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Development of Constructivity Learning Model In the Style of To Ugi' (Case Analysis at SD Negeri Lalabata, Tanete Rilau District, Barru Regency)

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Abstract

The research aims to develop a Constructivistic Learning Model Based on the style of *To Ugi* (PATU) at Lalabata Elementary School, Tanete Rilau District, Barru District. This type of research is research and development (R & D). The research was carried out by stages: 1) analyzing the level of needs of students towards to ugi-based constructivistic learning model (case analysis), 2) designing the development of learning models (research and development), 3) producing to ugi-based constructivistic learning model products (in terms of validity, practicality, effectiveness). Data analysis used quantitative qualitative descriptive with SPSS program. The results of the study show: 1) the analysis of the level of needs of students towards to ugi-based constructivist learning model 'is really needed in improving the character of students considering the shifting moral values are very alarming, 2) the design of the learning model development consists of: syntax $\bar{x}$ = 3.77 (very valid), supporting theory $\bar{x}$ = 3.6 (very valid), Social System $\bar{x}$ = 3.68 (very valid), Reaction System (teacher behavior) $\bar{x}$ = 3.78 (very valid), Supporting System $\bar{x}$ = 3.35 (valid), Instructional Impact and Companion Impact $\bar{x}$ = 3.67 (very valid), Learning Implementation $\bar{x}$ = 3.6 (very valid), Learning Environment and Management Tasks $\bar{x}$ = 3.75 (very valid), Evaluation $\bar{x}$ = 3.55 (very valid). The results of the PATUl model design analysis value $\sum \bar{x}$ = 3.64 can be said that PATU' model has VERY VALID criteria. The results of the trial analysis

Keywords: *Model, Learning, Constructivistic, style, To, Ugi*

Introduction

Learning model is one of the factors that can make students build or construct their own minds, learning models are also able to make participants shape the character and through the learning model, educators and students are able to explore local wisdom that

can be used as a morally ethics order. As a cultured nation, local wisdom is used as a reference in measuring Indonesian ethics.

The foreign cultural influences imitated by students are due to a lack of recognition of local cultural values and the absence of a local wisdom-based learning model that is able to lead students to more recognize and understand their own culture. The introduction of local culture through learning models is actually very effective, but local wisdom-based learning models do not yet exist. Lack of educator's understanding of learning models based on local wisdom increasingly makes students less aware of their own culture, even though there are many learning models that can be used in integrating local culture. One of the learning models is constructivistic learning model. Another phenomenal thing in the learning process is that educators are less innovative in presenting teaching materials, so the learning process is monotonous, educators are less interested in introducing local culture, do not make regional languages as instructional language in conversation both indoors and outdoors, less sensitive to students character which begins to shift from religious values and norms. With less optimal class conditions, coupled with lack of parental attention to students (individuals), the shift in moral values can be seen and felt today.

Shifting moral values that occur, (the case at Lalabata Public Elementary School) for example: learners talk to educators without any respect or slightest reluctance, less students *pangngadereng* (normative value) in behaving and acting, the lack of politeness of students (less polite) towards educators, Bugis language as a local language is no longer used so that the Bugis culture is increasingly lost, not introducing local culture to students, the field of study of local content is considered normal by students, there is no boundary between educators and students in terms of behavior, and other things that describe the moral values possessed by the Buginese are increasingly eroded.

Thus the researchers assume that by developing a learning model which is called *to ogi'-based* constructivistic learning model *(Siri na Pesse)* is able to shape the character of students, re-raise the values of ade 'ugie, fast re-develop panggadereng nennia pangngampe madecengnge whether within the school, the society, or within the family as well. As for the priority of this research is to raise cultural values to ugi ' creating a buginese-based habitual learning model which is a cultural custom of ugi'.

