PROCEEDINGS
AISTEEL 2017
THE 2ND ANNUAL INTERNATIONAL SEMINAR ON TRANSFORMATIVE EDUCATION AND EDUCATIONAL LEADERSHIP

Educational Research to Endorse Productive and Innovative Generation in the 21st Century

16-17 October 2017
Ball Room Grand Mercure Hotel, Medan - Indonesia

Organized by:
Post Graduate School
State University of Medan
North Sumatera, Indonesia

Supported and Coordinated by:
Indexing By:

ISSN: 2548 - 4613
Vol. 2, December 2017
Proceedings of The 2nd Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2017)

“Educational Research to Endorse Productive and Innovation Generation in The 21th Century”

Grand Mercure Hotel, Medan City, North Sumatera, Indonesia
October 16-17, 2017

Editorial Board

Editorial-in-Chief
Dr. Juniastel Rajagukguk, M.Si (State University of Medan, Unimed)

Deputy Editor
Dr. Saronom Silaban, M.Pd (State University of Medan, Unimed)

International Advisory Board / Scientific Committee
Prof. Dr. Kala Saravanamuthu (University of Newcastle, Australia)
Prof. Arjen EJ Wals (University of Gothenburg, Sweden)
Prof. Dr. Bornok Sinaga, M.Pd (Unimed, Indonesia)
Prof. Dr. Aytekin Isman (Sakarya University, Turkey)
Prof. Peter Charles Taylor, Ph.D., Med., B.Sc., Dip.Ed (Murdoch University, Australia)
Prof. Dr. Mukhlas Samani, Ph.D (Indonesia)
Prof. Dr. Jailani bin Md. Yunos (University Tun Hussein on Malaysia)
Prof. Dr. Nurahimah Mohd. Yusuf (UTM, Malaysia)
Assoc. Prof. Dr Pedro Isaia (University of Queensland, Australia)
Assoc. Prof. Elisabeth Taylor, Ph.D (Murdoch University, Australia)
Dr. Bambang Sumintono, M.Ed (Universiti Malaya, Malaysia)
Dr. Isma Widyaty, M.Pd (UPI, Indonesia)
Prof. Dr. Syahrul R, M.Pd (UNP, Indonesia)
Prof. Amrin Saragih, MA., Ph.D (Unimed, Indonesia)
Assoc. Prof. Ade Gafar Abdullah, M.Si (Universitas Pendidikan Indonesia)
Eng. Asep Bayu Dani Nandiyanto (Universitas Pendidikan Indonesia)
Prof. Dr. Hartono, M.Pd (Universitas Negeri Semarang)

Please cite the proceeding as “Proceeding of the First Annual International Seminar on Transformative Education and Educational Leadership Vol. 2” with the following abbreviation: Proc. Aist., 2
Preface

The 2nd Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL with web link is http://aisteel2017.unimed.ac.id/) was held on October 16 -17, 2017 in Medan City, Indonesia. This conference was organized by Postgraduate School, State University of Medan (Unimed) and is the routine agenda at Unimed now. The Second Annual International Seminar on Transformative Education and Educational Leadership’ is realized this year with various presenters, researchers, lecturers and students from universities both in and out of North Sumatera participate in the theme of which is “Educational Research to Endorse Productive and Innovative Generation in the 21st Century.”

2nd AISTEEL is the annual international seminar with main aim is to discuss of recent research special for Transformative Education and Education Leadership. Several topics like: Teachers Education Model, Research Global Issue in Education, Mathematics and Science Education, Social, Language Education, Vocational Education, Curriculum, Economic, History and Management Education have been discussed at the 2nd AISTEEL 2017. 2nd AISTEEL international seminar provided experts’ view on transformative education and educational leadership as well as curriculum article presentation. There were five keynote speakers have been came Professor Keiichiro Yoshinaga, Dr. Bambang Sumintono, Dr. Sitti Maesuri Patahuddin, and Dr. Yulia Rahmawaty. The organizer had been use online submission system to receive all abstract, full paper and also communication with authors. All of information include with comment of reviewer can be cheked real time by author.

Chairperson

Dr. Rahmad Husein, M.Ed
Welcoming Speech of Director of Postgraduate School State University of Medan

The Second Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL)

The honorable,
- Rector of State University of Medan, Prof. Dr. Syawal Gultom, M.Pd.
- Vice Rectors of UNIMED
- Professor Keiichiro Yoshinaga, PhD, Institute of Liberal Arts and Science, Kanazawa University – Japan
- Dr. Bambang Sumintono, M.Ed., University Malaya – Malaysia
- Dr. Sitti Maesuri Patahuddin, Faculty of Education, Science, Technology and Mathematics, University of Canberra – Australia
- Yuli Rahmawati, Chemistry Education Program, Universitas Negeri Jakarta
- Deans of Faculties of Education, Languages and Arts, Social Sciences, Natural Sciences and Mathematics, Engineering, Sports Sciences, and Economics
- Vice Directors of Postgraduate School of UNIMED
- All speakers, lecturers, researchers, students, and participants

Good Morning
Welcome the honorable guests speakers Professor Keiichiro Yoshinaga, Dr. Bambang Sumintono, Dr. Sitti Maesuri Patahuddin, Assoc. Prof. Emilia Zulmira de FAN, and other speakers, lecturers and students from outside and inside Unimed to this international seminar which is the routine agenda at Postgraduate program of Unimed now. I’m glad that ‘The Second Annual International Seminar on Transformative Education and Educational Leadership’ is realized this year with various presenters, lecturers and students from universities both in and out of North Sumatera and participate in the theme of which is “Educational Research to Endorse Productive and Innovative Generation in the 21st Century.”

