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# Proceedings

## **The 4th Annual INTERNATIONAL SEMINAR on Transformative Education and Educational Leadership**

Theme : Education Innovation in Indonesia Context Focused  
on Disruptive Technology of Industrial Revolution 4.0.

23 - 24 September 2019  
Garuda Plaza Hotel - Jln. Sisingamangaraja No. 18  
Medan, North Sumatra - Indonesia



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**Rundown of The 4<sup>th</sup> Annual Internatioanal Seminar on Transformative Education and Educational Leadership (AISTEEL) 2019**  
**Garuda Plaza Hotel, Medan, 23 – 24 September 2019**

**1st day (Monday, September 23, 2019)**

Time	Activities	PIC
15.00 – 20.00	Registration in Garuda Plaza Hotel	committee

**2nd day (Tuesday, September 24, 2019)**

Time	Activities	PIC/Moderator
07.00 – 08.30	Poster Sessions 1	Section Poster 1
08.30 - 09.00	<b>Opening Ceremony</b> 1. MC Speech 2. Traditional Welcome Dance 3. Indonesian National Anthem 4. Pray 5. Chairperson Report 6. <b>MoU signing between Unimed and PSU - Thailand</b> 7. Welcoming speech of Director of Postgraduate School 8. Welcoming speech and official opening of Rector of State University of Medan	MC
09.00 – 09.40	Plenary Lecture 1: <b>Prof. Dr. Syawal Gultom, M.Pd</b> (State University of Medan– Indonesia)	Moderator Section
09.40 – 10.25	Plenari Lecture 2 <b>Prof. W. L. Quint Oga-Baldwin</b> (Department of Education, Faculty of education and Integrated Art and Sciences, Waseda University - Japan)	Prof. Amrin Saragih, PhD (Panel)
10.30 – 11.15	Plenari Lecture 3 <b>Prof. Dr. Wu-Yuin Hwang</b> (Graduate Institute of Network Learning Technology National Central University, NCU - Taiwan)	
11.15 – 12.00	Plenari Lecture 4 <b>Prof. Dr. Ekkarin Sungtong</b> (Dean of Faculty of Education Prince of Songkla University - Thailand)	Mangara Simanjorang, PhD (Panel)
12.00 – 12.45	Plenari Lecture 5 <b>Asst. Prof. Patcharin Panjaburee, Ph.D.</b> (Mahidol University – Thailand)	
<b>12.45 – 13.30</b>	<b>Lunch Break/</b> Poster Sessions 2	Section Poster 2
<b>13.30 – 15.30</b>	<b>Parallel Session 1</b>	
15.30 – 16.00	Break/ Poster Sessions 3	Section Poster 3

15.50 – 18.00	<b>Parallel Session 2</b>	Moderator/Operator
18.00 – 19.00	Break/ Prayer	
19.00 – End	Banquet (Gala Dinner) - Announce of Best Presenter - Announce of Best Poster	Consumption Section

## **Proceedings of the 4<sup>th</sup> Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2019)**

### **Preface**

The 4<sup>th</sup> Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2019) was held in Garuda Plaza Hotel, Medan City-Indonesia on 23-24 September 2019. This seminar is organized by Postgraduate School, Universitas Negeri Medan and become a routine agenda at Postgraduate program of Unimed now.

The AISTEEL is realized this year with various presenters, lecturers, researchers and students from universities both in and out of Indonesia participating in, the seminar with theme “Education, Learning and Leadership Innovation.”

The plenary speakers coming from various provinces in Indonesia have been present topics covering multi disciplines. They have contributed many inspiring inputs on current trending educational research topics all over the world. The expectation is that all potential lecturers and students have shared their research findings for improving their teaching process and quality, and leadership.

The fourth AISTEEL presents a keynote speaker and 4 distinguished invited speakers from Indonesia, Japan, Taiwan, and Thailand. In addition, presenters come from various Government and Private Universities, Institutions, Academy, and Schools. Some of them are those who have sat and will sit in the oral defence examination.

