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Do Task-Based and Competency-Based Learning Models Influence Learner Autonomy and Student Learning Outcomes?: Writing Courses

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Received: October 12, 2021 ▪ Reviewed: November 26, 2021

▪ Accepted: December 27, 2021 ▪ Published: January 28, 2022

Abstract:

This study examines the relationship between task-based and competency-based learning models on student autonomy and student learning outcomes in writing courses. Structural Equation Modeling was adopted to get a detailed understanding of the influence between variables. This study involved around 104 students in writing courses at the Majapahit Islamic University, Mojokerto. These findings indicate that several task-based and competency-based learning models affect students' autonomy and student learning outcomes in learning writing courses. In part, the task-based learning model has an insignificant impact on the formation of learning outcomes. Furthermore, this study found a significant difference between task-based learning models' impacts on learning outcomes. Meanwhile, the relationship between other variables shows no significant difference between task-based learning models and competency-based learning on student autonomy and student learning outcomes in writing courses at the Majapahit Islamic University, Mojokerto. These results imply that selecting learning models in writing courses with task-based and competency-based learning can encourage establishing independence and student learning outcomes.

Keywords: task-based learning, competency-based learning, learner autonomy, learning outcomes.

基于任务和基于能力的学习模型会影响学习者的自主性和学生的学习成果吗? : 写作课程

摘要:

本研究探讨了基于任务和基于能力的学习模式对学生自主性和学生写作课程学习成果之间的关系。采用结构方程建模来详细了解变量之间的影响。这项研究涉及大约 104 名学生，他们在莫约克托的满者伯夷伊斯兰大学参加写作课程。这些发现表明，几种基于任务和基于能力的学习模式会影响学生在学习写作课程中

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的自主性和学生的学习成果。在某种程度上，基于任务的学习模式对学习成果的形成影响不大。此外，本研究发现基于任务的学习模型对学习成果的影响存在显著差异。同时，其他变量之间的关系表明，在满者伯夷伊斯兰大学莫约克托的写作课程中，基于任务的学习模型和基于能力的学习在学生自主性和学生学习成果方面没有显著差异。这些结果表明，在编写具有基于任务和基于能力的学习的课程中选择学习模式可以鼓励建立独立性和学生的学习成果。

关键词：基于任务的学习、基于能力的学习、学习者自主性、学习成果。

1. Introduction

The development of the education sector with the current COVID-19 pandemic that has hit Indonesia for more than a year has had a significant impact on the development of education (Crawford et al., 2020). One of them is online learning, or what became known as the distance education policy, which is a technology-mediated learning process where students learn separately from one another but remain connected with their lecturers by technology (Oranburg, 2020), effective during the ongoing COVID-19 outbreak.

There are so many problems that arise in the education system in Indonesia, one of which is a passive learning system or lecturers still dominating the teacher center, namely the learning system in the classroom. Lecturers provide material that is one-way without being supported by creativity and innovation from students (Hassel & Ridout, 2018). Students are allowed to accept the information provided by the lecturer without allowing students to find their problems. This will undoubtedly make students passive, lazy to think, and not innovative. So it is very contrary to the principles and objectives of education contained in the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 3 of 2020, concerning National Standards for Higher Education.

In addition, the learning process also provides opportunities for students to be able to develop all their potential into abilities that are increasingly increasing in terms of attitudes (affective), knowledge (cognitive), and (psychomotor) skills (Grant & Baden-Fuller, 2018). The assessment process has also shifted from output-based assessment to process and output-based (Dwaikat, 2020).

The ability to write has become an indispensable skill in the academic field. Because by writing, in addition to making someone able to express their ideas, they can also evaluate the content of the arguments that will be poured (Haerazi et al., 2020). Raimes (1981) states that a person will strengthen the structure and vocabulary by writing. In addition, writing allows a person to explore the language being studied.

Writing skills are essential but still difficult for most people to master. This is due to the complexity of the competencies that must be possessed, such as expressing ideas, language style, sentence structure, vocabulary, grammar, spelling, and skills (Bennui, 2016).