Ladies and Gentlemen,

In this second seminar exels the first one related to the administration by online and the publication index by either Thomson Reuters or Google Scholar. By the new policy on student’s publication, postgraduate program really matches the system, particularly for the students who will sit in the oral defence examination. Through the seminar, the postgraduate students improve their article journal writing and it is proved by many articles are submitted by the students.

The plenary speakers coming from 15 provinces in Indonesia will present topics covering multi disciplines. They will contribute a lot of inspiring inputs and new knowledge on current trending educational research topics all over the world. The expectation is that all potential lecturers will share their research findings to educational scientists and researchers as well for improving their teaching process and quality. Thus, this will contribute to the next young generation researchers to produce innovative research findings in education and educational leadership contexts.

This second seminar continues the promotion of the first sequel ‘Developing Future Teachers’ Education Model. Therefore, the propose of this second seminar on the transformative education and educational leadership research will trigger the young professional lecturers and educators to compete in the invention of innovative educational teaching and learning strategies, techniques and leadership.

I hope that the scientific attitude and skills through research will promote Unimed to be a well-known university which persists to be developed and excelled in the future.

Thank you the Rector of Unimed who always supports us in organizing the seminar. Thank you all guest and plenary speakers. Special thanks to both steering and organizing committee who have well-coordinated and colaborated in actualizing the seminar.

Director of Postgraduate Unimed

Prof. Dr. Bornok Sinaga, M.Pd
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Effect of Using Collaborative Learning Strategy on The Student’s Achievement in Writing Descriptive Text</td>
<td>1</td>
</tr>
<tr>
<td>Nursyah Handayani</td>
<td></td>
</tr>
<tr>
<td>The Development of Multicultural Based Teaching Materials on the Observation Report Text for Senior High School Student</td>
<td>5</td>
</tr>
<tr>
<td>Nurhasanah Permata Sari Sembiring, Khairil Ansari, Mutsuhyito Solin</td>
<td></td>
</tr>
<tr>
<td>The Power Behind Advertisement</td>
<td>10</td>
</tr>
<tr>
<td>Endang Larasati</td>
<td></td>
</tr>
<tr>
<td>The Effect of Using Audio Visual Media on Student’s Vocabulary Mastery</td>
<td>13</td>
</tr>
<tr>
<td>Resti Citra Dewi</td>
<td></td>
</tr>
<tr>
<td>Ideational Taxonomic Relation of Hata Pangupa in Tapanuli Selatan Wedding Ceremony</td>
<td>17</td>
</tr>
<tr>
<td>Mutia Nasution</td>
<td></td>
</tr>
<tr>
<td>Pal’s Leadership Style and Teacher’s Performance of Islamic Junior High State School (MTsN) Hamparan Perak Deliserdang Distric</td>
<td>21</td>
</tr>
<tr>
<td>Nurmaliana, Maria Ulfah Handayani, Denny Khairani, Desi Prawita</td>
<td></td>
</tr>
<tr>
<td>The Influence of Work Motivation on Teacher’s Job Performance of Vocational High School in Medan</td>
<td>24</td>
</tr>
<tr>
<td>Darmawati, Sri Melfayetti, Selamat Triono Ahmad</td>
<td></td>
</tr>
<tr>
<td>Error Analysis by Using Tenses of Senior High School</td>
<td>28</td>
</tr>
<tr>
<td>Hariyanto</td>
<td></td>
</tr>
<tr>
<td>The Traditional Custom and Ceremonial Tradition in Suku Anak Dalam Language</td>
<td>32</td>
</tr>
<tr>
<td>Putri Ayu Lesari</td>
<td></td>
</tr>
<tr>
<td>The Impact of Internet Marketing on Success of Women Micro, Small and Medium Enterprises Innovation as Intervening Variable</td>
<td>36</td>
</tr>
<tr>
<td>Fivi Rahmatus Sofiyah, Ami Dilham</td>
<td></td>
</tr>
<tr>
<td>The Effect of Cooperative Integrated Reading and Composition (CIRC) Technique on Students Reading Comprehension</td>
<td>40</td>
</tr>
<tr>
<td>Linda Efrina Nasution</td>
<td></td>
</tr>
<tr>
<td>Translation Shifts in Translating Didong from Gayonese in to Bahasa Indonesia</td>
<td>44</td>
</tr>
<tr>
<td>Wike Yurida</td>
<td></td>
</tr>
<tr>
<td>The Effect of Team Assisted Individualization (TAI) Strategy on Student’s Reading Comprehension</td>
<td>48</td>
</tr>
<tr>
<td>Khairurini Syafitri</td>
<td></td>
</tr>
<tr>
<td>The Effect of Organizational Culture on Working Disciplines of Madrasah Ibtidaiyah Head Master in Deliserdang</td>
<td>53</td>
</tr>
<tr>
<td>Muhammad Rifa’i, Syafaruddin Siahaan, Siman Nurhadi</td>
<td></td>
</tr>
<tr>
<td>Student’s Achievement on Reading Comprehension in Narrative Text by Using Think Pair Share Technique (TPS) at SMPN 1 Lubuk Pakam</td>
<td>58</td>
</tr>
<tr>
<td>Eprimila Lestari Hutabarat</td>
<td></td>
</tr>
<tr>
<td>Ideational Taxonomic Relations of Hobar on Parpokatan Orja of South Tapanuli</td>
<td>63</td>
</tr>
<tr>
<td>Novria Brahmanyunari</td>
<td></td>
</tr>
<tr>
<td>The Effect of Using Task Based Learning Method on the Student’s Achievement in Reading Comprehension</td>
<td>69</td>
</tr>
<tr>
<td>Nilam Ulami Siregar</td>
<td></td>
</tr>
<tr>
<td>Relationship of Initiation Structure and Consideration with Effectiveness Leadership</td>
<td>72</td>
</tr>
<tr>
<td>Wanti Simanjuntak, Syaiful Sagala</td>
<td></td>
</tr>
<tr>
<td>The Effect of Storytelling Method on Students Writing Narrative Text Ability at the Eleventh Grade Students of MAN Panyabungan</td>
<td>77</td>
</tr>
<tr>
<td>Armita Novriiana Rambe</td>
<td></td>
</tr>
</tbody>
</table>
The Implementation of Curriculum 2013 in Vocational High School 4 Takengon ................................................................. 80
Zainal Arifin, Herbert C.B. Manalu, Rini Deliana, Fitri Ariyanti