Research Methods

The type of research used is research and development (R & D), aiming to develop constructive learning models based on To Ugi style with validity, practicality and effectiveness criteria. The development model used refers to Borg and Gall in Sugiyono (2015: 166) with the design of learning model development procedures illustrated in the following figure:

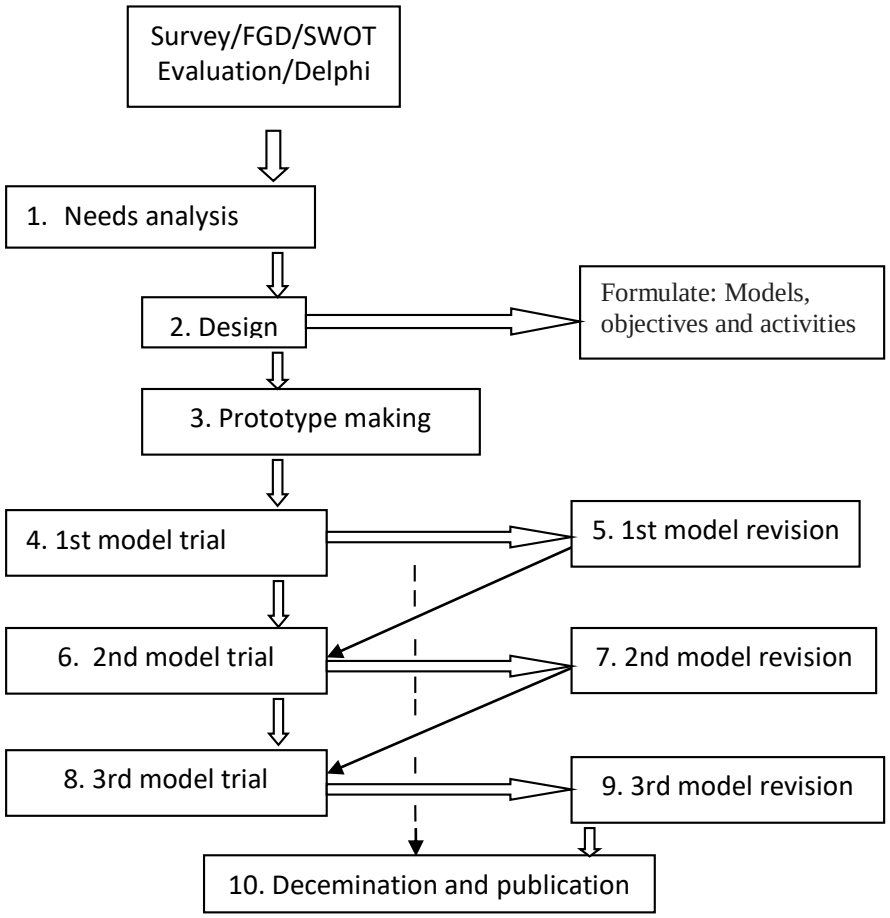


Figure: The procedures design of learning models development according to Borg & Goll

According to Borg and Gall, it can be simplified in four steps, but Sukmadinata (2012: 184) simplification can be three stages of implementation, namely: preliminary studies, model development, model tests. More clearly can be seen in the following chart:

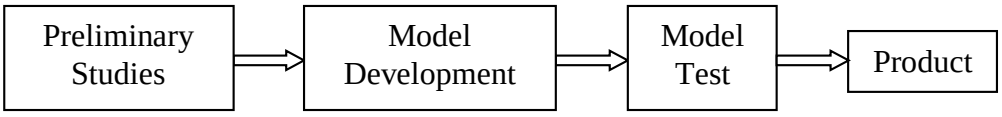


Chart: The simplification of the R & D Implementation Phase

All activities in the process of developing the PATU model along with the tools and instruments as described previously can be described in a modified flow chart from the PK model by Nurdin (2016) as follows:

