

Multi-Cultural and Local Wisdom-based Curriculum Development Model in the Independent Campus Learning Program to Improve Graduates' Micro Skills

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Abstract

In the Independent Campus Learning Program [Merdeka Belajar Kampus Merdeka (MBKM)], the 5-1-2 learning pattern is used in the undergraduate program. In implementing this pattern, curriculum coherence is needed between study programs and between institutions. A model for developing a curriculum based on local wisdom and multiculturalism was created to improve the micro-skills of program graduates. A model for developing a curriculum based on local wisdom and multiculturalism was created to improve the micro-skills of program graduates. A model for developing a curriculum based on local wisdom and multiculturalism was created to improve the micro-skills of program graduates. In order to attain the objective, a hierarchical pattern of relationships is employed, beginning with the central construct, primary dimension, and indicator. A structural Equation Model (SEM) is used to analyse the relationship between variables, while an inductive approach is used for exploratory purposes to identify factors. In order to evaluate the dependability of the model, a study was conducted at two different universities in Indonesia: Sultan Ageng Tirtayasa University in Serang, Banten Province, and Galuh Ciamis University in West Java Province. The study involved testing the coherence of the curriculum of various programs at both universities and evaluating the micro-skills of graduates who had participated in the MBKM program. Samples from the 4 study programs implementing MBKM at the two universities were used to test curriculum coherence. Then, to determine the increase in graduates' micro-skills, a sample of 70 students was used. The results of the analysis show that curriculum development has a direct effect on improving graduates'

micro-skills. In developing the curriculum, three factors strengthen micro skills improvement: development of knowledge, responsiveness to technological developments, and relevance to needs.

Keywords: curriculum development, graduate micro skills, science, technological developments, and relevant to needs.

1. Introduction

Each study program consistently reviews and updates its curriculum to ensure high-quality graduates. Thus, it is best to focus on scientific development while designing a curriculum. Developing this knowledge should be relevant to life's needs and responsive to developments in science, technology and arts (Science and Technology). The scientific development is related to science and technology, namely the development of intellectual intelligence and skills. These two things will be reflected in the formulation of learning outcomes (N. R. W. Astuti & Dewi, 2021; Wang, Q. & Jiang, P., 2024).

There are two steps in compiling learning achievements: consideration and determination (S. P. Astuti, 2022). Input from associations and stakeholders is considered in developing market and stakeholder needs. Meanwhile, the development of knowledge and expertise is the domain of universities in determining the formulation of learning outcomes. There are four learning achievement targets: attitudes, general skills, specific skills, and knowledge. General attitudes and skills refer to SN-DIKTI (Standar Nasional Pendidikan Tinggi), while specific skills and knowledge refer to KKNI (Kerangka Kualifikasi Nasional Indonesia). The level of achievement of these four learning outcomes will be reflected in the competency standards of Study Program graduates (Kristanti et al., 2021).

Graduate competency standards are the minimum criteria for qualifying graduate abilities formulated in achieving graduate learning (Baharuddin, 2021). Mastery of specific knowledge and skills is a parameter for the study program's achievements. The level of knowledge mastery refers to learning content standards, while specific skills refer to elements of workability described in the KKNI. The Independent Campus Learning [Merdeka Belajar Kampus Merdeka (MBKM)] program was implemented to enhance graduates' competency based on KKNI standards.

In the MBKM program, three learning patterns are carried out to improve the competency of Study Program graduates (Sulistiyani et al., 2021). First, learning takes place in each study program. Second, learning occurs in different study programs within the same institution (internal institution). Third, learning occurs in the same study program but at different institutions (external institutions). With these three learning patterns, the academic atmosphere will grow, resulting in the adoption of cognition between students, between study programs and between institutions. Referring to the three learning patterns in the MBKM program, an academic atmosphere will likely emerge, resulting in a cognitive adoption process.