The Difference of Mathematical Problem Solving Ability by Using Student Teams Achievement Division (STAD) and Direct Instruction on System Linear Equation Two Variable in Grade VIII SMP Negeri 11 Medan .......................................................... 84
Faradilla Bafaqih, Cecep Nandar

The Influence of Problem-Based Learning and Every One is A Teacher Here Models on Higher Order Thinking Skills in Environmental Pollution Topics ............................................................................................................ 89
Kurnia Putra, Hasruddin, Ahmad Rafiqi Tantawi

The Effect of Applying Task Based Learning (TBL) Approach on The Student’s Ability in Writing Descriptive Paragraph ....... 94
Vijay Khana

Teacher’s Language Style in English Course Class .................................................................................................................. 98
Dyan Yosephin Hutagalung

Differences Between Students Mark Taught With Co-Operative Learning Model Type TGT With Guess The Words Media Compared With Students Mark Taught With Co-Operative Learning Models With Words Square Media in Hydrocarbon Subject ........................................ 101
Hariani Siregar, Gulmah Sugiharti

Language Used by Male and Female of Darul Ilmi Murni ........................................................................................................ 107
Syakri Hidayati

The Use of Journal Writing in Improving Student’s Writing Skill of Recount Text ................................................................. 110
Muhammad Ilham Adha

Teacher and Student Perceptions Toward Practical Implementation Obstacles at Learning Chemistry ........................................ 114
Sepra Pajar, Ramlan Silaban, Zainuddin Muchtar

The Analysis of of the Implementation and Problems of Lab Work on Chemistry Learning .................................................. 120
Elvira Lastri, Iis Siti Jahro, Marham Sitorus

The Implementation of Using Library Card and ICT Based Library Service System in Increasing Reading Interest of Primary School Students at Tanjung Gading of Batu Bara Regency ........................................ 125
Suci Amalia, Asih Menanti

Project Based Learning Tools Development on Alcohol and Ether Materials at Natural Science Faculty State University of Medan ................................................................................................................................. 132
Nadia Armina Ramud, Jamalum Purba

The Development of Teaching Material to Write Explanation Text Based on Mind Map .................................................................. 138
Pienti Mala Ningsih Manalu, Biner Ambarita, Rosmawaty Harahap

Improvement of Student Learning Outcome Using Model of Collaborative Based Lesson Study with Student’s Worksheet on Materials Hydrolisis ................................................................................... 141
Agus Muliaman, Laila Majnun Hutagaol

The Application of Comic Learning Media to Improve Student’s Achievement on Reduction and Oxidation Reaction Topic ...... 146
Anggi Desviana Siregar, Rini, Herdini

