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THE ANALYSIS OF FACTORS ON STUDENTS' SATISFACTION: THE CASE OF MONGOLIA

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Abstract: *Our study aims to examine the correlation between professors' communication, professors' knowledge, professors' skills, teaching method and campus environment and how students' issues are assessed with their satisfaction.*
We attempt to evaluated and provided valuable insights into factors influencing student satisfaction across both public and private universities in Mongolia, highlighting key areas for enhancing the higher education experience. Our study was conducted via online channel from total 326 respondents, who study at university bachelor degree in Mongolian public university as Mongolian State University of Education and private university as Royal International University, Mongolia. We used SMART PLS-3.0 and SPSS-27.0 software as a qualitative research program, Cronbach's alpha (α coefficient), (T statistic) and (P values) were used to measure the data in our study. We describe and compared between relationships of hypothesized and significance of the hypothesis tested by Path analysis in our study such as the analysis of hypotheses reveals differing impacts of professors' communication, knowledge, skills, teaching method, and campus environment on student satisfaction across the two universities. In Royal International University, Mongolia, only teaching method and campus environment significantly influence student satisfaction. Conversely, at Mongolian State University of Education, professors' knowledge and campus environment positively affect student satisfaction.

Keywords: *Oyster mushroom commercialisation, Crop Commercialisation Index, intensity of oyster mushroom commercialisation, two-stage least square regression*
(JEL code: I23)

INTRODUCTION

Higher education institutions are encountering increased competition to implement market-driven strategies that distinguish them from rivals and draw in as many students as possible, all while fulfilling the needs and expectations of current students.

In our study, we need to begin the discussion logically of factors and impacts beginning with a definition of students' satisfaction. In education field, our study has a significant impact of students' satisfaction. Ashari Ismail, Muhammed Hariri Bakri, Mohd Norazmi Nordin (2021), studied that satisfaction is a complex concept with multiple meanings and application as it finds expression and widespread application in disciplines such as sociology, economics, religion, law, psychology, urban and regional planning, marketing, music, and entertainment among. There are many definitions of satisfaction that were mention in the literatured of satisfaction. "Longman Dictionary of Contemporary English (1981) defines satisfaction as contentment (leisure); something that pleases, the fulfilment of need or desire, payment of a claim or money owned, condition of being fully persuaded (certainty), and the chance to defend one's honor in a duel. (Ashari Ismail, 2021).

However, there are main concepts related to the relationship between professors' attributes, teaching methods, campus environment, and student satisfaction. When we need to focus on their factors that research questions in our study as below:

RQ 1. What communication between professors and students impact student satisfaction?

RQ 2. What role do professors' knowledge play in influenc-

ing student satisfaction?

RQ 3. What skills do professors' play in influencing student satisfaction?

RQ 4. What different teaching method affect students' assessment of their issues and overall satisfaction?

RQ 5. What ways does the campus environment contribute to student satisfaction?

MATERIALS AND METHODS

Our study was conducted via online channel from total 326 respondents, who study at university bachelor degree in Mongolian public university as Mongolian State University of Education and private university as Royal International University, Mongolia.

Our study used information obtained from the responses to a questionnaire applied to undergraduate students of the between one to four course in Mongolian State University of Educational and Royal International University, Mongolia. Our model of study was based on a questionnaire about perceptions of professors' communication, professors' skills, professors' teaching method and campus environment and students' satisfaction in an undergraduate course of art, architure, graphic art, business administration and law.

The questionnaire was separated into two parts, one was general information each university, another was for the analysis of professors' impacts and another. Each had a five-point Likert scale (33 items) and an open question at the end. The answers had five options, from the least to the most favorable. In questions about frequency, the options were 1 – never; 2 – rarely; 3 – sometimes; 4 – often; and 5 – always, and in questions about agreement, 1 - strongly disagree; 2 – disagree; 3 – neither agree nor disagree; 4 – agree; 5 – strongly agree in our study.

THEORETICAL BACKGROUND IN OUR STUDY

Satisfaction

According to Guolla (1999) satisfaction is an evaluation which takes place at the end of the process of consumer psychology after the use of a product or service (Suarman, 2015).

Solomon et al. (2002) posits that satisfaction is largely determined by the feelings or attitudes about a product or service generated post purchase or consumption. Rai (2013) defined satisfaction as "a buyer's emotional or cognitive response post subjective assessment and comparison of prepurchase expectations and actual performance subsequent to the consumption of the product or service, meanwhile evaluating the costs incurred and benefits reaped in a specific purchase even or over time in course of transacting with an organization" (Medha Srivastava, 2013)

Herzberg et al. (1959) defined the best known popular "theory of job satisfaction." According to the two-factor theory of job satisfaction factors that affect job satisfaction are divided into two categories, hygiene and motivation. Hygiene factors surround the doing of the job. They include supervision, interpersonal relations, physical working conditions, salary, company policy and administration, benefits, and job security. Motivation factors lead to positive job attitudes because they satisfy the need for self-actualization. Motivation factors are achievement, recognition, the work itself, responsibility, and advancement (Bayasgalan, 2015).

