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Effect of Hard Skills, Soft Skills, Organizational Learning and Innovation Capability on Islamic University Lecturers' Performance

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ABSTRACT

The purpose of this research was to measure the effect of hard skills, soft skills, organizational learning, and innovation capabilityon the lectures performance of an Islamic University in Indonesia.Data collection was done by simple random sampling to 261 population an Islamic University in Indonesia. The returned and valid questionnaire results were 244 samples.SEM method with SmartPLS 3.0 software is used for data processing. The findings of the study reveal that hard skills, soft skills, organizational learning, and innovation capability have a direct positive and significant effect on the lecturer's performance. Besides, soft skills have the greatest influence on lecturer performance among other variables.This research proposed a model for building the lecture's performance among the lecturers of an Islamic University in Indonesiathrough enhancing hard skills, soft skills, organizational learning, and innovation capability. This research could pave the way to improve the lecturer readiness in facing the 4.0 education era.

Keywords: *Hard skills, organizational learning, performance, soft skills, lecturers' innovation capability*

INTRODUCTION

Dramatic changes that come from industrial revolution 4.0 become a new challenge for education. This industrial revolution requiresqualified, agile, adaptive, and responsive human resources against a rapid change. The world of education is facing rapid economic, social, political, and technological change. Therefore, universities must be flexible to be able to adapt tochanging situations and contexts. An environment that continues to grow positive and conducive is needed for schools and other educational institutions to compete in global human resources. Therefore, the synergy between lecturers and the work environment is needed by universities to make continuous improvements in innovation and performance. The point is that innovation and flexibility in the era of economic knowledge are needed by the community as energy to survive the competition. Increasing knowledge resources is the

strategic development of educational institutions in the future, especially lecturers, which provide space for innovation and growth.

To ensure that educational institutions, lecturers need to be directed and involved in pumping university performance so that universities can be competitive and adaptive. Lecturers must be powered and empowered. As a result, universities must manifest in real organizational learning. Organizational learning that empowers lecturers as one of the main elements of university transformation, as well as lecturers as instruments of civilization. The form of universities as organizational learning is very important for educational institutions that operate in environments with rapid and unexpected changes. So that, absolute condition for the creation of human resources is the speed of response to change, becomes a requirement to, students who are competitive and win global human resources competition.

Intellectual capital consisting of the knowledge of each lecturer and university will become a new icon that illustrates the economic value of a university. This is the new paradigm adapted from industrial revolution 4.0. Major future investment contributions no longer depend on traditional productive assets such as buildings, constructions, land, and other tangible assets. Lecturer knowledge is an intangible asset that is productive and sustainable in the future. This research seeks to understand and explain the effect of lecturers' hard skills and soft skills on their‘lecturers’ innovation capability’, then,to measure the effectiveness of theorganizational learning mediation on the relationship between hard skills, soft skills, and lecturers’ innovation in Indonesia.

LITERATURE REVIEW AND HYPOTHESES

Hard Skills

Hard skills are one type of knowledge that is easily documented and formed (Choi & Lee, 2003; Sousa & Rocha, 2019; Borrego et al, 2019; Wokcik et al, 2019; Cifariello, Ferragina&Ponza, 2019; Che et al, 2018; Tang et al, 2016; Bashir &Farooq, 2019; Attia&Salama, 2018), easily articulated (Haamann&Basten, 2018) and usually constitute knowledge that inherent in universities (Afsar, Masood&Umrani, 2019). Besides, hard skills can be created, written, and transferred between university activity units (Lombardi, 2019). The transfer of hard skills among lecturers is easier to be encouraged by a conducive university mechanism and culture.