The Application of Cooperative Learning Round Robin to Improves Student Learning Achievement on the Subject of Electrolyte-Nonelectrolyte and Redoxin Class X SMAN 1 Seberida ................................................................. 150
Nora Santi, Betty Holiwarni, Johni Azmi

The Effect of Combination Cooperative Learning Models Toward Learning Result ................................................................. 154
Sapnita Idamarna Daulay

The Maintenance of Hokkien Among Chinese Speakers in Stabat ....................................................................................... 159
Widy Ningsih

Effect of Blended Learning Model and Learning Style to Civic Education Learning Results in Class VII in Junior High School Panca Budi Medan ............................................................................................ 164
Madina Qudsia Labis, Reh Bungana Br.Perangin-angin, Mursid

EFL Student’s Uses of Um as Fillers in Speaking .......................................................................................................................... 169
Eka Riana
The Influence of Role Playing Method and Self Concept of Social Skills of 5-6 Years Old Child
Rabiah Hanum Hasibuan, Anita Yue, Yusnadi

The Effect of Learning Approach and Personality Type Towards Learning Outcomes
Dwohy Dinda Sari, Julaga Situmorang, Busmin Gunning

The Effect of Learning Models and Critical Thinking Skills on Social Science Learning Outcomes
Juriah Siregar, Julaga Situmorang, Baharuddin

The Effect of Suggestopedia Method on Student’s Achievement in Vocabulary
Heppy Yersin Digiha Purba

Application of Active Learning Strategy Type Everyone is A Teacher Here (ETH) to Increase Student Activity and Learning Outcomes in Chemistry on Salt Hydrolysis
Wila Fajrinda, Darra Utari Ningsih, Sri Adelila Sari, Habibati

The Effect of Learning Strategy and Type of Personality on Student’s Achievement in Economic Science
Dewi Shara Dalimunthe

Development of Learning Tools Based on Realistic Mathematics Education of Ethnomathematics Nuances to Improve Mathematical Communication Skill Students in Junior High School 2 Percut
Seituan

The Impact of Cooperative Learning Strategy and Learning Interest Toward the Learning Result of Second Year of Senior High School Students in 2016/2017
Riswan Sianturi, Abdul Muin Sibuea, Edward Purba

The Development of Flash Program as a Media of Chemistry Learning on Chemical Equilibrium
Lenni Khotimah Harahap, Albinus Silalahi, Iis Siti Jahro

The Ethnic Mandailing Tradition of Courtship (Markusip) and Revitalization Efforts in the Formation of the Character Youth
Rizqi Jamiah, Edi Syahputra, Karm, M. Amin Fauzi

The Effect of Education on Unemployment Rate in Indonesia
Rahmat Putra Ahmad Hasibuan, Dede Ruslan, Fitrawaty

Development of Explanatory Text Materials Based on Problem Solving in Senior High School Pematangsiantar

The Effect of Education on Unemployment Rate in Indonesia
Rahmat Putra Ahmad Hasibuan, Dede Ruslan, Fitrawaty

The Development of Explanatory Text Materials Based on Problem Solving in Senior High School Pematangsiantar

Learning Model of Strengthening Vocational Life Skills With Entrepreneurship Knowledge to Improve Student Learning Outcomes
Husni Wardi Tanjung

A Critical Discourse Analysis Wardah Halal Beauty Advertisements
Ayu Lestari Siregar, Mei Lateki E.F. Butar-Butar

Influence of Creative Problem Solving (CPS) Mathematics Learning Model to Mathematical Problem Solving and Self Efficacy Students of SMA Negeri 3 Binjai
Nurcahaya Hutaisi, Martua Manullang, Ani Minarni

Differences in Mathematics Problems Solving Students With Implementing Learning Model Think Pair Square and Group Investigation in Junior High Schools
Abdul Halim, Edy Surya

The Acquisition of Nouns and Verbs of Mandailingnese by Two-Year-Old Mandailing Children
Marwah, Amrin Saragih, Sri Minda Murni

Utilization of ICT Learning in Senior High School Teladan Medan
Tengku Salwa Miranti

The Effect of Cooperative Learning Model Based Interactive Media and Interpersonal Communication on Student’s Achievement
Catur Ayu Wialandari, Efendi Napitupulu, Keysar Panjaitan

Developing of Learning Material Based on Problem Based Learning to Increase Student’s Mathematical Reasoning Ability and Self-Efficacy in Grade X SMA Negeri 1 Medan
Anggi Paramita Daulay, Dian Armanto, Waminton R
Efforts to in Crease A Motivation to Learning Math Using “Program” Learning Model……. 257
Linda Sari, Edi Syahputra

The Efod of Improving Mathematics Learning Outcome on Quadrilateral and Triangle Matter by Using Gradually Exercise Strategy with The Assistance of Image Media………………… 261
Ady Putra, KMS. Muhammad Amin Fauzi, Yulita Moliq

