

5.6.1. Depending on the curriculum and specifics of the NUM, students have the right to propose the transfer of certain courses to electronic form.

5.6.2. It is responsible for analyzing the results of e-learning performance and submitting relevant suggestions and recommendations to the relevant department and unit in charge of e-learning.

5.7. Roles of the unit in charge of training technology and registration:

5.7.1. Provide and organize e-learning under general management;

5.7.2. Monitor the implementation of e-learning and whether the training is conducted in accordance with the “E-learning Guidelines”;

5.8. Role of the Innovation and Technology Transfer Center:

5.8.1. To fully register the e-learning course that fully meets the requirements of the e-learning development contract and register it as the intellectual property of the National University of Mongolia;

5.9. Rights and responsibilities of the Finance and Planning Department:

5.9.1. To fully meet the requirements of the e-learning contract and record the successful e-learning in the financial statements with the intangible assets of the National University of Mongolia;

5.10. The role of e-learning teacher:

5.10.1. Attend e-learning technology training;

5.10.2. Follow the “e-learning guidelines” and organize according to the schedule;

5.10.3. Regularly communicate with students and monitor and evaluate the learning process;

5.10.4. Take initiatives to increase and encourage student participation;

5.10.5. Take initiative to improve e-learning content;

5.10.6. Do not use e-learning for purposes other than NUM training;

5.11. Student rights and responsibilities:

5.11.1. Students have the right to choose e-learning in the same way as classroom training.

5.11.2. Must be familiar with e-learning guidelines and course information for students;

5.11.3. Responsible for active participation in e-learning;

5.11.4. The student has other rights and responsibilities specified in the charter of the National University of Mongolia.

## SIX. Others

6.1. Any third party disputes related to the content of the e-learning course will be reported to the unit in charge of the program, and the unit will take feedback from the relevant department.

6.2. Disputes related to intellectual property infringements shall be resolved in accordance with intellectual property rights and related laws and regulations.

6.3. The e-learning package fee is the same as the corresponding set of classroom fees.

6.4. If there are any issues related to the organization of e-learning that are not covered in this regulation, the NUM Training Procedure will be followed.

6.5. If there are any issues not regulated by this regulation and the Training Procedure, the Administrative Council shall consider and resolve them.

## Annex to the regulation 1

### Technology requirements for e-learning

#### 1. General requirements for e-learning

1.1. The content of the e-learning course should fully cover the content of the curriculum.

1.2. E-learning is free of intellectual property and copyright infringement.

1.3. Each e-learning video will feature the NUM logo, the caption "@NUM, all rights reserved" and a memorandum on intellectual property protection.

1.4. Depending on the type of e-learning, an e-learning guide has been prepared that clearly explains how to use the e-learning

is. The "e-learning guidelines" describe the requirements, technological conditions, teaching, and how to achieve the learning outcomes of the course.

didactic solutions that include a sequence and methodology for assessing, communicating, and analyzing the learning process and outcomes.

#### 2. Requirements for video structure / content:

2.1. The content of a topic may consist of several videos, each of which contains the same concept, and the length of a single video shall not exceed 15 minutes.

2.2. At the end of each video of the lecture, 1-2 tests with 2-3 options each are included to confirm how the content is understood.

2.3. Each lecture topic includes information on independent study materials.

2.4. Assignments are included behind each workshop topic.

2.5. The content of the topic should be simple and easy to understand.

3. Requirements for video recordings

3.1. The background color and the background color of the display should be light, without a variety of shapes and text.

3.2. The text of the presentation is dark.

3.3. The video resolution shall be 720P or less and the aspect ratio shall be 16: 9

3.4. The number of frames per second of video recording is 30fps.

3.5. Depending on the content of the video, the amount of data to be written per second is 6-10Mbps.

3.6. The video codec shall be H.264 and the audio codec shall be AAC.

3.7. The video should be in MP3 format.

3.8. Recorded with low ambient noise.

3.9. The volume of the speech should not be too low or too loud.

Form 1

NUM E-COURSE DEVELOPMENT AGREEMENT

Date \_\_\_\_\_

Ulaanbaatar

This agreement is signed on behalf of the client by the National University of Mongolia

\_\_\_\_\_

\_\_\_\_\_ school principal \_\_\_\_\_ and  
\_\_\_\_\_ department teacher \_\_\_\_\_ (hereinafter referred to as

“parties”) on behalf of the contractor agreed to implement, finance and evaluate the results of the project (hereinafter referred to as “the project”) to transfer the \_\_\_\_\_ course of the National University of Mongolia to electronic format.

### 1. General

1.1. The project will run from \_\_\_\_\_, 20\_ to \_\_\_\_\_, 20\_.

1.2. A brief description of the project (Annex 1 to the Contract), a work plan (Annex 2 to the Contract), and the results to be achieved through the implementation of the project (Annex 3 to the Agreement) are attached to this contract.

### 2. Job rewards

2.1. Depending on the number of hours of contract training and the type of e-learning, the amount of bonuses to be paid to the contractor shall be determined in accordance with Article 3.2 of the “NUM e-learning procedure” and the value of one set of hours shall be calculated according to the corresponding year.

2.2. The total bonus for e-learning is \_\_\_\_\_  
\_\_\_\_\_ MNT.

2.3. The Contractor shall transfer \_\_\_ percent of the total bonus to the Contractor within 2 weeks after the conclusion of the Contract and shall transfer the balance percentage after the execution of the Contract of Completion.

### 3. Rights and obligations of the customer

- 3.1. Obligated to finance the project on time in accordance with the agreement;
  - 3.2. At the end of the fiscal year, the project is responsible for disclosing the long-term balance of the project and planning it for next year's budget;
  - 3.3. Has the right to monitor the implementation of the project and take necessary measures;
  - 3.4. Has the right to evaluate the results of the project, make decisions on extension and cancellation;
4. Contractor's rights and obligations
- 4.1. It is responsible for completing the project within the timeframe specified in the contract and generating results without compromising on quantity or quality from the project proposal and the expected results specified in this contract.
  - 4.2. Responsible for e-learning development.
  - 4.3. It is responsible for developing e-learning in accordance with the requirements of the "Temporary e-learning regulations of the National University of Mongolia".
  - 4.4. It is responsible for handing over the e-learning developed within the project to the e-learning center.
  - 4.5. You have the right to use the electronic recording studio of the National University of Mongolia to develop e-learning.
  - 4.6. You have the right to get technological advice from the e-learning unit during the e-learning process.
  - 4.7. After preparing the e-learning course, the e-learning unit is responsible for obtaining a conclusion from the relevant department on whether it meets the technological requirements and the content requirements.
  - 4.8. Responsible for hosting e-learning on e-learning platforms.
  - 4.9. Responsible for correcting technological errors made during the development of e-learning.

## 5. Others

- 5.1. The agreement shall enter into force on the date of its conclusion.
- 5.2. All intellectual property rights for e-learning developed under this agreement are owned by the National University of Mongolia.
- 5.3. In case of incomplete completion of the project, failure to complete the project proposal or expected results specified in the contract, or failure of the project to continue due to the fault of the



supervisor or contractor, the component school shall submit a proposal to the Monitoring Unit to terminate the project early and reimburse the contractor.

5.4. Changes in the terms and conditions of the contract shall be mutually agreed upon by both parties.

5.5. After handing over the e-learning course, additional explanations and enrichment can be made without changing the main content of the course.

5.6. Due to changes in the curriculum, e-learning may be modified by the contracting parties.

This agreement shall be made in triplicate and one copy shall be retained by each of the financial institutions and the contracting parties.

Representing the customer

/ Signature /

..... / name /

school principal

Representing the Contractor

/ Signature /

..... / name /

(project leader)

/ Signature /

..... / name /

(project members)

Brief introduction of the project

Project name and registration number	
Full name, registration number, position, address, telephone and e-mail address of the leader	
Contractor names, registration number, position, address, telephone and e-mail address	
Brief introduction of the course, grounds for transfer to electronic format / up to 300 words /	
E-learning format: complete / mixed / write clearly which types of course materials will be transferred to e-learning /	

Total bonus / MNT /	

Attachment to the contract

Schedule of project activities

No	Certain phases of work	Time (by calendar date)

Attachment to the contract 3

No	Project Performance Guarantee	Quantity	Time (preliminary) *
1			
2			

Representing the customer

/ Signature /

..... / name /

school principal

Representing the Contractor

/ Signature /

..... / name /

(project leader)

/ Signature /

..... / name /

(project members)

CONTRACT PERFORMANCE ACT

Date

Name of the contract	
Contract number	

Order number related to the contract	
Customer organization	NUM, ..... school
Contractor	..... Department Lecturer
Time to start work under the contract	
Completion date of the contract	
Total contract financing	
Of which: Down payment	

Date of completion of work by the Contractor:	
---	--

Conclusion on contract implementation / by each relevant unit /

Conclusion	Signature and date
Conclusion on whether the technology meets the requirements	
Evaluation of content requirements	
Opinion of the school board on whether the other requirements of the contract have been met	

Contract performance decision:

To pay the remaining bonus of ..... MNT for fulfilling the contractual obligations. Due to non-fulfillment of contractual obligations ..... ..... decided.
--

Relevant e-learning materials received by e-learning center:	Signature, date
--	-----------------

The contract was concluded

Representing the customer

/ Signature /

..... / name /

school principal

Representing the Contractor

/ Signature /

..... / name /

(project leader)

## Annex 4: Moodle users guide for student and teachers



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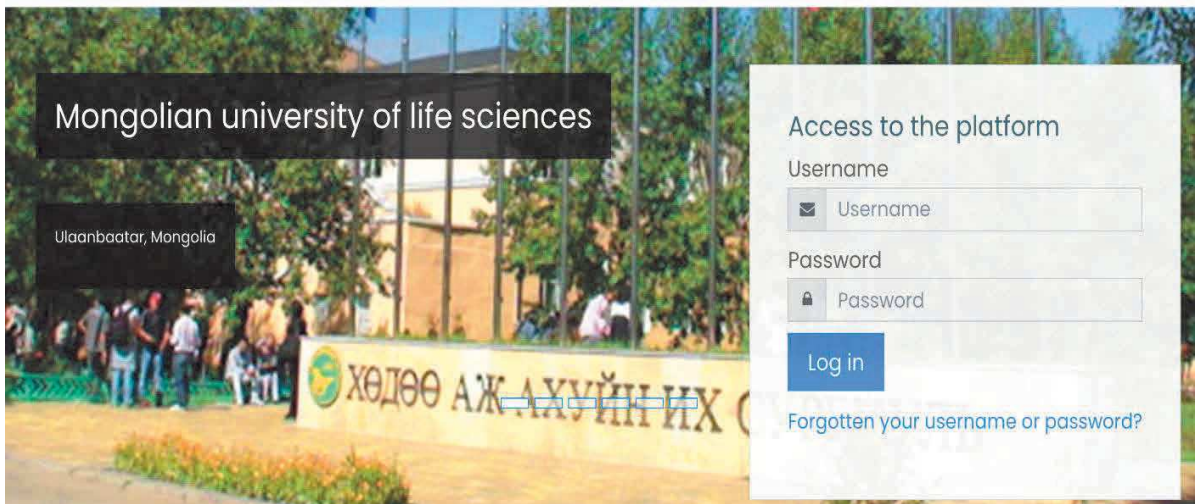
### ГАРЫН АВЛАГА Оюутанд

Цахим сургалтын хүрээнд онлайнд зайнаас видео болон файлаар хичээл үзэх зааварчилгаа