There are 310 articles submitted to committee, some of which are presented orally in parallel sessions, and others are presented through posters. The articles have been reviewed by double blind reviewer and 172 of them were accepted for published by Atlantis Press indexed by International Indexation and 96 papers are published by digital library indexed by google scholar.

The Committees of AISTEEL invest great efforts in reviewing the papers submitted to the conference and organizing the sessions to enable the participants to gain maximum benefit.

Grateful thanks to all of members of The 4<sup>th</sup> Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2019) for their outstanding contributions. Thanks also given to publisher for producing this volume.

The Editors

**Bornok Sinaga**  
**Rahmad Husein**  
**Juniastel Rajagukguk**

## *Table of Content*

<b>Title And Authors</b>	<b>Page</b>
Learning Media Development of Foklore Text Which is Based on Digital in the 10th Grade of Vocational High School PAB 1 Helvetia <i>Yogi Andriyan Zunaeidy</i>	1-3
Translation Shift in the English Version of Musabaqah Tafsir Quran <i>Muhajirah Binti Jamaluddin</i>	4-8
Types of Lexical Creation in Iis Dahlia's Slang Words in Mamaku Hits <i>Filzah Farhana Hasibuan</i>	9-12
The Effect of Learning Strategies and Achievement Motivation on Entrepreneurship Learning Outcomes of Scout Special Unit Education and Culture Program BP-PAUD and DIKMAS Sumatera Utara <i>Johanes Pasaribu</i>	13-16
Analysis of Student's Science Process Skill on Respiration System Topic in Langsa City- Aceh <i>Ajeng Lola Prianti</i>	17-20
Meaning Equivalence in Abdullah Yusuf Ali's Translation of Surah al waqiah from English into Indonesian <i>Wirdatul Mardhiah</i>	21-22
Developing an Authentic Assessment Instrument of Exposition Text Based on Higher Order Thinking Skills (HOTS) in Class X Students of Senior High School <i>Yuli Novita Sari</i>	23-26
Sentence Acquired by Children of 2 – 2.6 Years Old in Bilingual Environment <i>Laura Agustina Simamora</i>	27-29
Development of Study Peripheral Base on the Realistic Approaches to Increase Ability of Mathematical Reasoning of Student Junior High School State 6 Medan <i>Melisa</i>	30-35
Effectiveness of Ecology and Environment Textbook Based on Science Literacy and North Sumatra's Local Potency to Improve High School Student Science Literacy <i>Ivandi Sitompul</i>	36-39
Deposit Determinant Analysis in Bank Sumut <i>Mangaradot Saur A Sinaga</i>	40-47
Development of Teaching Materials Based on Guided Discovery Learning Methods to Increase Mathematical Problem Solving Ability <i>Rianta Ananta Sitepu</i>	48-55
Development of Mathematical Learning Devices Based on Model Problem Based Learning (PBL) to Improve Mathematical Communication Skills of School IT Jabal Noor Students Class VII	56-65

*Rizka Putri Rahayu*

Development of Thematic Teaching Materials Based on Local Culture at The Fourth Grade of Primary Schools in North Padang Lawas District 66-69

*Rahimul Harahap*

The Maintenance of Mandailing Language Kecamatan in Torgamba

*Putri Nurul Rahmadani Siregar* 70-76

Enhancing Students Mathematical Conceptual Understanding by Applying Guided Discovery Learning and Direct Learning Model 77-82

*Sri Rahwany Marbun*

Development of Learning Devices Based on Realistic Mathematic Education to Improve Mathematical Communication of Students at Senior High School 83-86

*Karina Hajar Hutasuhut*

The Developing of Interactive Learning Media in Improving The Learning Creativity of 4-6 Year-Old Playgroup Students in PAUD Kenanga Raya Medan 87-89

*Romi*

The Influence of Learning Approaches and Interest in Learning Against the Results of Learning English in Class VIII Medan SPK Middle School T.A 2018/2019