Students in the second semester of the English education study program at the Faculty of Education and Teacher Training at University Islam Majapahit (UNIM) experienced a decline in learning outcomes in the Writing Course 2 test. Many factors caused this, such as background among students, insufficient knowledge of grammatical rules, and inadequate implementation in the use and understanding of English. According to Henri et al. (2017), Higuita Bustamante (2018), students' difficulties in mastering writing require appropriate learning methods. Many methods are offered to make writing learning effective, including Task-Based Learning (TBL) and Competence-Based Learning (CBL). Many studies reveal the effectiveness of task-based learning (TBL) and competency-based learning (CBL) methods. Dewi et al. (2020), Kafipour et al. (2018) state that the Task-Based Learning (TBL) model is a very effective learning model when applied to writing subjects about free arguments.

Other studies (Donti et al., 2017; Pragasam et al., 2018; Xue, 2020) show that the Task-Based Learning (TBL) method significantly can improve students' skills in writing descriptive paragraphs. This can be seen from the increase in student scores, namely the value before implementing Task-Based Learning (TBL). In addition, the results showed that almost all students involved in the study gave positive responses to the implementation of the Task-Based Learning (TBL) method. Therefore, the Task-Based Learning (TBL) method is highly recommended to be applied to the writing teaching process. For further research, it is possible to implement Task-Based Learning (TBL) to teach texts with indications of different skills. In another analysis proposed by Bratianu et al. (2020), Giaffredo et al. (2017), Wesselink et al. (2017), Yago et al. (2018), Želvys and Akzholova (2016), Competence-Based Learning (CBL) shows more extraordinary skills in constructing sentences and using more varied words.

In addition, it was also stated by Blidi (2017), Borg and Alshumaimeri (2019), Boyadzhieva (2016), Cotterall (2017), Gholami (2016), Hu and Zhang (2017), Barnard and Li (2016) that strengthening the learning autonomy (LA) approach in learning writing has a practical impact on students' motivation and ability to write. In this research, the researchers advised students to do self-study.

2. Literature Review

2.1. Task-Based Learning (TBL)

Understanding Task-based learning (TBL) is associated with learning a foreign language. We can detail it; a task is carried out freely for others or some purpose. In this case, the task is defined as something that must be completed according to the procedures set and the goals to achieve. Willis and Willis (2001) define a task as an effort in the classroom where students use language to communicate to achieve a result. Ellis (2016) defines a task as a work plan that requires students to deal with language pragmatically to get an achievable result and evaluate whether they are conveying a correct proposition. Ellis (2016) stated that task-based language teaching is a foreign language teaching method that encourages students to use simple language by giving them a series of tasks. Dailey (2009) stated that task-based learning and teaching, placing students in the real world without too much intervention by the teacher, would inspire students' enthusiasm to use the language taught to complete their assignments. Task-Based Learning (TBL) steps include listing, ordering and sorting, comparing, problem-solving, sharing personal experience, and creative tasks.

Therefore, the following hypothesis is proposed:

H1: Task-based learning has a positive and significant effect on learner autonomy.

H2: Task-based learning has a positive and significant effect on learning outcomes.

2.2. Competence-Based Learning (CBL)

Finch and Crunkilton (1997) define competence as mastery of a task, skills, attitudes, and appreciation needed to support success. The statement can be written as: "Competencies for technical education are those tasks, skills, attitudes, values, and appreciations deemed critical to successful employment". According to this definition, competence has the aggregate of knowledge, skills, and attitudes that can support success in doing work, and, for achieving graduate competence, a curriculum is needed. Roe (2002) states that competence is the ability to perform a task, duty, or role adequately. Competence integrates knowledge, skills, personal values, and attitudes. Competence builds on knowledge and skills acquired through work experience and learning. From this definition, competence can be described as carrying out a role or task, integrating knowledge, skills, attitudes, and personal values, and building knowledge and skills based on experience and learning.

One of the CBL learning model characteristics is that it requires knowledge and understanding of the content in the material presented. Therefore, this study provides the following hypothesis:

H3: Competence-Based Learning has a positive and significant effect on learner autonomy.