Hard skills can be described in general and are also based on the specific context in which these skills are used. Rainsbury et al. (2002) define hard skills as skills that are related to technical aspects for carrying out several tasks at work. Therefore, hard skills are cognitive and are affected by intellectual quotient (IQ) (Muhammad et al., 2019; Kenayathulla, Ahmad &Idris, 2019; Tsotsotso et al., 2017; Fan, Wei & Zhang, 2017). Contextually, some researchers use the concept of hard skills in particular the state of management. Azim et al. (2010) generally refers to hard skills in the context of project management as processes, procedures, tools, and techniques (Gale et al, 2017; Laker & Powell, 2011)

Behavior and skills that can be seen is a picture of hard skills (explicit). Hard skills are the main skills that produce something that can be seen and directly. Technical or

practical tests can assess hard skills. Intelligence thinking that has indicators for calculating, analyzing, designing, broad insights and knowledge, modeling, and critical are elements of hard skills. Mastery of science, technology, and technical skills related to the part of knowledge related the hard skills. A lecturer must have expertise in opening lessons, managing classes, designing group discussions, arranging rooms, and writing well (Muqowim, 2012). Hard skills are relatively easy skills to measure. Widoyoko distinguishes between two hard skills, namely their academic and vocational skills. Academic skills are the ability to master various concepts in the field of research, such as skills to define, count, explain, describe, classify, identify, describe, predict, analyze, compare, differentiate, and draw conclusions from various concepts, data, and facts related to the subject (Widoyoko, 2009).

Soft Skills

Two types of knowledge classification are soft skills and hard skills (Polanyi, 1966). The knowledge that is still in the human mind and is very personal is the definition of soft skills (Chen et al, 2018; Holford, 2018; Khoshorour&Gilaninia, 2018; Zebal, Ferdous& Chambers, 2019; Agyemang&Boateng, 2019; Perez-Fuillerat et al, 2018), it is difficult to be formulated and divided naturally (Deranek, McLeod & Schmidt, 2017; Wang & Liu, 2019; Asher & Popper, 2019) personal interaction is needed by transformation (Lee, 2019). A person's actions and experiences, including idealism, values, and emotions are the roots of soft skills (Boske&Osanloo, 2015; Kawamura, 2016; Hartley, 2018).

Based on its understanding, personal knowledge or in other words knowledge obtained from individuals or personal are categorize soft skills(Nonaka& Toyama, 2015; Munoz et al, 2015; Stewart et al, 2017; Razmerita et al, 2016; Jaleel&Verghis, 2015; Wang et al., 2016; Serna et al., 2017; Jou et al., 2016; Rothberg & Erickson, 2017). Each lecturergets a different experience based on situations and conditions that cannot be predicted. Soft skills are not easily articulated and converted into hard skills (Mohajan, 2016; Prasarnphanich et al, 2016; Addis, 2016; Cairo Battistutti, 2017; Zang et al, 2015; Spraggon&Bodolica, 2017). However, the process of knowledge spiral or SECI Model can empower bysoft skills (Li, Liu & Zhou, 2018; Nonaka& Hirose, 2018; Chatterjee et al, 2018; Sasaki, 2017; Lievre & Tang, 2015; Stanica&Peydro, 2016; Norwich et al., 2016; Hodgins&Dadich, 2017; Balde et al., 2018; Okuyama, 2017; Huang et al., 2016).

Lecturer soft skills must be used to encourage them to share knowledge and keep learning for each university's educational institution. University educational institutions like this will become more creative, innovative, and lead in the era of education 4.0. Management and use of tacit knowledge that is outside the awareness stored in the subconscious mind of each lecturer with an embedding and sharing approach can be facilitated by universities(Ma et al, 2018; Ferreira et al, 2018; Borges et al, 2019; Ferraris et al, 2018; Guo et al, 2018; Tsai & Hsu, 2019; Swierczek, 2019; Cantwell &Zaman, 2018).

Organizational Learning

Crises will more resilient to good organizational learning (Starbuck, 2017). Organizational learning present as important elements of the dimensions such as desire, discipline, decision making, and alignment (Wetzel & Tint, 2019; Urban &Gaffurini, 2018). An important performance indicator for evaluating overall organizational performance is organizational learning (Qi &Chau, 2018) which can help build the knowledge resources needed to maintain university growth and continuity. The distinguishing factor between one university and another is the ability to access knowledge. The strong knowledge base possessed by each individual from a university education institution is very significantly related to the success of the university education institution's strategy.