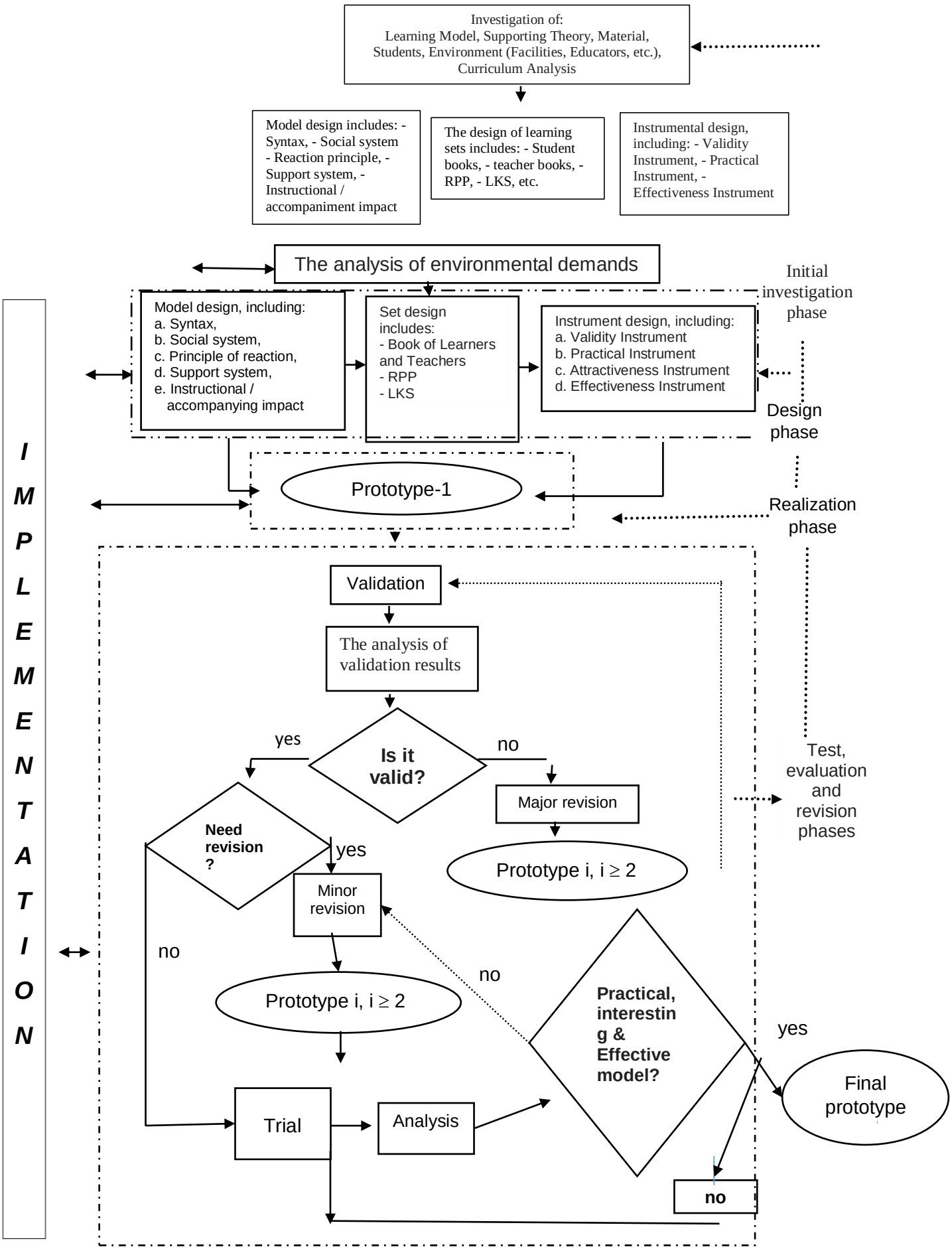
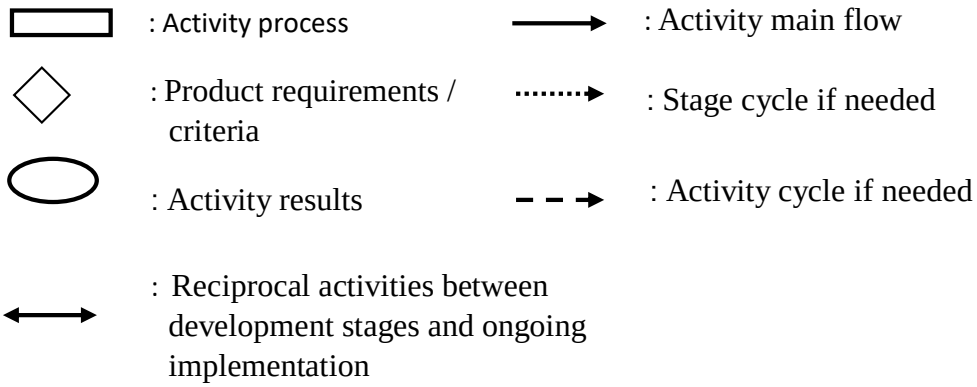


