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Technological Innovation to Support 21st Century Learning Outcomes and Sustainability at Universitas Islam Negeri (UIN) Antasari

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ABSTRACT

This study analyzes how technological innovation supports and improves student learning outcomes and sustainability at Universitas Islam Negeri (UIN) Antasari. This study obtained data from interviews with senior lecturers and researchers and 12 resource persons, and 12 open questions. We conducted a series of questions for interviews and a literature study to understand how this change occurred. Next, the researchers analyzed the interview results with a phenomenological approach; to ascertain how technological innovation supports 21st-century learning in higher education. Based on the existing data and discussion, concluded that technological innovations such as the internet and digital applications currently in academic activities in the distance learning process and student face-to-face classes strongly support that goal. This considers the penetration of the internet and computer technology used in learning and teaching. With the experience of lecturers and students at UIN Antasari. Technological innovation supports learning there with the clear advantages of existing technology. Thus, it is hoped that the results of this study be helpful to improve the quality of further research.

Keywords: *Technological Innovation, 21st-Century Learning Outcomes, Learning Outcome*

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INTRODUCTION

Utilization of technological innovations such as Internet access, communication, and information technology in some universities in Indonesia and other nations, such as actualizing learning environments with internet facilities and innovative and collaborative education, has still proven to be very promising for student learning outcomes for many years ago since technology entered those developing nations (Van der Vaart et al., 2013; Putra & Aslan, 2020; Putra et al., 2020). Since the recent technological revolution and the use of internet access in higher education, the benefits

have begun to be felt, namely the increasing literacy among students on how to learn with the help of technology. Likewise, higher education providers are now overcoming several obstacles that hinder using technology for student learning (Mumin, 2019; Putra et al., 2020). Therefore, educational institutions such as universities in developing countries have benefited from learning technology to improve educational outcomes, as is currently expected by industry and government in modern countries (Stukalenko et al., 2016).

For this reason, studies and discussions on obstacles are achieved that goal needs to be continued. For example, how to improve the quality of learning outcomes by using technology in higher education in the future so that education can proliferate. Likewise, technology is utilized and adequate infrastructure to overcome barriers to technology accessibility in developing countries (Fu, 2013). The utilization of technology applications that can innovate learning and teaching outcomes needs to be resolved to gain access to learning resources and increase their results, even though the benefits of technology are still new to most universities in developing regions. Furthermore, other evidence in the field is that there is still low proficiency in digital literacy among academics, especially students and faculties, and the high cost of access to technology for individual students (Johnston et al., 2015).

Despite the significant barriers, the advantages of accessing internet learning assets and other technological innovations are usually beneficial to students and university staff, significantly improving the quality of learning in developing countries where technological barriers and limitations such as handbooks and other course materials can currently be overcome, with the presence of technology that is ready to innovate ways of thinking and acting for the sake of the quality of student lecture outcomes (Ferri et al., 2020). Various web destinations by higher education students at Antasari State Islamic University include proficiency in email, online chats, and sharing group discussions. Considering the superior power of technology that is increasingly evident in the university environment, this study aims to understand the power of technological innovation to improve the quality of student learning outcomes in higher education through interviews with academics and secondary data studies.

The question will question the advantages of the Internet and technology in student learning considering students at the Antasari Islamic State University, a higher education foundation in Kalimantan with significant progress in student learning in the acceptance of technology and the Internet in lectures and other learnings. The interview will develop questions about the advantages and power of technological innovation in lectures and their results. We will offer potential solutions to understand the maximum technological capability of website innovation in higher education in developing countries such as Indonesia (Whitworth, 2012). This field study wants to understand the influence of Internet access on technology such as laptops, computers, tablets, and other tools often encountered among students. Moreover, we want to understand the difficulties of academics in the use of technology and the opportunities for growth in learning outcomes in Islamic higher education institutions in the country, which involve advanced technology as an investigation of academic views and mindsets in order to answer hypotheses and study questions (Marshall, 2016).

METHODS

To understand the learning that innovates high technology at Antasari University, we have sent a series of open-up questions to 12 resource lecturers and

researchers at the State Islamic University of Antasari Kalimantan (Redlich-Amirav & Higginbottom, 2014).