H4: Competence-Based Learning has a positive and

significant effect on learning outcomes.

2.3. Learning Autonomy (LA)

Independent learning or autonomous learning (AL) refers to the principle that students have to increase the amount of responsibility for what they learn and how they learn it. Autonomous learning is more personal and focused and provides better learning outcomes, as the learning is based on student needs and preferences (Zeynal et al., 2021). Benson (2000) distinguishes three significant ways of learner independence in language education:

a. Technical perspective, emphasizing skills or strategies for unsupervised learning: specific types of activities or processes such as metacognitive, cognitive, social strategies;

b. Psychological perspective, emphasizing broader attitudes and cognitive abilities that enable learners to take responsibility for their learning;

c. Political perspective, emphasizes the empowerment or emancipation of students by giving them control over their learning.

According to Kumaravadivelu (1994), there are two views of learner autonomy in pedagogy: a narrow view and a broad view. The narrow view seeks to develop students' learning ability, while the broad view goes beyond that, including freely learning. Helping students learn to learn involves developing in them the ability to take charge of their learning: (1) To hold responsibility for setting goals; (2) To select methods and techniques; (3) To monitor their progress; (4) To evaluate what has been obtained. Thus, this study proposes the following hypotheses:

H5: Task-based learning and Competence-Based Learning have a positive and significant effect on learner autonomy.

2.4. Learning Outcomes (LO)

Learning outcomes are two words, namely results and learning, between results and learning. Therefore, before the understanding of learning outcomes is discussed, it is better if the discussion is directed to the first problem to gain further understanding of the meaning of the word's results and learning. This makes it easier to understand the meaning of "learning outcomes" more deeply. The first word discussed is results. The result is obtained from an activity created individually or in groups.

Regarding learning outcomes, it is necessary to pay attention to one of the success factors: competence is a person's ability to carry out various tasks in a job. According to Nygaard et al. (2009), this term describes students' expectations for the results of various learning activities carried out where the learning outcomes can be determined by: 1) Competencies that students have and need to be further developed; 2) Development competencies that teachers must facilitate through the design of a supportive curriculum; 3) Dimensions for

measuring student learning outcomes.

Learning can be successful if the stages of delivering results show that these results are following the learning targets set in the broader scope. As previously explained, learning must produce changes in various aspects of students, including aspects of thinking, attitudes, and behavior. This study proposes the following hypotheses:

H6: Task-based learning and Competence-Based Learning have a positive and significant effect on learning outcomes.

3. Methods

3.1. Research Design

This quantitative approach with the experimental model was adopted to determine the effect of Task-Based Learning (TBL) and Competence-Based Learning (CBL) on Learner Autonomy (LA) and Student Learning Outcomes in Writing Courses. This study was conducted at Universitas Islam Majapahit (UNIM) in Mojokerto Regency, East Java, Indonesia.

3.2. Participants

The participants in this study were all students of the English teacher faculty at the University Islam Majapahit (UNIM) in Mojokerto Regency. The sample includes class A and class B University (UNIM), located in the Mojokerto Regency area. The sample distribution in this study was 104 students. The authors used proportional random sampling method in all classes.

3.3. Instruments

To find out the respondents' responses to learning outcomes, we used two instruments developed by Hsu (2012), while the task-based learning model adopted six indicators from Willis (1996). In addition, we adopted three indicators for the competency-based learning model from Brumm et al. (2006). Finally, we included nine indicators from Gholami (2016) in calculating learner autonomy. All survey questions use a five-point Likert scale. After calculating each variable, we calculated the data using Partial Least Squares (PLS) with SmartPLS Version 3.0.

