Some Issues Encountered in Accreditation of Teacher Curriculum

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Abstract. In recent years, the issue regarding the quality of higher education has been discussed actively, and program accreditation by local and foreign authorities has become a common issue. The purpose of this research is to study some of the issues encountered in the process of national accreditation of bachelor's degree programs based on the practice of 4 state-owned universities. Through the usage of the numerical survey method, 10 groups of 39 questionnaires were developed based on common accreditation criteria and requirements for the curriculum approved by the Mongolian National Council for Education Accreditation (MNCEA), and study data were collected using printed materials and Google forms, and analysis was performed by using Microsoft Excel and SPSS. Study results show that the development, planning, and implementation of professional programs and activities aimed at teachers and students are reasonable and good. However, despite the legal framework for program accreditation, there is a need to improve the planning and allocation of appropriate incentive mechanisms, increase the budget and resources needed for the successful implementation of the program, and continuously improve funding and the materialistic environment for training and research. At the same time, it is important to plan appropriate steps for the collaboration of stakeholders that will result in change management practice. Although the internal quality assurance process is merely starting at the departmental or unit level, and internal policy and legal environment are in place, performance and implementation are insufficient by periodic planning, and no further steps are yet taken or need to be improved.

Keywords: Teacher professional · External accreditation · Program development

1 Introduction

Acquiring higher education has become a matter of public, even of the world, not just a subject of the elite minority, [1] that improved access to education in one way, and brought the nations to concern educational quality assessment and measuring, and accrediting in another way.

The goals of the higher education development policy of Mongolia 2017–2021 emphasized refinement of pedagogical universities' qualifications, accreditation, teaching, the standard of research, curriculum, and research directions that meet the needs

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of the society, [2] formulating the importance of having training programs suited to international standards to improve quality and competitiveness.

Therefore, joining in the initiation "Education first" [3] by the models of the developed countries in the world, Mongolia announced education shall be developed as a priority sector because education is lifelong support for citizens' life qualities and a key factor in the country's social, economic, scientific, and technological development, also a guarantee of national independence and security, according to one of the parliamentary decrees of 2015 [4].

Mongolia's Sustainable Development Policy stated at least four national universities are ranked among Asian top universities, with a higher education system that prepares capable graduates with knowledge and skills, recognized in the international labor market [5]. The long-term development policy "Vision 2050" for Mongolia states that higher education would be developing following international standards and quality requirements, along with building an equal and inclusive educational environment.

Among state-owned universities, the National University of Mongolia (NUM) and the Mongolian State University of Education (MSUE) were accredited first time in 1999. Therefore, teacher training programs of MSUE were accredited by this local accreditation in 2004; also, professional programs to prepare teachers in mathematics, informatics, physics, chemistry, and biology were accredited internationally by the German accreditation organization ASIIN for the first time in 2018 and 2019 [6].

As of 2021, there are 88 states, non-state, private, and foreign universities and colleges engaged in teaching and research activities, and 147,293 students are studying [5]. The above universities have 14,335 [6] students in the field of teacher education, which is 0.9% of the total number of undergraduate students.

Besides this, to put teacher education and education science on the priority list of essential professions required in Mongolia, [9] the state focus on teacher education and teachers' permanent professional development, and observes whether teacher-training universities' quality and programs meet the needs of the society. So, it has been monitored and reflected in comprehensive national development policies on education development.

The number of accredited institutions and programs in the higher education sector of Mongolia has been increasing in recent years, but most accredited programs are in finance, business, engineering, and technology [7]. Among them, four state-owned and one non-state-owned university get their teaching curricula evaluated and certified [8].

Therefore, it is important to intensify the process of evaluating, approving, and accrediting the programs to implement the policy, planning, and goals mentioned before.

The objective of this research work is to identify the challenges to accreditation of bachelor's degree programs of teacher training by national accreditation, together with examining the current situation.

2 Literature Review

In recent years, researchers have been interested in internal and external quality assurance in the sector of higher education. For instance, the consequences and significance of carrying out accreditation in the education sector were defined at 6 levels and the main directions to update criteria for accreditation were studied to be defined [9].

Researcher G. Battsetseg and others (2021) conducted a quantitative and qualitative study on the comparison of the criteria and requirements for accreditation of bachelor's degree programs in Mongolia with the criteria and requirements of the ASIIN accreditation program of Germany.

The result of this study shows that the current criteria and requirements of the Mongolian national council for education accreditation are too general by evaluating many factors in one provision, while the criteria and requirements of Germany are formulated in a detailed and accurate way to evaluate and measure specific factors.

