

The Sustainability of Pervasive Learning in Accounting Education: Strategy in the Transition of “*Merdeka Belajar-Kampus Merdeka*”

Diyah Probowulan^{1*}

¹Accounting Department, Muhammadiyah University of Jember,
Jalan Karimata 49, Jember 68128, Indonesia

*Corresponding author; Email: diyahprobowulan@unmuhjember.ac.id

ABSTRACT

In accounting, sustainability can improve the accuracy, reliability, and relevancy of teaching and learning in the educational, economic, and social landscapes that are constantly changing and evolving towards Big Data Personalized Learning or Pervasive Learning. Firstly, the purpose of this paper is to provide a brief overview of the educational landscape in the accounting field in the context of pervasive learning during the transitional period of *MBKM*. Second, providing evidence of the new teaching and learning readiness of the 2020 *MBKM* grant recipients in the accounting education program at Muhammadiyah Higher Education. A literature study is conducted to support the empirical evidence obtained from questionnaires filled out by groups of Accounting Department students. This study finds that, although the beginning of pervasive learning is new for them, with the help of the technological convenience provided by the Ministry of Education and Culture's big data, it can be well-adopted. This convenience is due to the literacy approach that is used in disseminating information to students and the grant outcomes that must be implemented to create a conducive environment for teaching and learning. This research also finds that students' understanding of the use of learning technology has increased. The implications of these findings can provide the roadmaps and strategies that can be carried out in the accounting learning process in the *MBKM* era through pervasive learning and sustainable technology developments.

Keywords: Sustainability; Pervasive learning; Accounting; *MBKM*.

INTRODUCTION

Quality education is listed as the Sustainable Development Goal 4 (SDG 4) by the United Nations [1] and considering the influence of Information Communication Technology (ICT) on education. Technology will change the world's approach to communication and leverage human activities on a large scale. The business model is changing, with the transformation of an increasingly efficient marketplace and increasingly affordable service costs. The way humans work is also changing, with super networks that accelerate the speed of adaptation and the emergence of artificial intelligence. Changes in skills that are needed to keep HR (Human Resources) relevant have also influenced the learning approach taken in HR-producing institutions. The use of technology and the creation of innovations rapidly resulted in a gap between the world of education and the demands of human resources in the business and community sectors. The role and strategy in bridging the gap between the educational process in higher education and the

world of work and the need for innovation are the challenges of 21st-century education. There remains a large gap between professionals, particularly in terms of industry skills and awareness, and a gap in meeting industry demands with the available personnel.

Every day, 2.5 trillion bytes of structured and unstructured data are generated worldwide, so the availability of relevant information at the right time is critical to the success of enterprises to keep pace with ever-increasing data volumes, as well as business and regulatory complexity [10]. Today, we can say that we have entered the era of pervasive learning, a condition of being a part of a distributed system that can be accessed anytime, anywhere, and by anyone.

In education, the Indonesian Ministry of Education and Culture has launched the *Merdeka Belajar-Kampus Merdeka (MBKM)*. *MBKM* is a program that allows students to study outside of campus, such as internships at *DUDI* (Industrial World), student exchanges, independent studies, humanitarian projects, village building (*KKN*

Thematic), Campus Teaching, Research, Indonesia International Students, and Start-Up Business. These programs are the mechanism through the Ministry of Education and Culture's website that has been designed to contain structured and unstructured data information tools in the form of pervasive learning, as reflected in the big data visualization.

In an ever-changing and evolving educational, economic, and social landscape, sustainability can provide accurate, reliable, relevant, and meaningful teaching and learning. As a result, teaching and learning strategies that take cognition from changes in the external environment or the needs of future stakeholders, as well as the students' circumstances, backgrounds, and expectations are required. Such teaching and learning strategies must foster a real-world educational environment that creates sustainable learning and value for future generations. This shift requires a teaching approach based on Computer-Aided Instruction, Learning Management Systems, and Massive Online Open Courses towards Big Data Personalized Learning or Pervasive Learning. This kind of approach shift has also occurred in the knowledge-based teaching approach to develop students' skills after graduating in accounting for lifelong learning [2], [7], and [24].