In cultivating an academic atmosphere, paying attention to multiculturalism, including academic culture, ethnocentrism, and social culture, is necessary (Artanto, 2022). Multicultural is part of local wisdom that needs to be developed (Syahid, 2022). Local wisdom, if linked to cultural values, can regulate the order of life. Based on this, multicultural and local wisdom is assumed to have the potential to develop the curriculum according to the institution's position. Curriculum development considering multi-cultures and local wisdom is assumed to have implications for improving graduates' micro-skills. A curriculum development model for multicultural and local wisdom-based study programs was created to explore this. This model was created to improve the micro-skills of study program graduates.

2. Literature Review

Higher education in Indonesia consists of three types: academic, professional and vocational. These three types of education have different levels and educational standards. Presidential Regulation [Peraturan Presiden (Perpres)] Number 8 of 2012 states that each level of education has different educational standards with the Indonesian National Qualifications Framework (KKNI). Based on the type of education and the Presidential Decree, academic education for undergraduate and vocational programs in the Diploma IV program has a KKNI of level 6. Then, Masters and Specialist I programs have a KKNI of level 8, while Doctoral and Specialist II programs have level 9. The difference in KKNI levels shows that Each level of education at each university has different characteristics.

The characteristics of each higher education institution are reflected in the vision, mission and strategy for achieving institutional goals. The institutional vision is one indicator of developing the curriculum. Differences in vision at each institution are assumed to have implications for the diversity of curricula at each university. However, this diversity must refer to the same goal: the National Higher Education Standards (SN-DIKTI). The SN-DIKTI as a reference is Minister of Education and Culture Regulation [Peraturan Menteri Pendidikan dan Kebudayaan (Permendikbud)] Number 03 of 2020. The graduate profile reflects the coherence between the institution's objectives and the Minister of Education and Culture Regulation. As an effort to realize the graduate profile, the Study Program curriculum was developed.

In developing the Study Program curriculum, there are two bases as a reference: national and institutional (Endrawan et al., 2021). The National Foundation is related to SN-DIKTI and KKNI, while the institutional foundation is related to developing a vision and how to achieve a graduate profile. The national policy basis for developing the Study Program curriculum refers to Law (UU) Number 12/2012 concerning Higher Education, Presidential Regulation (Perpres) Number 12/2012 concerning KKNI, and Minister of Education and Culture Regulation Number 03/2012 concerning SN-DIKTI. Furthermore, as an institutional basis, namely institutional characteristics and science and technology development. Institutional characteristics refer to university values and the body of knowledge, while science and technology refer to education and industry development (Karwowska, 2023). The development of university values is based on an analysis of the institution's vision, mission, strategy and objectives. In contrast, the body of knowledge is based on developing local wisdom. Based on this, national curriculum

development refers to national interests, while institutionally, it is oriented towards increasing graduate competency.

Curriculum development aims to produce an accountable curriculum, which refers to SN-DIKTI and graduates who comply with the KKNI. References in developing the curriculum listed in SN-DIKTI include increasing graduate competency. About this, curriculum development has been carried out, including: (Nyamai, 2021) This concludes that successful curriculum development requires adequate stakeholder understanding and participation. Parents are critical stakeholders in curriculum development, for their inclusion brings democracy and diversity to the curriculum. Then, (Mahajan et al., 2022) concluded that The curriculum will be a dynamic document and work will be needed to adapt it as the role changes. Furthermore, (Setiawan & Suwandi, 2022; Napierała, 2012) concluded that integrated curriculum changes impacted other knowledge. Based on this, it shows that curriculum development should be integrated and oriented towards increasing competence. Therefore, in compiling a curriculum, there are three stages: formulating learning outcomes, forming and arranging courses, and course structure.

In formulating learning outcomes, there are several stages: determining graduate profiles, formulating abilities, and determining abilities (Putra et al., 2022). Determining the graduate profile refers to developing knowledge and expertise and market and stakeholder needs. Based on the graduate profile's determination, it is converted into graduate abilities. The formulation of graduate abilities includes four learning outcomes: attitudes, general skills, specific skills and knowledge. Based on these four formulas, graduates' abilities, exceptional skills (employability), and mastery of knowledge will be determined. Special skills and mastery of knowledge are the domain of the Study Program in formulating graduate learning outcomes [Capaian Pembelajaran Lulusan (CPL)]. In order to evaluate the CPL (Curriculum et al.) of each Study Program, the courses are categorized into various groups.