The Difference on Students’ Mathematical Creative Thinking Ability Between Realistic Approach with Conventional in The State Madrasah Tsanawiyah 2 of Medan……………………… 264
Siska Lestari, Zul Amry, Hasratuddin

Developing Learning Materials Using Realistic Mathematics Education to Increase Junior High School Students’ Mathematical Disposition and Connection Ability……………………………………… 269
Sy’aida Hazar Nasution, Izwita Dewi, E.Elvis Napitupulu

Developing Learning Materials Using Problem Based Learning to Increase Senior High School Student’s Mathematical Disposition and Representation Ability……………………………………… 275
Dewi Khairani, Mulyono, Izwita Dewi

The Effect of Question Students Have Strategy on The Result of Students Learning in Mathematics…. 281
Yuliani Aruan, Edi Syahputra

Analysis of Academic Supervision Competence and Managerial Supervision in Improving the Performance of Vocational High School Supervisors in Langsa City………………………………… 284
Muhammad Hendra, Saut Purba, Mian Siahaan

The Use in Active Learning Strategy of Learning Starts with a Question Type in the Mathematics Learning………………………………………………………………………………………… 289
Jeni Putria Efyl, Ani Minami, Pardomuan Sitompul

Improving the Ability to Learn Math by Using Rubu’ al-Mujayyab Media…………………………….. 293
Muhammad Hidayat, Edi Syahputra, E.Elvis Napitupulu

The Impact of Education Cost and Government Spending the Interest Rate of Bank Indonesia Submit………………… 297
Julika Rahma Siagian, Dede Ruslan, Arwansyah

The Implementation of Problem Based Learning Models to Improve Mathematical Problem Solving Ability of Students on Arithmetic Materials in Class VII Junior High School………………….. 301
Elidar Tanjung, Izwita Dewi, Mulyono

The Effect of Learning Strategies to Trial By Jury in Participatiomorphic Mathematics Learning Student of Junior High School……………………………………………………………………… 305
Rizka Putri Rahayu, Ani Minami, Zul Amry

The Differences Between The Effect of Realistic Mathematics Learning Approach to Conventional Learning with The Students Mathematics Learning Outcomes in Junior High School of 38 Medan Grade VII…………… 309
Diah Ari Saputri, Syafari

The Effect of Value National Exam Standards at Learning Achievement of Students at Senior High School……………………………………………………………………………………………… 312
Nurdiana Fahmi, Borok Sinaga, W. Rajagukguk

The Effect of Open Unemployment Rate and Level of Vocational High Education to Poverty in North Sumatera Province………………………………………………………………….. 315
Zulaili, Indra Maipta

The Application of Cooperative Learning of Think-Pair-Share (TPS) Type to Increase the Students’ Ability of Problem-Solving…………………………………………………………………………… 320
Mudiviah Fadhilah Siregar, Zul Amry, Syafari

The Relationship Between Metacognitive With the Results of Learning Outcomes on the Fungi Topic….. 324
Elizabeth, Herbert Sipahutar, Syahmi Edi

Comparison of DNA Isolation Methods from Economically Valuable Plants in Indonesia………………………… 327
Chairiyani Rizka, Fauziyah Harahap, Syahmi Edi

Development of Learning Device Based on Realistic Approach to Improve Problem Solving Ability Mathematic of Student at Junior High School………………………………………………….. 333
Susanna Romaria Harahap
Efforts to Improve Understanding and Use Concept of Additive Fractions and Reduction Using Media Comics on Model Cooperative Learning Type Student Team Achievement Division (STAD).................................................................................................................. 339

Ratu Natalia Perangin-angin, Sahat Siahaan

The Effect of Cooperative Learning Type Games Teams Tournament (TGT) of Mathematics Learning Outcomes in the Fractions Matter.................................................................................................................. 342

Ansori Hasibuan, Asmin Panjaitan, Asrin Lubis

Development of Authentic Mathematics Assessment in Application of Problem Based Learning Model to Improve Problem Solving Ability and Understanding of Student Mathematics Concept at Namorambe Secondary Private Middle School Junior High.............................................................................................................................. 347

Kartika Sari, Asmin, Bornok Sinaga

The Increasing of Student’s Mathematics Problem Solving Ability and Learning Motivation Through Problem Based Learning Model.................................................................................................................. 351

Ridha Maulida

Dialect of Batakinese Language Used by Senior High School Students’.................................................................................................................. 358

Rafika Nur Rahman

The Effectiveness of Tandur Method of Improving Students’ Learning Ability in Junior High School.............................................................................................................................. 362

Rahimatul Islam Elmujahidah, Mulyono, H. Banjarnahor

The Effect of Reciprocal Teaching Approach to Student Achievement on Ecosystem Topic in Junior High School.............................................................................................................................. 365

Nilawati, Nurtika Dewi

Improvement of Student Learning Result by Using Cooperative Learning Model of Teams Games Tournament Type on Algebra Function Limit.............................................................................................................................. 367