Figure 3.1. Model Development of PATU' Activities Flow

Information :



Results And Research Outpart

A. Research Results

The results of the analysis obtained in each phase of development are reviewed from validity, effectiveness, and practicality.

1. The validation asssessment and analysis of Patu model can be seen in the following table:

PATU' Model Aspects	Average Assessment Score ($\bar{x}$)	Status
Supporting Theories	3,77	Very valid
Syntax	3,6	Very valid
Social System	3,68	Very valid
Reaction Principle (teacher behavior)	3,78	Very valid
Supporting System	3,35	Valid
Instructional Impact and Companion Impact	3,67	Very valid
Learning Implementation	3,6	Very valid
Learning Environment and Management Tasks	3,75	Very valid
Evaluation	3,55	Very valid
Total Average	3,64	Very valid

The results of the learning set validation can be seen in the following table:

No	Set	Average Assessment Score	Status
1.	RPP I	3,5	V.Valid
2.	RPP II	3,5	V.Valid
3.	RPP III	3,5	V.Valid
4.	LAPD I	3,67	V.Valid
5.	LAPD II	3,67	V.Valid
6.	LAPD III	3,67	V.Valid
7.	LAPD IV	3,67	V.Valid
8.	Teachers' books	3,66	V.Valid
9.	Students' books	3,58	V.Valid

Table: The Summary of PATU' Model Learning Set Validation Results

2. The analysis of test results can be seen in the following table:

a. Trial I: The analysis results for each component of the PATU' model can be seen in the following table:

Tabel: Analysis Results of the PATU Model First Trial Implementation

PATU' Model Aspects	Quantitative Test Result		Qualitative Test Result
	$\bar{x}$	R	
Syntax	1,52	100	Entirely implemented
Social System	1,57	100	Entirely implemented
Reaction Principle (teacher behavior)	1,59	100	Entirely implemented
Supporting System	1,95	92,06	Entirely implemented
Total Average	1,66	98,06	Entirely implemented

b. Trial 2: Analysis results on the PATU 'model component is in the following table:

Table: Analysis Results of PATU Model Component

POKM Model Aspects	Quantitative Test Result		Qualitative Test Result
	$\bar{x}$	R	
Syntax	1,67	100	Entirely implemented
Social System	1,58	100	Entirely implemented
Reaction Principle (teacher behavior)	1,72	100	Entirely implemented
Supporting System	1,98	100	Entirely implemented
Total Average	1,74	100	Entirely implemented

Table: The Summary of Learning Outcomes Analysis Trial 1

No	Learning Outcomes	Trial I	Information
1	Mastery of Science Materials (KKM)	Classical completeness 44%	The PATU' Model effectiveness standard is not yet fulfilled
2	The ability to construct knowledge of oneself	Average score 1,5 (Medium / sufficient)	The PATU' Model effectiveness standard is fulfilled
3	The Ability of Science Problem Solving	Average score 1,5 (Medium / sufficient)	The PATU' Model effectiveness standard is fulfilled
4	Character building	Average score 1,5 (Medium / sufficient)	The PATU' Model effectiveness standard is fulfilled