Lecturers'Innovation Capability

Lecturer innovation skills are needed in the industrial era 4.0 as a competitive advantage in universities (Malik, 2019; Muscio&Ciffolili, 2019; Durana et al, 2019; Lund &Karlsen, 2019; Haseeb et al, 2019; Jakhar et al, 2018; Hamada, 2019; 2019), competitive strategy (Culot, Orzes&Sartor, 2019), the key to face industry era 4.0 (Stachova et al, 2019) part of the quality of 21st-century management (Gunasekaran, Sabramanian&Ngai, 2019), has many advantages business (Zambon et al., 2019; Parida, Sjodin&Reim, 2019). One of the most important internal resources that can produce superior university educational institution performance recognizes as an innovation capability (Zouaghi et al, 2018; Santoro et al, 2017; Castela et al, 2018; Ruiz-Torres et al, 2018; Huesig&Endres, 2019). Innovation is an important aspect of quality education (Klaeijsen, Vermeulen, & Martens, 2017).

Lecturers' Performance

According to Campbell (1990), a series of individual actions and behaviors that are relevant to the organization's goals are a reference to individual performance. "The extent to which work is done well" is one of the simplest definitions of individual performance (Campbell et al., 1993). Not only to ensure better university management but also to facilitate services to the development of science required employee performance appraisal. Thus, good individual performance means the lecturer has completed work-related responsibilities to a satisfactory extent or the extent expected by university management.

The Effect of *Hard Skills*onLecturers' Performance

Increasingly fierce competition, sustainability remains a concern, and important issues mark the current industry 4.0 era. Business sustainability is driven by lecturers' innovation capability. The culture of knowledge that exists in organizations influences a performance. Knowledgeconsists of tacit and hard skills. Lecturer innovation abilitiesthat are influenced by leadership are discussed by many researchers (Samsir, 2018; Schuckert et al, 2018; Villaluz&Hechanova, 2019), employee involvement climate (Naqshbandi, Tabche&Choudhary, 2019) knowledge sharing (Kim & Shim, 2018) knowledge search (Wang, Chen & Chang, 2019) collaborative culture (Yang, Nguyen & Le, 2018) and knowledge process (Imran et al, 2018). This research will evaluate the effect of hard and soft skills regarding lecturer innovation competencies in universityeducational institutions to deal with the industrial revolution 4.0. The positive and significant effect of hard and soft skills on lecturers' innovation capability has been proven by previous researchers (Ganguly et al, 2019; Aulawi, 2018; Rumanti et al, 2018 & 2019; Torres & Liang, 2016; Li et al, 2019).

More specifically, soft skills have a positive and significant effect on the ability of lecturer innovation this was concluded by many researchers (Perez-Luno et al, 2018). All of them are within the scope of business organizations. However, some researchers state that formal & informal learning affectslecturers' innovation capability of lecturers in universities (Lecat, Beausaert, &Raemdonck, 2018). Based on the above literature, the following hypotheses are arranged:

H^1: Soft skills have a positive and significant effect onlecturers'performance

The Effect of*Soft Skills* onLecturers' Performance

One strategy for organizations to study the dynamics of the business environment is in learning organization (Senge, 1990; Zhu et al., 2018; Kasim et al., 2018; Darwish et al., 2018). Learning routines will produce a collection of knowledgeable individuals, both hard and soft skills were managed by universities(Hussain et al, 2018). The organizational learning is affected by collaborative culture and knowledge sharing is concluded by some researchers (Nugroho, 2018). Very significant predictors for the development of organizational learning find soft skills (Muthuveloo, Shanmugam&Teoh, 2017). Based on the above literature, the hypotheses to be examined are as follows:

H^2: *Hard skills* have a positive and significant effect on lecturers' performance

