A New Pedagogy and Online Learning System on Pandemic COVID 19 Era at Islamic Higher Education

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Abstract—The purpose of the article is the analysis of Covid-19 impact on Islamic Higher Education (IHE). The following research methods were used in the article: empirical methods, methods of theoretical analysis, questionnaire, and interview. The approaches to online education in IHE Indonesia have been analyzed. The results of the article have a few significant implications for the science and practice of online education and its perspectives on the IHE system. Prospects of online education of students have been offered during Covid-19. The main recommendations are the following: to organize training courses of online education methods for lecturers; to organize in-depth training courses of online education methods for lecturers of non-pedagogical specialties; the university's management should provide constant monitoring of the satisfaction of students and lecturers of the online education organization for the accumulation of statistical data in the dynamics.

Keywords—new pedagogy, online learning system, pandemic covid-19, islamic higher educations

I. INTRODUCTION

New forms and methods of education have become increasingly important since the start of the quarantine. The Covid-19 pandemic isn't just causing changes to global architecture and the world economic system, however also the transformation of higher education. Recent trends are rapidly influencing new demands for education. In the education system, soft skills are becoming increasingly important as they enable future lecturers, students, and education personnel and employees to adapt to new challenges, as well as ensure independent education and lifelong learning.

Additional results from the University's response to the Covid-19 challenge increases the digital competence of students and lecturers. Online education requires a new approach to class organization, individual assignments, an independent educational approach.

Covid-19 has had a significant impact and impetus transformation of the structure of university education in Indonesia. It became necessary to modernize teaching methods at the university. And it's a pandemic that gives like the drive for rapid and effective transformation Higher education system in Indonesia.

Nowadays three emerging pedagogical trends are identified [1]. Firstly, it's "a move to opening up learning, making it more accessible and flexible" which means face-to-face communication with a teacher in the classroom is no longer the unique learning center. A teacher and their lectures are no longer the monopolies 'source of information and knowledge transfer' and students can obtain information on each topic very easily by themselves. The second trend is defined as 'an increased sharing of power between the instructor and the student' which means changing roles of teacher and a student to develop and support student autonomy, to increase students' interactions among peers via social networks, asynchronous discussions, peer assessment, and feedback, etc. The second trend is closely related to the third one which is 'increased use of technology, not only to deliver teaching but also to support and assist students and to provide new forms of student assessment' [1]. These trends inform not only to pedagogy but also to andragogic approaches as adult learners are more self-directed, goal-oriented, and responsible for their learning [2], which is very important during online education in quarantine.

Cognitivism, Constructivism, Connectivism are the main theories that inform any online education strategy and are considered to be appropriate for adult online courses. Modritscher argues that certain learner characteristics should be prioritized in online education strategy as an impacting factor to prevent the students from failing the course and to optimize the education process [3]. The student should play an active role in the understanding of the materials and information as cognitivism suggests. Constructivism as the theory is focused on preparing students for problem-solving and creative thinking. Connectivism adds value to this theoretical approach in terms of understanding learning in the digitalization era and suggests such learning tools and technologies as social networks, web searching, online discussion forums. Connectivism means that online education happens to maintain connections through social networking. Social learning is based on online collaborative tools such as blogs, wikis, social media and it enhances connectivism concepts and principles [4]. The approach to education as a service contributes to the transformation of the higher education system [5-9].

In recent months, several papers related to Covid-19 influence on the education system have been published [10-12]. This paper shows a higher development education in pandemic conditions, and its effects on Covid-19 concerning the mental health of students, university staff, and lecturers.

Several articles on the psychological impact of Covid-19 in higher education participants have been reviewed considered in this study and included in the bibliography [10; 12]. The general effect of Covid-19 on education is discussed by Chandasiri [11].

The results of the Global Impact Survey show that only 1% the institution is open as usual, there are no special actions for Covid-19 (it is Higher Education Institutions (HEI) at Burundi); 10% of institutions are open as usual, however, containment measures have been taken to avoid the spread of Covid-19; 30% of institutions are partially open, but there is a big annoyance; 59% - all campus activities have ceased and the institution closed completely [13]. This fact is the response of universities in the global world conditions for Covid-19.