*Juni Triana Sitompul* 90-94

Determinant Analysis of Sharia Banking Efficiency in Indonesia

*Rahmat Putra Ahmad Hasibuan* 95-99

The Development of Interactive Instructional Media Based on Behavioral Perspective to Improve the German Skills of Senior High School Students Grade X 100-102

*Hadijah Handayani Sibuea*

Development of Guided Inquiry Green Chemistry Practicum Guides 103-106

*Ekin Dwi Arif Kurniawan*

The Development of Adobe Flash Media Integrated Problem Based Learning on Salt Hydrolysis 107-110

*Indriati Aulia*

The Effect of Learning Strategy and Interpersonal Communication on the Students Achievement Reading Comprehension English Language at SMP Negeri 1 Selesai Kabupaten Langkat Tahun Ajaran 2018 / 2019 111-115

*Husna Lubis*

Cognitive Consideration in Persuading Readers in Argumentative Writing 116-119

*Betharia br. Sembiring Pandia*

The Role of the Single Mother of Parenting in Informal Education in Javanese Ethnic Families in Kualuh Hulu District Labuhanbatu Utara Regency 120-122

*Suriyanti Siagian*

Understanding of Female Prisoners Character Education Through Formal 123-125



Socialization at Labuhan Ruku Penitentiary

*Dian Puspita Sari Sirait*

Local Wisdom-Based Education Marsialapari Salak Farmers Sibangkua Angkola Barat Tapanuli Selatan 126-128

*Desy Andarini*

Rituals at the Tomb of Datuk Darah Putih as a Media for Nonformal Education to Respect Ancestors (Case Study Chinese Ethnic in Aur Village Medan Maimun District Medan City) 129-131

*Gadis Anastasia*

Interactive Multimedia-Based Learning Materials Innovation for Teaching Basic Techniques in Analysis 132-134

*Yuni Chairani*

The Effect Model of Learning and Learning Interest Against the Results of Learning the Knowledge of Nature Primary School (SD) in Medan T.A 2019/2020 135-139

*Mida Lishanata*

Development of Interactive Media in Arabic on the Material Read Class VIII of MTs Darul Hikmah T.A 2019/2020 140-143

*Nurul Amri*

The Influence of Leadership Behavior, Work Motivation, Job Stress, and Job Satisfaction on Lecturers' Performance 144-146

*Hanafiah*

Developing Big Book as Reading Materials Based on Thematic Approach for Fourth Grade Students at SD Negeri 028068 Binjai East Binjai Regency Langkat 147-149

*Utari*

The Development of Textbook Based on Research About the Insect Pollinator on Chili Paper (*Capsicum annum L.*) 150-154

*Fitriatul Aspahani*

Gratitude Expressions and Responses used by the Characters in the Vow Movie 155-158

*Sabrina Octavia Pandingan*

Subtitling Strategies Used in The Meg Movie Texts 159-164

*Devi Sucina Nirwana*

Lexical Metaphor in Novel and Film Critical Eleven 165-167

*Indah Christiani Silitonga*

The Types of Modality in Teaching Learning Process 168-169

*Harnida Tanjung*

The Effect of Teaching Strategies and Students Motivation on Reading Comprehension Achievement 170-173