Anita Kanwar, Meghana Sanjeeva (2022), argued that students are the most important stakeholders of any educational institution. Along with students' progression and placements one of the main indicators of a college's progress is the students' level of satisfaction (Anita Kanwar, 2022).

Professors' communication and students' satisfaction

Carlos Estrela, Marcela Gimenes B Oshita (2024) studied that Communication takes place in a context of great importance in learning, as it directly affects factors that are relevant for clarity, safety, confidence, and the logic of the contents taught. Success in a career as a professor depends on a high communicative potential. Teaching requires the incorporation of communication skills, and these potentials may affect the outcomes of the learning process (Carlos Estrela, 2024).

Udhanshu Bhushan (2021), said that Students are important stakeholders in the higher education system. Policy, planning, financing and governance all revolve around maximizing the learning and satisfaction of students. If with enhanced communication skills, learners are likely to develop greater self-confidence and improve their self-image (Bhushan, 2021).

Elisa Monterrubio Cabrera, Liliana de Jesús Gordillo Benavente, Carmen Guadalupe Juárez Rivera (2024) argued that the audiences and audiences of each institution become more and more dynamic in their communication processes in media spaces, becoming present and visible (Elisa Monterrubio Cabrera, 2024).

Communication is seen as social interaction of people while exchanging scientific, industrial or any other experience; interpersonal or group communication among people exchanging their experience with the help of verbal and nonverbal signals. Communication competence was indicated as the second most important competence in the educational process. This competence consists of a bigger range of subcategories compared to personal competence. It is necessary to note that the subcategory "sender's personality" is attributed to communicative competence because it characterizes the sender's personality as a universal participant in the process of communication: "charismatic", "admirable personality" and exceptional personality" (Vida NAVICKIENĖ, 2019). Considering the literature review, we hypothesize that professors' communication and students' satisfaction as below:

Hypothesis 1. Professors' communication will have a positive impact on students' satisfaction.

Professors' knowledge and students' satisfaction

Knowledge is a collaborative and integrated approach to creation, capture, access and use of an enterprise's intellectual assets (Grey, 1996). Knowledge management is the concept

under which information is turned into actionable knowledge and made available effortlessly in a usable form to the people who can apply it (Tsogtsuren Bayasgalan, 2017).

Shulman, L.S. (1987) indicated that besides subject-matter expertise the pedagogical content knowledge is required for effective teaching and the satisfaction of students. Many of the effective teaching skills come under the umbrella of Pedagogical skills, Classroom management skills, Knowledge of Curriculum, Quality teaching, Differentiated instruction, Instructional Assessment, Use of appropriate and effective teaching strategies. The curriculum can be defined as the road-map or framework for teachers to accomplish desired learning objectives. Therefore, curriculum thinking and its knowledge needs to be undertaken for the teachers to start to think about how to represent and structure a topic (Lambert, D. (2014a) (Muhammad Mujtaba Asad, 2020).

Nurul Hidayah Binti Md Noor (2021), studied that lecturer in higher education institutions have the responsibility of delivering quality education through finding the better ways of delivering knowledge, researches, reviewing and updating their knowledge as well as improving the curriculum to satisfy the students as the students is the customers of the institutions (NOOR, 2021). Considering the literature review, we hypothesize that professors' knowledge and students' satisfaction as below:

Hypothesis 2. Professors' knowledge will have a positive impact on students' satisfaction.

Professors' skills and students' satisfaction

Baigalmaa Danzan, Gerelkhu Tugsuu (2018), studied that Learning and teaching skills are a complex construct that is difficult to define. Most definitions of learning describe it as a relatively permanent change in behavior or ability in response to practice or experience (Shuell, 1986). Learning outcomes show a significant relationship with success in the initial phase of gradates' careers (Vermeulen & Schmidt, 2008). Student feedback is increasingly being considered as an important indicator of the quality of education (Harvey, 2001). Student feedback such as performance, including academic performance and student satisfaction, is important in understanding the students' perspective on their learning experiences (Baigalmaa Danzan, 2018).

Learning motivation involves an individual's desire to master new knowledge and skills. Motivation to learn is influenced by internal factors such as self-confidence, expectations and personal satisfaction, as well as external factors such as the support of teachers, family and peers. Learning motivation is a psychological drive that encourages individuals to start, continue, and direct their learning actions (Ely Ibrahim, 2023). Considering the literature review, we hypothesize that professors' skills and students' satisfaction as below:

Hypothesis 3. Professors' skill will have a positive impact on students' satisfaction.