Rismalyah Manalu, E. Elvis Napitupulu, Martua Manullang

Noun Phrase of Culture Articles in The Jakarta Post.............................................................................................................................. 371

Misdiana

Application of Cooperative Learning Model Type Think Pair Share for Improved Communication.............................................................................................................................. 374

Nurhasanah

Implementation Model of School Policy in Constructing Behavior of Troubled Students.............................................................................................................................. 378

Khairtati Purnama Nasution, H. Syaiful Sagala

Efforts to Improving Creativity and Mathematics Learning Outcomes of Students With SPLET Strategy.............................................................................................................................. 382

Antoni

The Influence of Physical Education in Establishment of Self Esteem.............................................................................................................................. 386

Yustinus Tarigan, Tarsyat Nugraha

The Improvement of Dance Art Learning Achievement for Deaf Students Through Total Communication Application (Gesture/Signal) in Sekolah Luar Biasa (SLB) - E Negeri Pembina Tingkat Provinsi Sumatera Utara.............................................................................................................................. 390

Siti Maryam

Innovation of Media Video Compact Disc Instructional Pencak Silat for High School.............................................................................................................................. 393

Marli Perangin-angin, Imran Akhmad, Agung Sunarno

Achievement Strategy of the Indonesian National Qualification Framework Based Curriculum Generic Description of Sport Education Postgraduate Program Universitas Negeri Medan.............................................................................................................................. 397

Muhammad Supriadi Siregar, Nurhayati Simatupang, Albadi Sinulingga

The Effect of Teaching Styles and Motor Ability as The Result of Study Dribbling Football.............................................................................................................................. 401

Muhammad Fajar Doli Siregar

Semantic Analysis of English Loan Words in Indonesian Electronic Paper (Analisa).............................................................................................................................. 404

Putri Nurul Rahmadani Siregar

Analysis of Empowerment of Competence Sinergity on Optimization of Education System.............................................................................................................................. 408

Rameyanti Tampubolon

Inquiry-Based Video Learning Media For Overcoming Student Learning Difficulty (Case Study at State Junior High School 3 Lubuk Pakam Deliserdang District).............................................................................................................................. 412

Megawati
The Development of Mathematics Learning Tool Oriented on Problem Based Learning to Enhance Mathematics Problem Solving Ability and Self Efficacy
Solawati Nainggolan, Mulyono, Hasratuddin

The Effectiveness of Contextual Inquiry-Based Worksheet on the Matter of Fungi on Food Towards Students’ Higher-Order Thinking and Science Process Skills of Biology Education
Nurjamiah Siregar, Hasruddin, Syahmi Edi

The Function of Limits Mastery on Mathematics Learning Achievement in Derivative Subject at the Eleventh Grade of Madrasah Aliyah Yayasan Pendidikan Karya Setia Padangsidimpuan
Hasna Dewi Ritonga

Effect of Education Level, Income, Inflation on Community Consumption Pattern in North Sumatera Province
Nelly Hutajulu, Fitrawaty, M.Fitri Rahmadana

Application of Problem Based Learning Model Assisted by Cabri Software to Improve Problem Solving Ability of Mathematics Students
Ahmad Darmawan, Edi Syahputra, Kms. M. Amin Fauzi

Optimization of Academic Supervision Competence of High School Supervisor in Karo Regency with Critical Events Model (CEM)
Karyawan Keliat, Yasaratodo Wau, Irsan

The Concept of Physics Learning Media Based Computer Animation
Ratna Tanjung, Mukhtar, Efendi Napitupulu

Cultivating Children’s Critical Attitude with Educational Philosophy
Daulat Saragi
Efforts to Improving Creativity and Mathematics Learning Outcomes of Students With SPELT Strategy.

Antoni
State University of Medan
Unimed
Medan Indonesia
Email : thoniematrix@gmail.com

Abstract. Students feel that math lessons are the most difficult and tedious lesson with less innovative learning methods. Effect of it the less innovative method of causing creativity and student learning outcomes decreased. This type of research is a classroom action research using SPELT (Strategy Program for Efektif Learning/Teaching). This study aims to know that by using SPELT strategy (Strategy Program for Efektif Learning/Teaching) Can improve creativity and student learning outcomes on linear inequality two variable system. The data obtained from the test results of students in groups and individuals both written and oral. The results of data analysis showed that in cycle II creativity increased and has reached the expected value of above 60 %. While the result of data analysis for learning ability more increase compared to initial capability and cycle I. Result of research indicate that by using SPELT strategy (Strategy Program for Efektif Learning/Teaching) Can improve the creativity and result of student's mathematics learning on linear inequality two variable. Thus it can be concluded that learning by using SPELT strategy (Strategy Program for Efektif Learning/Teaching) can be used in the process of learning to teach math.

Keywords: SPELT strategy (effective program for effective learning/teaching), creativity and learning outcomes

I. INTRODUCTION

Teaching skills are not heredity, are the result of experience. However we can use information from others who have developed learning from their own experiences. This adds a lot of information to us to develop the effectiveness of teachers and schools.