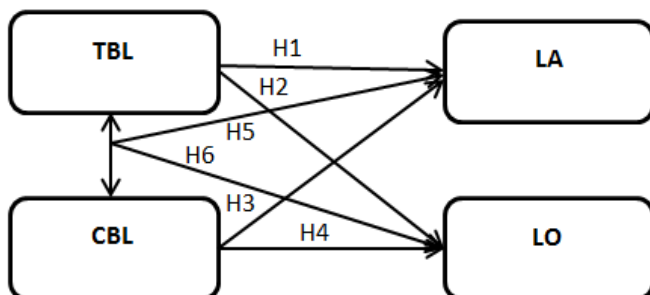


Figure 1. Research framework

4. Results and Discussion

4.1. Measurement Model (Outer Model)

Validity Test

4.1.1. Convergent Validity

According to Elfenbein and MacCann (2017), individual indicators are reliable if a loading factor value is above 0.70. However, at the research stage of the scale development stage, a loading of 0.50 - 0.60 is still acceptable.

Table 1. Outer model

	TBL	CBL	LA	LO
CBL1		0,845		
CBL2		0,838		
CBL3		0,805		
LO1				0,921
LO2				0,888
LA1			0,809	
LA2			0,795	
LA3			0,829	
LA4			0,868	
LA5			0,809	
LA6			0,856	
LA7			0,736	
LA8			0,781	
LA9			0,814	
TBL1	0,784			
TBL2	0,778			
TBL3	0,777			
TBL4	0,790			
TBL5	0,794			
TBL6	0,782			

Based on Figure 2, it can see that the loading factor value of each item > 0.7 indicates that the indicator is valid.

4.1.2. Discriminant Validity

Discriminant validity is a valuable cross-loading factor for knowing whether the constructed variable has an adequate discriminant by comparing the loading value on the intended construct variable, more significant than the loading value with other constructs (Permatasari et al., 2019).

Table 2. Model task-based learning validity test results with cross-loading

	TBL	CBL	LA	LO
TBL1	0,784	0,565	0,685	0,089
TBL2	0,778	0,558	0,688	0,133
TBL3	0,777	0,552	0,698	0,139
TBL4	0,790	0,824	0,782	0,074
TBL5	0,794	0,679	0,795	-0,035
TBL6	0,782	0,711	0,781	0,122

Table 3. Model competence-based learning validity test results with cross-loading

	TBL	CBL	LA	LO
CBL1	0,774	0,845	0,812	0,160
CBL2	0,661	0,838	0,660	0,171
CBL3	0,625	0,805	0,668	0,247

Table 4. Learning autonomy validity test results with cross-loading

	TBL	CBL	LA	LO
LA1	0,750	0,640	0,809	0,009
LA2	0,794	0,679	0,795	-0,035
LA3	0,765	0,688	0,829	0,025
LA4	0,795	0,721	0,868	0,121
LA5	0,785	0,700	0,809	0,100
LA6	0,816	0,774	0,856	0,050
LA7	0,672	0,632	0,736	0,261
LA8	0,745	0,650	0,781	0,268
LA9	0,769	0,828	0,814	0,143

Table 5. Results of learning outcomes validity test using cross-loading

	TBL	CBL	LA	LO
LO1	0,047	0,189	0,072	0,921
LO2	0,159	0,231	0,163	0,888

Based on Tables 2, 3, 4, and 5, it can see that each indicator in the intended variable is discriminant valid. Each construct indicator is not highly correlated with other constructs used in measuring research.

4.2. Reliability Test

4.2.1. Composite Reliability

According to Elfenbein and MacCann (2017), a composite reliability value greater than 0.7 indicates that the construct is reliable. According to Table 6, all values have met the requirements for Composite Reliability > 0.7, so it can be said that the variables of the Task-Based Learning Model, Competence-Based Learning Model, Learner Autonomy, and E-Learning Outcomes have high reliability.

Table 6. Reliability test results

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	Information
TBL	0,875	0,905	0,615	Reliable
CBL	0,774	0,869	0,688	Reliable
LA	0,935	0,945	0,659	Reliable
LO	0,780	0,900	0,819	Reliable

4.2.2. Average Variance Extracted (AVE)

According to Elfenbein and MacCann (2017), the value of Average Variance Extracted (AVE) is more significant than 0.5, and then the instrument can be said to be reliable. According to Table 6, all values have met the requirements of Average Variance Extracted (AVE) > 0.5, so the variables of the Task-Based Learning Model, Competence-Based Learning Model, Learner Autonomy, and E-Learning Outcomes in the evaluation of the measurement model have good discriminant validity.