The subject groups in each Study Program consist of three groups, namely: General Compulsory Subjects [Mata Kuliah Wajib Umum (MKWU)], Institutional Compulsory Subjects [Mata Kuliah Wajib Institusi (MKWI)] and Main Study Program Subjects [Mata Kuliah Utama Program Studi (MKUP)]. MKWU contains courses: Religion, Five Principles, Citizenship, and Indonesian. The objectives of these courses refer to national interests. Then, MKWI is carried out to show the characteristics of each institution, while MKUP is a course that reflects special skills and mastery of study program knowledge. Each course group, MKWU, MKWI and MKUP, is the basis for developing and compiling courses in the MBKM program.

In the undergraduate program, each study program in the MBKM program uses a 5-1-2 pattern. With this pattern, learning is for 5 (five) semesters in the Study Program, 1 (one) semester outside the Study Program but at the same University, and 2 (two) semesters in the same Study Program but at a different University. Based on this learning pattern, in the MBKM learning pattern, for 3 (three) semesters or the equivalent of 60 credits of study outside the Study Program, the number of credits within the Study Program is between 84-90. The credit range includes subject groups: MKWU, MKWI, and MKUP. Considering the number of credits in MKWU and MKWI, the number of credits in the MKUP group is between 73-79. Referring to the number of credits outside universities and study programs as well as the MKUP group, there is potential to improve

the micro-skills of graduates. With several courses between 133 and 139 credits, each study program has the opportunity to improve the micro-skills of its graduates.

3. Research Method

The research was conducted at Sultan Ageng Tirtayasa University, Serang, Banten and Galuh University, Ciamis, West Java, to determine the improvement in micro-skills of graduates who participated in the MBKM program. There were 8 study programs sampled from the two universities. Then, to determine the increase in graduates' micro-skills, a sample of 70 students was used.

A hierarchical relationship pattern is used in developing a multicultural and local wisdom-based curriculum model, starting from primary constructs, primary dimensions and indicators. With this hierarchical pattern, the following analysis is carried out:

1) Hierarchical pattern of study program curriculum development

The hierarchical pattern as a reference in developing the curriculum is shown in Figure 1 below.

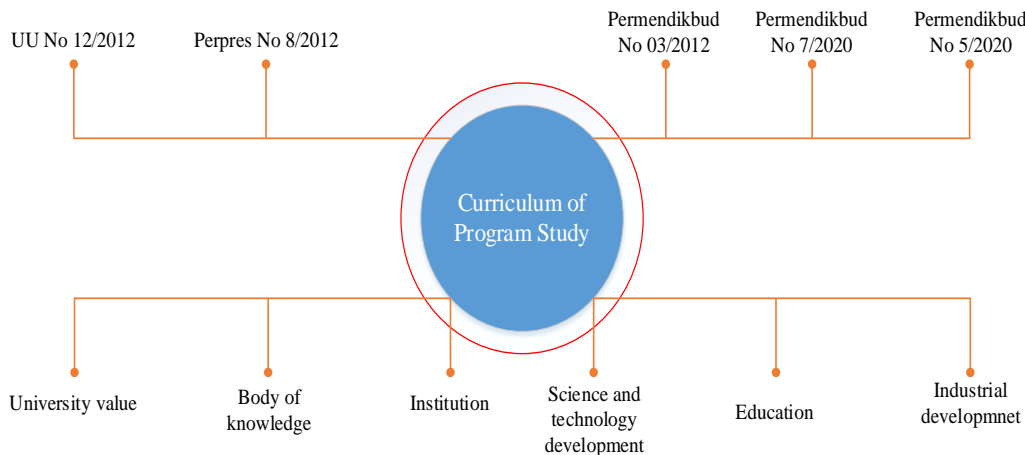


Figure 1. Hierarchical pattern of curriculum development

In Figure 1, it appears that in developing a curriculum, four things need to be considered. First, statutory regulations that refer to SN-DIKTI and KKNI. Second, the vision and mission of each higher education institution, while the third and fourth are the development of science and technology, as well as industrial development.