Besides, [20] although more than 80% of accounting graduates eventually choose careers outside of public accounting, most undergraduate accounting core programs focus on topics that the academics believe students will need to work in public accounting. However, accounting education should broaden its scope to include organizational settings in addition to public accounting. As a result, universities must act quickly in collaboration with industry to ensure that the graduates they produce have the skills required for the era of ubiquitous systems. Emphasizing the significance of Big Data in accounting education, [22] asserts that academics, as educators, must fundamentally revise their accounting and auditing curricula to provide the Big Data skills required in the accounting and auditing professions.

Several developing countries have also responded to the changes in accounting curricula to face business challenges in the Big Data world. For example, in initiative 6.1, the Indonesian Institute of Accountants has taken six action steps, one of which is to equip accountants with multidisciplinary skills and competencies, meta-analytical abilities, and social skills as well as to adjust the accounting education curriculum and professional education to accommodate technological developments and business disruptions [12]. Malaysia has also taken the steps to cope with the changes in the world of Big

Data. According to [5], in 2006, the Malaysian Institute of Accountants, the Ministry of Higher Education, and other local higher education institutions formed a committee to ensure that the accounting programs offered by local universities are in line with the global developments of the profession.

To respond to the drastic changes in knowledge and skills required for the job market, college accounting curricula and professional training programs must respond quickly and appropriately to assist college educators and empowerment professionals in redesigning their curricula [6]. Several stakeholders, including the accounting profession, industry, and academia, have recently reported the importance of developing these skills, the types of skills required, and the best practices to apply these skills in the accounting classroom, [4]. Meanwhile, [22] suggests that learning experiences that develop the skills required by accreditation standards can be integrated across all parts of the accounting curriculum using existing instructional resources.

From the gap analysis of the previous research, this study provides a brief overview of the educational landscape in the accounting field in the context of pervasive learning during the transitional period of "*Merdeka Belajar-Kampus Merdeka*" and provides evidence of the application of new teaching and learning method in the accounting education programs of Indonesian universities. This study implies that it can provide the roadmaps and strategies that can be carried out in the learning process of accounting in the "*Merdeka Belajar-Kampus Merdeka*" program through pervasive learning and sustainable technology developments.

Pervasive Learning Model

Pontefract officially coined the term "pervasive learning" in his book, *Flat Army: Creating a Connected and Engaged Organization* [5]. In this book, Pontefract defines pervasive learning as "learning at the required pace through formal, informal and social learning modalities". This concept states that learning extends far beyond what we learn in traditional classroom settings. Its influence extends to the worlds of e-Learning, informal learning, and on-the-fly learning. There are opportunities for learning in everyday life, and education is not limited to textbooks or formal learning resources but is all around us. As a result, we are all lifelong learners who can absorb and retain the knowledge of our daily lives, even if we are not enrolled in schools or undergoing on-the-job training. The concept of pervasive learning has been around for a long time. Dan Pontefract compares this concept to

Charles Jennings' 70-20-10 model, which states that 70 percent of our education comes from completing difficult jobs or tasks, 20 percent from people (mentors, bosses, etc.), and the remaining 10 percent from ourselves (formal education courses, books, and other sources). As illustrated in Figure 1, this model proposes that the majority of our learning occurs outside of the classroom. Furthermore, [14] provides a different and more aligned learning ratio approach: 3:33. In this approach, 3:33 stands for 33% formal learning, 33% informal, and 33% social learning.