4.2.3. Cronbach's Alpha

According to Elfenbein and MacCann (2017), a value with a Cronbach's alpha higher than 0.7 can be reliable. Based on Table 6, all scores have met the requirements of Cronbach Alpha > 0.7, so the variables

of the Task-Based Learning Model, Competence-Based Learning Model, Learner Autonomy, and E-Learning Outcomes have good reliability.

4.3. Structural Model (Inner Model)

4.3.1. Coefficient of Determination (R^2)

According to Elfenbein and MacCann (2017), the size of R^2 shows the influence of exogenous variables on endogenous variables. If the value of R^2 is 0.75, 0.50, and 0.25 can be concluded that the model is robust, moderate, and weak.

Table 7. R-square value

Variable	R Square
LA	0,913
LO	0,076

According to Table 7, the R-square value for the learner autonomy variable was obtained at 0.913, indicating that the variable Task-Based Learning Model could influence 91.30%, Competence-Based Learning Model. In comparison, other variables outside the study influenced the remaining 8.70%. The R-square value of the Learning Outcomes variable is 0.076, indicating that the Task-Based Learning Model variable can influence the Learning Outcomes variable, the Competence-Based Learning Model is 7.60%, while other variables outside the study influence the remaining 92.4%. The higher the R-Square value, the greater the ability of the independent variable to explain the dependent variable so that the better the structural equation.

4.3.2. Predictive Relevance (Q^2)

According to Elfenbein and MacCann (2017), predictive relevance or Q^2 measures how well the model and the estimated parameters generate the observed values. A Q^2 value greater than 0 indicates the model has predictive relevance, while a Q^2 value less than 0 indicates the model has no predictive relevance. The criteria for the strength of the model based on Q^2 are 0.35 (robust mode), 0.15 (moderate model), and 0.02 (weak model). The calculation of Q^2 is as follows:

$$\begin{aligned} \text{Score } Q^2 &= 1 - (1 - R^2) \times (1 - R^2) \\ &= 1 - (1 - 0.913) \times (1 - 0.076) \\ &= 1 - (0.069) \times (0.924) \end{aligned}$$

$$\text{Score } Q^2 = 0.063756$$

The calculation results are that the Q^2 value is 0,063756, meaning that the diversity of the research data that the structural model can explain is 6,38%, while other factors outside the model explain the remaining 93,62%.

4.4. Hypothesis Test

4.4.1. Direct Effect Test

This study uses direct effect testing to test Hypotheses 1, 2, 3, and 4. This test uses path

coefficients, taking into account the t-statistics value higher than the t-table (1.96). The p-value < 0.05 indicates that the hypothesis is accepted, then the direct

effect is positive and significant between the two variables involved.

Table 8. Path coefficients

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P-Values
TBL -> LA	0,728	0,065	10,911	0,000
TBL -> LO	-0,272	0,176	1,549	0,123
CBL -> LA	0,260	0,073	3,439	0,000
CBL -> LO	0,457	0,157	2,837	0,004

Based on Table 7, it is known that hypotheses 1, 2, 3, and 4 show t-statistics values that are more than t-table (1.96) and p-value < 0.05, so it can conclude that hypotheses 1, 2, 3, and 4 are accepted and have a positive effect. While hypothesis 2 shows that it is not accepted and has a negative effect.

4.4.2. Direct Influence Test

Regarding testing the direct effect of two variables, the fifth and sixth hypothesis testing is as follows:

Table 9. Path coefficients

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P-Values
TBL + CBL -> LO	0,175	0,079	2,139	0,026
TBL + CBL -> LA	0,955	0,013	75,177	0,000

The results of testing the fifth and sixth hypotheses in Table 8, the relationship between the Task-Based Learning model and the Competence-Based Learning model on learner autonomy shows the direct path coefficient value of 0.079 with the at-count value of 2.139, which means greater than 1.96 and a p-value of 0.026 or less than 0.05. These results mean that task-based and competency-based learning models significantly affect learner autonomy. Furthermore, the relationship between the Task-Based Learning model and the Competence-Based Learning model on learning outcomes shows a direct path coefficient value of 0.013 with a t-count value of 75,177, which means greater than 1.96 and a p-value of 0.000 or less than 0.05. These results mean that the Task-Based Learning and Competence-Based Learning models significantly influence learning outcomes.