The Effect ofthe Organizational LearningonLecturers'Performance

Organizational learning will trigger and spur lecturer innovation abilities and organizational performance was conditioned by knowledge creation (Asbari, Purwanto & Santoso, 2019; Vijande& Sanchez, 2017; Lin & Lee, 2017). Learning culture that adds value will be sustainable when based on university innovation. All lecturers interact with each other so that their current knowledge and new knowledge acquired can be effectively transferred, exchanged, and combined into university intelligence and knowledge of the university was used as a learning culture (Lin & Lee, 2017; Lee et al, 2016; Chang & Lin, 2015). An organizational environment that provides excitement at work is an important factor in creating lecturers' innovation capability of the organizational members (Bani-Melhem, Zeffane&Albaity, 2018). Furthermore, based on the above literature, the hypotheses to be examined are as follows:

H^3: Organizational learning has a positive and significant effect on lecturers' performance

The Effect ofLecturers' Innovation Capability onLecturers' Performance

Organizations need to increase their flexibility, responsiveness, and efficiency, and innovation to respond to challenges thatare faced in local and global competition (Asbari et al, 2019; Asbari et al., 2020; Purwanto et al., 2020). This is due to the rapidly increasing need for innovative product and service capabilities as well as internal processes and behavior of all members of the organization. In addressing this issue, previous researches emerged that has explored shifting from an efficiency view to innovation. The need for more knowledge about how individuals can be coordinated is to improve innovation and performance at the organizational level (Sopa et al, 2020). Besides, Asbari et al (2020) argue that internal

processes should create innovations that contribute to improving performance. While Prameswari et al (2020) show that employee innovation indirectly affects the value of the organization through its effect on the market and financial position. Nevertheless, according to Sopa et al. (2020)mention that innovation is very important for improving lecturers' performance and they show that universitiesthat focus on lecturers' innovation will be more productive and competitive in the global education market. Therefore, we hypothesize:

H[4]: *Lecturers' innovation capability*has a positive and significant effect on lecturers' performance