After a series of questions, we analyzed the results of the interviews by adhering to some study questions that we elaborated into interview questions. Then we examined them with a phenomenological approach, namely the distribution of data to obtain relevant answers to the problems of this technology study (Oun & Bach, 2014). In conducting interviews, we were assisted with the speed of manuscripts and also literature review to support theory and idea development. After we went through and analyzed the data, we arrived at the interview report in qualitative form with the hope that what is phenomenal 21st-century Innovation technology that can improve learning can be carried out correctly to get optimal learning outcomes (Onwuegbuzie dkk., 2010). We followed several qualitative studies involving interviews and literature reviews in reporting on this study. Thus, among others, a brief description of the chronology and stages of the implementation of the study of technology and learning in the 21st century, starting from the formulation of the problem then identification, then data search and analysis followed by the report of the results (Gregor & Hevner, 2013).

RESULT AND DISCUSSION

Technological innovation in academic

Talking about technological innovation in the field of higher education is a matter that becomes a challenge for the implementation of education, especially now that education must be adapted to the progress of the 21st century where the existence of technology was created to develop equipment that provides something different in the world of teaching and learning practices. This is not only in the scope of higher education, but innovation will occur at all levels of education, from basic to higher needs. Since genuine educational technology innovations have occurred significantly, this is due to the positive impact of technology applications continuously developing to impact the achievement of learning outcomes. It is clear that technology, especially the technology used in education, is considered to have been able to improve learning outcomes both when they are in academics to enter the world of work where every higher education institution by presenting their technology will be ready to compete to provide educational services according to the needs of both the government and the environment industry outside of government.

Therefore, technology in academics will undoubtedly provide a learning reference with technology. Sometimes students want to learn directly with the magnitude, and sometimes they can directly access all their learning needs from technology. With the presence of technology in academics, of course, this is a significant innovation, significantly when the world of education around the world is affected by the pandemic, that is when it has been proven that technological innovation can provide solutions needed by education and also the world of other business activities, without significant technological advantages. In teaching in universities, of course, this technology does not get the attention and ability to do many things. The following is an excerpt of our interview with one of the lecturers at Antasari State Islamic University:

Question 1# What is the opinion about technology in learning in the Antasari State Islamic University lecture environment?

Since technology is present in the academic environment, knowledge and information about student lectures are no longer a significant problem. Students can now get all that

(new knowledge and knowledge) exponentially. The younger generation, such as students, are genuine experts on many media such as digital lecture applications. Such learning media facilities are a learning solution, such as in a modern lecture environment in developed countries" (participant#1)

Therefore, technology in academics at Antasari University is a breakthrough based on the power of technological innovation in accelerating the achievement of ar-Rahim learning outcomes adapted to the typical learning, which is a generation that is close to technology apart from many problems that must be overcome, especially when talking about procurement and transfer. Use of technology in academic environment.

Question 2# Is there any issue with technology in the academic environment?

There are only a few problems in our lecture environment at Antasari (university) because students were not introduced to new learning methods earlier in school. So, we lecturers hope that students will practice themselves for the future of lifelong learning and be helpful during college and when they enter the world of work because they will ask all facilities for students to adapt to new ways of learning and technology has become a solution at the higher level college level. Fast and innovative so that they can go to college with high achievements (participant#1).

Talking about technology issues in the academic environment of Antasari University, of course, this is commonplace considering that technology still has to be updated and understood and at the application level of its development so that the university must prepare both students and teachers in order to maximize the use of technology itself in order to achieve educational goals. that have been included in the university curriculum.

Question 3# How do universities respond to the technological needs of students and other academic people such as teachers, researchers, and developers of higher education curriculum programs?

Yes, universities must be seriously responsive to academic needs, especially technology and future college graduates; ideally, various modalities and teaching strategies with innovative technology are needed for students as 21st-century learners who are very different from previous generations. For academics, current and future technologies related to learning are essential to be prioritized and contrasted. Thus, the standard view between students and the university is a vision of the importance of technological literacy in the academic environment to improve college outcomes as one of the goals of innovation both in technology and in higher education" (participant #2).

The response of the Antasari state Islamic University regarding the need for technology, both for teaching students, researchers, and others, is that it is very urgent to be used successfully considering that typical learning in this energy era is different from previous learning models so that the university has responded enthusiastically. Considering that learning in the millennial era is technology-based to improve both the quality of teaching and other academic activities.

Question #4. How do universities or lecturers build the relationships between students and the technology they need?