Алхам 1 <https://inrae.mn/moodle5593/> оюутан цахим хаягаар нэвтэрч орох

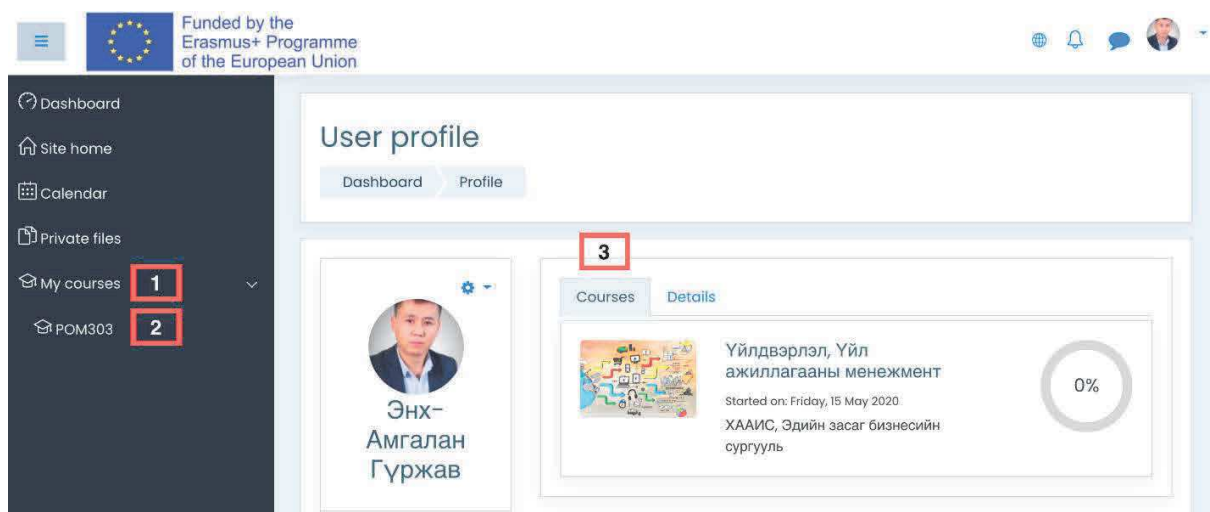


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of the European Union



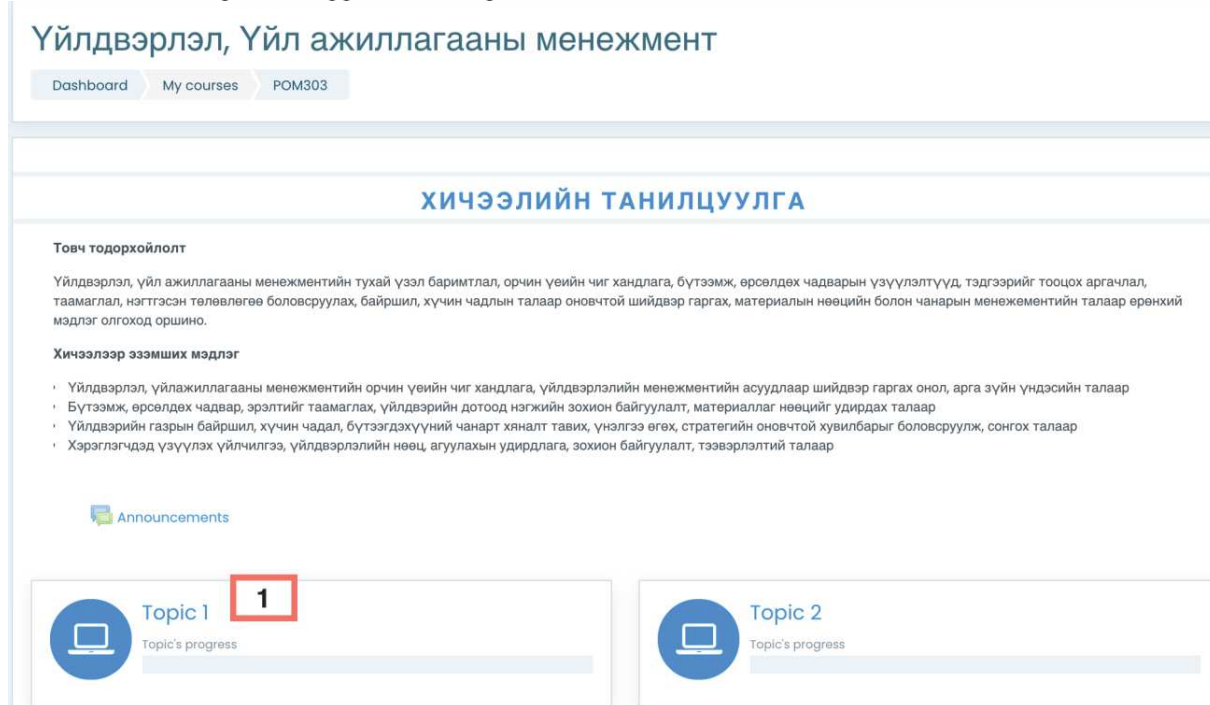
Алхам 2

1. Оюутан таны сонгосон хичээлүүд
2. Хичээлүүд нь хичээлийн кодоор харагдах
3. Хичээлүүд нь нэрээр харагдах



Алхам 3

1. Энэ талбар хичээлүүд болно Topic-1 эхний хичээл гэх мэт.



Алхам 4

1. Хичээлд нэвтэрт орох талбар

Your progress

- Үйлдвэрлэл, Үйл ажиллагааны тухай ерөнхий ойлголт **Дарах видео хичээлийг үзэх**
- Мэдлэг шалгах асуултууд **Хичээлийн асуултууд үзэх**
- Илтгэх хуудас бичих дасгал **Дасгал ажил**

1. Таны дарга, таны компанийн үйлвэрлэлийн менежер Тамир танд дараах агуулгатай албан бичиг илгээжээ. Тэрээр марктенг, санхүүгийн албаны ажилтнууд төлөвлөлтийн асуудлаар хамтарч хурал зохион байгуулах санал тавиад, та ямар бодолтой байгаа талаар хариу өгнө үү гэжээ. Доор албан бичгийн товч агууллагыг сийрүүлэв: "Марктенгийн хэлтсийн ажилтан Гэрэл, санхүүгийн хэлтсийн дарга Дорж нар сүүлийн үед хурал хийж дээрхи асуудлаар хэлэлцэх санал тавьсан. Гэвч би нэг их яарахгүй байна. Учир нь би тэднээр манай хэлтэс юу хийх, яаж ажиллах талаар заалгаад баймааргүй байна. Тэд манай хэлтэс яаж ажиллаж байгаа, бидэнд ямар асуудал тулгараад байгааг мэдэхгүй. Тэд биднийг жинхэнэ ажиллах ёсоороо ажиллаж чадахгүй байна гэж дүгнэж байгааг би сайн мэдэж байна. Тэд өөрсдийгөө хийх ажлыг л хийхгүй бидэнд ийм асуудал тавиад яаруулаад байгааг би ойлгохгүй юм." Та марктенгийн болон санхүүгийн албатай хамтарч төлөвлөлтийн асуудлаар хурал зохион байгуулах асуудлын ач тусын талаар өөрийнхөө саналыг тусгасан илтгэх хуудас бичнэ үү.

2. Жижиг компаний дунд шатны удирдагч гэж өөрийгөө төсөөлөөрэй. Компанийн гүйцэтгэх захирал компьютерийн шинэ сүлжээ худалдан авахаар төлөвлөж, энэ талаар таны саналыг авахыг хүсчээ. Одоо ашиглаж байгаа сүлжээ нь хэвийн ажиллаж байгаа боловч шинэ нь файлдай ажиллах, текстүүдийг редакторлах, мэдээллийн баазтай ажиллах боломжоор илүү байгаагаараа давуутай. Нэг хуудсанд багтаан илтгэх хуудас бичнэ үү. Тухайн асуудлаар шийдвэр гаргахад харгалзах гол хүчин зүйлсийг, хувилбар бүрийн давуу талуудыг тусгаарай.

Jump to...

NEXT SECTION [Topic 2](#) >

### Алхам 5

- Энэ талбар нь хичээлийн үндсэн талбар юм.

**Тоглуулах**

**Хичээлийг татаж авах**

Лекц №1: Үйлдвэрлэл үйл ажиллагааны менежмент

Нэвсрэл/Менюг: Хэрэв Ан Азын Их Сургууль, Дунд Саяаг Бизнесийн Сургууль, Менежментийн тусламжийн Бааз | И-мэйл: [info@business.edu](mailto:info@business.edu)

1.Book\_Chinzo.pdf 20 May 2020, 4:08 PM

Submission status

Submission status	This assignment does not require you to submit anything online
Grading status	Not graded
Last modified	-
Submission comments	<a href="#">Comments (1)</a>

**Сэтгэгдэл үлдээх**

**Өмнөх талбарт шилжих** [Announcements](#)  Jump to... **Өөрийн талбарыг Сонгох** **Дараагийн талбарт шилжих** [Мэдлэг шалгах асуултууд](#)

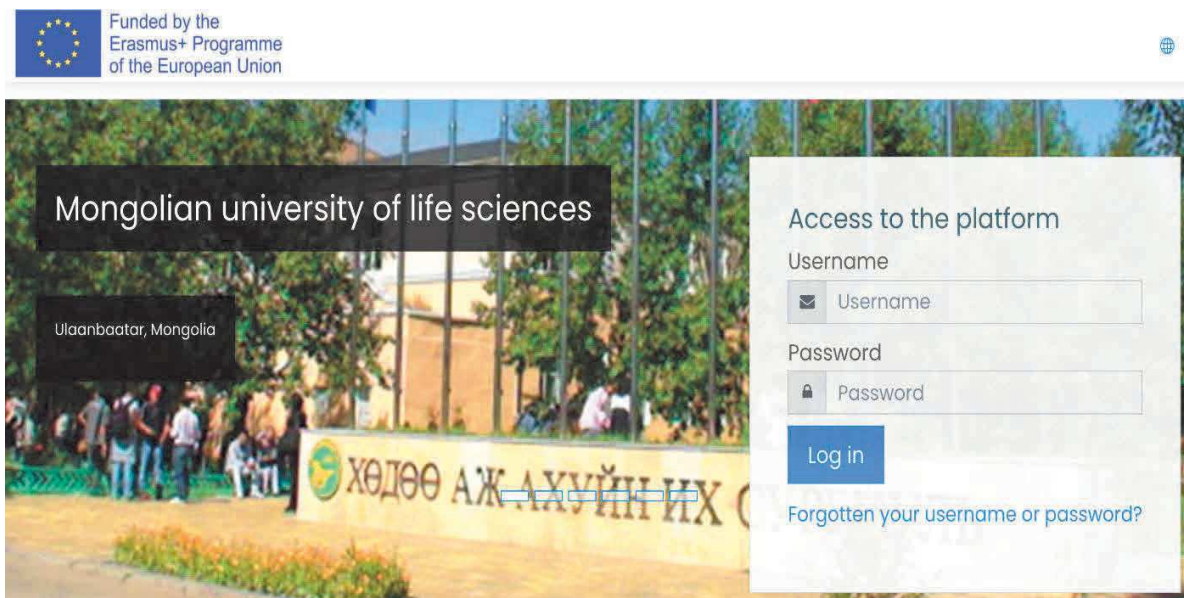
Дараагийн хичээлд шилжихдээ Topic 2 талбарт шилжих юм.



## ГАРЫН АВЛАГА

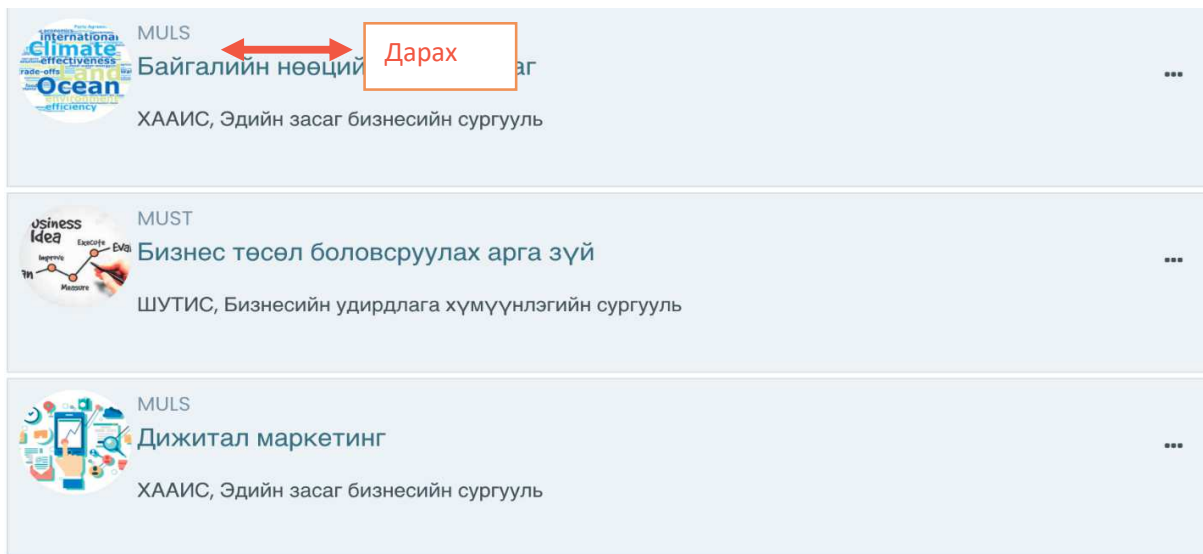
Цахим сургалтын хүрээнд онлайнд зайнаас видео болон файлаар хичээл оруулах зааварчилгаа

Алхам 1 <https://inrae.mn/moodle5593/> цахим хаягаар нэвтэрч орох

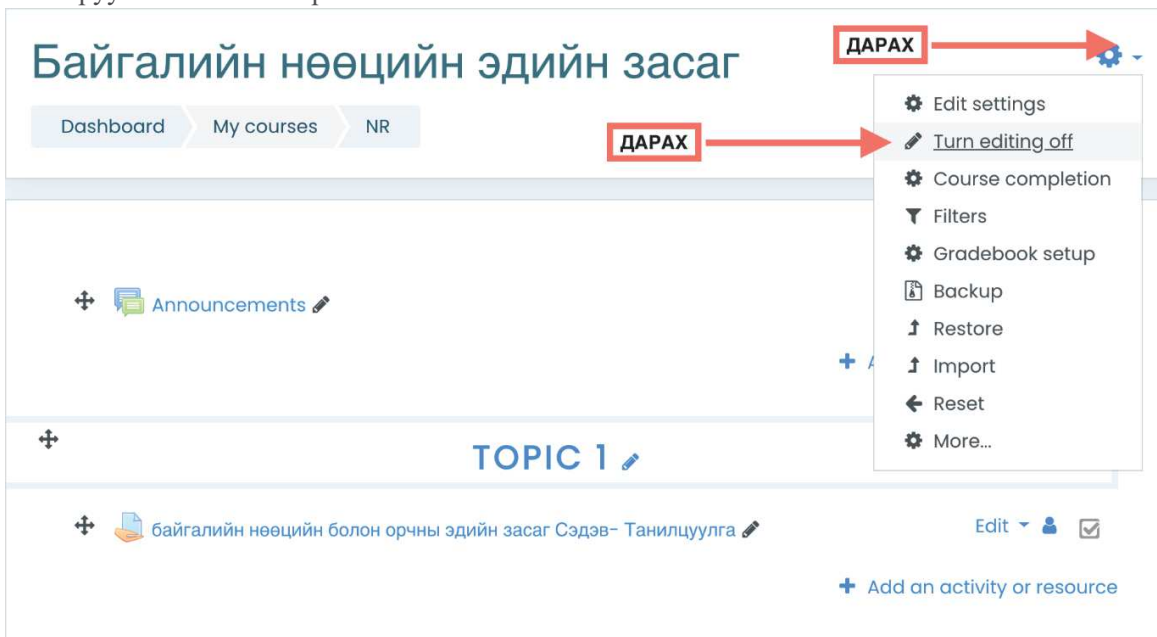


Алхам 2 Байршуулсан хичээлээс сонголт хийх





Алхам 3 Хичээл оруулах болон засварлах



Алхам 4 Шинэ хичээл оруулах

The image shows a user interface for a platform with three topics. Each topic is represented by a horizontal bar with a plus icon on the left, the topic name in the center, and an 'Edit' dropdown on the right. Below each topic bar is a button labeled '+ Add an activity or resource'. A red box highlights the word 'ДАРАХ' (DARAH) with a red arrow pointing to the '+ Add an activity or resource' button for TOPIC 2.