In Indonesia from 12 April, 2020 the nursery schools, general secondary schools, colleges, out-of-school educational institutions, universities, institutions of undergraduate, graduate, and postgraduate learning were closed. The education in the country has moved to the online forms or daring system [14].

Despite the event's importance in higher field education in Indonesia, according to this deadline problem, thorough research hasn't been done. There is a systematic analysis of online education during Covid-19 and recommendations. Hence, the topic of this article is relevant, modern, and important.

II. METHOD

The research was carried out at National Aviation University from March 2020 to June 2020. That focused on university education outcomes transformation due to Covid-19. The object of the study is the Indonesian higher education system.

The subject of the study is the higher education system transformation in Indonesia during Covid-19. The research method used in this research is quantitative descriptive. The following research methods were used in the article: empirical methods, methods of theoretical analysis, questionnaire, and interview. The approaches to online education in IHE Indonesia have been analyzed.

The purpose of the article is the analysis of Covid-19 impact on Indonesia's higher education. The following research methods were used in the article:

- Empirical methods (study articles, statistical database, other publications);
- Methods of theoretical analysis (analysis and synthesis; specification and generalization):
- A questionnaire with google form;
- Interview with WhatsApp.

The questionnaire sample includes 197 participants who are higher education institutions (both private and government) representatives from different parts of IHE around Indonesia. They were selected randomly and recruited via social media networks. The sample inclusion criteria are being a representative of the IHE Institution. Data analysis from respondent was processed by the percentage descriptive formula:

$$P = \frac{n}{N} \ X \ 100\% \qquad (1)$$

Information:

n = number of respondents on each criterion
N = number of respondents
P = percentage of criteria achieved

III. RESULT

Traditional teaching and organizing methods the educational process is mainly used in Indonesian universities before Covid-19. But Indonesia has a high-level educational potential that affects social development [15].

Since the beginning of the quarantine, higher education the institution is not fully ready to go online education, they only use certain online elements education. And online teaching methods require clear development and regulation. During the interview on July-Sept 2020, most of the e-learning noted that before quarantine, their facilities used certain elements of online education and relied heavily on the Moodle system (Figure 1). In addition, the development of online education had a special appointment and was a response to the demands of time or circumstances. Thus, some online courses were introduced for students of displaced "*Ruang Guru*" or "Teacher Rooms".

Thus, the results of the survey showed that 75% of respondents used online learning tools sometimes or some of its elements (Figure 1). More than 25 % had no previous online experience. Only 17 % had experience and constantly taught online. So mostly Indonesian lecturers had no experience of constant online education (83 %).

- 1 respondents used online learning tools 147.75
- 2 no previous online experience 49.25
- 3 experience and constantly taught online 33.49
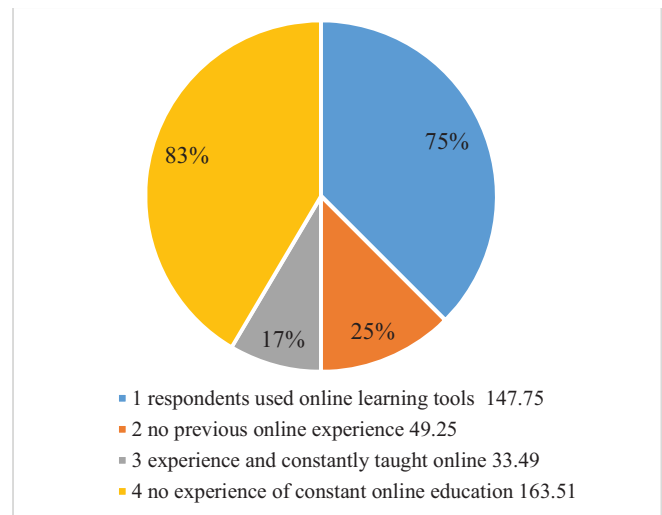- 4 no experience of constant online education 163.51

Fig. 1. Respondents' survey results about previous experience of online work before the quarantine

Besides, there was the issue of online accreditation and quality assurance in higher education during the pandemic. In 2019, a study conducted by National Agency for Higher Education Quality Assurance showed that 70% of higher education institutions have an internal quality assurance system and 30% some elements of this system [16]. Moreover, 76% of HEIs systematically conduct surveys of students on the quality of educational programs in general, and 74% - on the level of their satisfaction with the content of curricula [16]. This quality assessment tool is important during the transition to online education in quarantine.