Higher education, especially Antasari University, means that every student and technology must have a mutually beneficial bond. The students in deepening their knowledge as the main task are to improve the quality of their learning outcomes so that the required learning outcomes can easily measure the results of their lectures. So to promote successful student learning, Antasari States Islamic university and other universities in Kalimantan must optimize the ability of their academics to continue to

prepare graduates to be ready to enter the professional world and whose tasks are required by industry according to their knowledge and expertise" (participant#3)

Regarding the relationship between students and technology at the Antasari state Islamic university, the principle is that every student must be able to use this technology because current learning both related to knowledge and about these skills is part of the learning objectives where technology allows academics to solve problems by improving skills or building a good relationship between students' ability to use computers and the ability to innovate bags to provide facilities.

Question #5. To what extent does the lecturer give students the freedom to use technology for academic purposes?

The lecturers and universities view that learning technology has helped improve learning outcomes across disciplines of majors and sciences, so there must be limitations, especially for those who have learned the ways and functions of using technology for learning as well as sanctions for those who are wrong in using learning technology facilities at Antasari University. During the pandemic, we believe that online education has helped students learn in many professional disciplines. We lecturers also do not prevent students from using access to the university" (participant#4).

It must be admitted that the university certainly sees this technology as very useful in improving learning and discipline in all majors. The function of technology has indeed provided a precious solution so that the facilities feel relieved when the pandemic hits the world of higher education. we already have something self-prepared so that other academic students can adapt to the circumstances.

Innovation in the academic field

Regarding innovation in the academic world in higher education, (Hendriarto et al., 2021) offer his thoughts that now the era of technology has entered academia because technology has many uses that have been able to innovate learning outcomes in schools. They also agree that typical teaching based on new technologies and innovations certainly has a creative and innovative ability to help students and lecturers significantly improve learning outcomes. Because if learning outcomes are not high, it is believed that technology has not become innovative and instructive.

Question#6. How to increase innovation based on learning technology in a fertile university environment and produce high student learning outcomes?

As a lecturer at the higher education level, the lecturer must understand and carry out instructional innovations involving technology in improving the quality of learning through tutoring supported with a high commitment to creating significant changes in competitive instructive programs (Participant #5).

As for the improvement of innovation based on technology learning in the academic environment in Indonesia, Antasari there, of course, has been prepared at the facilities or also researchers to first understand and be able to apply all technologies related to improving the quality of learning outcomes and also a commitment to always continue to create significant changes, especially in terms of competition both in learning and students.

Question #7. How do lecturers strengthen students and technology and procedures for changing college outcomes for highly successful students when they are sometimes not ready to use technology according to their academic needs?

Lecturers must be pioneers in developing an innovative instructive culture by changing old ways that are not innovative. Ordinary teachers do not carry out this task at the elementary school level. So, through technology-based advances, they will be able to innovate and offer solutions to students' difficulties in terms of heavy-duty work. Lecturers, in this case, must keep the door wide open in the process of 'improving student learning outcomes. We, lecturers, believe that students have accepted fundamental changes regarding technology in teaching that have high-quality results (participant#6).

Meanwhile, to strengthen how lecturers and students, and technology can collaborate to create high learning outcomes, here the lecturers must first be at the forefront of developing innovative teaching and have the ability to empower students to become very innovative parties. Creatives always create something new and produce solutions that are needed because today they have a motto they use, which must be guided by Xiaomi, so academics must understand.

However, the cost of learning technology is also essential to discuss. This is because the evolution of technology is very sharp. The knowledge and exceptional technical skills of the academic community of its users create new problems that are very substantial cost-effectively because of the use of innovative and effective technology.

Question#8. What are the lecturers' efforts if the students are not proficient in teaching technology? How do they understand the technology they have assimilated but have not used. Encouragement how to do?

For this reason, lecturers usually hold an initial understanding in the form of placement tests on technology, including the experiences of students during school from various perspectives, which are very important in using information technology for students so that they make technology skills as basic knowledge and skills, and for students to master technology. The collaborative creation of fellow students who finally understand technology according to academic goals was the academic goal (participation #7).

The policy above is Antasari, where the academic community, such as lecturers, must have a proficiency in the use of technology and continue to train students so that they understand but are able and know how to apply. Academics are always asked to be upfront and provide understanding and application of how technology can be used, and technology can be something that helps students who are not good in the evaluation learning process and, of course, want to improve the quality of payment results at every stage of the semester. In other words, Evita so far, to achieve high learning scores, the university should be able to collaborate between students and students as well as students and teachers.

Question#9. What if many lecturers are not interested in using technology in teaching or a phobia about technology and information and communication is persuaded to achieve the latest technology-based teaching models?