5. Discussion

This study will describe the results of testing six hypotheses that have a process through path analysis with the following explanation:

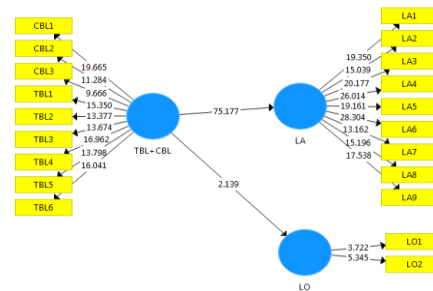
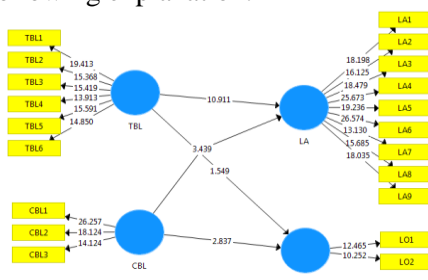


Figure 2. Structural equation modeling calculations

Table 10. Summary of the test results

Hypothesis	Correlation	Value-t	Value-P	Decision
H ₁	TBL → LA	11,211	0,000	Accepted
H ₂	TBL → LO	1,544	0,123	Declined
H ₃	CBL → LA	3,563	0,000	Accepted
H ₄	CBL → LO	2,905	0,004	Accepted
H ₅	TBL+CBL → LA	74,510	0,000	Accepted
H ₆	TBL+CBL → LO	2,227	0,026	Accepted
H ₇	TBL → LA	11,211	0,000	Accepted

5.1. The Effect of the Task-Based Learning Model on Learning Autonomy in the Writing Subject for Students of the Teacher Training Faculty, Universitas Islam Majapahit, Mojokerto

Based on the study results, it is known that the proof of the first hypothesis of the study is indicated by the Task-Based Learning model variable having a significant positive effect on learner autonomy. These results are in line with previous research by Lee (2016), Pragasam et al. (2018), Rieckmann (2018), which states that the Task-Based Learning model has a significant influence on learner autonomy. Furthermore, these results indicate that the better the lecturers' implementation of the Task-Based Learning model, the more learner autonomy can be implemented. This is evidenced by the ease with which students understand the written material and their accuracy in collecting assignments during online learning.

5.2. The Effect of the Task-Based Learning Model on Learning Outcomes in the Writing Subject for Students of the Teaching Faculty, Universitas Islam Majapahit, Mojokerto

Based on the proof of the second hypothesis, it is known that the Task-Based Learning model variable does not have a significant positive effect on learning outcomes. This result is not in line with previous

research conducted by Azlan et al. (2019), Xue (2020), which stated that the Task-Based Learning model influenced learning outcomes. These results indicate that the better the lecturer's implementation of the Task-Based Learning model, the better it cannot be used as a measure to get good learning outcomes in writing courses. The proof is shown by the number of students who cannot achieve the minimum standard value for writing courses.

5.3. The Effect of Competence-Based Learning on Learning Anatomy in the Writing Subject for Students of the Teacher Training Faculty, Universitas Islam Majapahit, Mojokerto

Based on the study results, it is known that the third hypothesis is evidenced by the competence-based learning variable, which has a significant positive effect on learner anatomy. These results align with previous research by Bezanilla et al. (2019), Giaffredo et al. (2017), Yago et al. (2018). They state that competency-based learning significantly influences learner anatomy. These results indicate that the better the lecturer's competence-based learning when learning writing, the better learner autonomy in online learning. The relationship between the two variables that influence each other is shown by the high dominance of the attitude dimension indicators that affect the achievement of learner autonomy in students (El Hammoumi et al., 2021). The proof is that each learning lecturer assesses student abilities from test results and behavior and responsibility.