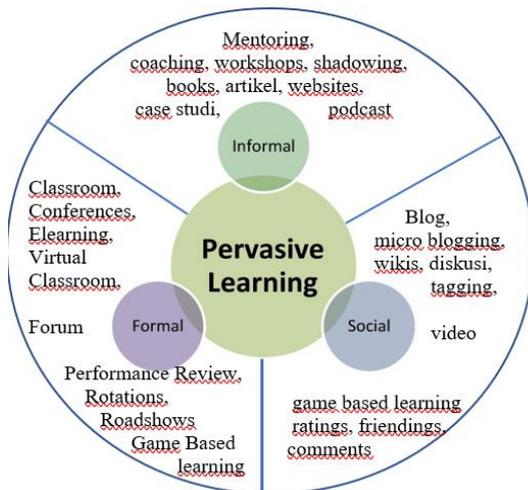


Figure 1. Pervasive Learning Model

Students now have access to a wealth of information at any time and from any location, thanks to new and emerging e-Learning tools and technologies. When students need information, they can use their phones, tablets, and computers, which allows them to broaden their understanding and develop their skills when they need to gather critical new knowledge or even at the most convenient time for them.

The benefits of pervasive learning allow students to set their own pace, encourage learning outside the virtual classroom, prepare students for real-life challenges and situations, and enhance the e-Learning experience by providing a collaborative environment. A pervasive learning model is one in which learning is collaborative, sustainable, connected, and community-based. Those who have entered the freelance market over the last five years will agree with this statement. This approach has ensured their sustainability longer than the market average for the self-employed [14], [19], and [23].

“Merdeka Belajar-Kampus Merdeka” (MBKM)

Currently, we are faced with two significant challenges, namely the industrial revolution 4.0 and

the Covid-19 pandemic, the completion of which is not yet known. The world of education must anticipate curriculum changes so that the students will not miss the opportunities or learning process during these challenging times. Policies must be implemented in such a way that learning remains effective. The Indonesian Minister of Education and Culture, Nadiem Makarim, introduces the concept of independent learning which combines the concept of independent learning campuses. This comprehension is an attempt to adapt to changing circumstances. So, how is the concept of an independent campus studied in the face of the Fourth Industrial Revolution? In this case, the era of the industrial revolution 4.0 is an era of increasing technology. Therefore, students from all universities are expected to be prepared to face challenges in the era of industrial revolution 4.0. With the concept of an independent campus, they are directed to be more prepared to work, collaborate, be creative, and collaborate in ways that are beneficial to them, [21].

Several things are emphasized in this policy, namely the autonomy and flexibility of the educational paradigm and the stimulation of a more innovative learning culture. Technically, the *MBKM* program requires universities to give (1) the right for students to take part in learning activities outside of tertiary institutions for a maximum of two semesters or 40 credits; and (2) the right for students to take different Accounting Department at the same university for one semester or 20 credits. Internships, village projects, teaching in schools, student exchanges, research, entrepreneurship, independent projects, and humanitarian initiatives are among the eight learning schemes available in the *MBKM* program.

RESEARCH METHOD

This study uses a survey method conducted on a specific population group to determine the development of the phenomenon from time to time. The specific population is the *MBKM* grant recipients from Muhammadiyah Higher Education (*PTM*) Accounting Department. There are many in-depth discussions about teaching and learning and the requirements that are adapted to the concept of an independent campus in the form of independent learning activities. The Accounting Department carries it out by asking quantitative questions related to the first factor of student readiness and the second factor of facilities and infrastructure continued with qualitative questions that are answered descriptively. The sample selection method uses Stratified Random Sampling [13] based on the year of the student force starting from

the third semester and above that are adjusted to the provisions of the *MBKM* program. Kemendikbud started the program starting in semesters 3 to 7. In this study, a sample of 1,355 accounting students was obtained from a total population of 4,622 students spread across the Accounting Department of Muhammadiyah Higher Education (*PTM*). There are 7 *PTM* that are *MBKM* grant recipients in 2020. Students' views about their readiness to face pervasive learning during the transition period of the independent campus learning model are analyzed. The questionnaire is developed by considering the literature review and the teaching and learning strategies of the Accounting Department. The questionnaire also includes an open section where respondents can provide their views and comments to allow a descriptive response that can enrich and expand the research results.