TOPIC 2 Edit

ДАРАХ → + Add an activity or resource

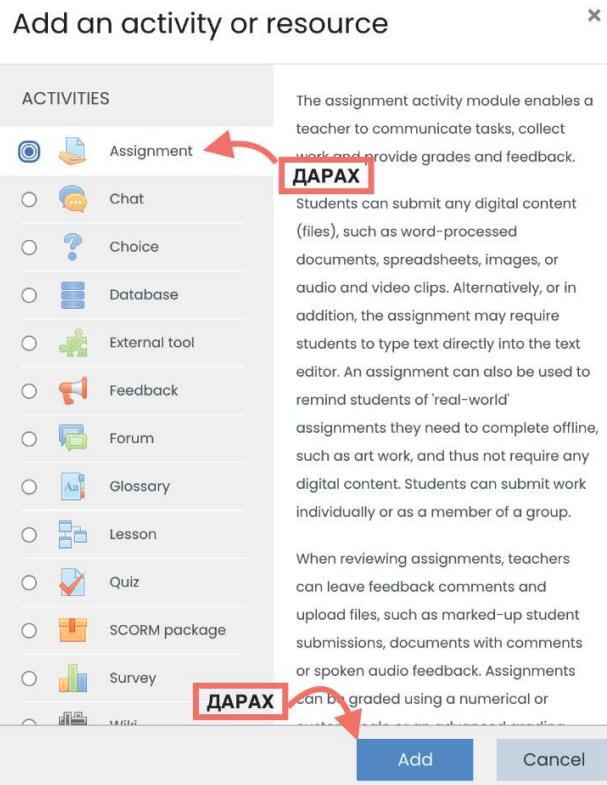
TOPIC 3 Edit

+ Add an activity or resource

TOPIC 4 Edit

+ Add an activity or resource

Алхам 5 Видео хичээл болон бусад хичээл оруулах талбар нээх



Алхам 6 Нээгдсэн талбар

## Adding a new Assignment to Topic 2

Expand all

### General

Assignment name !

- You must supply a value here.

Description

Хичээлийн тайлбар болон бичлэг оруулах

**Дарах**

Display description on course page

## Алхам 7 Видео хичээл оруулах цонх

### Insert media ×

**Сонгох**

Link Video Audio

Video source URL **Файл оруулах**  
Browse repositories...

Add alternative source [?](#)

- ▶ Display options
- ▶ Advanced settings
- ▶ Subtitles and captions [?](#)

Insert media

### File picker ×

- Embedded files
- Server files
- Recent files
- Upload a file**
- Private files
- Wikimedia

**Сонгох**

Attachment  
Choose File No file chosen **Дарах Оруулах видео**

Save as

Author  
Эрдэнэбаяр Машир

Choose license All rights reserved

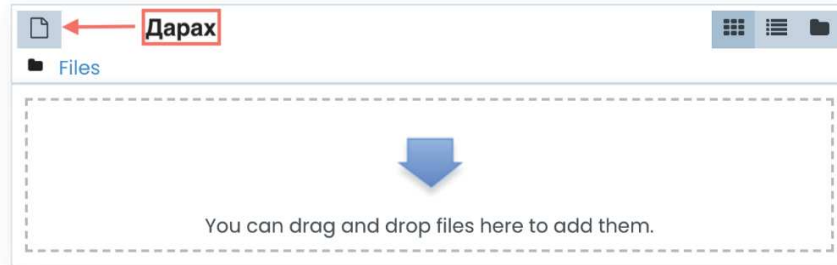
Upload this file **Видео оруулах**

### Алхам 8 Файлаар хичээл оруулах

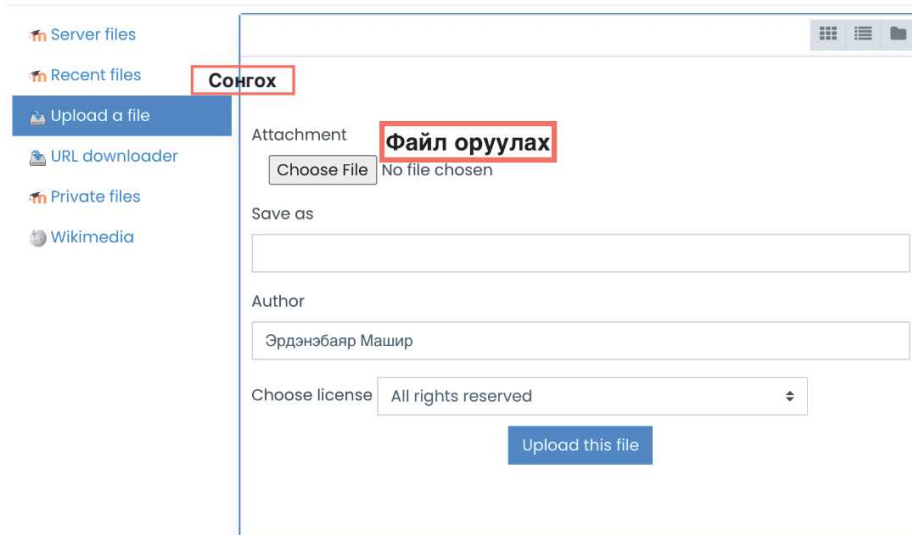
Additional files



Maximum size for new files: 256MB



### File picker



### Алхам 9 Хугацааг та өөрт тохирох хугацааг оруулна

▼ **Availability**

**Цаг хугацаа**

Allow submissions from       Enable

Due date       Enable

Cut-off date       Enable

Remind me to grade by       Enable

Always show description

**Илгээх ирээдүйн хугацааг оруулах**

**Дуусах хугацаа**

### Алхам 10 Онлайн тест оруулах болон тохиргоо

▼ **Submission types**

Submission types  Online text  File submissions

Maximum number of uploaded files

Maximum submission size

Accepted file types   No selection

**Энэ талбар нь онлайн тест болон онлайн тестийн файл байршуулах**

Accepted file types

All file types  **Сонгох**

Archive files .7z .bdoc .cdoc .ddoc .gtar .tgz .gz .gzip .hqx .rar .sit .tar .zip

Audio files .aac .aif .aiff .aife .au .flac .m3u .mp3 .m4a .oga .ogg .ra .ram .rm .wav .wma

Audio files natively supported by browsers .aac .flac .mp3 .m4a .oga .ogg .wav

Audio files used on the web .aac .flac .mp3 .m4a .oga .ogg .ra .wav

### Алхам 11 Талбарт

1. Сэтгэгдэлүүд,
2. Давхар тэмдэглэгээ хийх,
3. Дүнгийн хүснэгт,
4. Санал хүсэлт гэх мэт сонголтууд

▼ **Feedback types**

Feedback types  Feedback comments  Annotate PDF  Offline grading worksheet  Feedback files

Comment inline

#### Алхам 12 Талбарт

1. Илгээх
2. Хүлээн авах гэх мэт сонголтуудыг идвэхижүүлэх

##### ▼ Submission settings

Require students to click the submit button	<input type="checkbox"/>	No
Require that students accept the submission statement	<input type="checkbox"/>	No
Attempts reopened	<input type="checkbox"/>	Never

#### Алхам 13 Талбарт

- Хичээлийг оюутанууд дунд бүлгээр илгээх **тийм үгүй** сонголтыг идвэхижүүлэх

##### ▼ Group submission settings

Students submit in groups	<input type="checkbox"/>	No
---------------------------	--------------------------	----

#### Алхам 14 Талбарт

- Сонголтууд **тийм үгүй** сонголтуудыг идвэхижүүлэх -Мэдэгдэл-

##### ▼ Notifications

Notify graders about submissions	<input type="checkbox"/>	No
Notify graders about late submissions	<input type="checkbox"/>	No
Default setting for "Notify students"	<input type="checkbox"/>	Yes

#### Алхам 15 Талбарт

- Онлайн шалгалтын үнэлгээг оруулж өгнө

Grade

Grade ?

Type

Maximum grade

Grading method ?

Grade category ?

Grade to pass ?

Blind marking ?

Hide grader identity from students ?

Use marking workflow ?

Алхам 16 Талбарт

- Зорилтот хэсэг бүлэгээс шалгалт авах оюутныг цахим хаягаар бүртгэх

Common module settings

Availability ?

ID number ?

Group mode ?

Add group/grouping access restriction

**Дарах**

There are required fields in this form marked !.

English (en)  
**Нэмэлт мэдээлэл Анхаарлын тэмдэг байрлах хэсэгт хичээлийг оруулсан бол та бусад мэдээлэл оруулалгүй хадгалж болно**



## Annex 5: Summary results of feedback survey on E-Learning

Results of the Student Satisfaction Survey conducted in the activity strategy management course summarized in Table 1. Since the course was taught online in the spring of the 2019-2020 school year, student satisfaction with the teacher and the subject has not changed significantly (Table 1, Figure 1, Figure 2). However, student satisfaction with the learning environment has declined significantly, from an average of about 80 percent to 50 percent in the 2016-2018 school year (Table 1, Figure 3).

Sisi system surveys on the learning environment include “Classrooms are comfortable, warm, well-lit, well-ventilated, and clean”, “Classrooms are adequate, there are no duplication of classes”, “Classrooms seats are adequate”, and “Classroom equipment” It can be concluded that it has nothing to do with the electronic environment and is related to the fact that students are asked questions about the physical classroom. In the future, in the case of e-learning, it is necessary to organize the research depending on whether the subject is taught in the classroom or online.

Table 1. Summary of student satisfaction survey results

		2016- 2017 OH (n=8)	2017- 2018 OH (n=5)	2018- 2019 OH (n=6)	2019- 2020 OH (n=7)
1.	The teacher teaches the lesson in a logical, clear, and interesting way	2.38	2.60	3.00	3.00
2.	Teachers use class time effectively and to the fullest	2.38	2.80	3.00	3.00
3.	There are good methods to increase student and teacher participation	2.50	2.60	3.00	3.00
4.	Teachers provide students with the opportunity to take notes	2.25	2.00	2.83	3.00
5.	Teachers use teaching materials and equipment to teach	2.50	2.60	3.00	3.00
6.	The teachers are not late or absent	2.50	2.80	2.83	3.00
7.	The lesson taught by the teacher is consistent with the syllabus (in SISI)	2.38	2.60	2.83	3.00
8.	Teachers use e-learning methods and tools. The course materials are posted online and made accessible to students	2.50	1.80	1.83	3.00
9.	The method by which the teacher evaluates the student (homework, exams, etc.) can realistically reveal the student's knowledge and skills.	2.50	2.40	3.00	3.00
10.	Teachers' progress and term exams have an impact on student development, training, and education	2.50	2.40	2.83	3.00
11.	In assessing, the teacher is able to assess the student's knowledge and skills	2.38	2.60	2.83	3.00
12.	he teacher counsels the student according to a set schedule outside of class and focuses on developing the student's ability to learn independently and express themselves.	2.38	2.40	2.50	3.00
13.	The teacher helps the student to think independently, make predictions, and draw logical conclusions	2.50	2.40	2.83	3.00
14.	The purpose, content, level, and time of the assignment given by the teacher are appropriate	2.38	2.40	3.00	3.00
15.	The teacher respects the student, interacts with the culture, and creates an atmosphere of free expression	2.63	2.40	3.00	3.00

16.	The teacher can set an example for the student in terms of personal development and upbringing	2.50	2.40	3.00	3.00
17.	if teacher teaches another subject at the next season will be re-select	2.50	2.40	3.00	3.00
	<b>'About teacher' average score</b>	<b>2.45</b>	<b>2.45</b>	<b>2.84</b>	<b>2.91</b>
18.	Classrooms and halls are comfortable, warm, well-lit, well-ventilated and clean	2.25	2.00	2.33	1.00
19.	There are enough classrooms and there are no duplication of classes	2.25	2.80	2.50	1.00
20.	There are enough seats in the classroom	2.25	2.80	2.83	1.00
21.	Training equipment is available in the classrooms	2.38	2.40	2.67	1.00
	<b>'Learning environment' average score</b>	<b>2.28</b>	<b>2.50</b>	<b>2.58</b>	<b>1.00</b>
22.	The course follows the content of the syllabus	2.38	2.60	3.00	3.00
23.	Students know what knowledge and skills they will gain in this course	2.38	2.40	3.00	3.00
24.	This course met the student's learning objectives as outlined in the syllabus	2.38	2.40	3.00	2.86
25.	I found this lesson interesting	2.38	2.40	3.00	3.00
26.	There are good books, textbooks, manuals and teaching materials available for use in the class	1.88	2.40	2.67	2.00
27.	Books, textbooks, manuals, and teaching materials used in the course meet the requirements of the course	2.13	2.40	2.83	2.57
	<b>'About lesson' average score</b>	<b>2.25</b>	<b>2.43</b>	<b>2.92</b>	<b>2.81</b>
	<b>Total average score</b>	<b>2.38</b>	<b>2.45</b>	<b>2.82</b>	<b>2.67</b>

Source: Sisi summarizes the results from the information system.

Note: Sisi takes the Student Satisfaction Survey on a scale of 1-3 at the end of the semester.