2) Analysis of the relationship between curriculum development and micro skills improvement

The relationship between curriculum development and increasing specific knowledge and skills was analysed to determine the increase in student micro-skills. Analysis of the relationship between curriculum development and improving students' micro-skills is shown in Figure 2. This

figure has several interrelated indicators between curriculum development and micro skills. Indicators related to curriculum development, namely: development of science, development of technology, relevance to life, and exploration of local wisdom. Meanwhile, four indicators for improving micro-skills are special skills, work skills, problem-solving, and behaviour and culture.

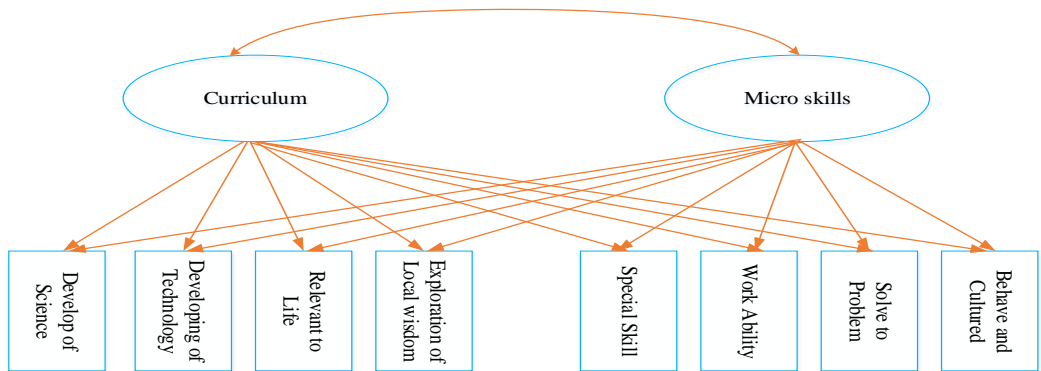


Figure 2. Analysis of the relationship between curriculum development and micro-skills

3) Analysis of curriculum development models to improve micro-skills

An exploratory analysis was conducted using an inductive approach to test the coherence between curriculum development and improving student micro-skills. Analysis of the relationships between variables uses the Structural Equation Model (SEM), while posterity determines the factors in each variable. In this analysis, there are four exogenous latent variables, namely academic culture (ξ_1), ethnocentric (ξ_2), social culture (ξ_3), and local wisdom (ξ_4) and two endogenous latent variables, namely curriculum (η_1) and micro-skills (η_2). The indicators for the academic culture variable (ξ_1) consist of rational thinking (X11), literacy culture (X12), scientific discussion (X13), and research culture (X14). Then, the indicators for the ethnocentric variable (ξ_2) consist of cultural openness (X21), interaction with culture (X22), tendency to respect tradition (X23), and adoption of cognition (X24). Furthermore, the indicators for the social culture variable (ξ_3) consist of the learning environment (X31), scientific standards (X32), competency standards (X33), and academic atmosphere (X34). Meanwhile, indicators for the local wisdom variable (ξ_4) consist of habits in ecological communities (X41), cultural integration in learning (X42), ethics and behaviour in life (X33), and exploration of cultural values (X44). Indicators for the curriculum development variable (η_1) consist of science development (Y11), technology development (Y12), relevance to life needs (Y13), and exploration of local wisdom (Y14). Then, the indicators for the micro-skills variable (η_2) consist of particular skills (Y21), work abilities (Y22), problem-solving (Y23), and attitude and culture (Y24). The equation is utilised to calculate the correlation coefficient and the significance level between variables:

$$\eta_{ij} = \sum_{i=1}^2 \sum_{j=1}^4 \rho_{ij} \xi_j$$

(1.1)

$$F_{ik} = \frac{(n-k-1)(\phi_{\eta_i(\xi_1, \xi_2, \dots, \xi_k)}^2)}{k(1-\phi_{\eta_i(\xi_1, \xi_2, \dots, \xi_k)}^2)}$$