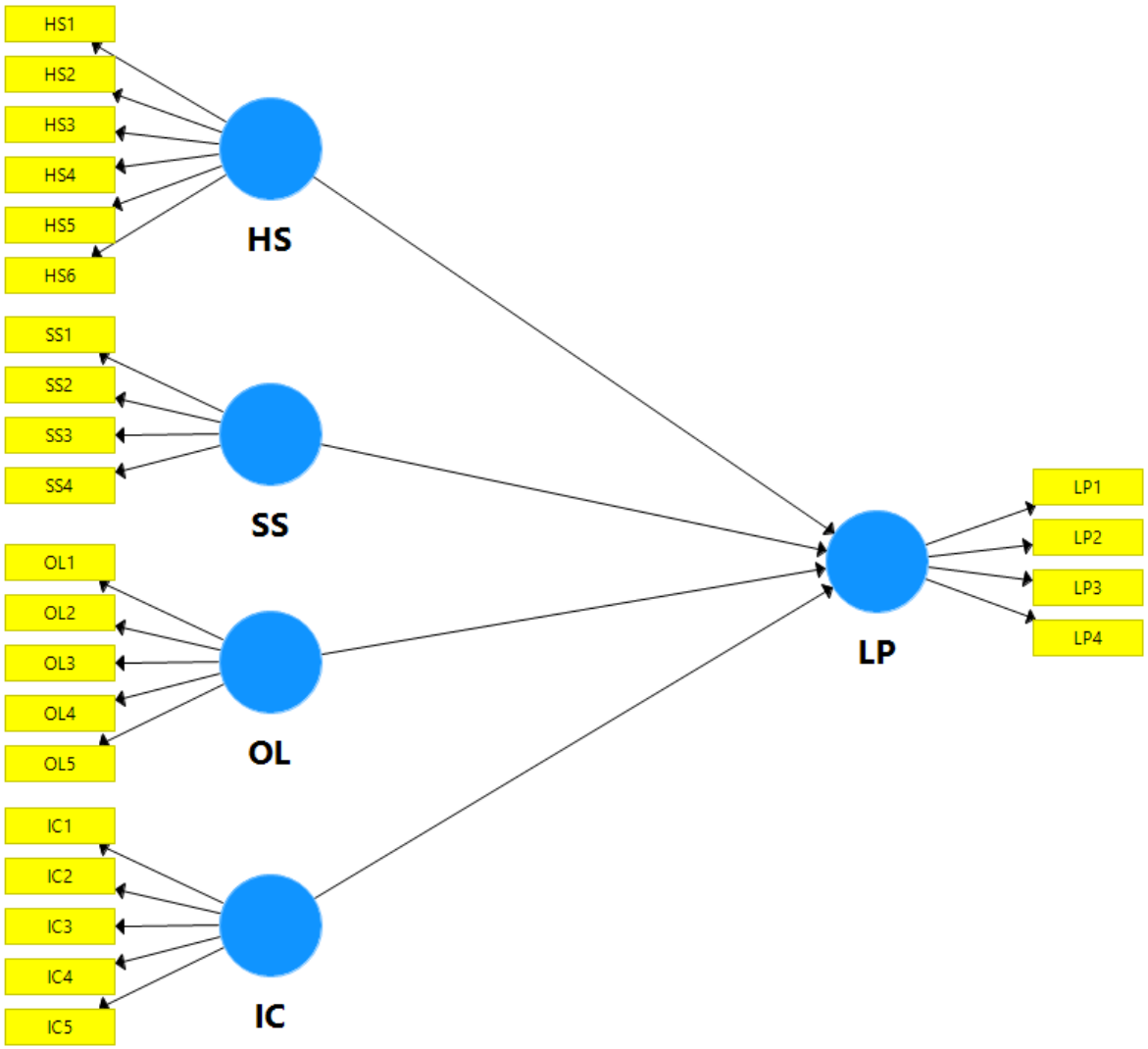

Figure 1. Research Model

METHODS

Definition of Operational Variables dan Indicators

In this research is quantitative method was used as the method. Data was collected by distributing questionnaires to all lecturers of university education institutions. To measure hard skills was used the instrument adapted from Hendarman&Cantner (2017) using six items. Soft skills were also adapted from Hendarman&Cantner (2017) using four items. Instruments adapted from Jiménez-Jiménez and Sanz-Valle (2011) measure organizational learning using five items. Lee & Choi (2003) adapted lecturers' innovation capability using five items. Lecturers' performance was adapted from Grace et al (2016) using four items. For questions/statements about the respondent's identity in the form of a semi-open questionnaire designed by a closed questionnaire. Five answer options give each closed question/statement item given, namely: strongly agree (SS) score 5, agree (S) score 4, less agree (KS) score 3, disagree (TS) score 2, and strongly disagree (STS) score 1.PLS and SmartPLS software version 3.0 are used as a method for processing data.

Populationand Sample

Data collection was done by simple random sampling to 251 population of the lecturers in five private senior high universities di Indonesia. The returned and valid questionnaire results were 244 samples (88.05 percent).

RESULTSAND DISCUSSION

Description of Sample

Table 1. Information descriptive ofthe sample

Criteria		Total	%
Age	< 30 years	50	20.4%
	30 - 40 years	114	46.6%
	> 40 years	80	33.0%
Service period as lecturer	< 5 years	77	31.7%
	5-10 years	118	48.5%
	> 10 years	48	19.8%
Highest education	Bachelor degree	19	8.0%
	Master degree	196	80.2%
	Doctoral degree	29	11.8%

Validity and Reliability Test Result of Research Indicator

Convergent validity, discriminant validity, and composite reliability testing are the measurement models used in the testing phase. To test the research hypothesis if all the indicators in the PLS model have met the requirements of convergent validity, discriminant validity and reliability testing can use the results of the PLS analysis.

1. Convergent Validity Test

To see the loading factor value of each indicator,do a convergent validity test. For most references, latent constructs are considered to have sufficiently strong validation explained through a factor weighting of 0.5 or more (Chin, 1998; Hair et al, 2010; Ghozali, 2014). AVE requirements for each construct> 0.5 are accepted as the minimum loading factor size in this study (Ghozali, 2014).