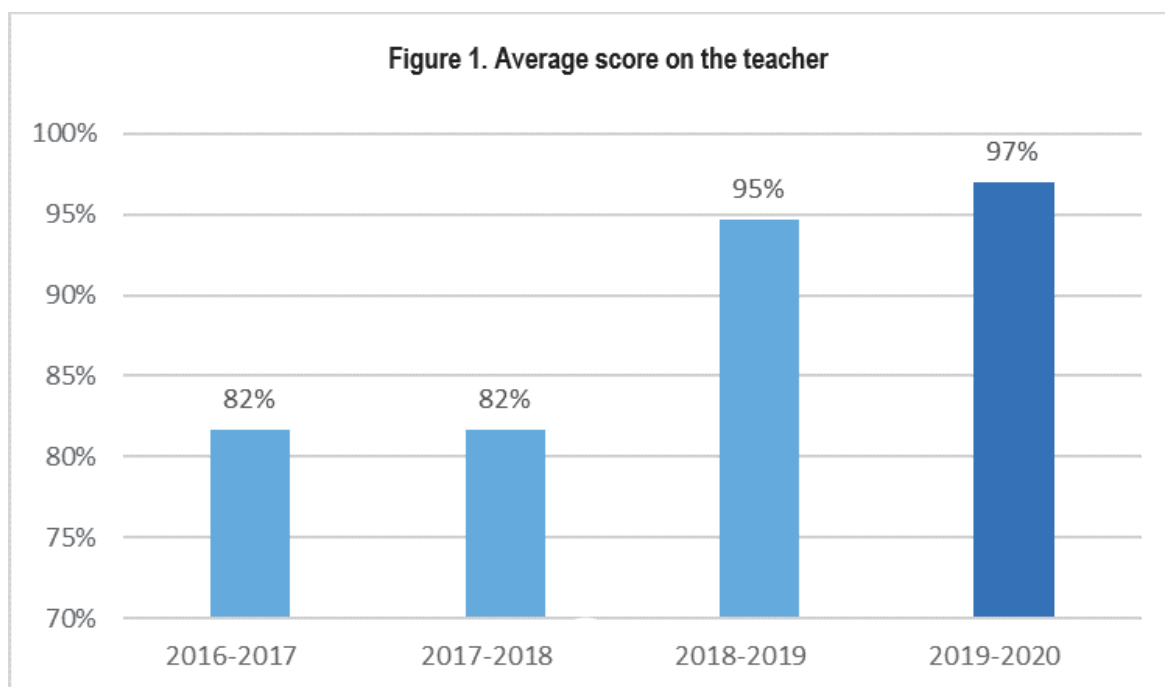
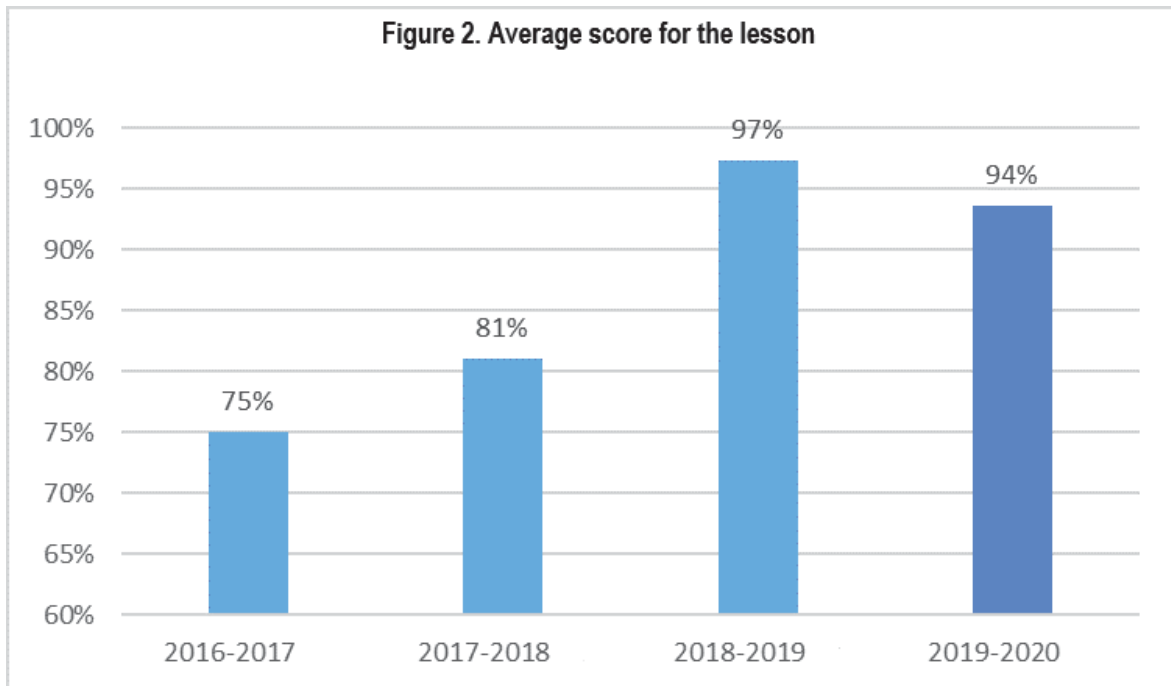
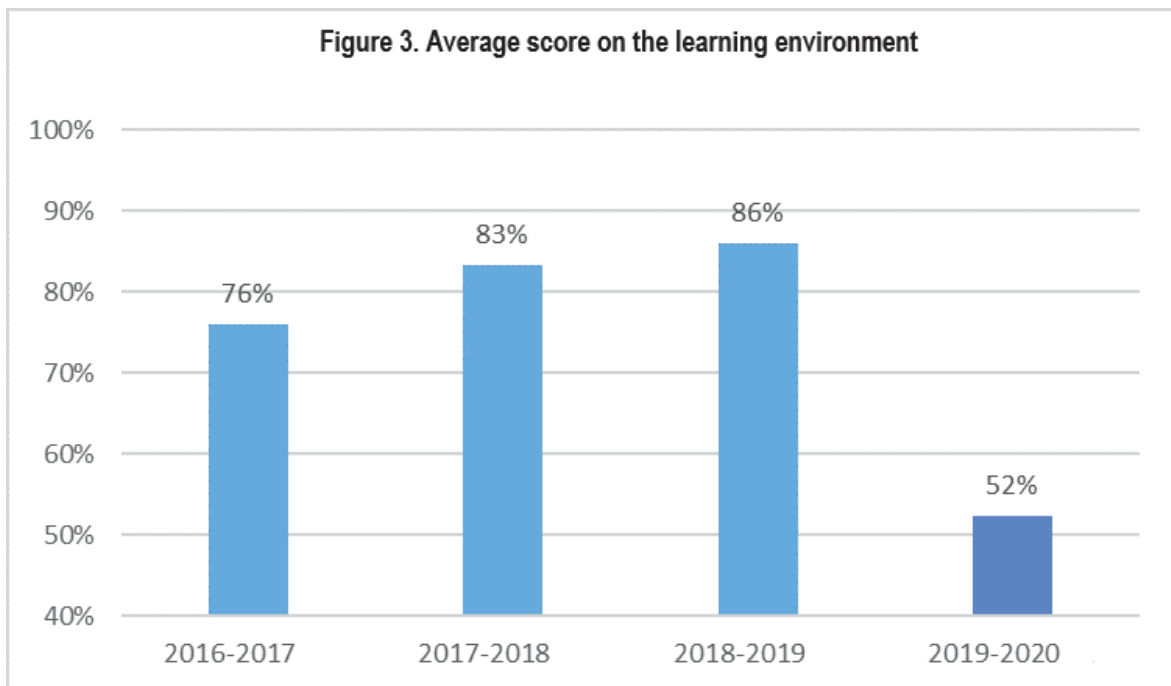


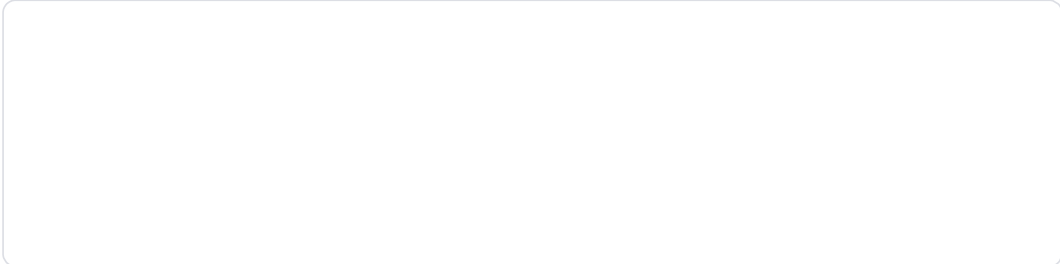
Figure 1. Average score on the teacher



**Figure 2. Average score for the lesson**



**Figure 3. Average score on the learning environment**



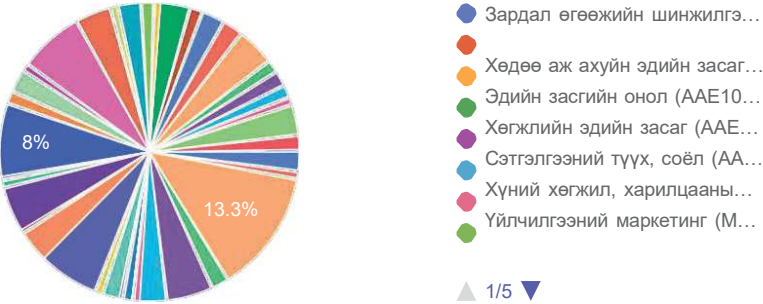
# Quality of E-Learning: Student Survey - 1

361 responses

[Publish analytics](#)

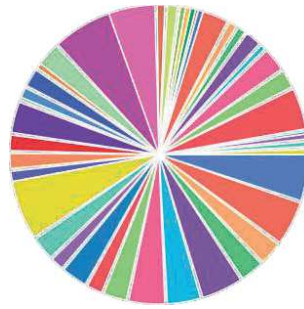
## Судалсан хичээлийн нэрээ сонгоно уу!

361 responses



Хичээл заасан багшаа сонгоно уу !

361 responses



- Б.Одончимэг (EB203)
- Г.Чулуунцэцэг (EB205)
- Б.Хишигдаваа (EB206)
- Г.Ундрах (EB207)
- Ч.Даваасүрэн (EB218)
- Л.Ундаргаа (EB219)
- Л.Батцэнгэл (EB221)
- З.Ганццэг (EB301)
- ▲ ▼

Та цахим хичээлд холбогдохдоо ихэвчлэн хаанаас холбогдож байсан бэ?  
(Энд аймаг, сум, баг эсвэл хот, дүүрэг, хороог бичнэ)

...

Сум

аймаг

сум

Аймаг

Улаанбаатар хот

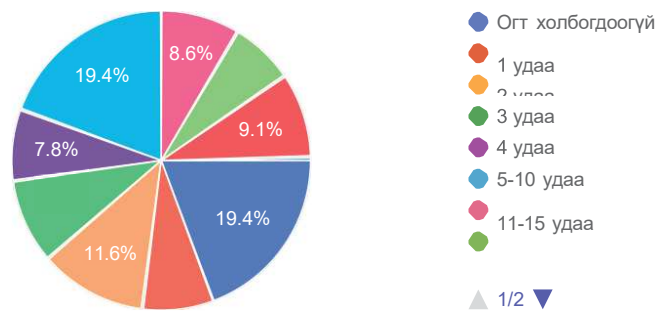
Sum

ulaanbaatar

Хот

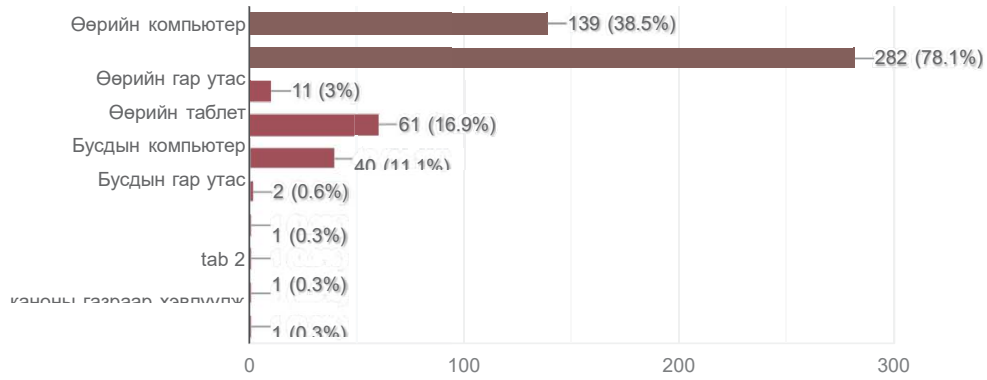
Та энэ хичээлээр хэдэн удаа багштайгаа холбогдсон бэ?