The measurement of survey results uses a Likert scale (Rensis Likert, 1=very inadequate, 2=inadequate, 3=sufficiently adequate, 4=adequate, 5=very adequate). The formula for calculating the score for each aspect of the question is: $T \times P_n$. With T = Total number of respondents who chose and P_n = Choice of Likert score numbers. The total score obtained is then calculated as the index % of survey results, with the formula of: $(\text{Total score} \times 100\%) / \text{Highest score}$. The score range uses the formula: $(\text{maximum score} - \text{minimum score}) / \text{Number of categories}$ obtained score range $(5-1)/5=0.8$. The interpretation criteria score based on the intervals can be seen in Table 1 below.

Table 1. Interpretation of survey assessment scores

Interval	Index %	Interpretation
1 - 1,799	0% - 19,99%	Very inadequate
1,8 - 2,599	20% - 39,99%	Inadequate
2,6 - 3,399	40% - 59,99%	Sufficiently adequate
3,4 - 4,199	60% - 79,99%	Adequate
4,2 - 5	80% - 100%	Very adequate

RESULTS AND DISCUSSION

Respondent Profile

The demographics of the research sample consists of the Accounting Department students who receive the 2020 *MBKM* grant from Muhammadiyah Higher Education based on Number: 2087/E2/BP/2020 published by the Ministry of Education and Culture on August 31, 2020, as shown in Figure 2.

The total number of students from *PTM* recipients of the 2020 *MBKM* grant is 4,622 students, with a sample distribution of 1,355 students who have filled out the questionnaire. The findings

also show that most of the students were 21 years old or younger (46.3%) in 2021 when the questionnaire was distributed, which means that they belong to the Generation Y category with specific characteristics (competitive, creative, focused on problem-solving, trusting). Self, technology literate and very active in social networks). The distribution based on the gender of the respondents shows that the number of respondents is dominated by female students with 81.5% or 1.104 respondents, while only 18.5% or 251 respondents are male students. This explains that females are more active on social media than their counterparts. According to [18], the female gender is more active in using social media for communicating. The results of this study can also be proven in the *MBKM* transition era's pervasive learning, where women tend to be more active in responding to the Ministry of Education and Culture program in *PTM* grantees.

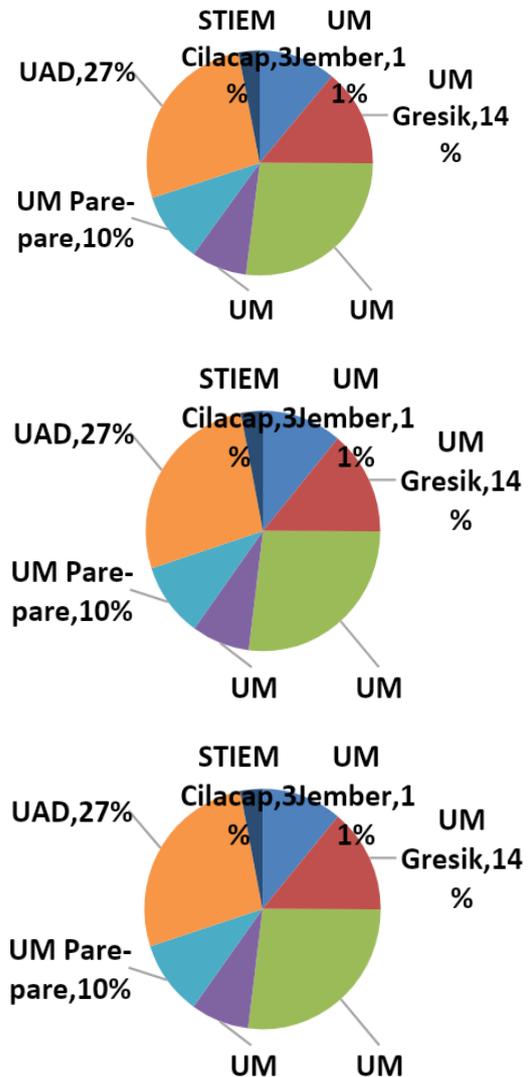


Figure 2. Total Distribution of Student Respondents in the Accounting Department of *PTM*