*Zulkarnain Batu Bara*

The Types of Flouting Maxim by Governor Candidates of North Sumatera in Election Debate 2018	174-176
<i>Tri Wita Indah Sari</i>	
The Effect of Teaching Strategies and Students' Interest on Reading Comprehension of Recount Text of Eighth Grade Students of MTs Qur'an Kisaran	177-179
<i>Ahmad Fauzi</i>	
Flouting Maxims in the Courtroom of Administrative Court	180-182
<i>Aminah Ari Fadhila</i>	
Development of Adobe Flash Learning Media Based on Cooperative Learning to Improve Student's Spatial Ability at Chandra Kumala Secondary School	183-188
<i>Fajar Sukma Harsa</i>	
Improving Results in Learning Bahasa for Poetry Readings with the Implementation of a Direct Learning Model for Fifth Grade Elementary School	189-192
<i>Dr. Mayske Rinny Liando, S.Pd., M.Pd</i>	
Development of Learning Materials Based on Problem Based Learning to Improve Students Problem Solving Ability	193-197
<i>Poppy Amalia</i>	
Analysis Of The Economic Bilateral Relationship Indonesia – China On Balance Of Payments In Indonesia	198-201
<i>Sri Wulandari</i>	
Community Participation in Preservation of City Park The Case of Binjai City, Indonesia	202-204
<i>Widya Afriani Wiliskar</i>	
The Types of Gender Arguments in Instagram (A Case Study of Donald Trump's Political Status)	205-207
<i>Putri Permata Sari Samosir</i>	
The Analysis of Monetary Policy Transmission Mechanism by Exchange Rate Channel in Influencing The Inflation in Indonesia	
<i>Putry Sari Rahmadyah Pulungan</i>	208-214
Translation Technique Applied in Translating the First Call from Heaven Novel	215-222
<i>Sudariyani</i>	
Education Cultural in Bona Pasogit (Ethnographic Study of Education Cultural Inheritance in the Toba Batak Society Marga Panjaitan in Pematangsiantar)	223-225
<i>Tripresar Jhon Tuan Panjaitan</i>	
Evaluation Of Tiered In Order To Increase PAUD Teacher Competence In Medan City	226-230
<i>Rehmenda Christy</i>	
Women Politeness Strategies of Bargaining "Media Credit Store" in Tanjung	231-233

Morawa

*Nahdyah Sari Daulay*

Toba Batak Language Shift in Rantau Selatan

*Helfi Vinawari S*

234-236

Development of Interactive Multimedia Digital Storytelling in English Subjects

237-239

*Juanda*

The Effect of PLAN (Plan, Locate, Add and Note) Strategies on Students' Achievement in Reading Comprehension

240-244

*Neneng Nurhamidah*

Unggah-Ungguh Code Switching in Kartini Movie

*Yutika Sari*

245-247

Metaphors in Umpasa of the Toba Batak Wedding Ceremony

248-250

*Sactica Oktavyani Sagala*

The Effect of Model learning and Gender Against Piano playing Skills for class V SMK Negeri 11 Medan T.A 2019/2020

251-255

*Gufran Nurman*

The Effect of Cooperative Learning Model Based on Aceh Culture to Improve the Generic Science Skills of Student

256-260

*Safitri Raufa*

Gender Conversation in Workplace Context

*Aisyah Fitriani Dasopang*

261-265

Management and Development Quality of Teacher Performance Through Teacher Competence in the First Middle School in Banda Aceh

266-268

*Faisal Anwar*

Modality used in Beauty Product Advertisements on Instagram Caption

269-272

*Indah Eka Sari*

Attitudinal Appraisal in Ahok's Speech

*Firdha Sabrina*

273-276

Appraisal Attitudes by the Judges on Indonesian Idol "Grand Final" Session

*Mieta Setieya*

277-280

The Development of Virtual Laboratory-Based Learning Media of Biology on The Topic of Bacterial for High School Students

281-284

*Lailatussyifa*

Analysis of Economic Opening on Rupiah Exchange Rate on United States Dollars (2008-2018)

285-289

*Sri Wahyuni*

The Manners of Cognitive Process in Translating English Phrasal Verbs Into

290-293

Indonesian

*Fitri Ervina Tarigan*

Javanese Addressing Terms Maintenance by the Teenager Speakers in Bukit Malintang 294-298

*Sudarti Rahayu Ningsih*

Appraisal in Students' Argumentative Writing 299-302

*Ika Vanesia Siagian*

Speech Pauses Used by Male and Female Students in English Oral Examination 303-305