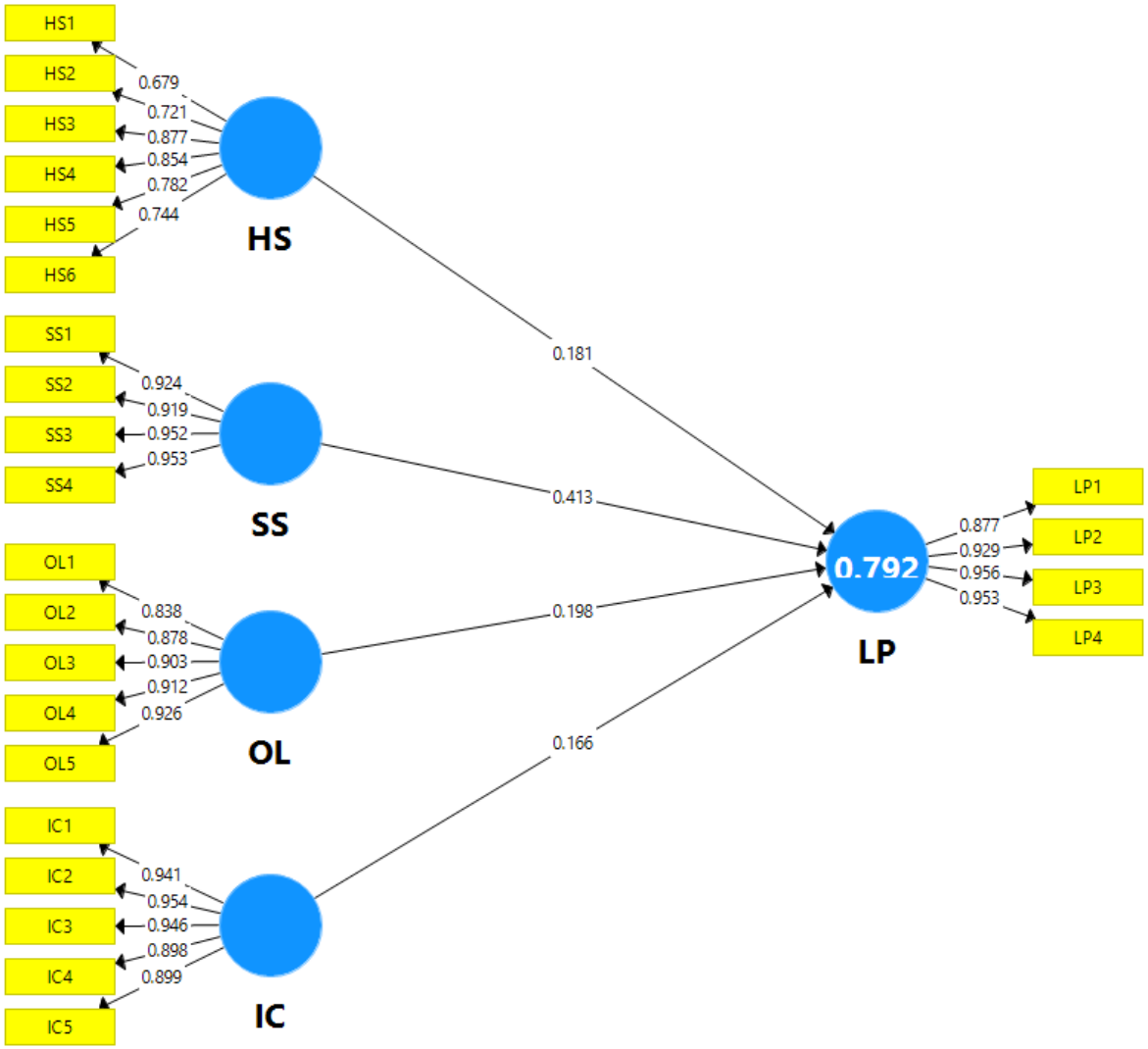

Figure2. Estimation valid model

All indicators have a loading factor value above 0.5 so that the model meets the convergent validity requirements, which is based on the estimation results of the PLS model in the picture above. Convergent validity is assessed from the AVE value in each construct, besides that it is also seen from the value of the loading factor on each indicator. AVE value for each construct of this research is above 0.5. So the convergent validity of this research model meets the requirements. In table 2 below can see the loading value, Cronbach's alpha, composite reliability, and AVE of each construct:

Table2. Items, Loadings, Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE)

Variables	Items	Loadings	Cronbach's Alpha	Composite Reliability	AVE
Hard Skills (HS)	HS1	0.715	0.870	0.902	0.607
	HS2	0.760			
	HS3	0.881			
	HS4	0.864			
	HS5	0.761			
	HS6	0.723			
Soft Skills (*SS*)	SS1	0.838	0.954	0.966	0.878
	SS2	0.887			
	SS3	0.887			
	SS4	0.929			
Organizational Learning (OL)	OL1	0.940	0.936	0.951	0.796
	OL2	0.956			
	OL3	0.945			
	OL4	0.911			
	OL5	0.911			
Innovation Capability (IC)	TIC1	0.910	0.959	0.969	0.861
	TIC 2	0.899			
	TIC 3	0.943			
	TIC 4	0.950			
	TIC 5	0.883			
Lectures' Performance (LP)	TP1	0.869	0.947	0.962	0.864
	TP2	0.922			
	TP3	0.957			
	TP4	0.951			

2. Discriminant Validity Test

To ensure that each concept of each latent variable is different from other latent variables do discriminant validity. If the AVE squared value of each exogenous construct (diagonal value) exceeds the correlation between construct and another construct (values below the diagonal) it can be interpreted that the model has good discriminant validity (Ghozali, 2014). AVE squared value is used as a result of the discriminant validity test by looking at the Fornell-Larcker Criterion Value obtained as follows:

Table3. Discriminant Validity

Variables	HS	IC	LP	OL	SS
HS	**0.779**				
IC	0.750	**0.928**			
LP	0.776	0.803	**0.929**		
OL	0.772	0.847	0.834	**0.892**	
SS	0.771	0.810	0.857	0.864	**0.937**

The results of the discriminant validity test in table 3 above can conclude that the model meets the discriminant validity show by all constructs that have AVE square root values above the correlation value with other latent constructs (through the Fornell-Larcker criteria).

3. Construct Reliability Test

The value of Cronbach's alpha and composite reliability of each construct can assess construct reliability. The recommended composite reliability and Cronbach's alpha values are more than 0.7. (Ghozali, 2014). All constructs have composite reliability and Cronbach's alpha value greater than 0.7 (> 0.7) is indicated by the reliability test results in table 2 above. In conclusion, the required reliability have been met all constructs.

Hypothesis Test

The inner model test was called the hypothesis test in PLS. A test of the significance of direct and indirect effects and measurement of the magnitude of the effect of exogenous variables on endogenous variablesare included in this test. A direct effect test is taken to determine the effect of tacit and hard skills sharing onorganizational learning and lecturers' innovation capability. The t-statistic test in the partial least squared (PLS) analysis model using the help of SmartPLS 3.0 software perform using the direct effect test. The table below obtain the bootstrapping technique, R Square values, and significance test values:

Table4. *R Square* Value

	R Square	R Square Adjusted
LP	0.792	0.789

Table5. Hypothesis Test

Hypothesis	Relationship	Beta	SE	T Statistics	P-Values	Decision
H1	HS ->LP	0.181	0.068	2.674	0.008	Supported
H2	SS ->LP	0.413	0.094	4.395	0.000	Supported
H3	OL ->LP	0.198	0.089	2.213	0.027	Supported
H4	IC ->LP	0.166	0.068	2.365	0.018	Supported

According to Table 4 above, the R Square lecturers' performance (LP) value of 0.792 which means that the lecturers' performance variable (LP) can be explained by hard skills

(HS), soft skills (SS), organizational learning (OL) and the lecturers' innovation capability (IC) variable by79.2%, while other variables explain the remaining 20.8% (not discussed in this research). While Table 5 displays the effect between the research variables that have been mentioned are showed the T Statistics and P-Values .