Table 2. Survey Results Number of Answers

Scale Likert	Knowledge & understanding*				Personality**			
	A1	A2	A3	A4	B1	B2	B3	B4
1	4	3	5	4	10	5	5	4
2	16	11	25	10	24	23	15	15
3	320	261	410	246	302	296	305	305
4	693	729	610	732	649	715	680	702
5	322	351	305	363	370	316	350	329
Total	1355	1355	1355	1355	1355	1355	1355	1355

Scale Likert	Tutorial***				Facilities****			
	C1	C2	C3	C4	D1	D2	D3	D4
1	3	15	11	4	4	5	5	5
2	5	40	34	16	1	11	10	14
3	286	358	425	305	218	285	360	336
4	752	669	645	759	770	714	644	734
5	309	273	240	271	362	340	336	266
Total	1355	1355	1355	1355	1355	1355	1355	1355

Information:

- Understanding & knowledge* : A1 understands the *MBKM* program about eight activities
 A2 understands the *Kemendikbud* website regarding the *MBKM* program
 A3 is aware of the benefits of the *MBKM* program
 A4 is aware of the *MBKM* program from the Accounting Department
- Personality** : B1 is the motivation and willingness to follow the *MBKM* program
 B2 is following the *MBKM* program for its volunteerism
 B3 is planning or already following the *MBKM* program
 B4 is creative and innovative.
- Tutorial*** : C1 is an Accounting Department that has an SOP (Standard Operating Procedure) or mechanism for the implementation of the *MBKM* program
 C2 is an Accounting Department that has a reliable teaching staff in the *MBKM* program
 C3 is getting guidance from academic guidance lecturers regarding *MBKM* programs
 C4 is an Accounting Department that provides opportunities to earn the right to study off-campus (*MBKM* program)
- Facilities**** : D1 is a good internet network.
 D2 is *Pervasive Learning* (Virtual Classroom, E-learning, Mentoring, Websites, Blog, Content YouTube) owned by the Accounting Department is adequate
 D3 is getting direction/socialization from the Accounting Department regarding the *MBKM* program
 D4 is an Accounting Department that has an *MBKM* curriculum as expected

Table 3. Total Score Data

Scale Likert	Knowledge & Understanding				Personality			
	A1 score	A2 score	A3 score	A4 score	Score B1	Score B2	Score B3	Score B4
1	4	3	5	4	10	5	5	4
2	32	22	50	20	48	46	30	30
3	960	783	1230	738	906	888	915	915
4	2772	2916	2440	2928	2596	2860	2720	2808
5	1610	1755	1525	1815	1850	1580	1750	1645
Total Score	5378	5479	5250	5505	5410	5379	5420	5402
Index	0,7938	0,8087	0,7749	0,8125	0,7985	0,7940	0,8	0,7973

Scale Likert	Tutorial				Facilities			
	C1 score	C2 score	C3 score	C4 score	D1 score	D2 score	D3 score	D4 score
1	3	15	11	4	4	5	5	5
2	10	80	68	32	2	22	20	28
3	858	1074	1275	915	654	855	1080	1008
4	3008	2676	2580	3036	3080	2856	2576	2936
5	1545	1365	1200	1355	1810	1700	1680	1330
Total Score	5424	5210	5134	5342	5550	5438	5361	5307
Index	0,8006	0,769	0,7578	0,7885	0,8192	0,8027	0,791	0,7833

Information:

Index calculation using formula (total score/highest scale score)x100%

Example: For Understanding and Knowledge indicator A1 obtained $5.378/(5 \times 1.355) = 0.7938$

The number of respondents' answers to each question indicator is seen from student readiness, which is categorized in understanding, knowledge, and personality. Moreover, aspects of infrastructure categorized in tutorials and facilities can be seen in Table 2 above. At the same time, the total score of each indicator can be seen in Table 3 below.