361 responses



Та ямар хэрэгсэлээр хичээлийн материалуудаа авч байсан бэ? (Олон сонголт хийж болно)

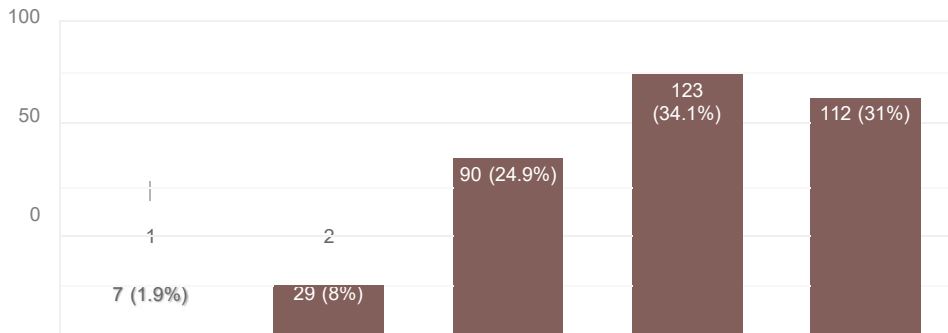
331



Лекцийн хичээлийн материал танд хэр ойгомжтой байсан бэ? (1-5

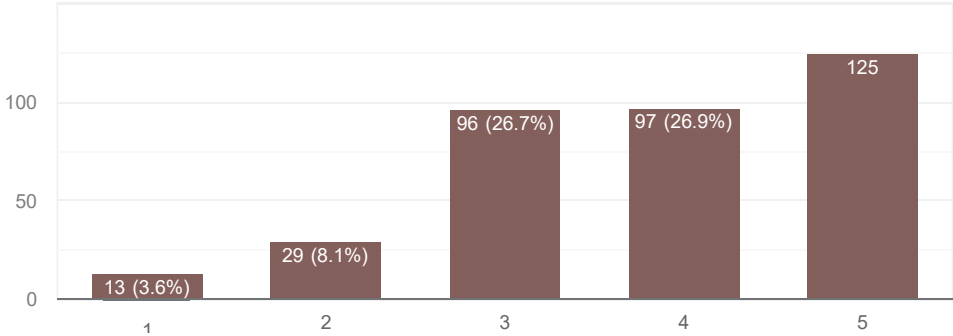
хүртэл оноогоор үнэлэнэ үү? 1 маш муу - 5 маш сайн)

361 responses



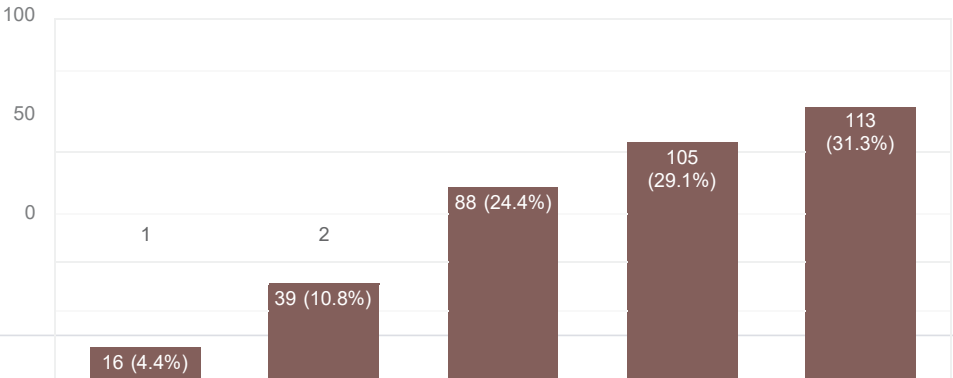
Багш лекцийн хичээлийг хэр ойлгомжтой заасан бэ? (1-5 хүртэл  
оноогоор үнэлэнэ үү? 1 маш муу - 5 маш сайн)

360 responses



Дадлага, семинарын хичээлийн материал танд хэр ойлгомжтой байсан  
бэ? (1-5 хүртэл оноогоор үнэлэнэ үү? 1 маш муу - 5 маш сайн)

361 responses

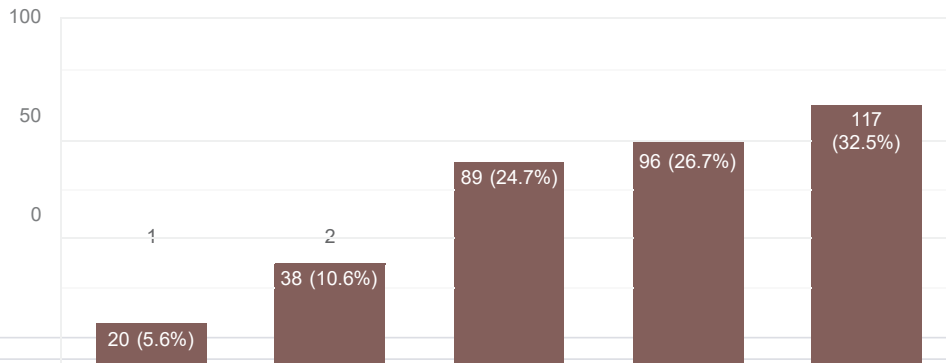




Implementation of a Food Analysis Platform  
Багш дадлага, семинар хичээлийг хэр ойлгомжтой заасан бэ? (1-5

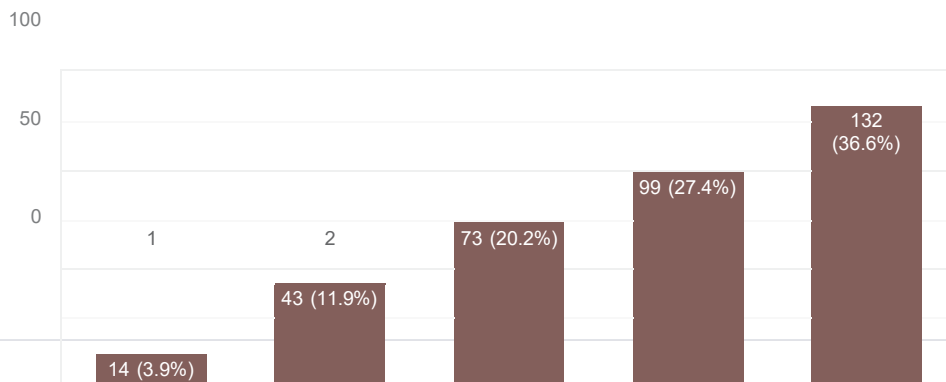
хүртэл оноогоор үнэлэнэ үү? 1 маш муу - 5 маш сайн)

360 responses



Бие даалтын даалгавар гүйцэтгэх удирдамж, даалгавар нь танд хэр ойлгомжтой байсан бэ? (1-5 хүртэл үнэлэнэ үү? 1 маш муу - 5 маш сайн)

361 responses



Цахим хэлбэрээр суралцсанаар онолын мэдлэгээс гадна та ямар шинэ мэдлэг, ур чадварт суралцсан бэ? Нэрлэнэ үү? (Жишээлбэл: шинэ прогамм хангамж, цахим горимд ажиллах гэх мэт)

цахим горимд ажиллах

Цахим горимд ажиллах

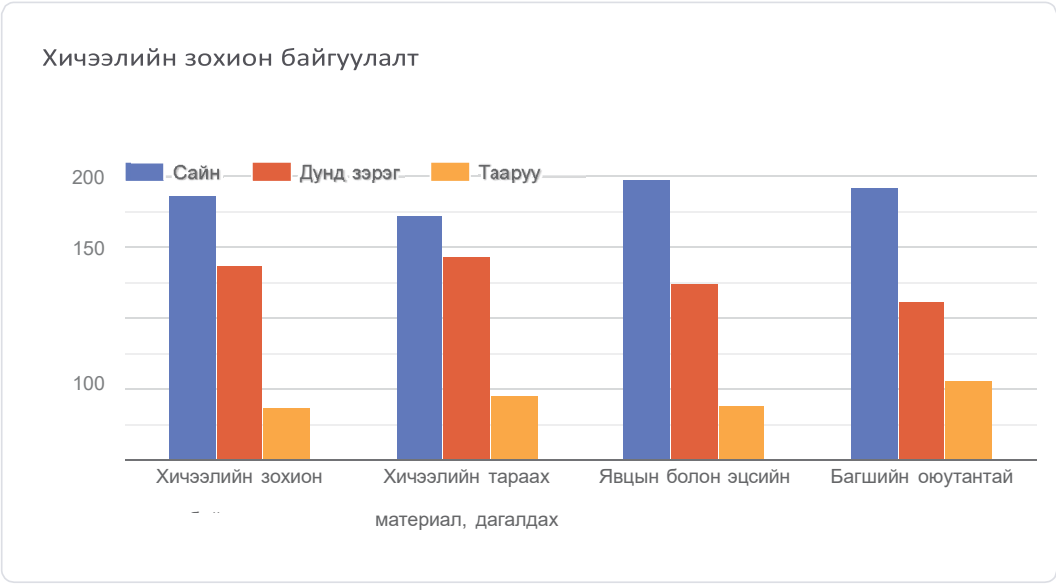
Baihgui

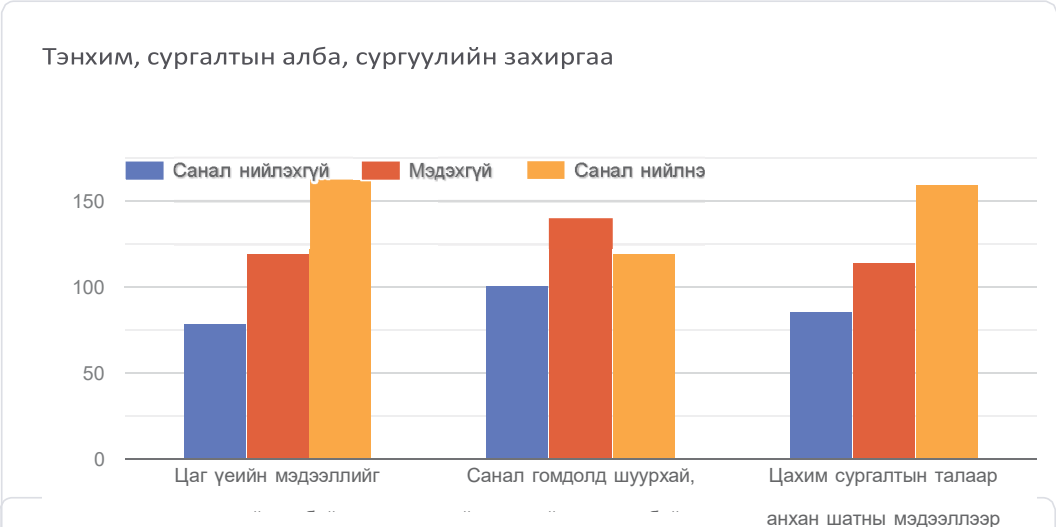
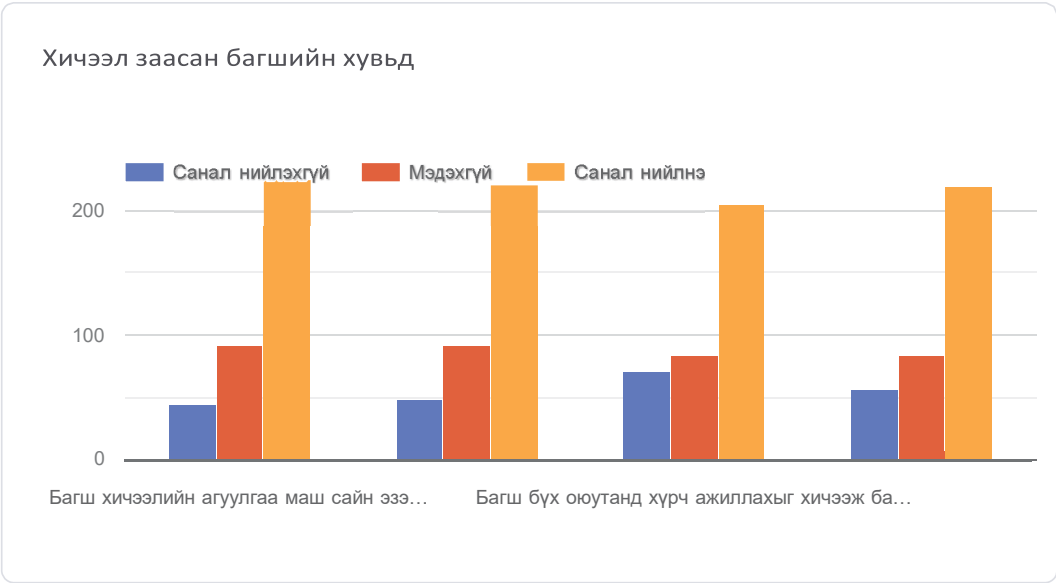
байхгүй

шинэ прогамм

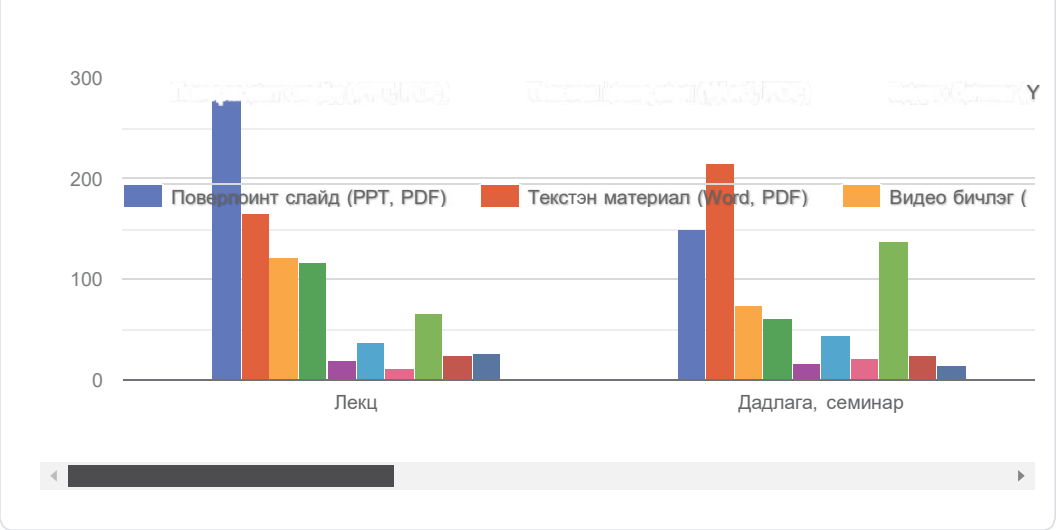
Өөрийгөө дайчлан бие дааж хийх аргад суралцсан ба цахимаар хичээл хийх дадлагад суралцсан

Цахим горимд ажиллах чадвар сайжирсан





Хичээлд багшийн ашигласан материалын хэлбэрийг сонгоно уу ! /олон хариулт сонгох боломжтой/



Google Classroom-ээр хичээл ороход үүссэн бэрхшээлийг бичнэ үү?