(1.2)

With ρ_{ij} the path coefficient, ξ_{ij} is the exogenous latent variable and η_{ij} the endogenous latent variable, while $\phi_{\eta_i(\xi_1, \xi_2, \dots, \xi_k)}^2$ the correlation of determination (R-squared) is the proportion of the variance in the dependent variable that is predictable from the independent variable. Here, k represents the number of exogenous variables in the substructure, and F_{ij} is the significance level. Next, the characteristics of several factors in improving graduates' micro skills will be investigated. To find out this, use the equation:

$$X_p = c_{p1}F_1 + c_{p2}F_2 + \dots + c_{pm}F_m + \varepsilon_p$$

(2)

With F_m (1, 2, 3, ...m) being the j common factor, c_{pm} (1, 2, 3, ...p; 1, 2, 3, ...m) as the weight (loading), and ε_p (1, 2, 3, ...p) is an error factor.

4. Results and Discussion

1) Multicultural-based Curriculum Development Model

The Higher Education Curriculum in Indonesia continues to experience changes and developments. The differences between these changes can be seen in the reference to statutory regulations and the expected competencies. In 1994, it was known as the Based Curriculum [Kurikulum Berbasis Ipteks (KBI)], referring to Ministerial Decree Number 056/U/1994 and prioritizing mastery of Science, Technology and Arts (Science and Technology). Then, in 2000, it became known as the Competency-Based Curriculum [Kurikulum Berbasis Kompetensi (KBK)], referring to Ministerial Decree Number 232/U/2000 and Number 045/U/2012. The curriculum prioritizes competency achievement. Furthermore, 2012 is known as the Higher Education Curriculum [Kurikulum Pendidikan Tinggi (KPT)] referring to Law [Undang-Undang (UU)] Number 12/2012, Presidential Regulation (Perpres) 08/2012 and Minister of Education and Culture Regulation (Permendikbud) Number 73/2012 and Minister of Education and Culture Regulation Number 49/2014. The curriculum prioritizes equality of learning outcomes. Currently, the Independent Campus Learning Program [Merdeka Belajar Kampus Merdeka (MBKM)] curriculum is used.

The MBKM program refers to Law Number 12 of 2012 concerning Higher Education, Presidential Decree Number 8 of 2012 concerning KKN, and Minister of Education and Culture Regulation No. 3 of 2020 concerning SN-DIKTI. The curriculum aims to improve graduate competencies, both soft skills and hard skills, so they are better prepared and relevant to the

needs of the times. This increase in competency is reflected in graduate learning outcomes (CPL), which include attitudes, knowledge, general skills and specific skills. General attitude and skill learning outcomes refer to SN-DIKTI, while specific knowledge and skills refer to KKNI. Figure 3 shows the steps for updating and developing the CPL based on the hierarchical pattern in Figure 3.