So far, we understand that most of our lecturers at Antasari University have used teaching technology to suit the pedagogical model and curriculum demands as a standard reference. The lecturers are the "pioneers": Individuals who understand the changes and challenges of the 21st century and the sustainable development that is an integrated part of the teaching profession in higher education (participation#8)

Talking about many lecturers who are not interested in technology or, let us say, they are afraid of technology; this must be addressed because the learning model both during the pandemic and average days, especially in master programs and PS here, is necessary for students. Academics to prepare appropriate pedagogical models and also

introduce curriculum demands so that lecturers and other academics can prepare themselves to anticipate so that something called fear of technology does not happen.

A typical understanding of today's generation of students

Evidence from previous studies shows that most developing countries in the developed world can be divided into four generational groups, the first group being individuals who have general academic characteristics, including learning experiences, origins, or generations. The most common group in the perspective of developmental psychology is known as the millennial age group, the birth group and those whose age range is called the "Baby Boomers" or "Generation X." Trainees of this generation of births tend to have similar high-tech cultural, birth history and social influences.

Question #10. How do lecturers and academics understand and distinguish between types of students known as the older generation, immigrants, baby boomers, generation X, and millennials in managing technology-based learning?

The first starts with a silent gradation, namely those under the age of birth between 19 and 70, and they tend to be more silent and passive towards technology. While the generation usually uses, the immigrant generation is ah who was born after 70, but still, learn word by word is the generation that learns technology. While the baby boomer generation is born between 19 and above where they have beliefs with their characteristics, they have a view with the previous paragraph are confident in themselves in learning in many ways they are optimistic about technology in the economy and other things. Things they poly experience. While the millennial generations are born and raised in technology and are natural actors, teachers' test at universities is to understand the type and learning models of different generations (participan#9)

When the issue is about the generation where the learning generation is currently known by many terms such as the original generation X and the immigrant generation and the digital generation, so at the university, of course, they have understood how to distinguish the learning system from learning participants, so here by academics, especially curriculum design and lecturers to It is possible to select and ensure that learning and technology choices are tailored to the learner and the organ to be achieved.

Technology and accelerated learning

Technology and accelerated learning the implementation of online lessons has grown since the pandemic hit education. Online learning trends have changed significantly over the past decade. However, many people know it as distance education after students are sent home to respond to public policies against the pandemic.

Question #11. What is the view of Antasari State Islamic University in particular when it comes to responding to the public policy of distance learning?

As reported worldwide, the concept of "distance education and teaching" is not a new thing at Antasari University. This is related to public policy to follow government directives. So online education is currently at the fingertips of the academic community; it can be done anytime and anywhere. Indeed, at the initial stage, distance learning is required, the minds of students and other academics are difficult to adapt. However, this method has given the healthiest innovation power to educational institutions, especially the Antasari University campus (participant#10)

Associated with Antasari's investment views, especially in terms of responding to public policies such as distance learning, as reported by the results of the whole world of distance learning, this is something that is not new today because especially in the major's program they have prepared themselves in advance to anticipate

learning-oriented models. to the needs of the field and also to the preparation of learning how to use technology, so when drawing Man preparing for distance learning, this is not a very new thing in Antasari.

Student discipline in academic

Student discipline is one of the factors that will determine the level of success. Likewise, the university designed student discipline towards using technology to improve the quality of results. Since pandemic has hit education and since then payments have been shifted to the remote method, the discipline factor is something that has been proven to be able to make online learning a very profitable solution, and this can be seen from the high level of student participation in interacting with all tasks in form and technology.

Question#12. How far is the discipline expected by stress on students, especially in optimizing learning technology?

This problem is that individual students interact with technology to improve their learning. We cannot hope for much. However, we have created a climate where students can freely access educational services, especially optimal academic writing and research assignments. We do not play a role in disciplining students, but with deadlines with targets and expectations that the academic side has started, students automatically must want to be self-disciplined to complete their assignments on time online. This is the main factor in becoming a professional (participan#11).

Then the issue of discipline and reducing student stress in terms of high learning achievement with the use of technology assistance feels Antasari's problem of discipline and stress management among students and other academics is a very community thing where academics are designed to be familiar with technological systems and are also able to improve discipline so that they can avoid the occurrence of severe stress when the work is not well organized in a proportional way.

Student interaction in technological innovation

Online learning characterizes many components such as content learned, how to interact, and assess aspects. So each of these components can be completed according to the department and the online interaction system, which aims to organize content using various texts combined with various media application models, all of which aim to communicate. With the interaction assisted by technology, there will be an optimization of student learning towards a sustainable interaction whose content and context are after having fun with the majors they like; the teaching design must consider aspects of the interaction between fellow students and lecturers and lecturers with a percent

Question#13

How are student interactions expected when they are in distance learning history?