Discussion

Based on the results of the research, hard skills, soft skills, organizational learning, and innovation capability have a positive and significant impact on lecturers' performance. This means that the more positive hard skills and soft skills possessed by lecturers, the lecturers'performance will also increase. This is by the findings of previous research which states that hard skills and soft skills have a positive and significant effect on performance(Asbari, Purwanto, Fayzhall, et al., 2020; Asbari, Purwanto, Maesaroh, et al., 2020; Fikri et al., 2020; Hutagalung et al., 2020; Putra et al., 2020; Sopa et al., 2020a, 2020b). Likewise, this study found evidence that the organizational learning of lecturers had a positive and significant effect on lecturer performance. This is following the findings of previous research which states that organizational learning is antecedents of employee performance(H. ur R. Khan et al., 2018; Li et al., 2018; Mus et al., 2017; Yamali, 2018). Besides, the innovation capabilityof lecturers also had a positive and significant effect on lecturer performance. This is following the findings of previous research which state that innovation capability is antecedents of employee performance(Asbari et al., 2019; Asbari, Wijayanti, Hyun, et al., 2020; Khadim et al., 2016; M. A. Khan et al., 2020; Masood & Afsar, 2017).Based on the results of the research, soft skills have the greatest influence on the teaching performance of lecturers. This is interesting. Therefore, it is confirming that many experts and researchers said that soft skills are more important than other skills to improve performance in the current knowledge era(Morrell et al., 2020; Munro, 2017; Ng, 2020; Rebele & Pierre, 2019; Sriruecha & Buajan, 2017; Szilárd et al., 2018; Tang, 2018).

CONCLUSIONS AND SUGGESTIONS

Conclusions

To add the role of hard skills, soft skills, organizational learning, and innovation capability as a predictor of lecturers'performance, Islamic university management needs to provide autonomy and breadth to share knowledge with thelecturers. Therefore, organizational learning as a positive environment that drives the competence and engagement of individual lecturers in college education institutions is created by the university. If the performance of each lecturer is in good condition knowledge management will run effectively in university institutions (Manaf et al, 2017).

Knowledge as an important university resource is learned by researchers. Both hard skills and soft skills can significantly improve university performance. Individual knowledge into university knowledge is transformed by organizational learning. Organizational learning acts as a catalyst for the process of knowledge creation among lecturers in the university is concluded by this research. Because, in fact, the lecturer who carries the obligation to prepare their students to learn and work in this knowledge society.

Managerial Implications

Based on the conclusions of this research, the maximum involvement of all lecturers to continuously improve their hard skills and soft skills was build by the management of Islamic universities. The key performance indicators of each lecturer were tailored by lecturer training in each section of the university is a necessity with the level of intensity, content, and context. In essence, team learning behavior created in the university environment will be a driving force for lecturers' innovation (Widmann& Mulder, 2018).

The process of improving skills to build lecturers' innovation capability of university education institutions should not only limit to the internal processes of the university. However, the process of building this innovation through efforts to absorb, articulate, utilize, and manage knowledge sourced from external university partners such as parents, government, communities, and other educational institutions are expanded by university management. University management can activate learning from others when assigning their lecturers to attend training, seminars, workshops, visits to other universities, meet with university committees and other strategic partners. Because external knowledge, such as those from trainers, coaches, students' parents, the government, the community, and other educational institutions support the lecturers' innovation capability of university education institutions.

Besides, things that need to be considered are the commitment to learning and the seriousness to be involved in managing the learning environment. The learning process is enjoyed by all members of university education institutions because university education institutions can become learning organizations. University culture that encourages innovation is used as a learning process.Trust, open communication, high involvement, the presence of industry challenges, and a creative work atmosphere are key factors of organizational learning. Facilitate the fulfillment of these key factors is the task of university management.

Limitation

Some limitations are owned by this research. First, the effect of hard skills, soft skills, organizational learning, and innovation ability on lecturers' performance analyzed by this research. Searching, exploring, and analyzing it is suggested by the author because there may be several other variables that affect lecturers'performance. Second, the environment of the higher educational institution is the place where this research was conducted and may not be generalized to other industries. Therefore recommended on this topic in other industries can carry out strongly research.

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