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Analyzing Academic Results of Managerial Accounting Courses Using Offline and Online Learning at Undergraduate Study Program

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ABSTRACT

This study aims to analyze the comparison of the academic result of the EA447 Managerial Accounting course using offline and online learning at the Management and Accounting undergraduate study program during 10 semesters of the 2016-2020 academic years at Indonesia Persada University-Jakarta. This study uses simple descriptive statistics to analyze the pass rate, failure rate and eligibility rate to take the final semester exam. The data is taken from the academic section of the institution in the form of student scores based on offline learning before the covid-19 pandemic, namely the odd semester 2016/17, 2017/18, 2018/19 and 2019/20, and 2019/20 and the academic year in online learning during the covid19 pandemic in the even semester 2019/2020, and the 2020/2021 school year. The results of this study indicate that the graduation rate is high, the failure rate is low, and the eligibility rate for taking the final semester exam is lower in online learning outcomes than offline learning outcomes. This finding implied to provide references in applying offline and online learning for the Management and Accounting undergraduate study program at the university.

CCS CONCEPTS

• :; • **Applied computing** → Law, social and behavioral sciences; Economics;

KEYWORDS

academic result, offline learning, online learning, course, undergraduate

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1 INTRODUCTION

The world of education has experienced very fast development, especially in the last two decades. We still feel in our minds that about twenty years ago, lecturers still gave lectures in class with a face-to-face system, lectured in front of the class and students sat listening and doing assignments. This traditional learning system has taken root and has become a popular learning system in various circles at that time. This learning system is still ongoing today, but with the presence of information technology that supports learning and is favored by the millennial generation, the way of learning has changed, namely, previously active lecturers taught in front of the class, now lecturers are not only teachers but also facilitators and motivators. Lecturers are no longer the only source of knowledge for students.

The transfer of learning which originally used the offline learning method to online learning, this happened not only to utilize information technology related to learning but also to answer the government's appeal regarding learning methods during the covid19 pandemic. The existence of the covid-19 pandemic has become an important moment to immediately implement online learning starting in the even semester of the 2019/2020 academic year. This learning method by maximizing information technology is an inseparable part of the knowledge delivery system in the industrial era 4.0. As stated by [2] that Education 4.0 is a digitally implemented learning system applied in the world of education by utilizing advances in information technology in industry 4.0. Education 4.0 tries to change traditional learning methods into digital learning with digital classes. According to [6] on higher education with digital classes, the role of the lecturer who was previously a source of knowledge becomes a facilitator or mediator in a digital learning system. Learning digital systems with digital classes makes learning without classroom walls and students should be able to absorb more knowledge from many sources.

Learning achievement with education 4.0 is expected to produce graduates who think creatively, are able to collaborate and are able to make promising business decisions. Meanwhile, in terms of skills, graduates are expected to be ready to face challenges and demands in the world of work. The accounting department, Faculty of Economics and Business, Universitas Persada Indonesia Y.A.I [FEB-UPI.YAI] has started implementing online learning since the even semester of 2019/2020 due to the covid-19 pandemic, which makes it impossible for students to study onsite. The EA447 Managerial Accounting course is offered to students of the Management

S1 study program in odd semesters and offered to students of the Accounting S1 study program in the even semesters of each academic year [7]. EA447 learning is carried out online from the even semester of 2019/2020 to the even semester of 2020/2021. So we will see how the academic results of the Management S1 study program students from learning for four odd semesters offline [odd semesters of 2016/17 academic year, 2017/18, 2018/19 and 2019/20]. The implementation of off-learning for Accounting Undergraduate students takes place in three even semesters, namely the even semesters of the 2016/17 academic year, 2017/18 and 2018/19. Students of the Management S1 study program only receives EA447 Managerial Accounting lessons ONLINE in the odd semester of 2020/21, meanwhile Accounting students take this course twice in even semesters, namely the even semesters of 2019/20 and 2020/21.

The selection of the object of this research is because this educational institution is one of the private universities with an accreditation which is quite favorite in the Central Jakarta area, Indonesia. This institution is an example of a private university that wants to advance by realizing online learning as soon as possible so that when onsite learning is frozen, this educational institution immediately takes the opportunity. Besides, the selection of the object of this research is due to adequate data support so that the distortion of the data will be very small.

Learning with the course code EA447 Managerial Accounting is given to students of the Management and Accounting S1 study program [1]. The difference is in recording the presence of lecturers, namely in offline learning, the presence of lecturers is recorded manually in class when the Face to face [F2F] class takes place, while in online learning the presence of lecturers is recorded on the lecturer portal when online learning takes place zoomed in.