Based on the results of interviews with a teacher of mathematics subjects SMANegeri 3 Binjai obtained information that rendanya creativity and mathematics learning outcomes in learning activities. This is stated by the mother of Leli Herawati, S.Pd as a teacher of mathematics class X Accounting, this difficulty caused by the curiosity of the students tau lessons in math is still relatively low this can be seen from the creativity of students on the initial test there are only 15 students which completed with an average of 23.14 and 21 unfinished students of 36 students. And the result of the students are also still low class yet reaching the value of classical completeness in the initial test only 15 complete students or 41.67% and 21 students who do not complete 58.33% from 36 students.

To solve the problem requires some strategies in proper teaching. This is the background of researchers to conduct research entitled "Efforts to Improve Creativity and Hasi learning Mathematics With SPELT Strategy (Strategy Program for Effective Learning / Teaching) On Students SMANegeri 3 Binjai Lesson Year 2015/2016".

The formulation of the problem is: a) how the students' creativity in learning the material of linear inequality system of two variables in class XISMANegeri 3 Binjai Lesson Year 2015/2016”. b) Whether by using SPELT strategy can improve student learning achievement of mathematics in linear inequality system two variable in class XISMANegeri 3 Binjai Lesson Year 2015/2016”.

II. LITERATURE REVIEW

Creativity
The conclusions of experts on creativity in Utami Munandar (2009) are:

a. Creativity is the ability to create new combinations based on data, information, or elements that exist.
b. Creativity (creative thinking or divergent thinking) is the ability based on available data or information, finding many possible answers to a problem where the emphasis is on quantity, usability, and diversity of answers.
c. The operational of creativity can be defined as an ability that reflects smoothness, impression and orisonality in thinking, and the ability to elaborate (develop, enrich, detail) an idea.

According to Utami Munandar (2009) the indicators that cause the child to be called creative can be observed in two aspects namely aptitude and nonaptitude aspects. The aptitude aspect is one that relates to a child's cognition or thinking process, whereas nonaptitude is more concerned with attitudes or feelings.

Some of the indicators of a child's creative category are extensive and profound curiosity, Often ask a good question, Giving a lot of ideas or suggestions to a problem,
free in expressing opinions, have a deep sense of beauty, prominent in one area of art, able to see a problem from various aspects, having a great sense of humor, have strong imagination, and original in the expression of ideas and in problem solving.

**Definition of Learning Outcomes**

According to Liebeck (in the book of muhabbin syah 2010) there are two kinds of mathematical results that must be mastered by students, namely mathematical calculation (mathematics calculation) and mathematical reasoning (mathematics reasoning). Based on such learning results Liebeck suggested that the curriculum of mathematics should cover three elements, (1) concepts, (2) skills, (3) problem solving.

In achieving learning success will be related to learning factors, both within and outside the individual. Factors that influence learning outcomes are: interent factor that is from within individual, consist of physical Factors, psychological factors, fatigue factor and external factors can be grouped into 3: family factors, school factors and community factors.

**SPELT Teaching Strategy**

In the world of education and modern teaching there are quite a number of steregeti specifically designed to teach certain materials to achieve the desired skills. Among the teaching strategies there is a teaching strategy based on the cognitive steregeti still relatively actual. This strategy, called Strategy Program for Effective Learning / Teaching, abbreviated as SPELT, was designed and piloted by Robert F. Mulcahy, a professor who heads the Cognitive Education Project in the School of Educational Psychology, University of Alberta.

As the name implies, SPELT’s strategy was deliberately engineered to improve and improve the effectiveness of students’ learning and thinking, especially those who occupy elementary and junior high school grades.

The aims of SPELT’s Strategy is to get students into:

a. Applicants who are active as thinkers and problem solvers;

b. An independent science claimant, having his own efficient plan and strategy in approaching learning;

c. The claimant of knowledge is more aware and more capable in controlling the process of thinking (metacognitive awareness).

**SPELT strategy teaching steps**

In implementing the SPELT strategy, teachers need to follow three different and lengthy steps in the sense of taking different but consecutive times. The steps to implement SPELT strategy are as follows:

1. Direct strategy instruction (direct instruction teaching).

   The goal: to strengthen metacognitive awareness (thought process itself). In a way: Raise awareness of students that he has a strategy, that is by the way the teacher must motivate the students that he has a way to solve the problems. Describe that the use of systematic strategies can improve the quality of learning, improve student participation and interaction in the learning process, that is by asking students to do the questions.

2. Teaching for transfer (teaching to transfer strategy).

   In a way: using strategies derived from phase I, be able to assess the use of strategy, expand strategies for other places and learning situations, engage actively in the learning process.


   In a way: assist, assess and develop effective strategies for improving the quality of learning, engage actively in the learning process itself.