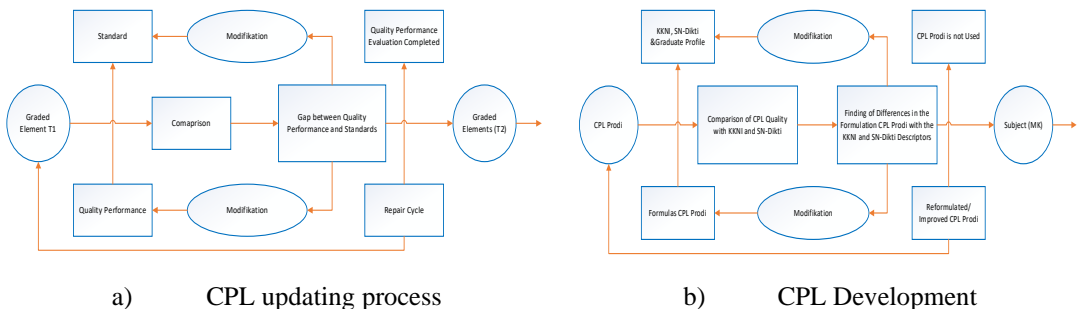


Figure 3. CPL updating and development process

Figure 3. a is the CPL updating process, which begins with developing several elements by comparing standards and quality performance (T1). Based on this comparison, it is then continued to the next stage (T2) by examining all elements. If there are differences between standards and quality performance, modifications are made concerning both. Each element's achievement level in T2 is carried out through an improvement cycle. In carrying out this improvement cycle, examine the elements in T1. Then, in Figure 3. b, the SN-DIKTI, KKNI, and graduate profiles, which are interconnected with the formulation of the CPL composition of the Study Program, are shown. The compatibility between the CPL formulation with SN-DIKTI and KKNI is reflected in the Courses (MK). If there are differences between the CPL Study Program and SN-DIKTI and KKNI, modifications will be made between the two. Furthermore, if there is no coherence between the Constitutional Court and the CPL, the formulation of the Study Program CPL will be revised.

2) Results of Analysis of Micro Skills Improvement in the MBKM Program

After analyzing the learning outcomes in the MBKM Program, a connection was made between curriculum development and micro-skills, as shown in Figure 2. The MBKM program for undergraduate programs uses a 5-1-2 pattern to achieve these four learning outcomes. With this pattern, the learning pattern applies five semesters of learning in the internal study program, one semester in the internal institution, and two semesters in the external institution. The results of the coherence analysis of course groups between learning patterns and study period are shown in Table 1.

Table 1. Coherence of student study periods with the MBKM pattern

Internal Study Program	Internal Institution	External Institutions
Learning in internal Study Programs (Prodi), minimum four semesters (smt), maximum 11 semesters.	Learning outside the study program but within the institution, at least one semester or equivalent to 20 credits.	Learning in the same study program, outside the institution for two-semester or equivalent to 40 credits.
Students are required to take MKWU and MKUP.	Students can take the courses offered, but according to the study program (MKWI or MKUP).	Students can take the courses offered, according to the study program (according to MKUP).

Based on the table above, 60 credits of study outside the program are required to complete the undergraduate program. Referring to the range of undergraduate program credits, the number of credits in the study program is between 84-90 credits. If there are 24 credits in each semester, the credits range can be completed in 4 semesters so that the study period can be completed in 7 semesters.

The learning pattern in the MBKM program not only provides the opportunity to speed up the study period but can also increase graduates' learning achievements. Referring to the four graduate learning outcomes, a maximum of 60 credits in MKUP can improve graduates' unique skills. These skills arise from improving graduates' micro skills obtained through internal and external institutional learning. The results of the analysis of learning patterns, learning outcomes and micro-skills of graduates are shown in Table 2.

Table 2. Results of analysis of learning patterns with learning outcomes

Learning Pattern	Learning Percentage	Attitude	General skills	Knowledge	Special skill	Micro Skill
Study Program	58.33%	14.04%	14.04%	14.04%	14.04%	2.11%
External Institution	27.78%	6.51%	6.51%	6.51%	6.51%	1.63%
Internal Institution	13.89%	2.95%	2.95%	2.95%	2.95%	1.77%

In Table 2, learning patterns in the Study Program and internal and external institutions contribute to learning outcomes. Each learning pattern produces attitudes, general skills, knowledge, and specific and micro skills. The increase in micro graduates learning in study programs was 3.61%, external institutions 5.86%, and internal institutions 12.75%. Based on this, it shows that learning with the MBKM pattern has implications for improving micro-skills. This is in accordance with the research results of Arsyad & Widuhung (2022) A study found that MBKM positively influenced the quality of students. As for what is related to micro-skills, it is by research (Khaeroni, 2022) concludes that implementing this policy is expected to motivate students to learn a variety of knowledge and skills.