байхгүй

Байхгүй

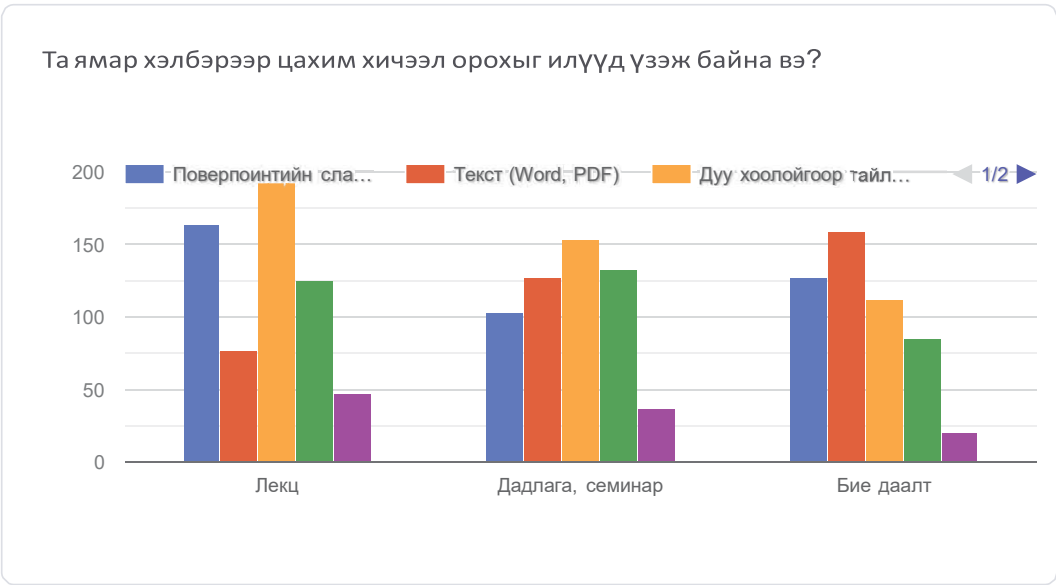
хөдөө орон нутагт ком байхгүй утсаар ороход удаан болон ойлгомжгүй байсан

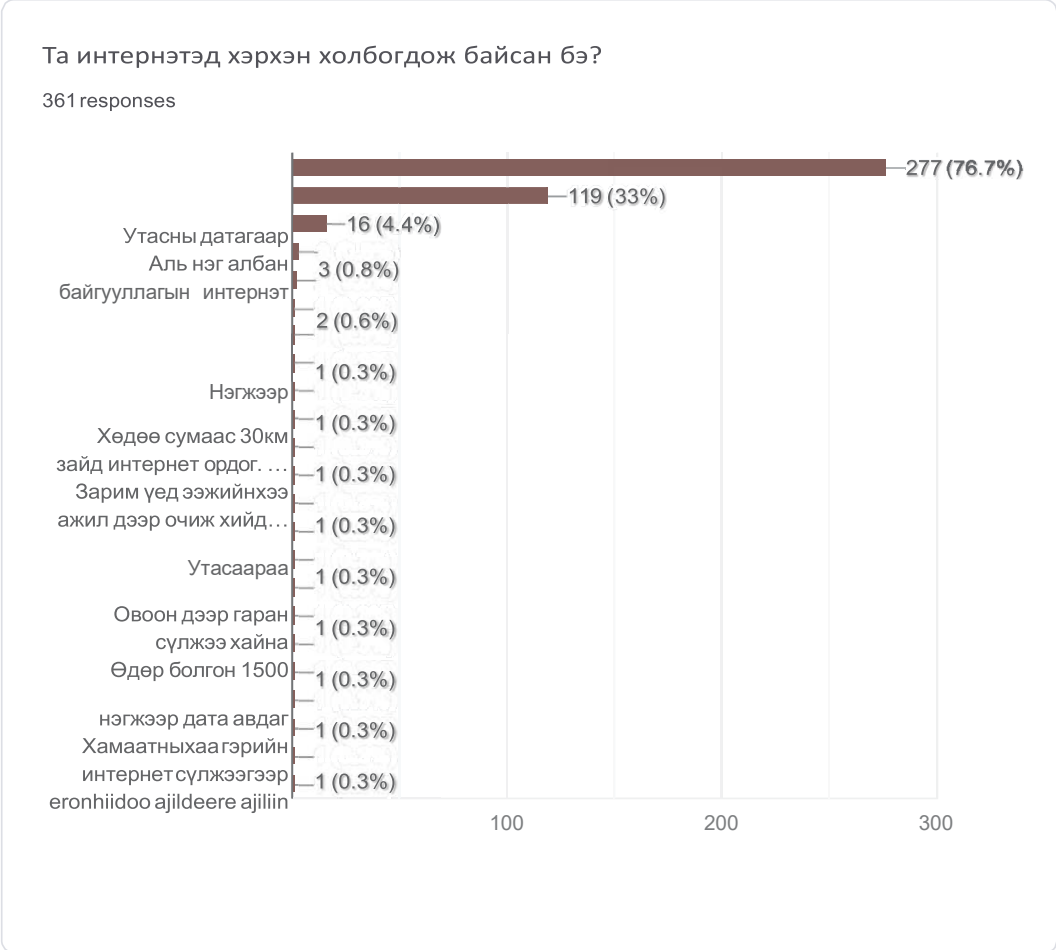
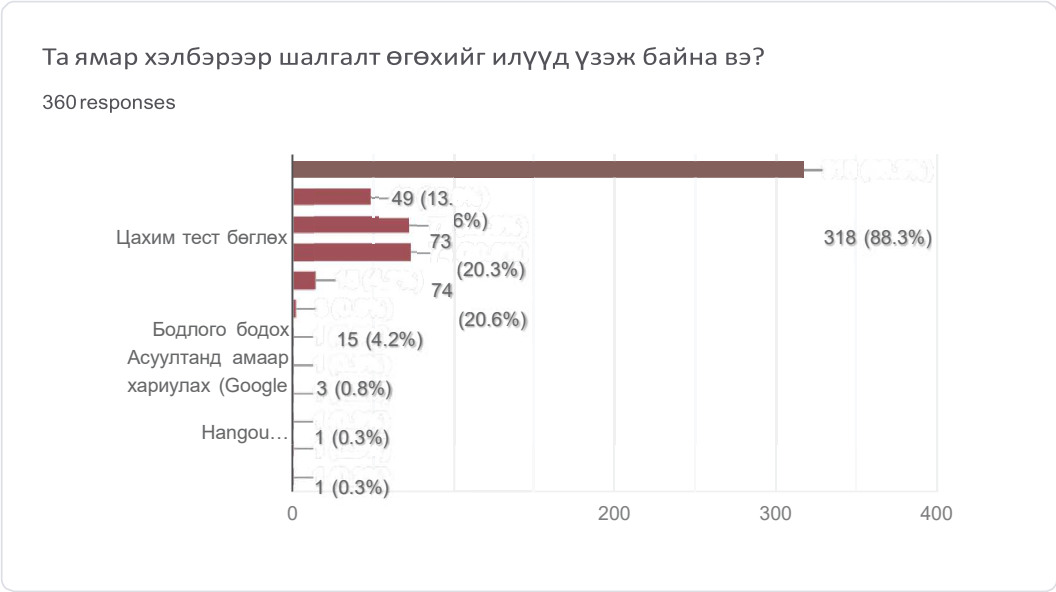
мм

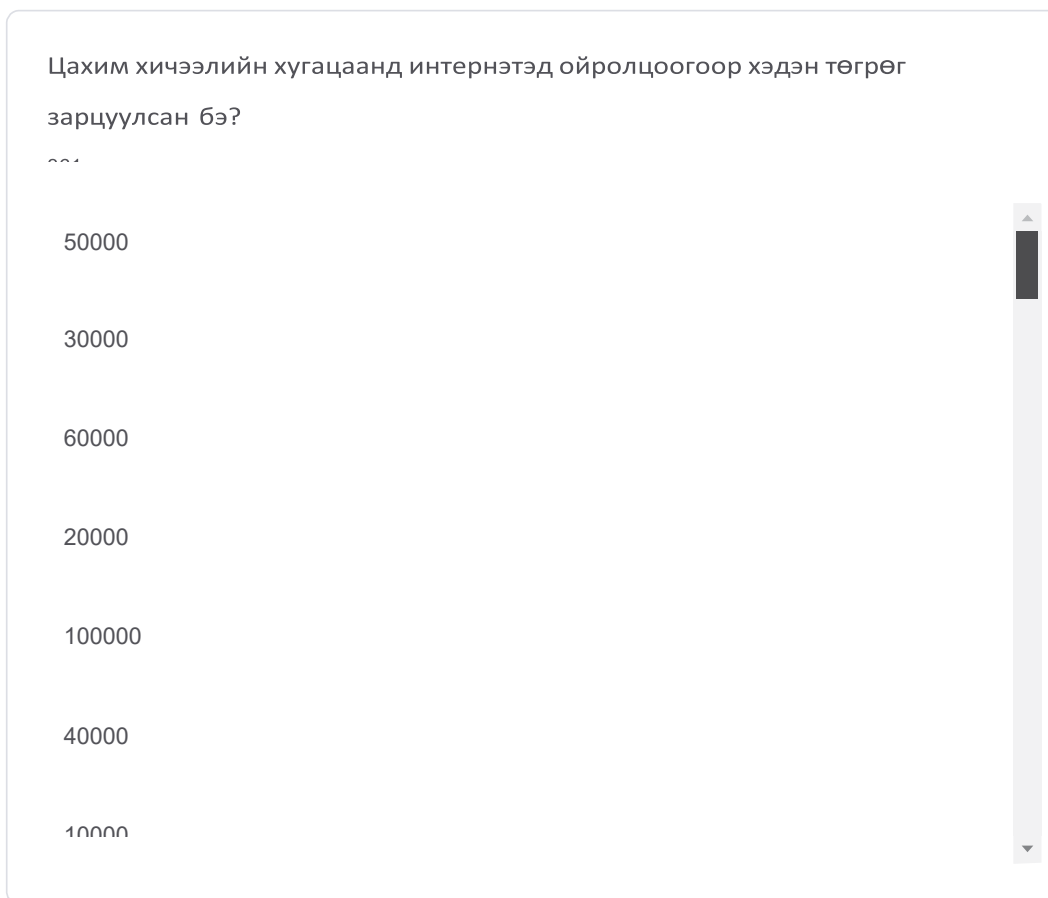
Тийм зүйл байхгүй

Дата

.



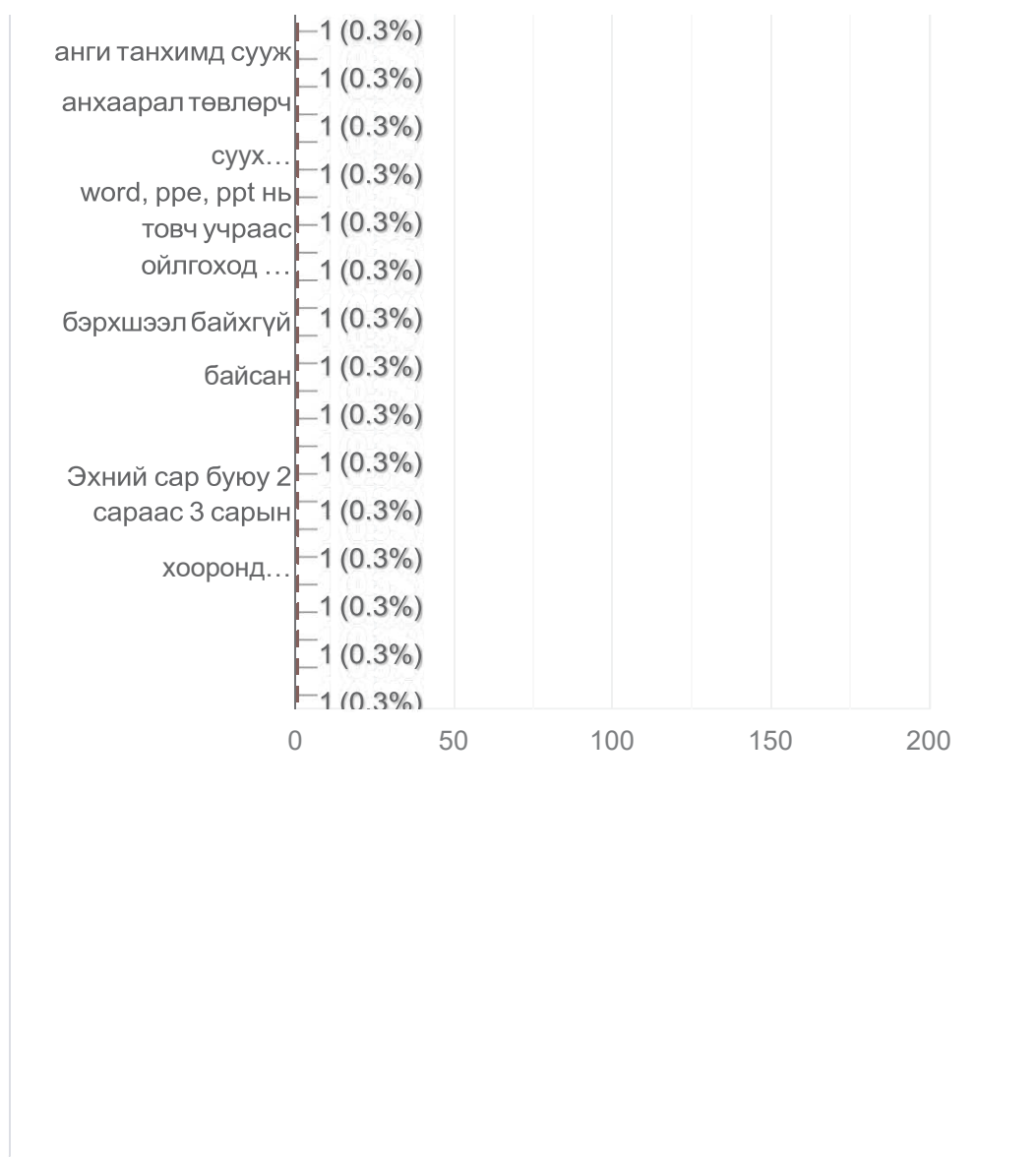






1 (0.3%)	167	1
1 (0.3%)	(46.4%)	3
1 (0.3%)		7
1 (0.3%)		(
1 (0.3%)		3
1 (0.3%)		8
		.
		1
		%
		)
		1
		3
		9
		(
		3
		8
		.
		6
		%
		)







Цахим хичээлийг илүү үр дүнтэй явуулахын тулд цаашид юу хийх шаардлагатай вэ?