They also saw the basic way to strengthen the higher education system and build a culture of quality in the universities are having self-evaluation of their programs, constant improvement, and development of internal quality assurance system; and noted some practices of conducting internal quality assurance in the universities of some countries [10].

Urnukhdelger, D raised the issue of curriculum reform and quality of teaching in the undergraduate program of Khovd University, saw the university program committee as one of the filters to improve the quality of the programs of the university, and developed specific proposals for further intensification and sustainable activities, doing a quantitative and qualitative study.

In recent years, universities consider having a "Program Committee" in their university's unit and structure as an effective step to open new curricula through it, to update and develop existing programs in a sustainable and long-term manner to get accreditation in their pams [11].

re is a need to improve the participation of stakeholders in internal quality certification, improve the understanding of members within the organization, and enhance cooperation [12].

3 Methodology

In the survey, four state-owned teacher-training universities as Mongolian State University of Education's branches in the city and county side, and the Teacher College in Arkhangai province, Khovd University, and Dornod University participated.

The survey questionnaire was developed based on the "Common criteria and requirements of the curriculum" adopted in resolution no. 08 of 2018, by the Board of Mongolian National Council for Education Accreditation, it was developed with 10 groups of 39 questions by using quantitative research methods. Responses were developed according to Likert's steps 1–5 (1-insufficient, 2-necessary for improvement, 3-possible, 4-Good, 5-excellent).

These common criteria and requirements for accreditation of higher education curricula adopted by the Mongolian National Council for Education Accreditation were developed using the recommendation of the European Quality Assurance standard with 3 parts and 24 steps standards as the guidelines. The Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) were adopted in 2005 first, then revised in 2015, and are now used as the primary document to accredit the quality of universities from the European Union [13]. Data for this survey was collected during the 2020–2021 academic year by using printed materials and Google forms and the analysis was done by using the software Microsoft Excel, and SPSS.

Table 1. Results of Reliability and Factor Analysis

Constructs	Cronbach' α	CR	AVE
Program planning	0.844	0.906	0.763
Training activities	0.846	0.910	0.770
Conditions and environment for program implementation	0.874	0.923	0.800
Program management and organization	0.867	0.911	0.719
Activities for students	0.865	0.903	0.652
Teacher's activities	0.883	0.919	0.740
Quality assessment and certification	0.904	0.927	0.679
Research database required for the support of the program development	0.924	0.943	0.769
System of incentive and evaluation	0.862	0.916	0.784
Financial resources and capacity	0.906	0.941	0.842
Operations of the sub-committee and general committee of the program	0.857	0.913	0.778

4 Survey Result

The age group of participants is 9.5% or 19 teachers aged 20–30, 34% or 68 teachers aged 31–40, 37.5% or 75 teachers aged 41–50, 16% or 32 teachers aged 51–60, 3% or 6 teachers aged 61 and over. Moreover, 155 or 62% were females and 95 or 38% were male. The results of the survey were analyzed and explained by each of the groups, depending on the proportion of 1 to 5 answer options. As the answer is closer to 1, it means that the content relevant to the question is insufficient and it needs to be improved, while as it is closer to 5, the content is good and very good.

The various latent variables are tested for reliability and validity. As shown in Table 1, the load of all indicators exceeds 0.7, which means that the reliability of each construct is sufficient; all the Cronbach'α coefficient of the corresponding latent variable is higher than 0.6, and the composite reliability is greater than 0.8, which indicate that the internal consistency of the latent variable is suitable, and the measurement model has good reliability, and all the AVE is greater than 0.5, indicating that the measurement model has good convergence validity (Table 2).

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic that indicates the proportion of variance in your variables that might be caused by underlying factors. High values (close to 1.0) generally indicate that factor analysis may be useful with our data. If the value is less than 0.50, the results of the factor analysis probably won't be very useful. As shown in Table 4, In our case it is greater than 0.50.

Bartlett's test of sphericity tests the hypothesis that your correlation matrix is an identity matrix, which would indicate that your variables are unrelated and therefore unsuitable for structure detection. For Bartlett's Test of Sphericity, Sig. = .000 < 0.01, that factor analysis may be useful with our data.

Table 2. KMO and Bartlett's Test results

	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
		Approx. Chi-Square	df	Sig.
Program planning	0.72	316.3	3	0.000
Training activities	0.72	328.3	3	0.000
Conditions and environment for program implementation	0.72	394.7	3	0.000
Program management and organization	0.77	501.3	6	0.000
Activities for students	0.83	585.9	10	0.000
Teacher's activities	0.82	529.4	6	0.000
Quality assessment and certification	0.90	876.4	15	0.000
Research database required for the support of the program development	0.87	961.0	10	0.000
System of incentive and evaluation	0.73	351.6	3	0.000
Financial resources and capacity	0.75	485.0	3	0.000
Operations of the sub-committee and general committee of the program	0.71	348.9	3	0.000

Table 3 shows the extracted components. For example, For Health Management Efficacy, Thelain nearly 69% of the variability in the original five variables, so we can considerably reduce the complexity of the data set by using this component, with only a 31% loss of information.