The results of the total score for each indicator in the category of aspects of student readiness and infrastructure are used to calculate the % index. The aspect of student readiness in the pervasive learning process of the *MBKM* curriculum in the field of accounting education at the *PTM* Accounting Department grantees based on the indicators produces the index in Table 4 as follows:

The aspect of infrastructure facilities in the learning process of *MBKM* curriculum's pervasive learning in the field of accounting education in the *PTM* Accounting Department's grant recipients based on the category of tutorials and facilities can be seen in Table 5 below.

Table 4. Student Readiness Index Achievement

Code	Indicators	Index %	Interpretation	
A1	understand <i>MBKM</i> program about 8 activities	0,7938	79,38%	Adequate
A2	understand the Ministry of Education's website about the <i>MBKM</i> program	0,8087	80,87	Very adequate
A3	Know the benefits of the <i>MBKM</i> program	0,7749	77,49	Adequate
A4	know the <i>MBKM</i> program from the Accounting Department	0,8125	81,25	Very adequate
B1	motivation and willingness to follow the <i>MBKM</i> program	0,7985	79,85%	Adequate
B2	follow the <i>MBKM</i> program on its own volunteerism	0,7940	79,4%	Adequate
B3	plan or have joined the <i>MBKM</i> program	0,8	80%	Very adequate
B4	Creativity and innovation	0,7973	79,73%	Adequate

From Table 4 and 5 indicators understand the Ministry of Education and Culture's website regarding the *MBKM* program (A2), know the *MBKM* program from the Accounting Department (A4), plan or have participated in the *MBKM* program (B3), the Accounting Department has an SOP (Standard Operating Procedure) or program implementation mechanism *MBKM* (C1), good internet network (D1). Pervasive Learning (Virtual Classroom, E-learning, Mentoring, Websites, Blogs,

YouTube Content) owned by the Accounting Department are adequate (D2), resulting in an adequate index. Explain how formal, informal, and social experiences help learners become more collaborative, interconnected, sustainable, communicative, and socially community-based. In informal contexts, includes different learning actions such as in the classroom (physical classroom), outside the classroom (virtual classroom), game-based, e-learning, conferences, and forums; as well as mentoring, web conferences, webinars, workshops, podcasts, and case studies. Furthermore, in social contexts, social web tools such as wikis, blogs, microblogging, friendships, bookmarks, user-generated content, and messaging platforms are used, [8] and [9].

Table 5. Infrastructure Index Results

Code	Indicators	Index %	Interpretation	
C1	The Accounting Department has an SOP (Standard Operating Procedure) or mechanism for the implementation of the <i>MBKM</i> program	0,8006	80,06%	Very adequate
C2	The Accounting Department has a reliable teaching staff in the <i>MBKM</i> program	0,769	76,9%	Adequate
C3	get guidance from Academic Guidance Lecturers regarding <i>MBKM</i> program	0,7578	75,78%	Adequate
C4	Accounting Department provides opportunities to earn the right to study off campus (<i>MBKM</i> program)	0,7885	78,85%	Adequate
D1	Adequate internet network	0,8192	81,92%	Very adequate
D2	<i>Pervasive Learning</i> (Virtual Classroom, E-learning, Mentoring, Websites, Blog, Content YouTube) owned by The Accounting Department is adequate	0,8027	80,27%	Very adequate
D3	getting direction/ socialization from the Accounting Department on <i>MBKM</i> program	0,791	79,1%	Adequate
D4	The Accounting Department has an <i>MBKM</i> curriculum as expected	0,7833	78,33%	Adequate

Although the pervasive learning model is used and studied to motivate students, it also accelerates the learning activities across all channels and platforms for learners to structure their content and context as an approach that emerges from the new educational paradigm. The availability of content at any time and from any location changes the nature of e-learning and social learning. As a result, social learning environments, as well as technological

advancements and utilization, help to improve content delivery among user groups and individuals. Recent examples of cell phone use have had a significant impact on the dissemination of ideas, discussions, and other social knowledge. Today's technologies (mobile pervasive learning technologies, pervasive applications, and computing, for example) can improve the accessibility and effectiveness of resource utilization and peer interaction to create innovative applications and programs.