.

Багш нарын харьцаа утасаа авдаггүй

ММ

Багш текстэн лекцнээс илүүтэйгээр өөрийн дуу хоолойгоор жишээ бодлогуудаа тайлбарлавал илүү ойлгох болов уу гэж бодож байна.

Багш нар video хэлбэрээр лекцээ оруулж мөн түүгээр зогсохгүй дадлагын хичээлээ video хэлбэрээр заамаар байна.

Лекцээ видео болон ppt эсвэл word гэсэн хэлбэрээр орвол илүү ойлгомжтой байна.

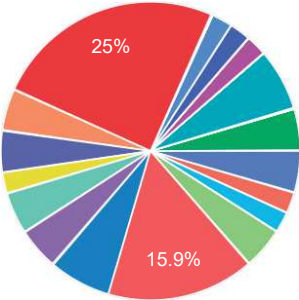


# Quality of E-Learning: Student Survey - 2

44 responses

Судалсан хичээлийн нэрээ сонгоно уу !

44 responses

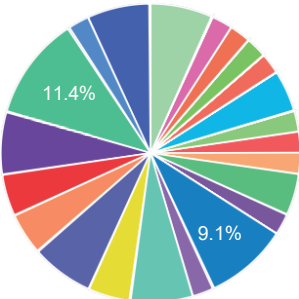


- 1. Дунд шатны нягтлан бодо...
- 2. Өртгийн бүртгэл I (ACC304)
- 3. Өртгийн бүртгэл II (ACC305)
- 4. Аудит (ACC301)
- 5. Эдийн засгийн мэдээлэл...
- 6. Эдийн засгийн математик...
- 7. Тоглоомын онол (ESM324)
- 8. Эдийн засгийн математик...

▲ 1/4 ▼

Хичээл заасан багшаа сонгоно уу !

44 responses



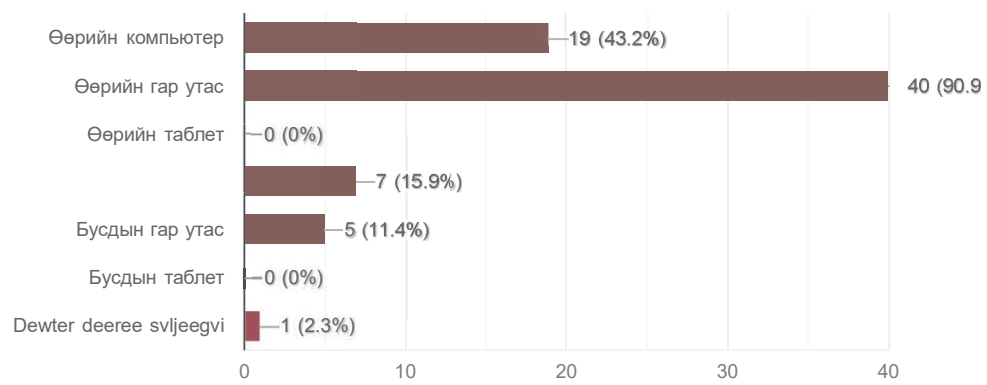
- 1. С.Оюунчимэг (EB202)
- 2. Б.Одончимэг (EB203)
- 3. Я.Нансалмаа (EB204)
- 4. Т.Болор-Эрдэнэ (EB220)
- 5. Л.Батцэнгэл (EB221)
- 6. Г.Ундрах
- 7. З.Ганцэцэг (EB301)
- 8. Б.Алтанчимэг (EB303)

▲ 1/6 ▼

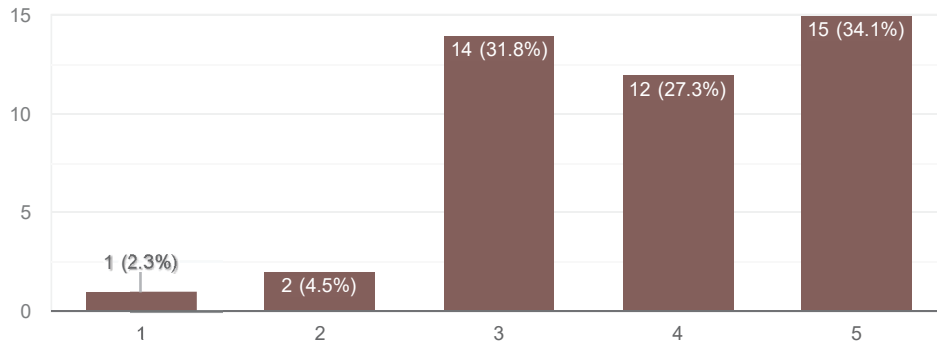


Та ямар хэрэгсэлээр хичээлийн материалуудаа авч байсан бэ? (Олон сонголт хийж болно)

..

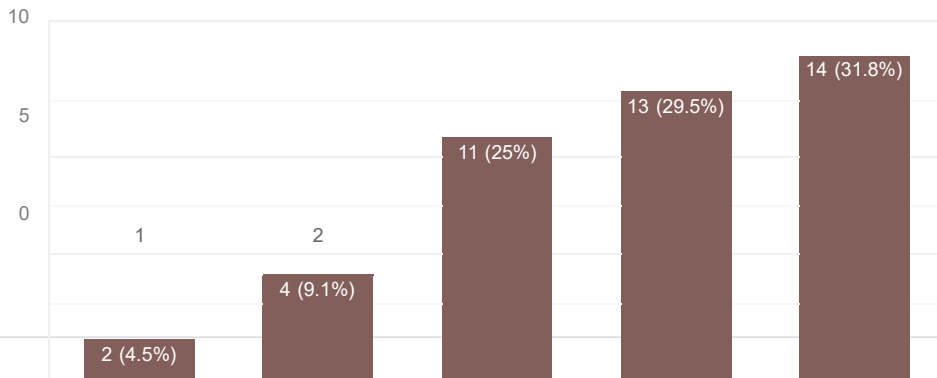


Лекцийн хичээлийн материал танд хэр ойгомжтой байсан бэ? (1-5 хүртэл оноогоор үнэлэнэ үү? 1 маш муу - 5 маш сайн)



Багш лекцийн хичээлийг хэр ойлгомжтой заасан бэ? (1-5 хүртэл оноогоор үнэлэнэ үү? 1 маш муу - 5 маш сайн)

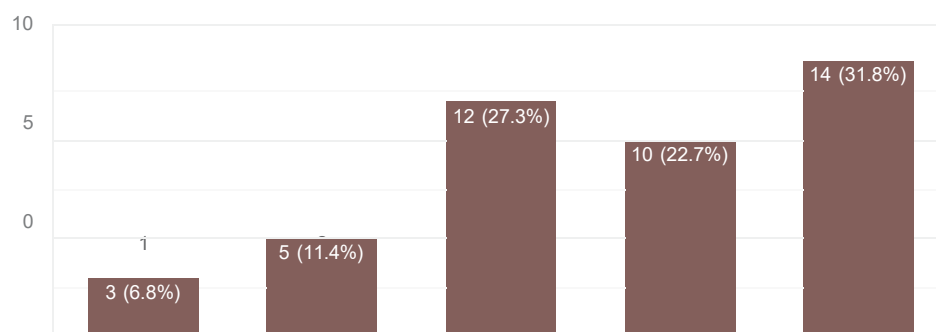
44 responses



Implementation of a Food Analysis Platform  
Дадлага, семинарын хичээлийн материал танд хэр ойлгомжтой байсан

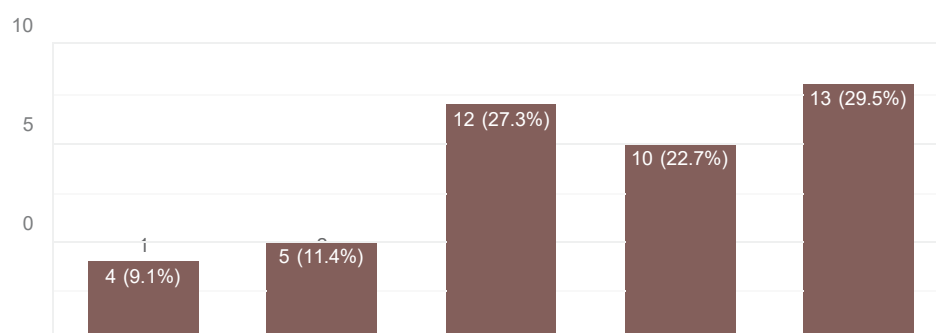
Бэ? (1-5 хүртэл оноогоор үнэлэнэ үү? 1 маш муу - 5 маш сайн)

44 responses



Багш дадлага, семинар хичээлийг хэр ойлгомжтой заасан бэ? (1-5 хүртэл оноогоор үнэлэнэ үү? 1 маш муу - 5 маш сайн)

44 responses

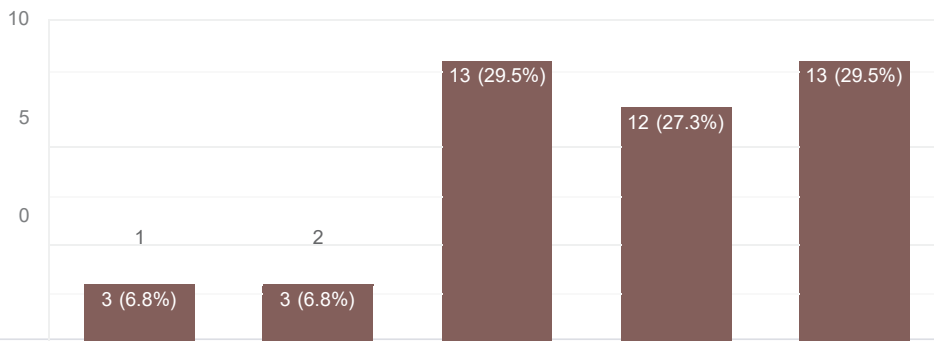




Implementation of a Food Analysis Platform  
Бие даалтын даалгавар гүйцэтгэх удирдамж, даалгавар нь танд хэр

ойлгомжтой байсан бэ? (1-5 хүртэл үнэлэнэ үү? 1 маш муу - 5 маш сайн)

44 responses



Цахим хэлбэрээр суралцсанаар онолын мэдлэгээс гадна та ямар шинэ мэдлэг, ур чадварт суралцсан бэ? Нэрлэнэ үү? (Жишээлбэл: шинэ программ хангамж, цахим горимд ажиллах гэх мэт)

Бие дааж хийх, лекц семинарын хичээлүүдийг илүү судалж хичээлээ хийх

Цахим горимд ажиллах

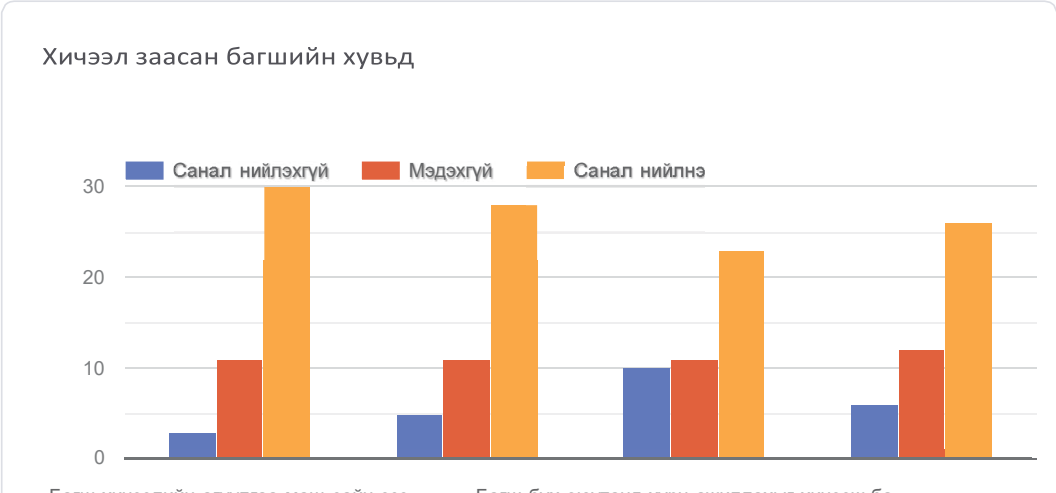
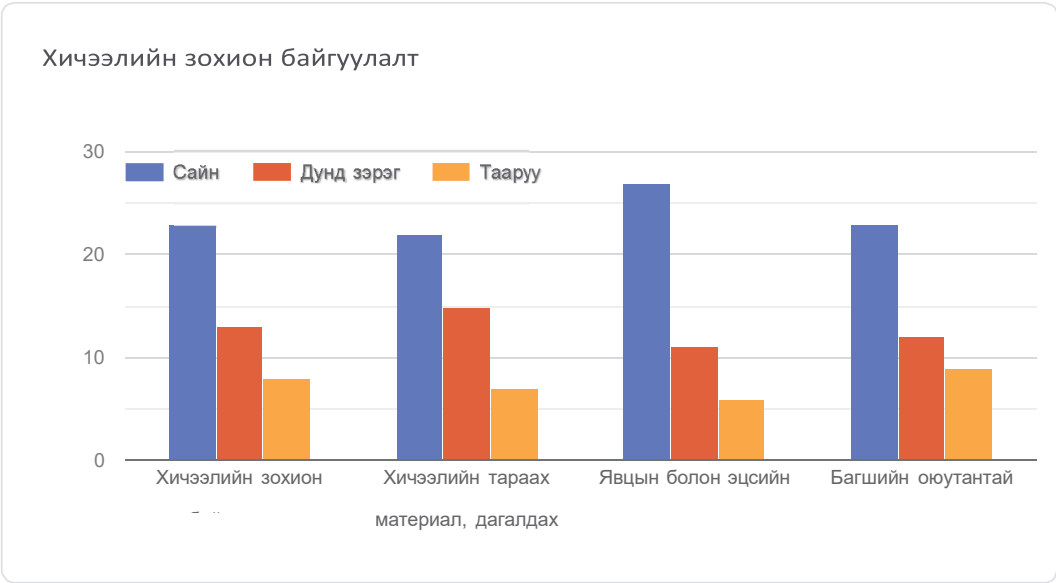
Юу ч сураагүй