STUDY RESULTS

Mushroom cultivation is a non-traditional farming enterprise that is being promoted in Ghana due to its proven economic, medicinal, and nutritional value. The increased demand for oyster mushrooms in Ghana, particularly in the Greater Accra region, justifies the need for commercialisation. Commercialising mushrooms provides a means of generating income and reducing poverty while also improving food security. The mushroom commercialisation index showed that during the 2020 production season, all producers sold 75% of oyster mushrooms. This indicates that oyster mushroom is grown as a cash crop in the region, although the intensity of commercialisation (GHC 10202.29) was low. In terms of farmer characterization, the study found that the majority (94%) of the mushroom producers in the region were highly commercialised. Age, educational level, land ownership, and volume of output were significant determinants of the intensity of mushroom commercialisation. We recommend that stakeholders such as the Food Research Institute and the Ministry of Food and Agriculture of Ghana increase their efforts to improve oyster mushroom production to enhance the intensity of commercialisation. We also recommend that stakeholders in the mushroom industry launch programmes to attract young, educated people, especially recent graduates who are not formally unemployed, into oyster mushroom production. This will increase the supply and maximise producers' profits.

Professors' teaching method and students' satisfaction

Teaching quantity and quality of students during interaction in teaching and learning should be the major concerns of educators. Quantity refers to the frequency of students' interaction to discuss their learning subject; whereas quality refers to the learning aspects discussed by students. Interaction among students is considered as social relationships in the classroom. According to Mohammad Ashori (2007) interaction is a natural social relationship between individuals, in which individuals mutually influence each other simultaneously (Suarman, 2015).

Pedagogical skills are essential for every teacher to promote the process of teaching and learning and to make it more effective. Many researchers have mentioned that students are capable enough to reflect on the teacher's method of teaching, instructional assessment, and classroom management skills. Thus, students are eligible to express whether they are satisfied with the teaching methods of their instructor or not. Keeping this in view, one of the key aspects that require students' satisfaction in claiming the provision of quality teaching is the teacher's pedagogical skills. As such, the influence of teachers' pedagogical skills on students' academic achievement and participation in classroom activities has always been regarded as an important factor in imparting quality education. But as a matter of fact, students' satisfaction towards teacher's pedagogical skills and teaching methods had never been taken in to account as a matter of importance and usually never paid

attention by the educational authorities (M. Nauman et. al, 2010) (Muhammad Mujtaba Asad, 2020). Considering the literature review, we hypothesize that professors' teaching method and students' satisfaction as below:

Hypothesis 4. Professors' teaching method will have a positive impact on students' satisfaction.

Campus environment and students' satisfaction

According to Guolla (1999) said that students' satisfaction on their learning program is considered as a cumulative satisfaction of the entire program of their study. Students are clients who interests and satisfaction need to be prioritized as a dependent variable. The students are clients and their satisfaction on certain educational products or services, resulted through interaction between lecturers and students during their teaching and learning process (Suarman, 2015).

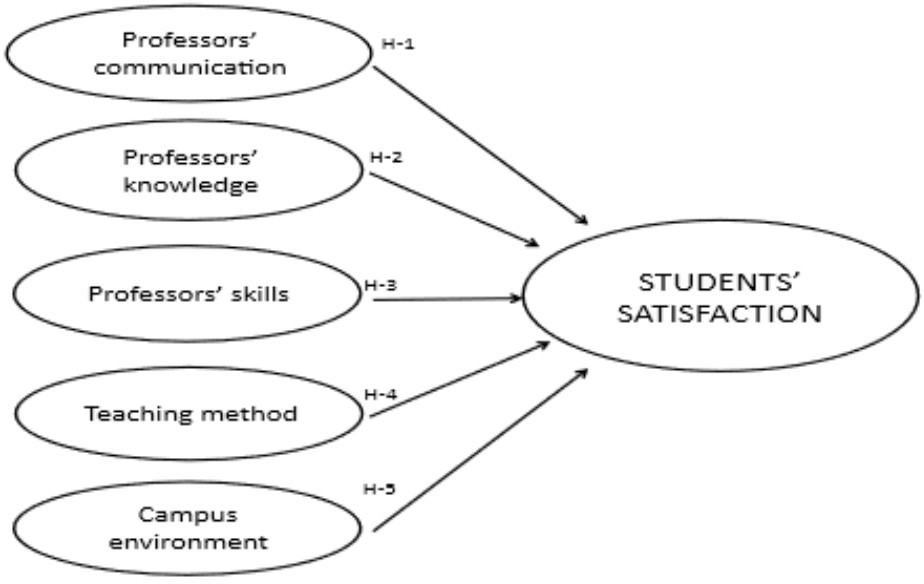
Muhammad Hilmy Muslim, , Hafazah Abdul Karim, Ishak Che Abdullah (2012) studied that Student housing presents a unique opportunity for student affairs administrators to contribute to and support the educational experience of the university student. Research on the impact of on-campus living satisfaction on student development has consistently shown that students' chances of persisting to graduation are greatly improved by living on campus and having a positive living and learning experience. Students that have a positive experience are more likely to see their program through to completion and have increased satisfaction with their overall university experience. The following studies demonstrate that while on-campus living may look and feel the same in many places, the way the program is viewed and experienced by the students is not (Muhammad Hilmy Muslim, 2012).