Despite the unexpected announcement of nationwide quarantine in the country and the first "shock" (figure 2), universities quickly organized the process of online education.

According to the information in Figure 2, 70% of respondents were ready and prepared for online education and 30 % were not prepared properly for online work. So, despite

the lecturer's lack of experience, they were ready for the online education organization.
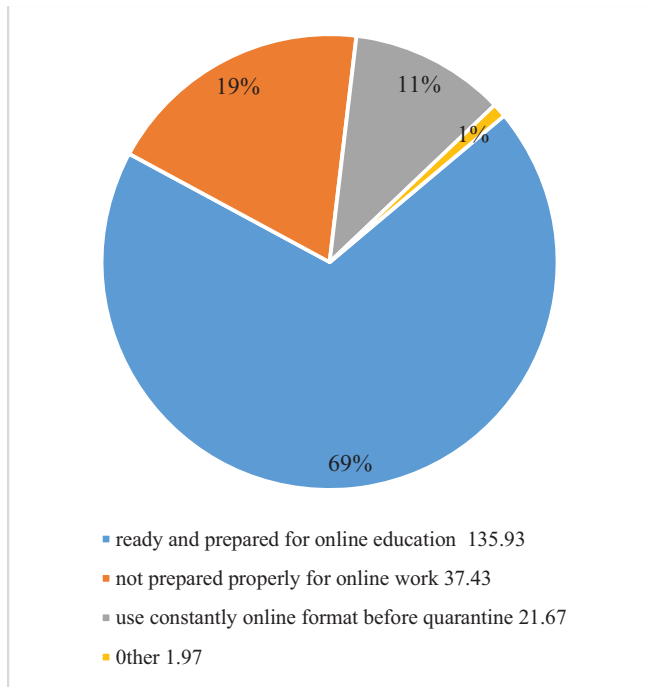

Fig. 2. Respondents' survey results about readiness for online work

Online education was on various online platforms using video communication - Moodle, Google Meets, Zoom, etc. Online conferences, debates, discussions, lectures, and seminars. And according to the results of the survey, the most optimal respondents considered video meetings in Zoom (84%). Universities have actively used the Google Meets platform for online education as well.
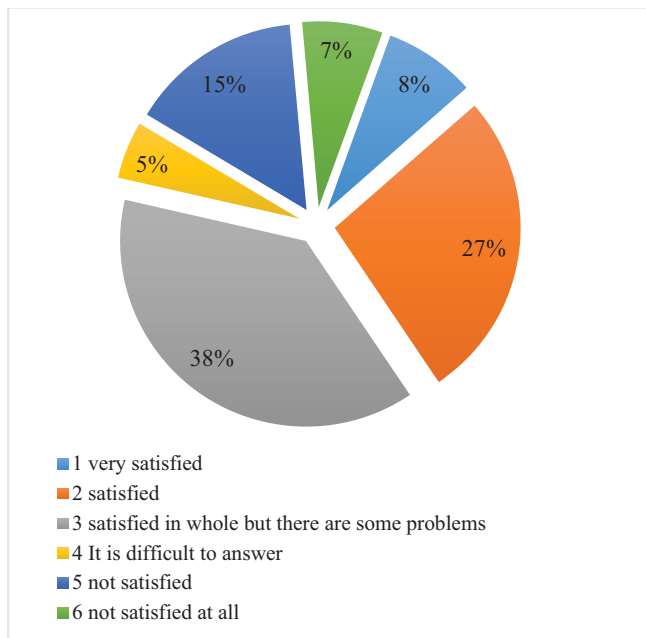

Fig. 3. Results of students' satisfaction with online education

During the quarantine period, the university administration studied the existing problems and constantly monitored and interviewed higher education applicants. As an example, a survey of students at the Indonesia ministry of education in July 2020 about the quality of online education

(Figure 3) [17]. More than 7,126,457 students, including international students, took part in the survey.