Бие дааж ажиллах, лекц семинарын хичээлүүдийг илүү судалж даалгавраа гүйцэтгэх

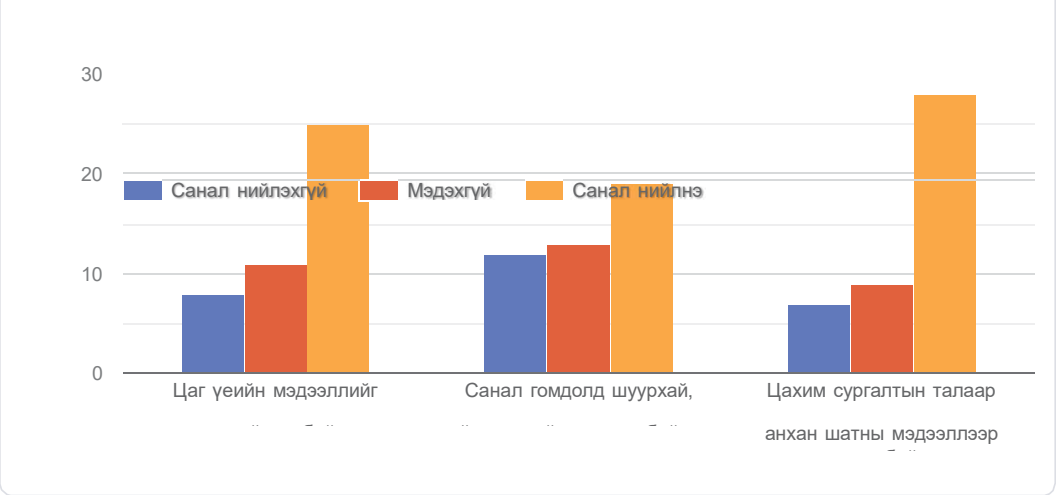
Бие даан сурах

Өөрөө бие даан сурах

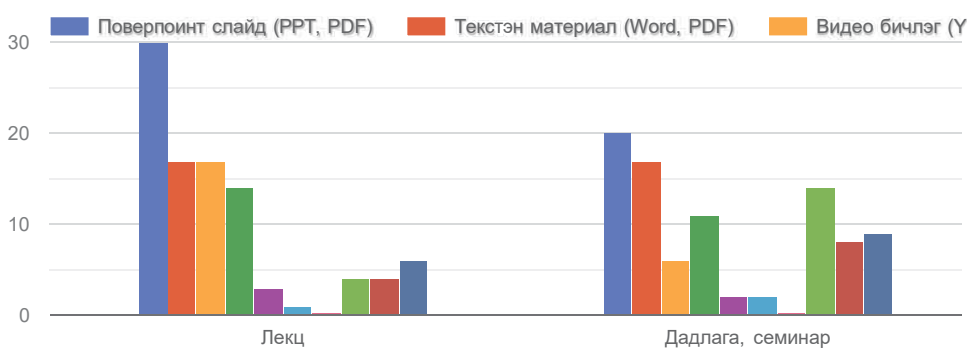
умар neg shine program deer ajillaagvi



### Тэнхим, сургалтын алба, сургуулийн захиргаа



Хичээлд багшийн ашигласан материалын хэлбэрийг сонгоно уу ! /олон  
вариант сонгох боломжтой!



Google Classroom-ээр хичээл ороход үүссэн бэрхшээлийг бичнэ үү?

44 responses

Байхгүй

байхгүй

Дата авах мөнгө бага

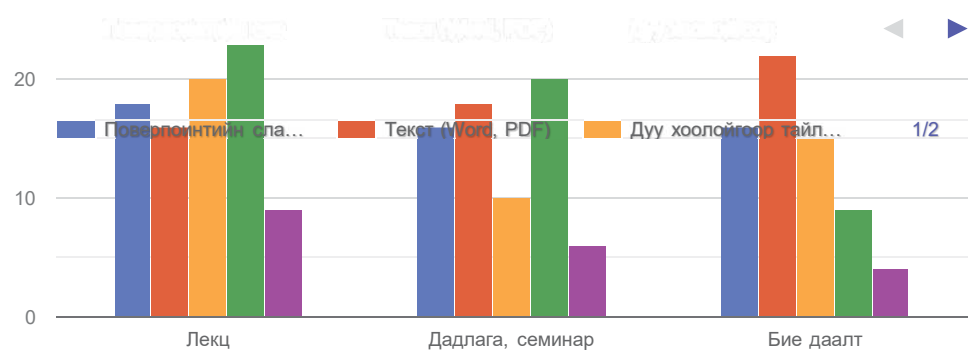
Дата

Data, өдөр болгон орж чаадахгүй

notification ireegvin ulmaas tsag hugtsaagaa aldj bsan

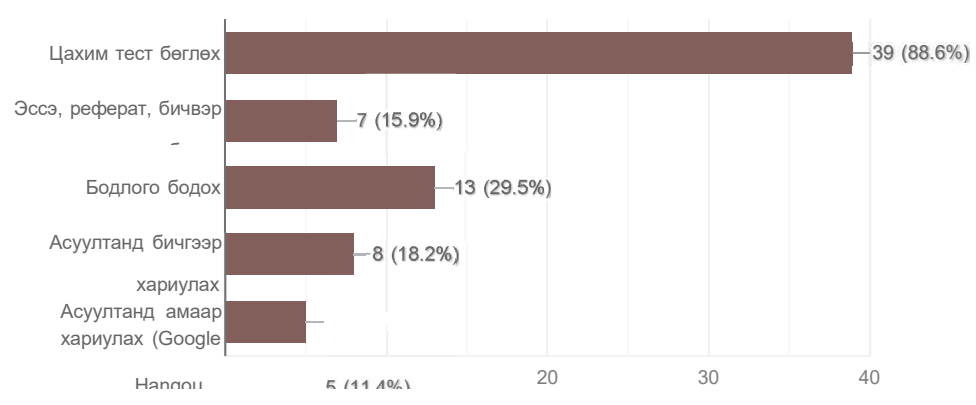
Багш нарын оруулсан материалууд заримдаа ирсэн нь мэдэгддэггүй.

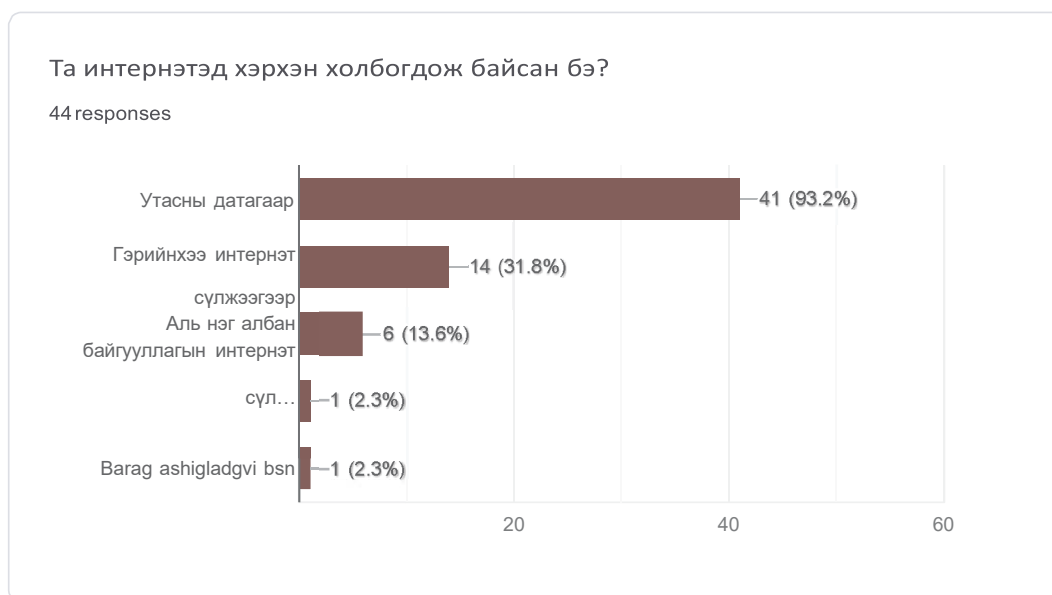
Implementation of a Food Analysis Platform  
Та ямар хэлбэрээр цахим хичээл орохыг илүүд үзэж байна вэ?



Та ямар хэлбэрээр шалгалт өгөхийг илүүд үзэж байна вэ?

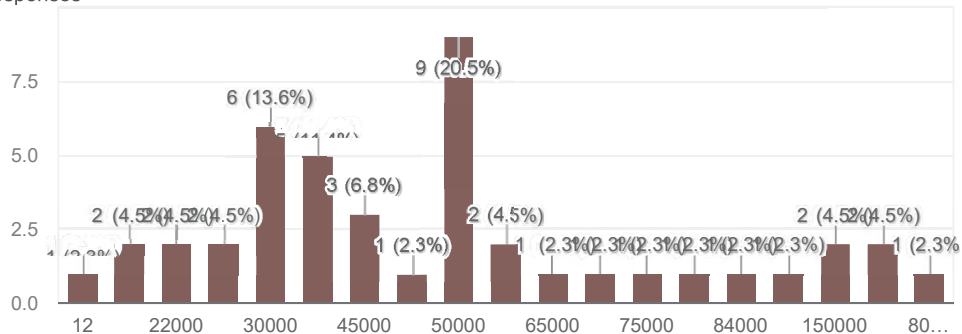
44 responses





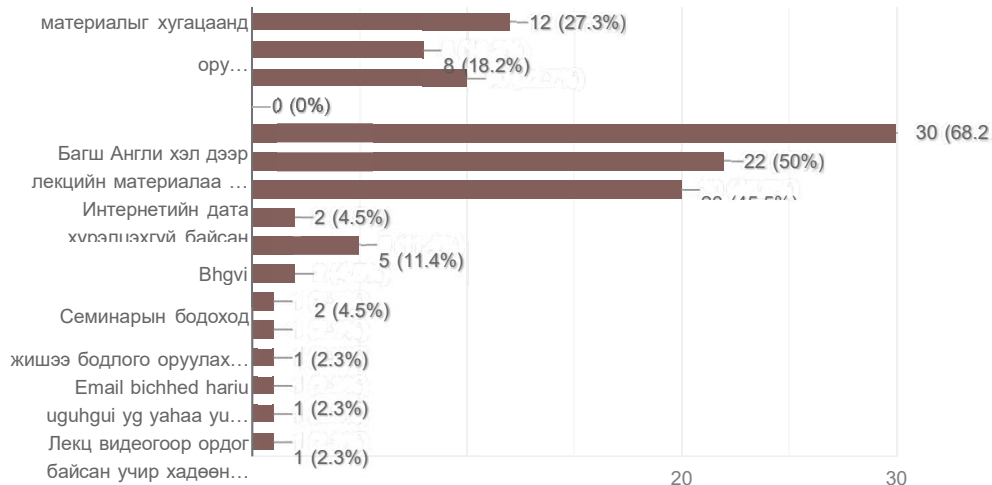
Цахим хичээлийн хугацаанд интернэтэд ойролцоогоор хэдэн төгрөг зарцуулсан бэ?

44 responses

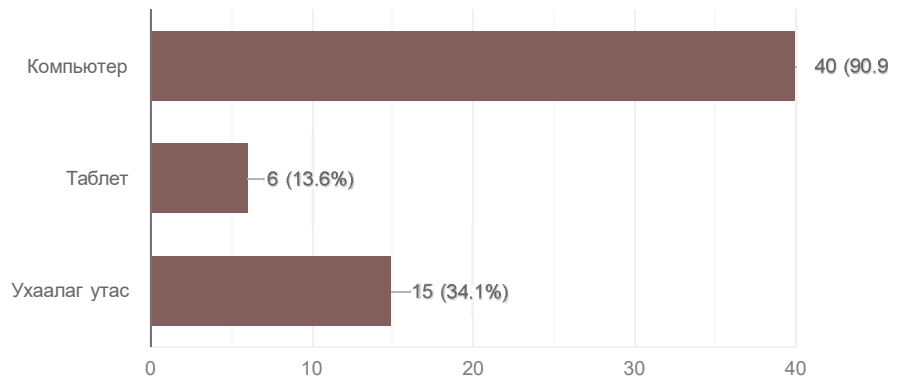


Хичээлийг цахим хэлбэрээр суралцахад гарсан хүндрэл бэрхшээлээс сонгоно уу? (Олон хариулт сонгож болно)

44



Цахим хичээлийг ямар төрлийн төхөөрөмж ашиглан сурах нь зүйтэй гэж та бодож байна вэ?



Цахим хичээлийг илүү үр дүнтэй явуулахын тулд цаашид юу хийх шаардлагатай вэ?

..

.

5-р улиралд орж байсан арга барил нь үр дүнтэй байсан

5-р улиралд орж байсан арга барил үр дүнтэй байсан

Багштай ойр харцах

...

..

bagsh nar lektsee oruulaad daraa n shuud tuhain lektsiinhee bogino hemjeenii dadlaga, asuult bodlogo boduulj tsag tuhai burt n awah n zow