Ely Ibrahim, Karlina Napu, Darman (2023), identified the influence of environment and satisfaction on student learning motivation at Bina Mandiri University, Gorontalo. They argued that a good educational environment can include aspects such as adequate campus facilities, a complete library, good laboratories, and adequate academic support from faculty and teaching staff. Also, they argued that the learning environment includes all factors that influence the learning process, such as the social context, culture, facilities and infrastructure, as well as the learning approach used escribes the learning environment as the physical, social, and psychological conditions in which individuals are located, including factors such as the classroom atmosphere, social interaction, and the existence of learning support resources (Ely Ibrahim, 2023). Considering the literature review, we hypothesize that campus environment and students' satisfaction as below:

Hypothesis 5. Campus environment will have a positive impact on students' satisfaction.

The proposed framework provides a structured method for

Figure 1. Conceptual model on students' satisfaction



RESULTS

Table 1. The general information in statistical data

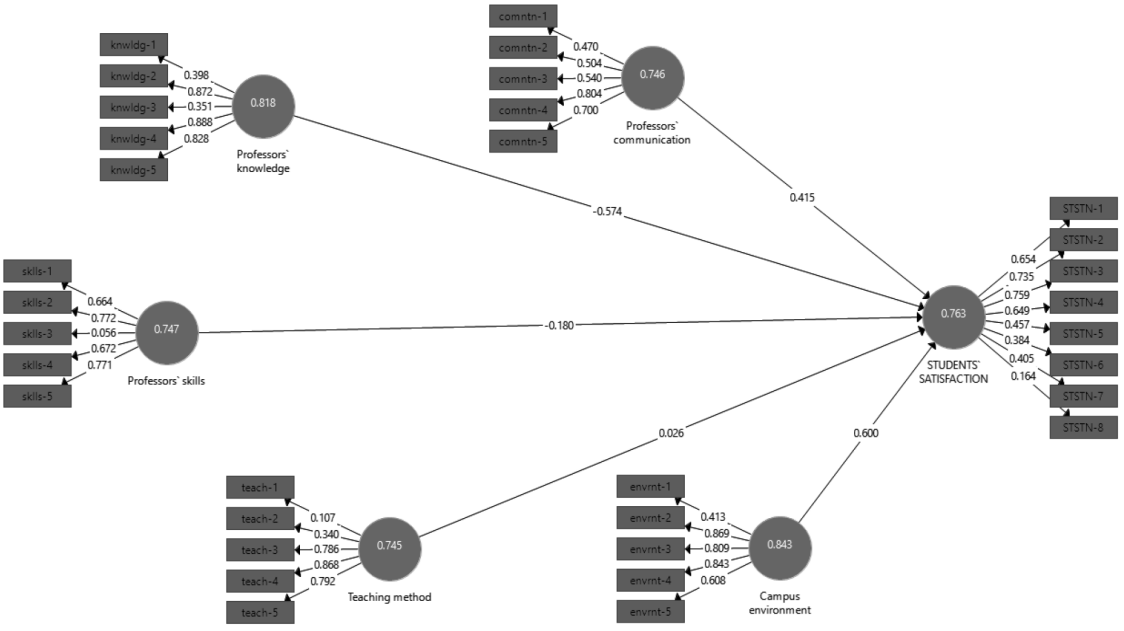
№	Name of Universities	number	Percent
1	Mongolian State University of Education	180	55.21%
2	Royal International University, Mongolia	146	44.79%
	Total	326	100.00%

Noted by: The results of our study.

understanding our research problem and key variable relationships in line with our conceptual model in Figure 1.