According to Hair et al. (2006) and Wu (2008), the factor analysis selection criteria: is cumulative explained variance $\geq$ 60%.

The descriptive analysis in Table 4 shows that the development, planning, and implementation of professional programs and activities aimed at teachers and students have reasonable and good results between 3.15 and 3.59. While the financial resources required for the successful implementation of the program have a result that needs to be improved or the lowest point of 2.59. Also, the participants of the study stated that it is necessary to improve the research fund formation and the effective management methods of the managers required to support the verification of the internal quality assurance and development of reward evaluation policy system and program (Table 5).

Table 3. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Program planning	2.29	76.30	76.30	2.29	76.30	76.30
Training activities	2.31	77.04	77.04	2.31	77.04	77.04
Conditions and environment for program implementation	2.40	80.04	80.04	2.40	80.04	80.04
Program management and organization	2.87	71.86	71.86	2.87	71.86	71.86
Activities for students	3.26	65.21	65.21	3.26	65.21	65.21
Teacher's activities	2.96	74.01	74.01	2.96	74.01	74.01
Quality assessment and certification	4.07	67.89	67.89	4.07	67.89	67.89
Research database required for the support of the program development	3.85	76.92	76.92	3.85	76.92	76.92
System of incentive and evaluation	2.35	78.40	78.40	2.35	78.40	78.40
Financial resources and capacity	2.53	84.18	84.18	2.53	84.18	84.18
Operations of the sub-committee and general committee of the program	2.33	77.83	77.83	2.33	77.83	77.83

Table 4. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Financial resources and capacity	250	1.00	5.00	2.59	0.874
Quality assessment and certification	.250	1.00	4.83	2.77	0.780
System of incentive and evaluation	250	1.00	4.67	2.80	0.843
Research database required for the support of the program development	250	1.00	5.00	2.87	0.827
Program management and organization	250	1.00	5.00	2.96	0.833
Operations of the sub-committee and general committee of the program	250	1.00	5.00	3.07	0.864
Conditions and environment for program implementation	250	1.00	5.00	3.15	0.971
Activities for students	250	1.00	5.00	3.28	0.832
Training activities	250	1.00	5.00	3.44	0.829
Training activities	250	1.00	5.00	3.54	0.826
Program planning	250	1.00	5.00	3.59	0.817

The following table shows the results of the comparison of indicators by location by group: Ulaanbaatar and the local area. The evaluation of teachers‘ activities is slightly higher in Ulaanbaatar (3.63) than in the local area (3.45), and this difference is statistically significant ($p < 0.1$). The evaluation of the activities of the sub and general committees of the program is higher in Ulaanbaatar (3.29) than in the local area (2.87), and this difference is statistically significant ($p < 0.001$). But, as for the other indicators, there is no significant difference.

The impacts of financial resources and capacities on program implementation have been assessed (Table 6). Locations of the schools were taken as a control variable in this model. The financial resources and capacities have a significant positive impact on the program implementation. In other words, if the financial resources are sufficient, the possibility of successful program implementation tends to be high. If it assumes that the financial resources and capacities are the same, the possibility of program implementation is low in the schools in Ulaanbaatar. It can represent 22.9% of the variance in program implementation.

The impacts of the program management and organization on the program implementation environment (model 2), teachers‘ activities (model 3), financial resources and capacities (model 4), activities of program committees (model 5), and incentive evaluation policy (model 6) have been assessed (Table 7). The program management and

Table 5. Results compared by locations

	Location	N	Mean	Std. Deviation	Independent Samples Test	
					t-stat	p-value
Program planning	Ulaanbaatar	119	3.67	0.864	1.610	0.109
	Local	131	3.51	0.766		
Training activities	Ulaanbaatar	119	3.48	0.860	0.786	0.433
	Local	131	3.40	0.800		
Conditions and environment for program implementation	Ulaanbaatar	119	3.06	0.902	-1.473	0.142
	Local	131	3.24	1.025		
Program management and organization	Ulaanbaatar	119	2.94	0.839	-0.378	0.706
	Local	131	2.98	0.831		
Activities for students	Ulaanbaatar	119	3.20	0.860	-1.454	0.147
	Local	131	3.35	0.802		
Teacher's activities	Ulaanbaatar	119	3.63	0.884	1.805	0.072*
	Local	131	3.45	0.761		
Quality assessment and certification	Ulaanbaatar	119	2.79	0.763	0.423	0.673
	Local	131	2.75	0.797		
Research database required for the support of the program development	Ulaanbaatar	119	2.79	0.831	-1.455	0.147
	Local	131	2.94	0.821		
System of incentive and evaluation	Ulaanbaatar	119	2.85	0.805	0.873	0.383
	Local	131	2.76	0.877		
Financial resources and capacity	Ulaanbaatar	119	2.65	0.865	1.113	0.267
	Local	131	2.53	0.882		
Operations of the sub-committee and general committee of the program	Ulaanbaatar	119	3.29	0.892	3.905	0.000***
	Local	131	2.87	0.791		