1. Student activities: The analysis results of student activities in the first trial can be seen in the following table:

STUDENT ACTIVITIES								
AVERAGE PERCENTAGE OF ACTIVITY TIME								
Keg.	**Mtng. I**	**Mtng. II**	**Mtng. III**	**Mtng. IV**	**Mtng.V**	**Mtng.VI**	**Mtng.VII**	**Average**	**Criteria**
1	**18,25**	**15**	**13,85**	**16,95**	**12,85**	**16,65**	**20,05**	**16,2**	**6 – 16**
	18	**14,6**	**20,95**	**26,95**	**21,45**	**18,05**	**24,3**	**20,6**	**17 – 27**
3	**13,25**	**13,15**	**20,5**	**14**	**15**	**17,1**	**14**	**15,3**	**6 – 16**
4	**10,9**	**22,45**	**16**	**17,7**	**14,55**	**29,25**	**17,1**	**18,3**	**17 – 27**
5	**15**	**5,6**	**5,75**	**1,15**	**1,15**	**3,2**	**3,65**	**5,0**	**12 – 22**
6	**21,55**	**20**	**20,9**	**18,4**	**12,85**	**8,75**	**10,8**	**16,18**	**6 – 16**
7	**3,4**	**4,7**	**2,1**	**4,85**	**0,85**	**2,35**	**5,75**	**3,42**	**0 – 5**
8	**0,4**	**4,65**	**0**	**0**	**0**	**0,7**	**0**	**0,82**	**0 – 5**
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	

2. Student responses: can be seen in the table below:

Table: The Summary of Analysis Results of Student Response Trial 1

Trial	**Aspect**	**Positive Response**	**Percentage**	**Info.**
I	Model of PATU'	17	68	Positive response standard fulfilled ≥ 50%
	Student's book	21	84	
	LAPD package	17	68	

a. Trial results II

Table: The Summary of Students' Learning Outcomes in the Trial II

No	Learning Outcomes	Trial II	Information
1	Mastery of Science Teaching Materials (Thematic)/KKM	Classical completeness75%	Fulfilling effectiveness standard of PATU' Model
2	Science Problem-Solving Ability	Average score 2,04 (Medium/sufficient)	Fulfilling effectiveness standard of PATU' Model
3	Knowledge Construction Ability	Average score 1,71 (Medium/sufficient)	Fulfilling effectiveness standard of PATU' Model

Table: Normality Test Results for Residual Data Pre-test and Post-test Results

Data	Sig	Information
Residual	0,40	Normal

Tabel: Paired t-Test Results of Residual Data Pre-test Results and Post-Test Results

Trial Results of PATU' Model			One Sample
Residual = Pos-test – Pre-test	Average		2,60
	Deviation Standard		3,174
	Average Error Standard		0,635
	Trust interval with trust level 95%	Lower Limit	1,33
		Upper Limit	3,95

Note: t_{hitung} = 4 ,159, $t_{(1-\alpha)\ tabel}$ = 1,711 df = 24, p < 0,000

STUDENT ACTIVITIES

ACTIVITY TIME AVERAGE PERCENTAGE

Keg.	Pert. I	Pert. II	Pert. III	Pert. IV	Pert.V	Pert. VI	Pert.VII	Rata-rata	Kriteria
1	7,5	8,65	9,5	12,35	12,3	11,85	12,4	10,65	6 - 16
2	18,15	18,8	20,4	20,4	20,75	21,8	20,95	20,18	17 - 27
3	16,9	14,35	14,45	10,1	10,6	8,95	6,65	11,71	6 - 16
4	19,5	17,8	17,85	18,75	18,35	18,05	16,55	20,77	17 - 27
5	19,9	19,8	23,95	20,65	20,25	20,3	21,7	17,93	12 - 22
6	12,1	11,4	11,95	12,6	11,55	16,05	11,45	12,44	6 - 16
7	3,5	6,7	4,75	4,3	3,9	4,95	4,9	4,7	0 - 5
8	4,8	2,75	2,15	2,45	2,4	2,75	4,4	3,1	0 - 5
Total	100	100	100	100	100	1001	100		