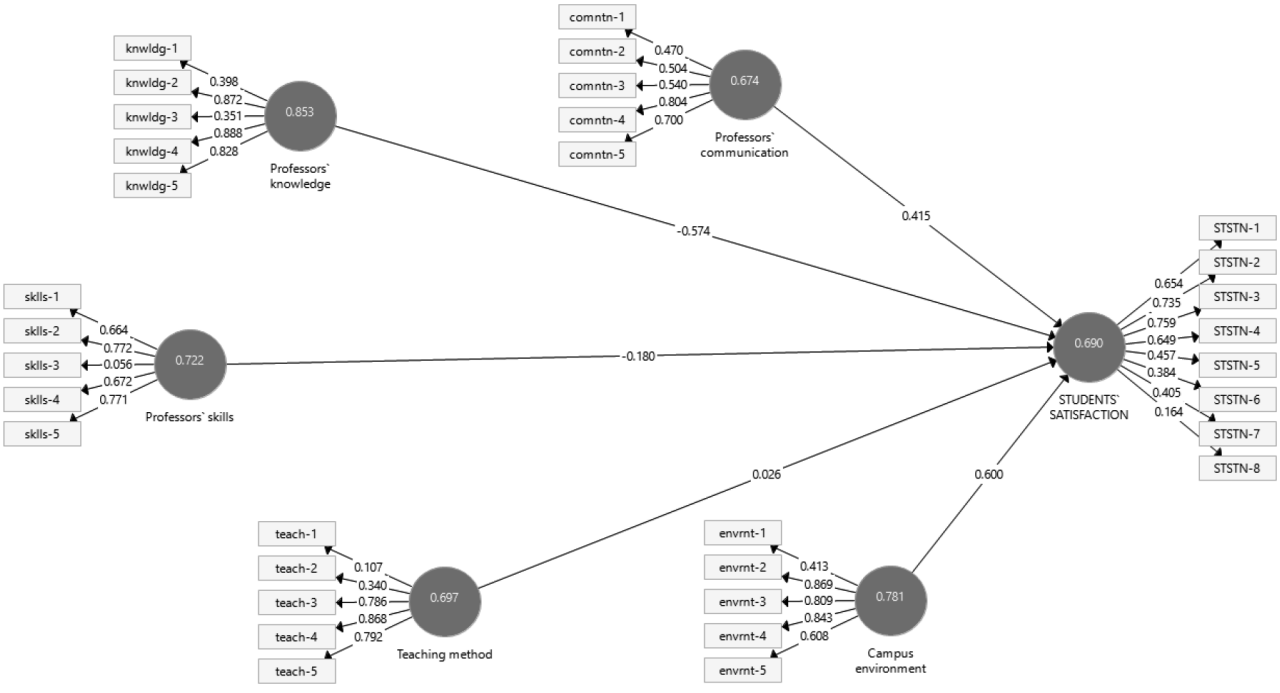
Our survey was rolled out and were kept open for a month between October and November, 2024-2025 in Academic year. We are analyzed that four important dimensions such as professors' communication, professors' knowledge, professors' skills, teaching method and campus environment and how students' issues are assessed with their satisfaction were fnalized. The survey was conducted online, allowing students to participate without revealing their personal identities, thereby minimizing the risk of biased responses or any pressure on them to provide skewed answers. The statistical analysis of Mongolian State University of Education has a majority with 180 participants, representing 55.21% of the total. Royal International University, Mongolia has 146 participants, making

Figure 2. The results of the proposed model (RIUM)



Noted by: The results of our study PC-professors' communication, PK-professors' knowledge, PS-professors' skills, TM-teaching method, CE-campus environment, Sndt SAT-students' satisfaction.

Figure 3. The results of the proposed model (MSUE)



Noted by: The results of our study PC-professors' communication, PK-professors' knowledge, PS-professors' skills, TM-teaching method, CE-campus environment, Sndt SAT-students' satisfaction.

Table 2. The consistency reliability and convergent validity (RIUM)

The factors	Codes	Items	outer	Cronbach's alpha	CR	AVE
professors' communication	comntn-1	greeting	0.730	0.880	0.913	0.677
	comntn-2	clarify	0.824			
	comntn-3	speech	0.847			
	comntn-4	support	0.894			
	comntn-5	respect	0.812			
professors' knowledge	knwldg-1	professional knowledge	0.843	0.919	0.938	0.753
	knwldg-2	research methodology	0.878			
	knwldg-3	preparation	0.811			
	knwldg-4	foreign language	0.932			
	knwldg-5	knowledge resources	0.869			
professors' skill	sklls-1	critical thinking	0.796	0.928	0.946	0.777
	sklls-2	adaptability	0.917			
	sklls-3	decision-making	0.917			
	sklls-4	soft skills	***0.033***			
	sklls-5	hard skills	0.837			
teaching method	teach-1	active learning	0.869	0.938	0.953	0.801
	teach-2	differentiation	0.897			
	teach-3	assessments	0.919			
	teach-4	training based learning	0.891			
	teach-5	case based learning	0.898			
campus environment	envrnt-1	green area	0.882	0.933	0.949	0.789
	envrnt-2	car parking	0.889			
	envrnt-3	cleaning	0.909			
	envrnt-4	Inclusivity	0.895			
	envrnt-5	safety	0.866			
STUDENTS'	STSTN-1	teaching quality	***0.624***	0.874	0.901	0.635
	STSTN-2	campus facilities	0.772			
	STSTN-3	student support services	0.794			
	STSTN-4	student-teacher relationship	0.790			
	STSTN-5	learning environment	0.770			
	STSTN-6	motivation	***0.614***			
	STSTN-7	academic advising	0.733			
	STSTN-8	personal improvement	0.729			

Noted by: The results of our study, CE-campus environment, PC-professors' communication, PK-professors' knowledge, PS-professors' skills, TM-teaching method, Sndt SAT-students' satisfaction.

up 44.79% in our study below data gives the following result at table 1. Hair et al. (2017) recommended that indicators with weaker outer loadings can be retained if other indicators with high loadings explain at least 50 percent of the variance (AVE = 0.50) (Hair, Hollingsworth, Randolph, & Chong, 2017) .