Learning must reflect on the programs outlined by the curriculum because curriculum content requires students to produce learning that explores all curriculum content and has an emphasis on online learning experiences, in other words, student literacy must reflect learning which requires online learning to bring results beyond from the national payment system so that Mahesa's interaction with technology will undoubtedly provide an experience of its own which will ultimately improve the quality of learning for Antasari university students (participant#12)

Regarding the interaction of students with academics, lecturers, and researchers during distance learning, as far as we can see, Antasari's intensity has a good culture of

interaction in the use of technology where both curriculum design and policymakers have prepared how this remote payment can be built an interaction and collaboration so that higher education goals can be achieved and also the need to build an excellent online community is a priority over university.

DISCUSSION

What was stated in the interview was that innovation in academics at the tall tree did offer a variety of mindsets and creativity on how to enter the academic world; the technology should be able to be applied. Likewise, to understand how typical learning and methods are relevant to today's students, a generation is divided into several different, namely a very millennial generation where learning must be adapted to their typical way of learning. Then we also found from interviews how technology has been able to accelerate learning in an innovative, creative and fun way. What is happening at the Antasari Islamic University is inseparable from the commitment and academic discipline, especially the students and also the lecturers where they are highly friends to the success of learning, especially during a pandemic where the most vital interaction is the use of technology in the form of learning applications. Likewise, the issue of how students interact with the academic community involves technology and innovation. This interaction succeed when students have the suitable ability and understanding to carry out interactions by paying attention to content, understanding context, and aspects of the final assessment. By understanding these three elements, students will get or run a positive interaction assisted by technology and innovation, which improves the quality of interaction and ultimately improves the quality of optimal and fashionable learning. We believe that the findings we got from interviews with several teaching staff and researchers from the state Islamic university Antasari Kalimantan. Thus, to improve the quality of writing in the future, criticism, suggestions, and optimal feedback can be imagined.

Technological innovation is the most up-to-date solution in higher education coupled with issues of a pandemic that hit education which requires students to study online and involve technology to innovate optimal learning outcomes (García-Peñalvo et al., 2012). When technology can be used in optimal learning, the learning results will show what happens when technology-assisted learning is invested in Antasari that technology optimization has been able to innovate superior combustion results marked by the active participation of all academic communities. However, to achieve large-scale change and Antasari, educational practices that involve technology continue to be pursued so that pedagogy and learning outcomes can occur optimally (Suriansyah et al., 2020).

What was revealed in interviews with staff, among others, said that the presence of technology at Antasari Stated Islamic University has accelerated learning during the pandemic and before (Suriansyah et al., 2020). This confirms that with various reports in the context of learning in developed countries, educational technology has been able to innovate how the academic community resolves academic demands and the demands of the world of work in the future. It must be admitted that the presence of technology can accelerate optimal learning outcomes when compared to the capacity and ability of online learning, which slightly uses distance-based learning systems and other applications. However, with online learning that involves technology, finally, the acceleration of learning outcomes has been proven to be different. This is what lecturers at Antasari University said (Hassel & Ridout, 2018).

So that the implementation of online education can produce optimal results, especially in tertiary institutions, the student discipline factor is significant and must receive attention and focus from the university. Antasari's university learning climate has carried this out based on a confession rather than teaching (Martha et al., 2021). However, this is also very influential from the problem factor where online learning and marketing strategies are somewhat more personal and independent. Thus, students must be disciplined because discipline makes students independent, professionals and nurtures them in online learning, management of time, and others so that later in learning with high discipline will create optimal learning outcomes.

Student interaction in Antasari technology-based learning has been explained by the staff where students are first expected to have high discipline then continue with the required level of interaction according to demands where students have to be online for several hours to work on completing homework then interaction model with friends as well as interactions with materials (Bratitsis & Dimitracopoulou, 2010). This is also with the course coordinator or supervisor. Of course, this is inseparable from the challenges they face. However, thanks to the excellent relationship between the university and students through this online learning model, it has increased human-human interaction to create a learning environment full of good initiatives in supporting friends.

Communication and interaction with good engagement were also essential (Jacobsen & Forste, 2011). So that it is easy to exchange ideas and guide social relations among academic members, so based on the explanation above, we can conclude that interaction within the academy is an essential element from the old way of learning to the online way to create effectiveness in learning where knowledge is a strategy that allows academics to interact and refer each other to existing regulations so that there is an interaction that is conducive to creating high-value learning outcomes.