*Lamia Deareni*

The Development of Guidance and Integrated Science Practicum Kit Integrated Guided Inquiry Model bases Science Process Skills for Class VII Semester I 306-309

*Fretty Nafratilova Hutahaeen*

Analysis of Biomolecular Practicum Guides According to KKNi Curriculum 310-313

*Nurul Indah Pratiwi*

The Cognitive Process of Different Gender in Writing Argumentative Text 314-318

*Surya Teriadi Tarigan*

The Development of Chemistry Lab Guide Book for High School Based on Guided Inquiry to Measure Scientific Attitudes and Science Process Skill 319-325

*Gorat Victor Sibuea*

The Unnaturalness of the Translatio of Indonesian Tourist Resorts Signs Into English in Parapat and Bukit Lawang 326-328

*Iis Aprianti*

Grammatical Error of Speech by Students in Bilingual Program of Ma'had Al Jami'ah UIN North Sumatra 329-332

*Riyah Shibha Nasution*

Speech Functions Used by Male and Female Tour Guides in Their Touring Interaction with Tourists in Bukit Lawang 333-336

*Widya Ningsih*

Analysis of the Influence of Economic Openness to Indonesia Growth 337-340

*Zando Silaban*

Design Development and Standard Operational Procedure for Training Model Management of 3 Diploma Mechanical Engineering University of Medan 341-345

*Mindo Judica Pangaribuan*

The Euphemism in "Sambah Manyambah" Tradition of Minangnese Wedding Ceremony 346-348

*Muhammad Fauzi*

Analysis of Factors That Influence the Interdiction of District/City in the Province 349-354

North Sumatra

*Muhammad Yulhelmy Isra*

Development of Interactive Learning Media Based on Adobe Flash CS 6 in Geographic Lessons 355-360

*Mardimpu Sihombing*

The Comparison between Predict Observe Explain (POE) and Think Pair Share (TPS) Learning Model on Students Learning Achievement, Activity, and Critical Thinking Skill on Human Circulatory System 361-367

*Remli Nelmian Simarmata*

Metaphor Translation in English and Indonesian Version of Surah Ali Imran 368-371

*Uswatun Hasanah*

# Development of Thematic Teaching Materials Based on Local Culture at The Fourth Grade of Primary Schools in North Padang Lawas District

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**Abstract**—The purpose of this study was to develop thematic teaching materials based on local culture on theme 6 namely My Ideals of sub-themes 2, My Great Ideals. This type of research was development research (R & D). The research model used was the research design model for developing 4-D (Four D Models), consisted of four stages, namely the definition, design, develop and disseminate by Thiagarajan. The subjects of this study were the fourth grade students of SDN 103014 Batang Baruar Julu, SDN 101130 Purba Sinomba and SDN 100930 Sibatang Kayu totaling 72 students and objects of thematic research based on local culture. The instruments used were validation sheets, student responses, and learning outcomes tests. The results showed that: (1) the instructional materials developed were valid to use, (2) the instructional materials developed were considered to be effective in terms of classical student learning outcomes. It was suggested that local culture-based thematic teaching material was a tool to assist in the process of delivering learning, the existence of teachers was still very much needed as a facilitator and students remain actively involved in the learning process.

**Keywords**—Development of Teaching Materials; Local Culture; Learning Outcomes.

## I. INTRODUCTION

Education has an important role in improving the progress of a nation. Various nations in the world place the education sector as the front guard in development priorities. Education was one way to grow the will, ability, talent and self-potential possessed by students (Purwanto, 2011:10). Susanto (2014: 1) argued that education was essentially a learning process that led a person to become a human being who was able to control himself and explore his potential and was able to see and analyzed reality around him.

In accordance with the opinion that has been presented, right on to education that emphasizes an outcome to create a generation that has high competency, talent, self potential that can give great contribution to the country. In line with the implementation of the 2013 curriculum that learning

in schools emphasizes aspects of learning experiences that are in accordance with the interests and talents of students.