Werts C E, Linn R L (1974), defined that composite reliability (CR) is also used to measure internal consistency and must not be lower than 0.7 (Werts, Linn, & Jöreskog, 1974).

In the table 2 and 4, we analyzed measurement analysis such as outer loadings, Cronbach's alpha, CR (composite reliability) and AVE (average variance extracted) in our study. The measurement analysis evaluated the outer loadings of various items associated with different factors influencing students' satisfaction in our study.

In table 2, Royal International University, Mongolia, the outer loadings of 5 items measuring professors' communication ranged from 0.730 to 0.894, Cronbach's alpha of 0.880, Composite reliability (CR) was 0.913 and Average Variance Extracted (AVE) was 0.677. The outer loadings of 5 items measuring professors' knowledge ranged from 0.811 to 0.932, Cronbach's alpha of 0.919 (CR) was 0.938 and (AVE) was 0.753. The outer loadings of 5 items measuring professors' skills ranged from 0.033 to 0.917, Cronbach's alpha of 0.928, (CR) was 0.946 and (AVE) was 0.777. The outer loadings of 5 items measuring teaching method ranged from 0.869 to 0.919, Cronbach's alpha of 0.938, (CR) was 0.953 and (AVE) was 0.801. The outer loadings of 5 items campus environment method ranged from 0.866 to 0.909, Cronbach's alpha of 0.933, (CR) was 0.949 and (AVE) was 0.789. The outer loadings of 8 items campus environment method ranged from 0.614 and 0.794, Cronbach's alpha of 0.874, (CR) was 0.901 and (AVE) was 0.635.

The measurement model from Royal International University, Mongolia demonstrated strong reliability and validity for most constructs, with high outer loadings, Cronbach's alpha, composite reliability, and AVE values across professors' communication, knowledge, teaching method, and campus environment. However, the professors' skills construct included one item with a very low outer loading, suggesting a need for item revision to further strengthen the measurement quality.

In table 3, Mongolian State University of Education, the outer loadings of 5 items measuring professors' communication ranged from 0.470 to 0.804, Cronbach's alpha of 0.674, Composite reliability (CR) was 0.746 and Average Variance Extracted (AVE) was 0.381. The outer loadings of 5 items measuring professors' knowledge ranged from 0.351 to 0.888,

Table 3. The consistency reliability and convergent validity (MSUE

The factors	Codes	Items	outer	Cronbach's alpha	CR	AVE
professors' communication	comntn-1	greeting	***0.470***	***0.674***	0.746	***0.381***
	comntn-2	clarify	***0.504***			
	comntn-3	speech	***0.540***			
	comntn-4	support	0.804			
	comntn-5	respect	0.700			
professors' knowledge	knwldg-1	professional knowledge	***0.398***	0.853	0.818	0.503
	knwldg-2	research methodology	0.872			
	knwldg-3	preparation	***0.351***			
	knwldg-4	foreign language	0.888			
	knwldg-5	knowledge resources	0.828			
professors' skill	sklls-1	critical thinking	***0.664***	0.722	0.747	***0.417***
	sklls-2	adaptability	0.772			
	sklls-3	decision-making	0.056			
	sklls-4	soft skills	***0.672***			
	sklls-5	hard skills	0.771			
teaching method	teach-1	active learning	***0.107***	***0.697***	0.745	***0.426***
	teach-2	differentiation	***0.340***			
	teach-3	assessments	0.786			
	teach-4	training based learning	0.868			
	teach-5	case based learning	0.792			
campus environment	envrnt-1	green area	***0.413***	0.781	0.843	0.532
	envrnt-2	car parking	0.869			
	envrnt-3	cleaning	0.809			
	envrnt-4	Inclusivity	0.843			
	envrnt-5	safety	***0.608***			
STUDENTS'	STSTN-1	teaching quality	***0.654***	***0.690***	0.763	***0.314***
	STSTN-2	campus facilities	0.735			
	STSTN-3	student support services	0.759			
	STSTN-4	student-teacher relationship	***0.649***			
	STSTN-5	learning environment	***0.457***			
	STSTN-6	motivation	***0.384***			
	STSTN-7	academic advising	***0.405***			
	STSTN-8	personal improvement	***0.164***			

Noted by: The results of our study, CE-campus environment, PC-professors' communication, PK-professors' knowledge, PS-professors' skills, TM-teaching method, Sndt SAT-students' satisfaction.