The impact of learning using the MBKM pattern on graduates' micro skills shows curriculum coherence between study programs and institutions. However, based on the analysis results in Table 2 above, the coherence still needs to be more optimal. In 58% of the learning patterns carried out in the study program, micro skills achievement was only 2.11%. Then, 13.89% of the learning patterns carried out in internal micro-skills institutions of graduates reached 1.77%. Meanwhile, 27.78% of learning patterns were carried out in external institutions, and micro skills achievement was 1.63%. Therefore, optimising the curriculum between study programs within one institution and between institutions is necessary. This optimisation is carried out by developing the study program curriculum.

3) Curriculum Development Model to Improve Graduates' Micro Skills

Referring to differences in study programs, both within and outside institutions, in developing a curriculum, it is necessary to consider several variables. Several variables related to curriculum development include academic culture, ethnocentrism, social culture, and local wisdom. The structural model for curriculum development for study programs in the MBKM program using SEM is shown in Figure 4. In this figure, the variables of academic culture, ethnocentrism, social culture and local wisdom, directly and indirectly, influence curriculum development and micro-skill improvement. Statistical analysis results obtained t-statistics between 0.294 and 6.603 with a standard deviation between 0.113 and 0.348. Based on the t-statistic range, it was found that there was no direct influence between the variables of academic culture, ethnocentrism, social culture, and local wisdom on curriculum development. However, there is a direct influence between curriculum development and improving micro-skills. The statistical test results between the two variables obtained a t-statistic between the two variables of 6.603 ($p\text{-value } 0.000 < 0.100$) with a standard deviation of 0.113. The considerable t-statistic value and slight standard deviation between these variables indicate a direct and robust influence between curriculum development and improving micro-skills. This research is in line with the research. (Katz et al., 2021) This concludes that micro-skills are helpful in describing how to apply skills, thereby completing and perfecting the concept of skills. The same thing is done (Durga Lekshmi, 2022; Wihardjo et al., 2024) This concluded that the TBL unit based on the Instructional Decision Model (IDM) helps the teachers and learners get an idea about the curriculum, the methods of teaching, and the assessment techniques. Then, the results of the F-square test between the exogenous latent variable and the two endogenous latent variables were between 0.003-0.212. The F-square test result between local wisdom and curriculum development was 0.212, while between curriculum development and micro skills improvement, it was 1.163. The results of the F-square test show that there is an influence between local wisdom and curriculum development and between curriculum development and improving micro-skills referring to the results of direct and indirect path analysis and t-statistical tests, as well as the results of the F-square test, followed by exploratory factor analysis.

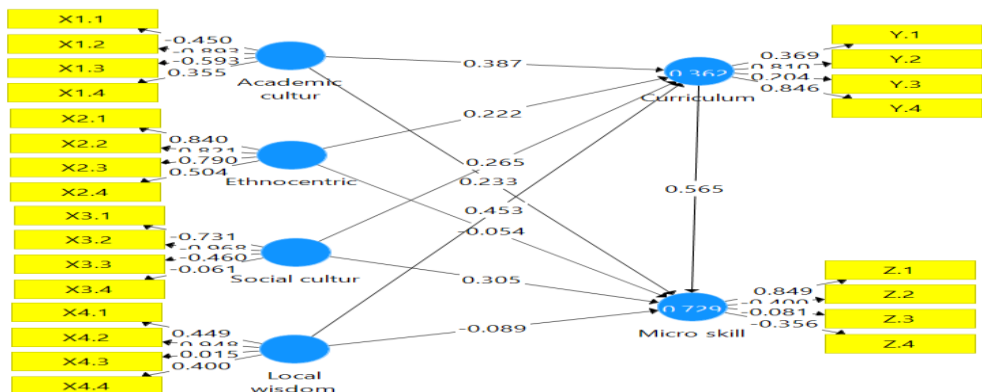


Figure 4. Results of the Curriculum Development Model

In creating a curriculum development model, four factors were explored, namely, scientific development, technological development, relevance to life needs, and exploration of local wisdom. The results of the F-square test on these four factors show that there is a significant influence between local wisdom and curriculum development. Then, to improve micro-skills, factors are explored, which consist of special skills, workability, problem-solving, and attitude and culture. Exploration of each factor using equation (2) obtained Kaiser-Meyer-Olkin (KMO) as shown in Table 3.