Thematic learning as including one type / kind of in the form of an integrated learning. The term thematic learning is basically integrated learning that uses themes to associate several subjects so that it can provide meaningful experience to students (Ministry of National Education, 2006: 5). Learning that is synergistic in creating interesting learning for students, like the theme in this elite is the theme six "My Ideas" in the fourth grade of Elementary School there were Basic Competencies in which the study of Indonesian, Social Science, Natural Science, Civil Science and Cultural Art and Vocational Subjects were included. In this case the formal education has an important role in the development, namely with conducting a high quality learning by making the appropriate instructional materials used in the process of learning.

Local wisdom is very important considering that the learning process that occurs in the classroom, especially for elementary school students, should begin with the closest world or often encountered by students. The values of local wisdom will help students to understand each concept in the material so that the knowledge gained by students is not only limited to knowledge, but can also be implemented by students in pre- physical form outside the school (Akbar, 2015 : 94 ). From various explanations regarding the values of local culture, local cultural values of the local area can be integrated into learning, so that students were able to learn according to their experiences in everyday life.

From the various descriptions above, it can be concluded that it was required thematic textbooks based on local culture were books systematically and facilitate the learning process. The book was developed from basic competencies shaded by a theme, related to the real life

context of students and their environment, and used by students in learning to make learning more meaningful.

Because if learning was not inherent in the local culture, it would create new problems in the future, it seemed clear that many young people did not know the culture of their own region and when foreign countries claim then a demand has just taken place. Something that were very worried about in the future, therefore this research was raised regarding teaching materials based on local culture.

## II. RESEARCH METHOD

The development of teaching materials based on local culture used a 4-D development model from Thiagarajan et al (1974) in Sugiono (2017: 37-38). Model 4-D consisted of four stages, namely definition design, develop, and disseminate.

This development model was used because the steps of the model can provide clear, easy to understand, systematic directions and in accordance with the teaching material development model.

This research was carried out at SDN 103014 Batang Baruar Julu, SDN 101130 Purba Sinomba and SDN 100930 Sibatang Kayu located in the Padang Bolak Subdistrict, North Padang Lawas Regency. Research conducted at the second semester of 2018/2019 academic year during the learning theme six My Goal subtheme 2 The Greatness of My Goal.

The subject of this research was class IV students who were at each SDN 103014 Batang Baruar Julu, SDN 101130 Purba Sinomba and SDN 100930 Sibatang Kayu 2018/2019 academic year as many as 72 people. The object in this research was teaching material products in the form of student books developed based on local culture.

The procedure for developing teaching materials was carried out and adapted from the Thiagarajan development model. The research model used in this research was the development of research design *Four D Models*, which consisted of four phases: *define, design, develop, and disseminate*.

Data analysis techniques used were validation, rehabilitation and effectiveness. With the fulfillment of all these requirements, the product developed was entered in eligible criteria.

## III. RESULTS AND DISCUSSIONS

### A. Result

Validation of the questions was analyzed by using the formula of the correlation with the correlation of the scores on

the items with the total score processed using *Microsoft Excel* in the attachment to the calculation section of the question. After testing the product trials the level of completeness of students reached 88.89% and the level of valid questions tested 90%. The validity of this post test question showed that the level of product being released was worth using.

With the correlation index in the book (Sugiyono, 2013: 186) as follows:

$0.09 < r_{11} \leq 0.30$  = very high degree of reliability

$0.70 < r_{11} \leq 0.90$  = high degree of reliability

$0.40 < r_{11} \leq 0.70$  = moderate degree of reliability

$0.40 < r_{11} \leq 0.20$  = low degree of reliability

$r_{11} < 0.20$  = the degree of reliability was very low

The results of the reliability calculation in the posttest question were 0.74 with the meaning that this data was concluded in the category of high rehabilitation. So that in this trial rehabilitation and reliability were stated.