organization have a significant positive impact on the environment of program implementation, teachers' activities, financial resources, activities of program committees, and incentive evaluation policy. The program management and organization represent about 18–37% of those variables. If it assumes that the program management and organization are the same, the activities of teachers and program committees are higher in Ulaanbaatar schools.

Table 6. Evaluation of feasibility model for the implementation of the program

	Model (1)
Regular	3.267*** (0.075)
Financial resources and capacity	0.457*** (0.054)
Ulaanbaatar	-0.245** (0.109)
R-squared	0.229
Sample size	250

*** statistically significant, at a 1% level. ** statistically significant, at a 5% level. * statistically significant, at a 10% level

Table 7. Impact of program management and organization

	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
Regular	1.075*** (0.144)	1.796*** (0.165)	1.075*** (0.179)	1.252*** (0.172)	1.530*** (0.179)
Program management and organization	0.572*** (0.047)	0.554*** (0.052)	0.510*** (0.058)	0.543*** (0.054)	0.430*** (0.058)
Ulaanbaatar		0.210** (0.086)		0.437*** (0.090)	
R-squared	0.374	0.325	0.237	0.332	0.181
Sample size	250	250	250	250	250

* Statistically significant, at 0.1 level. ** Statistically significant, at 0.05 level. *** Statistically significant, at 0.01 level.

The impacts of the quality assessment and assurance on the research fund required to support the program development (model 7) and the program subcommittee and general committee activities (model 8) have been assessed (Table 8). The quality assessment and assurance have a significant positive impact on each of the research funds required to support the program development and program subcommittee and general committee activities. The quality assessment and assurance represent about 39% of those variables. If it assumes that the quality assessment and assurance are the same, the research fund required to support the program development is lower in the schools in Ulaanbaatar, while the activities of the program sub and general committees are higher in the schools in Ulaanbaatar.

Table 8. Impact of quality assessment and assurance

	Model (7)	Model (8)
Regular	1.153*** (0.156)	1.105*** (0.162)
Quality assessment and assurance	0.651*** (0.053)	0.642*** (0.055)
Ulaanbaatar	-0.179** (0.083)	0.389*** (0.086)
R-squared	0.384	0.394
Sample size	250	250

** Statistically significant at 0.1 level. ** Statistically significant at 0.05 level. *** Statistically significant at 0.01 level*

5 Conclusion

Conclusively, some issues even though less the curricula accreditation in the state-owned municipal and local universities for teachers' training were examined in this research. The accomplishment of developing professional curricula, planning, and implementation, and activities aimed at teachers and students showed quite reasonable, good indication. However, even though the legal framework for accreditation teams, performer teams, and their arrangement were already established with incentives, there is still a need to improve the planning, assignation, and incentive mechanism; so a long-term incentive policy for accreditation activities should be operated.

In addition, even if there are good financial resources and capabilities for the programs in the universities, it is necessary to have special training and funds for development and research, as well as detailed financial estimation for each program, and a development plan to ensure the successful implementation of the program. It is important to plan optimal steps for stakeholder engagement to improve the program implementation environment and change management practices. Also, it is essential to establish a research fund to support the development of the program, especially to identify the needs and interests of employers.

Besides all of this, the internal quality assurance process is just going on the operations of the department several Although the legal environment is already established, the implementation by the periodic planning process and performances are insufficient. What's more, it appears that the second-level accreditation planning and improvement steps for it have not started, or need to be improved.

6 Discussion

There are several provisions in the program accreditation criteria and requirements that are unsatisfactory and in need of improvement to ensure certification of the teacher training programs by an independent certification authority. This research shows that it is

important to have an optimal organization of effective and demand-driven qualified curriculum, policies, and management of the quality department and program development of the university. There is also a need to improve effective policies for the engagement and cooperation of management and stakeholders and an open, transparent, and measurable legal environment for the long-term accreditation processes.

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