The results of an anonymous survey showed that more than 70% of students are satisfied with the quality of online education at the university, although there are some difficulties and problems (figure 3). Mostly students need to live communication with and video lecturers and seminars during Covid-19. Also, 22 % of students were not satisfied with online education [17]. The main reason is 19 % of lecturers who were not prepared properly for online education (figure 2).

Surveying students during quarantine is an important aspect because the traditional connections between the dean's office and the student have been lost. There was a transformation of educational relations. Online surveys of students have become necessary in this aspect because they allowed quickly identifying problems and responding to them.

Online education has shown problems with the provision Internet for Indonesians (not at all villages and cities), not all participants in the educational process have computers and other gadgets required to participate in online education. However, there are positive aspects of online education:

- Able to attend lectures, seminars from anywhere in the country with an Internet 80% of students surveyed by Indonesia ministry of education [17].

- The ability to do homework at an individual pace.

- Transparency of student assessments.

The education system influences student's awareness formation [18], which is very important in pandemic conditions to create the possibility of new challenges overcoming.

IV. DISCUSSION

The study had three main results: 83% of Indonesian lecturers have no substance experience online education before Covid-19; 75% of Indonesian lecturers think that they are ready for online education; 60% of students are satisfied with the quality online education at universities, though some difficulties and problems.

The difference between the results of Figure 3.1 and Fig 3.2 in future research, because of several elements and online educational instruments used by lecturers before Covid-19. They have digital competence so adapt quickly to new situations. But it is necessary to organize some training in online teaching methods.

It is important to discuss that the next-generation pedagogy is formed with five parts: Intelligent, Distributed, Engaging, Agile, and Situated (IDEAS) [19]. These five guideposts reflect an innovative approach in education: Intelligent pedagogy means teaching in which technology is used to enhance the learning experience; Distributed pedagogy refers to the engagement of different stakeholders who owes different elements of the learning journey; Engaging pedagogy means that learners should actively participate in the learning process and such an approach should be supported by curriculum design and delivery; Agile pedagogy means flexibility and customization of the curriculum, personalized learning pathways and individualized support for learners, recognition of non-formal learning achievements, responsiveness to learners' needs, and

support for virtual mobility of students and internationalization of the curriculum; Situated pedagogy reflects contextualization of learning and its real-world relevance expands work-related learning opportunities for students [19]. These new approaches are important for online education.

Student engagement, innovative approaches, effective education, formative assessment, coherence, consistency, and transparency is one of the core pedagogical principles online education created its quality framework [20]. Effective online lecturers must be relevant competence and skills in the pedagogical and andrological fields teaching model [21]. However, they are not only that pedagogical and andrological core but also heutagogical and a cybergogical principal. Online education should be motivated and engage students. In a way, they have to do it feel supported, but from the other side, they must be supported proactive and motivated to be independent learners [22]. Effective online education is also based on principles of digitization and innovation in education and can demonstrate through a personalized, evidence-based approach, encourages metacognitive thinking, authentic learn [20].

During Covid-19 there was a shift from traditional pedagogic and andragogical models for heutagogy and a cybergogy approach. Heutagogyis is considered as' a student-centered learning strategy where learning takes place learner-determined and self-directed learn [23].

V. CONCLUSION

Indonesian lecturers had no substantial experience of online education but responded quickly and adapted to the changes. It also concerns the management of the HEIs. Recommendations and propositions for the online transformation of higher education in Indonesia are the following: to organize training courses of online education methods for lecturers; to organize in-depth training courses of online education methods for lecturers of non-pedagogical specialties (including training in interactive online teaching methods, the formation of an individual learning trajectory, online multidisciplinary courses development); university management should provide constant monitoring of the satisfaction of students and lecturers of the online education organization for the accumulation of statistical data in the dynamics. The next research aims to accumulate statistical data and to develop the regulatory framework for online education in Indonesia.

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