Cronbach's alpha of 0.853 (CR) was 0.818 and (AVE) was 0.503. The outer loadings of 5 items measuring professors' skills ranged from 0.664 to 0.772, Cronbach's alpha of 0.722, (CR) was 0.747 and (AVE) was 0.417. The outer loadings of 5 items measuring teaching method ranged from 0.107 to 0.868, Cronbach's alpha of 0.697, (CR) was 0.745 and (AVE) was 0.426. The outer loadings of 5 items campus environment method ranged from 0.413 to 0.869, Cronbach's alpha of 0.781, (CR) was 0.843 and (AVE) was 0.532. The outer loadings of 8 items campus environment method ranged from 0.164 and 0.759, Cronbach's alpha of 0.690, (CR) was 0.763 and (AVE) was 0.314.

The measurement results from Mongolian State University of Education indicate generally moderate reliability and validity across the constructs, with professors' knowledge and campus environment showing relatively stronger metrics, while professors' communication, skills, teaching method, and students' satisfaction exhibited lower Cronbach's alpha, composite reliability, and AVE values. These results suggest that particularly professors' communication and students' satisfaction, require improvement through item revision or removal to enhance the overall measurement quality.

Table 4. The discriminant validity (RIUM)

factors	[1]	[2]	[3]	[4]	[5]	[6]
campus environment [1]	0.888					
professors' communication [2]	0.781	0.823				
professors; knowledge [3]	0.655	0.700	0.867			
professors' skills [4]	0.747	0.791	0.685	0.882		
STUDENTS' SATISFACTION [5]	0.481	0.553	0.365	0.423	0.731	
teaching method [6]	0.853	0.809	0.693	0.751	0.470	0.895

Noted by: The results of our study.

We used SmartPLS software in our study. The SmartPLS is one of the prominent software applications for Partial Least Squares Structural (PLS-SEM). PLS-SEM has been deployed in many fields, such as behavioral sciences (BassAvolio, B., Jung, D., & Berson YB.,, 2003), marketing (HenselerJ.,, 2009) organization (Sosik J JKahai, 2009), management information system (ChinW., 2003).

In table 4, professors' communication showed strong correlations with professors' skills 0.791 and teaching method 0.809, indicating its key role in both skill demonstration and instructional approach. Professors' knowledge was moderately correlated with communication 0.700, skills 0.685, and teaching method 0.693, reflecting its interconnectedness with teaching dynamics. Student satisfaction had moderate correlations with all factors, highest with professors' communication 0.553, suggesting it is influenced by but distinct from these constructs. Teaching method was highly correlated with campus environment 0.853, professors' communication 0.809, and professors' skills 0.751, underscoring its central importance. The strongest relationships were between teaching method and campus environment 0.853, and between professors' communication and professors' skills 0.791. Enhancing campus environment, teaching methods, and faculty capabilities is likely to improve student satisfaction significantly in Royal International University, Mongolia (table 4).

In our study, we proposed the structural model and table 5, Campus environment correlated moderately with students' satisfaction (0.495), teaching method 0.450, professors' skills 0.446, and professors' communication 0.436. professors' communication correlated moderately with teaching method 0.518 and professors' knowledge 0.425. Professors' knowledge shows a moderate correlation with professors' communication 0.425 but low correlations with professors' skills 0.263 and teaching method 0.221.

Table 5. The discriminant validity (MSUE)

factors	[1]	[2]	[3]	[4]	[5]	[6]
campus	0.729					
	0.436	0.617				
	0.379	0.425	0.710			
professors' skills [4]	0.446	0.391	0.263	0.646		
Students' Satisfaction [5]	0.495	0.376	-0.211	0.112	0.560	
teaching method [6]	0.450	0.518	0.221	0.483	0.298	0.652

Noted by: The results of our study.

Students satisfaction had a moderate positive correlation with campus environment 0.495 and a weak positive correlation with professors' communication 0.376, but a negative correlation with professors' knowledge -0.211 and weak with professors' skills 0.112. Teaching method correlated moderately with professors' communication 0.518 and professors' skills 0.483. Finally, the results highlighted the importance of campus environment and communication in shaping student satisfaction and teaching effectiveness but also suggest that other factors may contribute in Mongolian State University of Education (table 5).

Table 6. The Path analysis (RIUM)

hypothesis	relationship	sample meanings	standard deviation	T statistics	P values	results
H1	PC--> Sndt SAT	0.041	0.089	0.337	***0.736***	Not supported
H2	PK--> Sndt SAT	-0.046	0.086	0.509	***0.611***	Not supported
H3	PS--> Sndt SAT	0.020	0.172	0.164	***0.870***	Not supported
H4	TM--> Sndt SAT	0.395	0.142	2.584	0.010	Supported
H5	CE --> Sndt SAT	0.544	0.127	4.481	0.000	Supported

Noted by: PC-professors' communication, PK-professors' knowledge, PS-professors' skills, TM-teaching method, CE-campus environment, Sndt SAT-students' satisfaction.