Student response: The analysis results of student response can be seen in the following table:

Table: The Summary of Analysis Results of Student Response Trial II

Trial	Aspect	Positive Response	Percentage	Info.
II	Model PATU'	19	73,1	Positive response standard fulfilled ≥ 50%
	Buku Siswa	23	88,5	
	LAPD	19	73,1	

B. Research Outpart

The outpart of the research are: articles published in international journals, books on learning models

Conclusion

Based on the analysis results presented in Chapter IV, the researcher can draw some conclusions as follows:

1. The design of the PATU' model produces a model book format which includes: rational, supporting theories, components of the PATU' model, and instructions for applying the model
2. The development rational of PATU' models includes the foundation for developing learning models that optimizes the development of learners' knowledge through the construction of their own minds which are in the style of to ugi'
3. Instrument validity includes validity assessment questionnaire (PATU' model, sets), validity questionnaire (PATU' model, learning sets and instruments). Validity questionnaire assessment of learning sets includes (books of students and teachers, LAPD) with a value of PA = 0.93.
4. Practicality of Instrument on cognitive tests in constructing science knowledge and problem solving ability tests, based on the assessment results of three validators consisting of experts and practitioners in the field of education obtained test reliability (PA) = 0.78, for students' activity observation sheets obtained reliability coefficient (PA) = 0.80, Learning Management Observation Sheet obtained observation sheet reliability (PA) = 0.778
5. Student Response to Learning Process with PATU' model obtained questionnaire reliability (PA) = 0.90,
6. The validity of PATU' model with the average value obtained is $\bar{x}$ = 3.64, it is concluded that the average score is in the "very valid" category ($3.5 \leq \bar{x} \leq 4.0$), and meets the validity criteria. The validity of the PATU' model in terms of the "supporting theory" aspect is $\bar{x}$ = 3.77. It is concluded that the score is in the "very valid" category

($3.5 \leq \bar{x} \leq 4.0$), and the validity criteria is fulfilled. The validity of the PATU' model in terms of syntax aspects is $\bar{x}$ = 3.6, it is concluded that the value is categorized as very valid ($3.5 \leq \bar{x} \leq 4.0$), and meets the validity criteria. The validity of the PATU' model in terms of the social system aspect is $\bar{x}$ = 3.68, it is concluded that the value is in the "very valid" category ($3.5 \leq \bar{x} \leq 4.0$), and meets the validity criteria.

7. The validity of PATU' model in terms of the principle of the reaction with the average value obtained is $\bar{x}$ = 3.78, it is concluded that this value is categorized as very valid ($3.5 \leq \bar{x} \leq 4.0$), and meets the validity criteria. The validity of the PATU' model seen from the aspect of the supporting system has an average value $\bar{x}$ = 3.35, it is concluded in the valid category ($2.5 \leq \bar{x} < 3.5$), and meets the validity criteria. The validity of the PATU' model seen from the instructional impact and the accompanying impact of the average value obtained is $\bar{x}$ = 3.67, it is concluded to be in the "very valid" category ($3.5 \leq \bar{x} < 4.0$), and meets the validity criteria. The validity of the PATU' model from the aspect of learning implementation gained an average score $\bar{x}$ = 3.6, it is concluded in the category of "very valid" ($3.5 \leq \bar{x} < 4.0$), and the validity criteria is fulfilled.
8. The validity of the PATU model seen from the aspect of the learning environment and the management task obtained average value is $\bar{x}$ = 3.75, it is concluded to be very valid ($3.5 \leq \bar{x} \leq 4.0$), and fulfilled the validity criteria. The validity of the PATU model, seen from the evaluation aspect is $\bar{x}$ = 3.55, it is concluded as very valid ($3.5 \leq \bar{x} < 4.0$), and fulfilled the validity criteria
9. The practicality analysis of the PATU model is seen from the syntax component implementation obtained by the average value $\bar{x}$ = 1.52, included in entirely implemented category with the *percentage of agreement* (PA) = 100%. The analysis on the components of the social system obtained the average value of the PATU' model implementation $\bar{x}$ = 1.57. with the *percentage of agreement* (PA) = 100% and the value (R) ≥ 0.75. The analysis results of reaction principle obtained the average value of the PATU' model implementation $\bar{x}$ = 1.59, with the *percentage of agreement* (PA) = 100%, and the value (R) ≥ 0.75
10. The implementation analysis of the PATU model on the supporting system components has a value $\bar{x}$ = 1.95, with the *percentage of agreement* (PA) = 92.06%, and the value (R) ≥ 0.75. The overall observation results of the PATU' component model obtained an average value $\bar{x}$ = 1.66. The implementation criteria for the PATU' model is counted in the category "entirely implemented" ($1.5 \leq \bar{x} \leq 2.0$). with the *percentage of agreement* (PA) = 98.06%. and (R) ≥ 0.75