5.4. The Effect of Competence-Based Learning on Learning Outcomes in the Writing Subject for Students of the Teacher Training Faculty, Universitas Islam Majapahit, Mojokerto

Based on the fourth hypothesis research results, the competence-based learning variable significantly affects learning outcomes. This result is in line with previous research by Grant and Baden-Fuller (2018), Rieckmann (2018), Zaikin et al. (2017), who state that competency-based learning influences learning outcomes. These results indicate that the better the application of competency-based learning by the lecturer, the higher the learning outcomes. This is indicated by the influence of the attitude dimension indicator on the learning process during discussions and issuing opinions, which can be used as additional assessments.

5.5. The Influence of Task-Based Learning and Competence-Based Learning Models on Learning Anatomy in the Writing Course for Students of the Faculty of Teacher Training, Universitas Islam Majapahit, Mojokerto

Based on the study results, it is known that the fifth hypothesis, namely the Task-Based Learning model and the Competence-Based Learning model, has a significant positive effect on learner anatomy. This

result is in line with previous research conducted by Boyadzhieva (2016), Cotterall (2017), Godwin-Jones (2019), who stated that the Task-Based and Competence-Based Learning models influence learner autonomy. This is evidenced by the magnitude of the effect of applying the suitable learning model according to the subjects of the writing course and aimed at evoking students' responsibility in doing assignments and carrying out the learning process through discussion.

5.6. The Influence of Task-Based and Competence-Based Learning Models on Learning Outcomes in the Writing Subject for Students of the Teacher Training Faculty, Universitas Islam Majapahit, Mojokerto

The results of the sixth hypothesis test show a significant positive effect of the Task-Based and Competence-Based Learning models to achieve students' maximum learning outcomes. This means that giving students good Task-Based and Competence-Based Learning models can improve their learning outcomes. Their enthusiasm shows proof of the relationship between variables in participating in writing courses and is supported by various learning patterns such as discussions and presentations that encourage students to study harder so that later maximum learning results can be obtained.

6. Conclusion

This study explains the causal relationship between TBL, CBL, LA, and LO. In this study, there was a significant effect of TBL and CBL on LA. In addition, this study also showed a significant effect of TBL and CBL on LO. This study shows that TBL and CBL can explain the increase in LA and LO in college students. Previous research on the use of LA and LO among college students has never been done. Therefore, field observations on TBL and CBL in measuring LA and LO have not been widely carried out because they are considered not yet ready to be applied in the university environment.

This study found that the task-based learning model had an insignificant impact on the formation of learning outcomes. Unlike previous studies, this study found a significant difference between task-based learning models' effects on learning outcomes.

6.1. Practical Implications

This study shows that TBL and CBL play an essential role in achieving LA and LO for learning. For lecturers, the learning process in the classroom must describe cognitive aspects and inspire students to improve learning outcomes through the maximum application of the TBL and CBL models. The power generated by this study can explain the influence between TBL, CBL, LA, and LO. For universities, this research provides valuable input and measures the ability of lecturers to carry out effective learning and

can be used as evaluation material for lecturers and students to create positive activities for smooth learning.

The main limitation of this research is that it focuses only on understanding the educational process to develop learning models appropriate to the subject or material. Nevertheless, it was concluded that TBL and CBL were significant to LA. In addition, this study also showed a significant effect of TBL and CBL on LO. For universities, this research provides valuable input and measures the ability and accuracy of lecturers in implementing learning models so that, later, they can organize positive activities for smooth learning. Furthermore, researchers can add a mediating variable Technological Pedagogical Content Knowledge (TPACK), for further research.

6.2. Limitations and Further Study

This study only focused on understanding the educational process of developing disaster awareness run by the river university as a local-based educational institution. Future research should focus on digital readiness, model task-based learning, competency-based learning, learner autonomy, and learning outcomes.

Acknowledgments

The authors offer their gratitude to the Faculty of Education of University Negeri Surabaya for facilitating this Research through Research for 2021 and to the reviewers who provided valuable inputs for the perfection of this educational article.

Authors' Contributions

The authors were involved in conducting the research, collecting and analyzing the data, writing and reviewing the article under the obligations of the research group members.

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