Table 3. Results of Kaiser-Meyer-Olkin (KMO) analysis and Bartlett's test KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.624
Bartlett's Test of Sphericity	Approx. Chi-Square	145.867
	Df	28
	Sig.	.000

Based on this table, the Keiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) is $0.624 > 0.05$, with Bartlett's Test of Sphericity smaller than 0.05. This shows that factor analysis to explore the curriculum for micro-skills can be continued. An explained variance analysis was conducted to identify eight factors that can improve micro-skills. Figure 5 shows the results of the variance explained analysis for determining such factors.

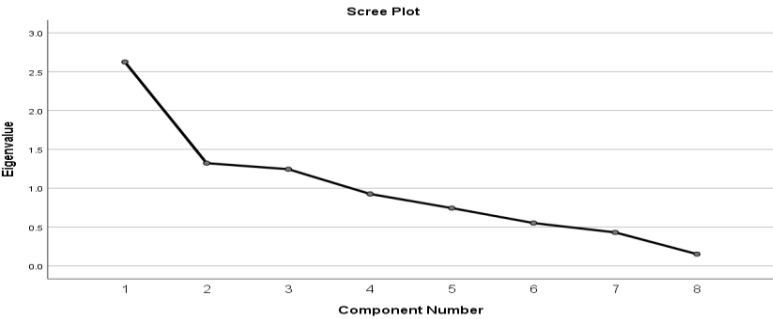


Figure 5. Factors influencing the improvement of micro-skills

Figure 5 is a screen plot that shows several factors that can improve graduates' micro-skills. The size of the component point value is three factors which have an eigenvalue > 1 . These three factors are scientific development, technological development, and relevance to life. The percentage of these three factors in improving graduates' micro-skills is shown in Table 4. This table shows the total variance explained in the initial eigenvalues section; 3 factors can improve graduates' micro-skills. The science development factor can increase micro skills by 32,820%. Then, responsiveness to technological developments can increase micro skills by 16,538%. Furthermore, the relevance factor to life can increase micro skills by 15,566%. Based on this, in developing a curriculum, it is necessary to consider factors: scientific development, responsiveness to technological developments, and relevance to life. This is in accordance with the research results (Hendriarto et al., 2021) who concluded that it can be considered that the results of this study prove that research framework skills help a lot with studies at postgraduate level.

Table 4. Results of total variance explained analysis

Total Variance Explained

Component	Initial Eigenvalues		Extraction Loadings		Sums of Squared		Rotation Loadings		Sums of Squared	
	Total	% of Variance	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance
1	2.626	32.820	2.626	32.820	32.820	2.243	28.041	28.041		
2	1.323	16.538	1.323	16.538	49.359	1.651	20.635	48.676		
3	1.245	15.566	1.245	15.566	64.925	1.300	16.249	64.925		
4	.926	11.579								
5	.744	9.304								
6	.552	6.901								
7	.431	5.392								
8	.152	1.898								

Extraction Method: Principal Component Analysis.

5. Conclusion

The study period in the undergraduate program can be completed in 8-14 semesters. However, with the MBM program using the 5-1-2 pattern, the undergraduate program can be completed in 7 semesters. Providing learning experiences within one semester in an external study program and two semesters in an external institution impacts increasing special knowledge and skills. The two-semester learning experience at an external institution has an impact on improving the micro-skills of graduates.

Graduates' micro-skills can be improved through developing the study program curriculum. In developing a curriculum, paying attention to academic culture, ethnocentrism, social culture, and local wisdom is necessary. Based on the results of research at two universities implementing the MBKM program, it was found that local wisdom influences curriculum development. The more comprehensive the discussion of local wisdom, the better it is for developing a curriculum. The statistical analysis results show a direct and robust influence between curriculum development and improving micro-skills. After exploring eight factors, it was found that improving micro-skills and developing the curriculum requires consideration of three factors. These factors are knowledge development, responsiveness to technological developments, and relevance to needs.

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