11. The implementation observation analysis results of the syntax component obtained the average value of the PATU' model implementation for the syntax aspect is $\bar{x}$ = 1.67, this value is included in entirely implemented category (1.5 ≤ $\bar{x}$ ≤ 2.0), with the *percentage of agreement* (PA) = 100%, and value (R) ≥ 0.75. The implementation observation results of the social system component obtained an average value $\bar{x}$ = 1.58, this value is included in entirely implemented category (1.5 ≤ $\bar{x}$ ≤ 2.0) with the *percentage of agreement* (PA) = 100% with the value (R) ≥ 0.75. The analysis of the implementation observation results on the reaction principle component, obtained an average value $\bar{x}$ = 1.72, included in the entirely implemented category (1.5 ≤ $\bar{x}$ ≤ 2.0), with the *percentage of agreement* (PA) = 100% with the value (R) ≥ 0.75.
12. The analysis of the implementation observation results on the supporting system components obtained an average value $\bar{x}$ = 1.98, the entirely implemented category (1.5 ≤ $\bar{x}$ ≤ 2.0) and the *percentage of agreement* (PA) = 100% with the value (R) ≥ 0.75. The overall results of the PATU' model component observation obtained an average value $\bar{x}$ = 1.74 in entirely implemented category (1.5 ≤ $\bar{x}$ ≤ 2.0) with the *percentage of agreement* (PA) = 100% and the value (R) ≥ 0.75
13. The data analysis of student learning outcomes in the trial I 60% of students achieve a minimum criteria of "medium", new completeness about 44% students get a score of 7.5 and above and the students ability to construct knowledge in problem solving based on construction tests results 25 (100%) achieved a minimum criteria of "medium" and the average total is in the "medium" category concludes that trial I was not yet achieved.
14. The results of the second trial analysis of student learning outcomes at the level of problem solving ability percentage are in 25 of 25 (100%) students who achieve a minimum criteria of "medium", completeness is 75% of students who get a score of 75 and above , and the ability to construct knowledge of students in problem solving based on the to ogi' style-based test results 25 (100%) reaches a minimum criteria of' medium 'and the average total is in the' medium 'category (average score 1.71 of the ideal score 4), the criteria for students learning outcomes in the second trial is reached.
15. The analysis results of the t-test score the problem solving ability for the residual category before the model test (pre-test) and after the model test (post-test), it can be seen that the significance value p = 0.4 is greater than α = 0, 05 data after the model test (post-test) is the data that comes from a normal distributing population. The value shows 0,000 <0,005 (p < α) or 4,159 > 1,711 (t count> t (1-α) table). Based on the predetermined criteria, there is a significant difference in science problem solving abilities (thematic) before and after the PATU 'model test or pre-test and post-test, at 95% significance level or value α = 0.05. So it is concluded that the application of PATU' model is effective in improving problem solving skills, this is when viewed from the residual value of both data. The analysis results of the second trial show that the constructivistic learning model based on to ugi' style meets the criteria of validity, practicality, and effectiveness, is said that can be used by other educ

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