For that reason, Tanis, (2020) said that learning with virtual communicative methods does allow for communication that is influenced by the goals and desires of each subject, so to increase quality interaction through effective communication, virtually all problems related to intellectual achievement and comfort are very important. It is essential is not easy to infringe on intellectual property and ethics in academia where all of this, if carried out properly, will affect the final grade (American Psychological Association, 2019). It is also optimal learning outcomes. Therefore, the explanation given by these teachers, Antasari, has convinced us that a good interaction through online learning will certainly bring learning outcomes that follow what academic students want and even the world of the classroom profession (Yang & Chang, 2012).

We can emphasize what makes this study's results fascinating to apply in teaching in education by relying on learning technology in the digital-based era (Jannah et al., 2020). So we can be sure that the results of this study where we have obtained different results from previous studies that they apply learning methods and strategies as mandated in the curriculum where the adoption of technology to enrich student learning outcomes then technology is also able to develop evaluation strategies that allow authentic learning can occur. Besides, suppose we look at the learning outcomes produced from technology.

In that case, by adopting technology that is following this learning, it has been mandated in the curriculum and where students, when studying and completing their studies later, can participate directly in the context of work where technology is today become very important (Ng, 2015). In other words, the application of technology is a

non-negotiable policy considering the power of technological innovation is very measurable and able to increase learning outcomes very maximally because with a technology design that is following learning, students will build an innovative power of creativity and problem solving and able to produce the skills needed today because most of the work that students have to do when they are in the field of work is that they are required to have technology-based skills such as communicating and getting high-speed and accurate information (Sarkar, 2012).

Furthermore, we also found that how students can develop new knowledge and get the skills they got in higher learning, then they can understand how that knowledge was obtained and how technology can solve problems so that later they will be helpful in exam assignments and even work and others (Von Krogh et al., 2020). In other words, technology also provides opportunities for students to get information because they can access questions quickly, and they have the same opportunities as others because solutions and breakthroughs by technology can provide anyone severe and willing to adapt to systems and concepts. Technology that was previously difficult and today is very easy (Vahdat et al., 2021). Finally, we summarize how the main benefits of technology brought to learning at Antasari university are that it allows academics to think technologically. They also help encourage the participation of academics when they have to get a different learning model from the previous one as they collaborate in preparing themselves for the future and connect learning mechanisms that have not been possible. However, since there is technology, they can solve everything (Porter & Heppelmann, 2014). Furthermore, as learning technology, there is potential to innovate and renovate the traditional teaching and learning process to a mixed teaching system. In this way, the university will remove the barriers and barriers to rush education that will dramatically expand access to lifelong student learning. Thus, students no longer have to meet with the lecturer in real time to study together. However, a lecturer can give students freedom in a more personalized way. Essentially, current innovation can change the origination of an advanced education establishment. Not any more advanced education organizations unavoidably become exact spots with study halls and dorms where understudies come to seek additional instruction. Because of ongoing innovative events, the standard western education picture of a school or college as an assortment of ivy-covered structures might be reexamined interestingly for Stated Universitas Islam Antasari. Therefore, we urge the university to be willing to conduct studies and assessments of models and typical applications that are relevant to the field of study of each department and students so that the progress and development of the impact of technology can be measured accurately on the success of improving the quality of student outcomes. Every year, there should be a university computing study policy that shows an increase in the use of technology in the classroom and remotely in universities from the lecturer and student resources that rely on technology such as e-mail applications, Internet browsing, lecture web pages, and program simulations – practical computer.

CONCLUSION

From a series of exposures to the findings in the form of interviews with lecturers and researchers at the State Islamic University Antasari Kalimantan Indonesia, we can conclude that the findings of this study are relevant to the problems we raised in the introduction where technological innovation has been proven to be able to improve student learning outcomes, namely learning that is following the demands of the 21st century. Therefore, to facilitate understanding, we will summarize essential points,

which include the birth of technological innovations in the academic realm in universities, especially at the Antasari state Islamic university, which is a problem that has given any challenges. Deliver results in the implementation of education relevant to the 21st century. This is in line with the university's expectations and the world of work. The following results include that technology that can innovate learning outcomes has indeed become the goal of the Antasari Islamic university, where technology is continuously involved, and academics are disciplined in applying it in learning occurs in the academic field.

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