Students' responses were descriptively collected to be deduced. Some points from the views or perspectives of students who plan or have already exercised their right to study in the Accounting Department at each *PTM* can be seen in Table 6 below.

Table 6. Summary of interview results descriptively

Advantages of <i>MBKM</i> Program in Accounting Department	Disadvantages of <i>MBKM</i> Program in Accounting Program
<ul style="list-style-type: none"> • More flexible • Add insight beyond accounting learning • Student independence is more visible • Benefits gained more broadly • There are links and matches with the world of work • More understanding of the field of Accounting easily 	<ul style="list-style-type: none"> • Premature planning • Unstructured HR • Limitations of internships • Activities that are busy and require more time • Lack of socialization • Changes that require transitions or adjustments

This deductive result can be used as a reference for program improvement and designing different pervasive learning strategies in the *MBKM* curriculum.

Accounting Department Response to Drivers of Change

The Department of Accounting under the Muhammadiyah Higher Education (*PTM*) responded to the changes discussed in Permendikbud No. 3/2020 regarding the Independent Learning Campus Curriculum program by participating in the *MBKM* grant competition organized by the Ministry of Education and Culture in 2020. A total of 7 Accounting Departments receive the grant, and those who do not pass or do not apply would continue implementing the *MBKM* curriculum program. The introduction of the *MBKM* program begins in 2020, starting with the reconstruction of the curriculum by introducing several collaborative courses based on technology to face the challenges

in the industrial era 4.0 and the development of pervasive learning that dominates today's learning.

In developing the new accounting curriculum, the team considers several aspects, such as the changing landscape of higher accounting education, a new generation of students, stakeholder expectations, specific accounting competencies as a marker, and learning strategies. Originally, lecturers teach accounting students using their teaching methods and techniques. Considering all the challenges and demands of stakeholders, the Accounting Department faces them by developing teaching and learning strategies in collaboration with various stakeholders such as academic staff, external consultants, and higher education specialists. *MBKM* teaching and learning policies and strategies are the basis for developing new strategies that focus more on the profile of current students and who are better engaged with lecturers. One of the most important of the pervasive learning teaching and learning strategies developed is that it is a natural cyclical process. It is also essential to get support, shared understanding, and commitment. Several workshops were conducted during the early implementation phase, and the implementation was closely monitored by the Ministry of Education and Culture's HEIs dedicated members and the Head of the Accounting Department. Regular feedback and reflection from both students and faculty help to improve the strategy. The sound teaching principles and learning practices underpin teaching and learning strategies, [3], [11], [15], [17], and [25], are as follows:

- Informed by instructional and learning strategies, as well as underlying philosophies;
- High but realistic expectations are communicated in good teaching and learning practices, and appropriate support is provided.
- Teaching and learning must be interactive, collaborative, and reflective, and they must respect diverse talents and modes of learning while emphasizing students' abilities to become lifelong learners.
- Learning should combine multiple sources, each of which has specific learning and teaching purposes based on closely linked knowledge and the creation of contextually relevant learning contexts.
- Teachers should be largely based on good educational principles, the self - reflection of having to learn, as well as constructive and required timelines;
- Teaching strategies should include and accommodate pervasive development and other software skills in computer technology;
- The strategy's goal is to help students become business leaders.