**SPELT strategy** has several advantages and disadvantages, among others:

1. The advantages: more stimulate students in doing individual or group learning activities, can develop student independence beyond teacher supervision, can foster student responsibility and discipline, can develop students’ creativity, students have the opportunity to foster development and courage in taking initiative, responsible, and independent, the knowledge that students gain from their own learning will be remembered for longer

2. Disadvantages: students are difficult to control, whether it is true that he is doing the task or someone else, especially for group tasks, not infrequently who actively do and solve them are certain members only, while other members do not participate well it is not easy to assign tasks that match individual student differences, frequently assigning monotonous tasks (not varying) can lead to student boredom, it is difficult to assign tasks that meet individual differences.

### III. METHOD

This research is a classroom action research. To obtain the data in this research, the researcher uses the instrument in the form of ability test and student creativity observation sheet. Research on the creativity of students based on indicators that have been compiled rubrics creativity:

<table>
<thead>
<tr>
<th>No</th>
<th>Indicator</th>
<th>Aspect to rated</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1</td>
<td>(fluency)</td>
<td>1.1 Asking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.2 Give attention to lesson</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K2</td>
<td>(flexibility)</td>
<td>2.2 Asking back that lesson unclear</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.3 Don’t give up to receiving the ask of the teacher</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K3</td>
<td>(originality)</td>
<td>3.1 Search the problem solving</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.2 finded the other alternative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K4</td>
<td>(elaboratio n)</td>
<td>4.1Can spark after teacher explained</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.2Have ideaor others opinions with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Analysis Technique

To analyze the level of success or achievement mastery learning after the teaching and learning process takes place in each cycle is done by giving evaluation in the form of test questions at the end of each cycle. This analysis is calculated by using simple statistics as follows:

Assessment for mastery learning outcomes

\[
\text{Level of mastery} = \frac{\text{score obtained by student}}{\text{score max}} \quad (\text{Zainal Aqib, 2010: 41})
\]

Presentation of its complete value is as follows:
0% < Lm < 65% (Unfinished), 65% ≤ Lm ≤ 100% (Completed)
Each student is said to be complete learning if the proportion of correct answers ≥ 65%, then can be known mastery learning classically with the formula:

\[
P = \frac{\text{number correct}}{\text{total number}} \quad (\text{Zainal Aqib, 2010: 41})
\]

The criteria of students' success rate in % as follows:
75% - 100% (Height), 65% - 75% (Medium), 0% - 65% (Low)

Analyze Observation Results

According to Soegito (2003), the calculation of the final value of each observation is determined based on:

\[
V_a = \frac{S_y}{B_i} \quad (1)
\]

Information:

V_a = final value
S_y = scores obtained
B_i = many items

Category Value Activity Interval
1.0-1.5 Very less, 1.6-2.5 Less, 2.6-3.5 Good, 3.6-4.0 Very good.
According Suherman (2001) to determine the level of student ability used the formula as follows:

\[
\text{LA} = \frac{S}{T} \times 100 \quad (2)
\]

Where:

LA = Level of Ability
S = Score obtained
T = Total Score

With the following capability criteria:

a. The ability level of 90-100 is very high
b. The ability level of 80-89 is high
c. The ability level 65-79 is moderate
d. The level of ability 55-64 is low
e. The ability level 0-54 is very low

IV. RESULTS AND DISCUSSION

This can be seen from the results of research indicating that all students experience an increase in value.

<table>
<thead>
<tr>
<th>NO</th>
<th>Test</th>
<th>Percentage of creativity</th>
<th>Percentage of outcomes study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pree Test</td>
<td>41.67%</td>
<td>41.67%</td>
</tr>
<tr>
<td>2</td>
<td>cyclus I</td>
<td>48.78%</td>
<td>63.39%</td>
</tr>
<tr>
<td>3</td>
<td>cyclus II</td>
<td>95.12%</td>
<td>91.67%</td>
</tr>
</tbody>
</table>

More explanation of student's creativity and learning hasl improvement can be seen from the percentage of classical students during the initial test, cycle I and cycle II, as in the bar chart picture below:

V. CONCLUSION

Based on this description, it can be drawn some CONCLUSIONS as follows:

1. Before being given an action, students have difficulty in learning mathematics especially on linear inequality two variable system. These difficulties include the lack of appropriate learning strategies and less active students in learning.
2. Student learning creativity increased with average in cycle I to 36.25 in cycle II. Or on creativity observation at the beginning there are 15 students who get a good level of creativity in cycle I to 33 students who get a good level of creativity and in cycle II into the overall value.
3. Students' satisfaction in the sense of matter of linear inequality two variables increases. This can be from the level of completeness of the evaluation results of students in a classical before using SPELLED strategy reached 41.67% to 63.89% increased to 91.67%. Or in the initial test there were 15 complete students or 21 unfinished students and on the completed cycle I of 23 or 13 unfinished students and in cycle II to 33 completed students or 3 students who did not finish in a classical manner from 36 students.
4. Based on the results of research shows the level of mastery learning students cycle I to cycle II has increased creativity and learning ability of students in learning mathematics.
REFERENCE