We describe relationships of hypothesized and significance of the hypothesis tested by Path analysis in our study. In table 6, Hypothesis H1 such as professors' communication have no supported on students' satisfaction for sample meanings 0.041 standard deviation 0.089, T statistic 0.337 and p value 0.736. Hypothesis H2 such as professors' knowledge have no supported on students' satisfaction for sample meanings -0.046 standard deviation 0.086, T statistic 0.509 and p value 0.611. Hypothesis H3 such as professors' skills have no supported on students' satisfaction for sample meanings 0.020 standard deviation 0.172, T statistic 0.164 and p value 0.870. Hypothesis H4 such as teaching method have supported on students' satisfaction for sample meanings 0.395 standard deviation 0.142, T statistic 2.584 and p value 0.010. Hypothesis H5 such as campus environment have supported on students' satisfaction for sample meanings 0.544 standard deviation 0.127, T statistic 4.481 and p value 0.000 in Royal International University, Mongolia.

Table 7. The Path analysis (MSUE)

hypothesis	relationship	sample meanings	standard deviation	T statistics	P values	results
H1	PC--> Sndt SAT	0.080	0.072	1.286	***0.199***	Not supported
H2	PK--> Sndt SAT	0.694	0.094	7.335	0.000	Supported
H3	PS--> Sndt SAT	0.056	0.092	0.541	***0.589***	Not supported
H4	TM--> Sndt SAT	-0.094	0.100	0.365	***0.715***	Not supported
H5	CE --> Sndt SAT	0.253	0.107	2.020	0.044	Supported

Noted by: PC-professors' communication, PK-professors' knowledge, PS-professors' skills, TM-teaching method, CE-campus environment, Sndt SAT-students' satisfaction.

In table 7, Hypothesis H1 such as professors' communication have no supported on students' satisfaction for sample meanings 0.080 standard deviation 0.072, T statistic 1.286 and p value 0.199. Hypothesis H2 such as professors' knowledge have supported on students' satisfaction for sample meanings 0.694 standard deviation 0.094, T statistic 7.335 and p value 0.000. Hypothesis H3 such as professors' skills have no supported on students' satisfaction for sample meanings 0.056 standard deviation 0.092, T statistic 0.541 and p value 0.589. Hypothesis H4 such as teaching method have supported on students' satisfaction for sample meanings -0.094 standard deviation 0.100, T statistic 0.365 and p value 0.715. Hypothesis H5 such as campus environment have supported on students' satisfaction for sample meanings 0.253 standard deviation 0.107, T statistic 2.020 and p value 0.044 in Mongolian State University of Education.

DISCUSSION

The analysis of hypotheses reveals differing impacts of professors' communication, knowledge, skills, teaching method, and campus environment on student satisfaction across the two universities.

The measurement model for Royal International University, Mongolia, only teaching method and campus environment significantly influence student satisfaction, while professors' communication, knowledge, and skills show no significant effect.

The measurement model for Mongolian State University of Education demonstrated moderate reliability and validity, with professors' knowledge and campus environment constructs showing relatively stronger psychometric properties compared to others. Constructs such as professors' communication, skills, teaching method, and students' satisfaction exhibited lower Cronbach's alpha, composite reliability, and AVE values, indicating less consistent and valid measurement.

The results of our study highlighted the need for revising or removing weaker items, particularly in professors' communication and students' satisfaction constructs, to improve the overall quality and robustness of the measurement model.Also, the results suggested that the determinants of student satisfaction vary between institutions, highlighting the importance of contextual factors in shaping educational experiences.

CONCLUSION

We concluded and comapred our study as discriminant validity and path analysis. Firstly, the analysis using SmartPLS revealed that at Royal International University, Mongolia, professors' communication, skills, and teaching methods are strongly interrelated and closely linked to student satisfaction, emphasizing the importance of faculty capabilities and instructional approaches in enhancing educational outcomes. In contrast, Mongolian State University of Education showed more moderate and varied correlations, with campus environment and professors' communication playing a significant role in student satisfaction, while professors' knowledge and skills exhibited weaker or even negative relationships. The differences suggest that while teaching methods and campus environment are central to student satisfaction in both universities, the strength and nature of relationships among faculty-related factors vary, possibly reflecting institutional or contextual distinctions.

Secondly, the results of our study highlighted the need for tailored strategies at each university, focusing on strengthening key factors such as communication and campus environment to improve student satisfaction and teaching effectiveness.

Finally, the path analysis results indicate that at Royal International University, Mongolia, teaching method and campus environment significantly influence student satisfaction, while professors' communication, knowledge, and skills do not show significant effects. Conversely, at Mongolian State University of Education, professors' knowledge and campus environment are significant predictors of student satisfaction, whereas teaching method, communication, and skills lack significant impact. The all findings highlighted that the key drivers of student satisfaction differ between the two institutions, emphasizing the need for context-specific strategies focusing on enhancing campus environment and either teaching methods or faculty knowledge accordingly.

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