The basic difference in offline learning for the EA447 Managerial Accounting course for both Management and Accounting undergraduate study programs is that offline learning organizes learning in 13 onsite meetings, teaching materials come from lecturers based on the mandatory textbooks used, lecturer attendance is recorded by signing the teaching attendance book. which are filled out manually and the tools used in the classroom to help teach are overhead projectors, in focus and other equipment. EA447 Managerial Accounting contains 3 credits with a learning duration of 1 credit of 50 minutes so that each onsite meeting lasts 150 minutes or 2.5 hours effectively. For the purposes of taking academic results, students are required to take 2 quizzes, namely the quiz before and after the Mid-exam. Students who are unable to attend onsite lectures below 75% are declared not to be allowed to take the final semester exam. The composition of the assessment includes 20% assignments, 30% Mid-exam and 0% Final Exams, all exams take place onsite or on campus.

In online learning, online learning meetings were also held 13 times. In online learning, before learning begins, lecturers are required to upload learning materials to the lecturer portal so that students can immediately download them. All learning procedures and exams are the same as in offline learning, there are only a few differences, namely lecturer attendance is carried out by maximizing the function of the lecturer portal, quizzes, mid-exams and final exams are carried out online with a deadline of the following week. In online learning, lecturers may expand learning activities by activating several applications, gadgets, education games that support and even use the google store, such as google mail, google meet, google drive, google form, and google chrome.

2 LITERATURE REVIEW

Online-based learning has added diversity in imparting knowledge to students. Students who were previously objects have now become subjects of science because learning conditions in digital classes prioritize student activity in gaining knowledge. Online learning can be a solution for delivering adequate material to cover the weaknesses found in offline learning. Offline learning is onsite learning or offline learning, in which the offline learning approach is a special term at UPI-YAI Jakarta. To be able to organize online-based learning, any educational institution must have a lecturer portal for the academic community of that institution. This lecturer portal is a kind of web or a kind of personal blog or lecture desk provided by an educational institution for every lecturer in charge of a course. All matters related to the lecturer are always through the portal from the lecturer. If the lecturer portal is a kind of Web, then this Web plays a very important role in the smooth communication that applies educational information technology. Web-based learning can be defined as online learning based on instructional meta-media, by utilizing the properties and resources of the World Wide Web to create a conducive learning environment that is held more flexibly with maximum results. The lecturer portal has a very important role for the implementation of this online learning. It was stated by [10] that the delivery of content or learning materials to the lecturer portal to support smooth online learning can be through all electronic means, such as cameras, intranet flash drives, peripheral networks, internet, interactive TV and even satellite broadcasts, etc. All of these electronic facilities can be utilized optimally when learning is taking place. E-learning according to [4], is defined as an interactively designed learning environment that focuses on learners that can take place anytime, anywhere or with anyone by utilizing different digital resources. The digital resources used are highly dependent on the learning being carried out.

Online learning was chosen because online learning provides so many benefits and conveniences in the implementation of modern learning for millennial who are so dynamic and critical. In addition, according to [3] online learning also provides benefits for students, for educational institutions and for national education. For students, it is clear that they will get all the benefits, such as lower transportation costs, more flexible time, more access opportunities, and more independent learning. For educational institutions, they can open the widest access to education with online learning so that large-scale learning is held with no restrictions on geography, politics and even countries. For national education, online learning is able to add learning opportunities for the nation's children to increase their knowledge at low cost and open up the flexibility to choose the desired education based on the most suitable learning method. [5] added that another benefit of online learning is that it combines the benefits of using online resources with the benefits of active student participation. The advantage of online learning according to [8] that the online learning environment is effective for student academic outcomes even though the student is not satisfied with the interaction between parties in the learning process. Online learning is not learning without its weaknesses

Table 1: Final Scores of S1 Management and Accounting S1 students using offline and online learning each semester starting from the 2016/17 academic year to the 2020/21 academic year.

LEARNING	SEMESTER	TOTAL STUDENTS	PASS	FAIL	INELIGI-BILITY	STUDENTS OF
ONSITE / OFFLINE	Odd 2016/17	122	112	5	5	Management
	Even 2016/17	84	81	1	2	Accounting
	Odd 2017/18	169	163	2	4	Management
	Even 2017/18	80	77	2	1	Accounting
	Odd 2018/19	101	95	4	2	Management
	Even 2018/19	92	89	1	2	Accounting
ONLINE [full]	Odd 2019/20	18	15	1	2	Management
	Even 2019/20	81	76	4	1	Accounting
	Odd 2020/21	102	100	0	2	Management
	Even 2020/21	66	64	1	1	Accounting

or shortcomings. There are several weaknesses found in online learning [9], for example, students will be isolated so that they will not interact directly with teachers and classmates so that in their solitude they must be able to motivate themselves in the ongoing learning process.