- Lecturers' primary responsibility is to facilitate and manage the teaching and learning process.
- Students are encouraged to become self-directed learners who take responsibility for their education;
- The strategy promotes student self-assessment and learning reflection to ensure that students are well-prepared for formative evaluation prospects.
- The innovative teaching strategy is also known as a hybrid approach to teaching and learning that combines various resources for students.

Below are the explanation of the meaning and role of each resource available to students as a part of learning processes:

(a) Pre-read

In preparation for the next class, students are given relevant reading material. The goal is to provide students with a context for the topics that will be covered in the following class so that they can have prior knowledge of the new topic. Lecturers should encourage students to pre-read by providing some form of feedback.

(b) Objective test

The purpose of this resource is to enable students to self-assess their understanding of accounting and big data topics covered during previous lectures.

(c) Class experience

Contact sessions (classes) continue to be the most important resource in the experiential teaching and learning process, but students must remember that they are only one of many sources. Based on the principle that lecturers are primarily facilitators of learning, adequate time should be spent explaining to students how different resources should be used to master the specific topic under discussion.

(d) Study guide or student

A study guide is provided to students in the class for each topic. The study guide explains the role and expectations of each learning resource.

(e) Self-study

The importance of independent learning should be emphasized, and guidance should be given on what it should take to help students become independent learners who take responsibility for their learning [16]. The benefits of passive learning allow students to set their own pace, encourage learning outside the virtual classroom, prepare students for real-life challenges and situations, and enhance the e-Learning experience by providing a collaborative environment. A pervasive learning model is one in which learning is collaborative, sustainable, connected, and community-based.

(f) Consultation

Students are encouraged to consult with the lecturer, but it should also be emphasized that students should first try to solve problem areas independently or through collaboration with their peers.

(g) Cooperation with colleagues

Students are encouraged to work in groups to enable collaborative learning and learning from one another.

(h) Task

Assignment completion and submission are critical components of formative assessment. Assignments should be of high quality but realistic, and students should be able to self-assess what they have learned. The number of assignments that students must complete is agreed upon with their lecturers in year groups so that students are not burdened during certain times. Formal and timely constructive feedback on assignments is required.

(i) Tutorials

Small-group tutorials should be used primarily to develop pervasive soft skills and others, but they should also be an essential component of the teaching and learning process. Tutorials can be used by lecturers for hand-ins and assignment discussion, or previously unseen questions can be discussed to explain how the principles are applied.

(j) Self-assessment

The concept of self-assessment should be clearly explained to students, and they should be encouraged to use opportunities for self-assessment to determine whether they understand the learning content or not.

(k) Formal assessment

A formal assessment should not surprise students in terms of standards, context, etc. The focus is on self-assessment.

CONCLUSION

Harmony through the integration of accounting education and accounting practice can be realized through pervasive learning. The *MBKM* program launched by the Ministry of Education and Culture in 2020 has been able to be carried out adequately. The future of the accounting education landscape cannot be separated from the use of technology developing quite rapidly. Using models of 8 *MBKM* program activities visually in the form of Big Data is very easy to implement. However, it is still necessary to realize that the readiness of human resources needs to be improved continuously by mastering the technology. Accounting is a field

that will be replaced by technology in the future, so it requires creators and innovators from lecturers and the Accounting Department to be more self-actualized with developments. Suggestions for sustainable pervasive learning in accounting can collaborate with the field of information technology.

Furthermore, this finding implies continuous improvement of the department or Accounting Department that is adapted to the transitional era of the *MBKM* curriculum. Of course, the improvement is made by creating the first strategies, namely the design of the *MBKM* curriculum with a series of planned interventions designed for teaching staff in the *PTM* Accounting Department. The second innovation is the integration model - a combination of accounting education tools and essential rules and principles represented in any accounting topic, with the same rules and principles that govern any accounting software. The limitation of this research is that it has not used the samples from the Accounting Department that have implemented the *MBKM* curriculum throughout Indonesia, so the conclusions are still concentrated in *PTM*. Further research can be done with a wider scope.

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