The research was conducted at grade IV of SDN 103014 Batang Baruar Julu, SDN 101130 Purba Sinomba and SDN 100930 Sibatang Kayu located in Padang Bolak sub-district, North Padang Lawas Regency. The first step taken for the three sample classes before giving treatment was to give the initial test to students to find out the initial abilities of each student in both classes. The next step, doing learning was a class with products that have been developed by researchers. Then at the end of the learning process a final test was given to find out the student learning outcomes.

At the results of the pretest and posttest had a value of 2-tailed  $0,000 < 0,005$ , it was concluded that there were differences in the pretest that had not been influenced by learning using the product and posttest that had been influenced by learning to use the product. It can be concluded that teaching materials were developed effectively.

The results of this study were in line with the results of the research conducted by Dek Ngurah Laba Laksana (2016) Based on the results of testing of the teacher and student response questionnaires, it was concluded that teaching materials developed in the category were very practical and feasible to use at an average position of 4.5. Learning activities increase which was accompanied by strengthening students' understanding of the science concept. Thus the study of local culture must be integrated in learning materials as an effort to improve the quality of learning.

### B. Discussion

A teaching material can be said to be feasible after showing satisfactory results in achieving a predetermined goal. In this case, a product trial was carried out in the learning process to determine the effectiveness of the teaching materials developed. Effectiveness of teaching materials that, obtained from the value of student learning outcomes after testing the product.

Teaching materials that were developed based on input into the needs analysis activities to obtain information that the teaching materials developed were indeed needed and can provide convenience for students and teachers as users. Trianto (2011) argued that by developing the learning process led students to find new things and develop a fact that they found in learning by being linked to the conditions of their environment and producing the required values.

This was in accordance with Subanidro (2012) who said that the instructional materials developed were declared to be effective as a manifestation of student achievement values that exceeded the specified completeness seen from different data pre-test with post-test. Based on this, the teaching materials that have been developed were included in the category to meet the effective criteria. With this, the researcher drew conclusions on teaching materials based on student learning outcomes that achieved completeness in spending teaching materials that were developed effective criteria.

From the results of the research obtained, it was stated that the teaching materials developed by researchers have good effectiveness and increase students' knowledge of the area compared to the student books circulated now in the school under study. It was supported by the results of a study conducted by Kusumam et al. (2016) Development of basic teaching materials and measurement of electricity, namely materials developed from the 2013 curriculum and syllabus.

With the results of the study the average percentage in the trial was limited to reach 77.05% with a good category, then the average percentage in the wider trial reached 80.24% in the good category.

So it can be concluded that teaching materials developed based on local culture helped students more easily understand learning material. We can understand this in the learning process that it was expected that using effective teaching materials can improve student learning outcomes and deliver learning objectives achieved in accordance with expectations.

#### IV. CONCLUSIONS

A conclusion to the research results of thematic development of teaching materials based on local content, systematics grain conducted with respect to formulation of the problem and research objectives that have been formulated and can be summed up as follows:

- The feasibility of using local culture -based thematic teaching materials based on the results of validation from material experts, linguists and learning design experts showed that the overall average was categorized as " Good" and was suitable to use as local content based thematic teaching materials .
- The effectiveness of using local culture-based thematic teaching materials. From the results of the trials that

have been done, it can be concluded that there were differences in the pretest that has not been influenced by learning using products and posttest that have been influenced by learning to use the product . With this the authors concluded that products that were developed were effective and feasible to improve student learning outcomes.

#### SUGGESTION

Based on the conclusions and implications of the results of the research, here are some suggestions as follows :

- Teachers were still very much needed attention to creativity to develop teaching materials and students remained actively involved in the learning process.
- In order for the product to be more maximal and feasible to be used further, it required development consisting of: curriculum development experts, study experts and professional material experts, design , financial support, facilities and time available, and the ability of facilities in production adequate teaching materials .
- It was expected that the principal fulfilled the library in accordance with appropriate standards so that students can use it effectively .

Other researchers should conduct further research to develop teaching materials based on local culture in a more representative sample.

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