3 METHODOLOGY

Data on student scores related to graduation, failure and eligibility to take the exam for the EA447 Managerial Accounting course that the author collected from the academic section of FEB-UPI-YAI from the odd semester of the 2016/17 academic year to the even semester of the 2020/21 academic year. EA447 Managerial Accounting is offered to students of the Management S1 study program in odd semesters, while to students of S1 Accounting study programs in the even semesters of each academic year.

Based on table 1 above, the final grades of students are processed using simple descriptive statistics through the Microsoft Excel application to find the comparison and effectiveness between offline and online learning at universities in Indonesia, especially universities in Jakarta using bar charts to determine the comparison between the final grades of study program students S1 Management and S1 Accounting in offline learning. Meanwhile, the Pie chart is used to determine the percentage of passing and not passing, both for students of S1 Management and S1 Accounting study programs who use online learning. Likewise, the Line curve is used to show the effectiveness of offline and online learning, both for Management undergraduate students and Accounting undergraduate students.

4 RESULTS AND ANALYSIS

4.1 Academic Outcomes of Students taking EA477 Managerial Accounting with Offline Learning

As shown in Figure 1, offline learning methods are recorded from the odd semester of 2016-2017 to the odd semester of 2019-2020. The EA477 Managerial Accounting course is carried out by the Management S1 Study Program in every odd semester, namely the odd semester of 2016-2020, while the same course is carried out by

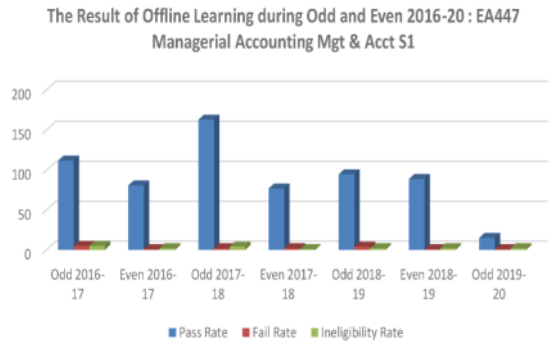

Figure 1: The Result of Offline Learning

the Accounting S1 Study Program in every even semester, namely the 2016-2019 even semester. With the spread of the COVID-19 pandemic and in order to comply with government regulations, starting from the even semester of 2019-2020 learning will be carried out online learning.

In the odd semester of 2016-2017, 122 students of the Management Study Program who took the Managerial Accounting EA447 were declared quite high, namely 91.8%, did not pass 4.1% and could not take the exam at 4.1%. Students who are unable to take the final exam for reasons of absence that exceed 75% of the total attendance. In the odd semester of 2017-2018, 169 students took EA477 and who passed 96.4%, did not pass 1.18% and those who could not take the exam were 2.42%. In the odd semester of 2018-2019, there were 101 students who took EA477 and 94% of those who passed, did not pass 4%, and 2% of those who could not take the exam. Finally, in the 2019-2020 odd semester, 18 students took EA477 and 83.33% were declared to have passed, 6% did not pass and 10.67% were unable to take the exam.

In the even semester of 2016-2017, out of 84 students of the Accounting S1 study program who took the EA447 Managerial Accounting who passed quite high, namely 96%, did not pass 1.19%

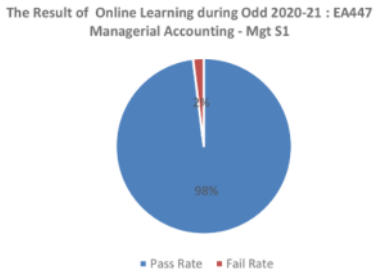

Figure 2: The Result of Online Learning for The Management Students

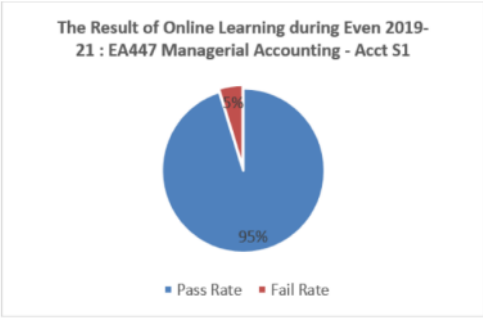

Figure 3: The Result of Online Learning for The Accounting Students

and could not take the exam by 2.81%. Students who are unable to take the final exam for reasons of absence that exceed 75% of the total attendance. Even semester 2017-2018 students who took EA477 were 80 students and 96.25% were declared to have passed, 2.5% did not pass and 1.25% were unable to take the exam. In the 2018-2019 semester, there were 92 students who took EA477 and 96.74% of those who passed, did not pass 1.09% and 2.17% who could not take the exam.

4.2 Academic Results of Students taking EA477 Managerial Accounting with Online Learning

The academic results of S1 Management Study Program students who took EA447 Managerial Accounting as presented in Figure 2 show that there were 102 students taking Managerial Accounting and 100 students (98.04%) who did not pass; whereas, students who were not allowed to take the exam as many as 1.96%.

Academic results of undergraduate Accounting Study Program students who took EA447 Managerial Accounting in the even semesters of 2019-20 and 2020-21 as presented in Figure 3 that 140 students graduated (95%), 5 students did not pass (3.4%); whereas, students are not allowed to take the exam as many as 2 students (1.6%).

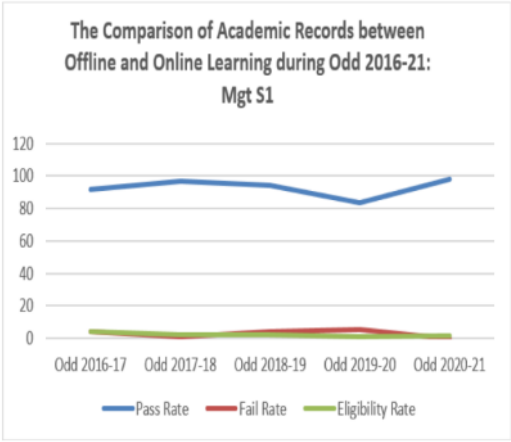

Figure 4: Academic Results Curve of Management S1 Students

4.3 Comparison of Academic Results of Students taking EA477 Managerial Accounting with Offline & Online Learning

Figure 4 shows that the academic results of S1 Management students who successfully passed the EA447 Managerial Accounting with Offline learning experienced a continuous decline after the odd semester of the 2017/18 academic year which started with 91.8% then increased to 96.45%, then decreased to 94.06% and 83.33% in the last odd semester of 2019-20 before using online learning. However, on the occasion of 4 exams in 4 odd semesters starting from 2016-20, there have been fluctuations in the percentage of students who did not pass, namely: 4.1%, 1.18%, 3.96% and 5.56% while implementing Offline learning. Likewise, students who cannot take the exam are shown in the percentages of 4.1%, 2.37%, 1.98% and 1.11%.

The results of online learning in the odd semester of 2020-21 using the online learning method show that students who pass the EA447 Managerial Accounting are very high at 98.04%, there are no students who do not pass and students who cannot take the exam are only 1.96%.

Figure 5 shows that the academic results of undergraduate Accounting Study Program students who successfully passed the Managerial Accounting EA447 experienced graduation, which were flat at 96.43%, 96.25% and 96.74%, then there was a decline in graduation to 93.83% in the even semester of the year. 2019/20, then increased again the next year by 96.97%. This happened before the online learning was implemented, starting from the even semester of 2019-20. Students who do not pass this course tend to fluctuate sequentially in all even semesters during offline learning, namely 1.19%, 2.5% and 1.09%. Likewise, students who cannot take the exam show the percentages of 2.38%, 1.25% and 2.17%.

The results of online learning in the even semesters of the 2019-20 and 2020/21 academic years show an up and down graph with students who passed EA447 Managerial Accounting, namely 93.83% and 96.97%, respectively. Students who did not graduate with online learning showed an increasing graph in two even semesters, namely

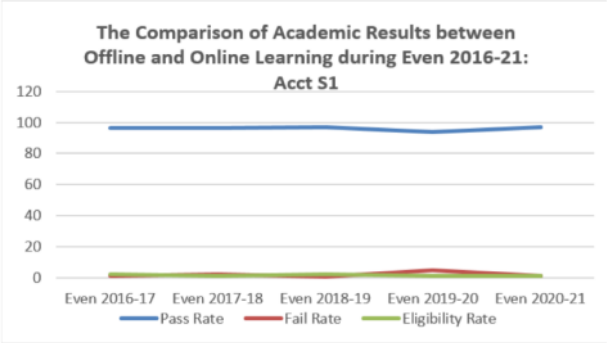

Figure 5: Academic Results Curves for S1 Accounting Students

4.94% and 1.515%; Meanwhile, students who are not allowed to take the exam are only 1.23% and 1.515%.

5 CONCLUSION

This study concludes that the academic results of undergraduate Management Study Program students with online learning are better than the academic results using offline learning with the graduation rate increasing by almost 15%, the failure rate decreasing by 5.56% and students who cannot participate only increase by 0.85% only.

Meanwhile, the academic results of students of S1 Accounting study program tend to be stagnant because the academic results of the last semester of offline learning are 96.74%; however, after using online learning, academic results decreased to 93.83%; although, in the next even semester it rose again to 96.97%.

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