



ISSN : 2548 - 4613
Vol. 4. Desember 2019

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



Supported by :



Committee

Advisors

Dr. Syamsul Gultom, S.KM.,M.Kes (Rector of Unimed)
Prof. Dr. Bornok Sinaga, M.Pd (Director of Postgraduate Program of Unimed)
Prof. Dr. Sahyar, MS.,MM (Vice Director 1 of Postgraduate School of Unimed)
Dr. Darwin, M.Pd (Vice Director 2 of Postgraduate Program of Unimed)

Conference Chairperson	:	Dr. Rahmad Husein, M.Ed
Secretary	:	Dr. Juniastel Rajagukguk, M.Si
Trasurer	:	Dedi Agus Syahputra, SE
Secretariat	:	Vivi Emilawati, SE.,M.Si
		1. Erika, S.Pd.,M.Pd
		2. Nurul Fazrika, S.Pd.,M.Pd
		3. Amir Husin Sitompul, S.Pd.I
		4. Agus Harriyanto
Papers and Proceedings	:	1. Dr. R. Mursid, ST.,M.Pd
		2. Dr. Anni Holila Pulungan, M.Pd
		3. Dr. Saronom Silaban, M.Pd
		4. Dr. Tumiur Gultom, M.Si
		5. Mangaratua Simanjorang, M.Pd.,Ph.D
		6. Indra Hartoyo, S.Pd.,M.Hum
		7. Dra. Meisuri, MA
		8. Dr. Hermawan Syahputra, M.Si
Program/Event	:	1. Dr. E. Elvis Napitupulu, M.Si
		2. Dr. Rachmat Mulyana, M.Si
		3. Dr. Elmanani Simamora, M.Si
Plenary Session	:	1. Prof. Amrin Saragih, M.A.,Ph.D
		2. Prof. Dr. Abinus Silalahi, M.S
		3. Prof. Dr. Abdul Hasan Saragih, M.Pd
Moderator for Parallel :		1. Prof. Dr. Edi Syahputra, M.Pd
		2. Prof. Dr. Anita Yus, M.Pd
		3. Prof. Dr. Paningkat Siburian, M.Pd
		4. Dr. Edy Surya, M.Si
		5. Dr. Fauziyah Harahap, M.Si
		6. Dr. Rahmatsyah, M.Si
		7. Dr. Arif Rahman, M.Pd
		8. Dr. Ir. Nurfajriani, M.Si
		9. Dr. Hidayat, M.Si
		10. Dr. Fitrawaty, SP.,M.Si
		11. Dr. Albadi Sinulingga, M.Pd
		12. Dr. Abdurrahman Adisaputera, M.Hum
		13. Dr. Imran Ikhamad, M.Pd
		14. Dr. Arfan Ikhsan, M.Si
		15. Dr. Saidun Hutasuhut, M.Si
		16. Dra. Jubliana Sitompul, M.Hum
Poster Session	:	1. Dr. Anni Holila Pulungan, M.Hum

2. Dr. Syamsidar Tanjung, M.Pd
 3. Dr. Sukarman Purba, M.Pd
 4. Dr. Ajat Sudrajat, M.Si
 5. Dr. Ratih Baiduri, M.Si
 6. Dr. Muhammad Fitri Ramadhana, M.Si
 7. Dr. Mulyono, S.Si.,M.Si
 8. Dr. Daulat Saragi, M.Hum
 9. Dr. Tumiur Gultom, SP.,MP
 10. Dr. Derlina, M.Si
 11. Dr. Wisman Hadi, M.Hum
 12. Dr. Nurhayati Simatupang, M.Kes
 13. Dr. Amir Supriadi, M.Pd
 14. Ali Fikri Hasibuan, SE.,M.Si
 15. Drs. Thamrin, M.Si
 16. Junita Friska, S.Pd.,M.Pd
- Public relations** : 1. Muhammad Surip, S.Pd.,M.Si
2. Jihan Siska
- Accommodation** : 1. Ater Budiman Sinaga, M.Si
2. Hendry Dalimunthe, MA
3. Yandri Imanuel Siburian, SE., M.Si.
4. Jasmi Assayuti, SHi
- Equipment** : 1. Eko Budiarto
2. Sofianto Gultom
3. Suhana Nasution
4. Farid Ma'ruf Harahap
5. Isachar Adry Utomo
6. Diky Arisandi
7. Herianto Samosir, S.Pd
8. Ahmad Rosyadi Nasution, S.Pd
9. Hizrah Saputra Harahap, S.Pd
10. Muhammad Isnaini, M.Pd
11. Nasiruddin, S.Pd
- IT & ICT** : 1. Jerry S. Pauned, S.Si
2. Mulyanto Duha
- Transportation** : 1. Hisar P. Sianturi, SH
2. Sari Purnamawati Siregar, M.Hum
3. Yutia Hafwenny, S.KM
- Consumption** : 1. Fitria Ramadhani
2. Azizi Apri Indaya, S.Pd
3. Susiani, S.Sos
4. Siti Rohana, M.Pd
5. Yutia Hafweny, S.KM
6. Tiarna Nova, M.Pd.
- Receptions** : 1. Nisa Ansyari Gultom, S.Pd
2. Desi Yulian, S.Pd
3. Siti Rohana, S.Pd.,M.Pd
4. Cecilia Tampubolon, S.Sos

Rundown of The 4th 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	Opening Ceremony 1. MC Speech 2. Traditional Welcome Dance 3. Indonesian National Anthem 4. Pray 5. Chairperson Report 6. MoU signing between Unimed and PSU - Thailand 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: Prof. Dr. Syawal Gultom, M.Pd (State University of Medan– Indonesia)	Moderator Section
09.40 – 10.25	Plenari Lecture 2 Prof. W. L. Quint Oga-Baldwin (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 Prof. Dr. Wu-Yuin Hwang (Graduate Institute of Network Learning Technology National Central University, NCU - Taiwan)	
11.15 – 12.00	Plenari Lecture 4 Prof. Dr. Ekkarin Sungtong (Dean of Faculty of Education Prince of Songkla University - Thailand)	Mangara Simanjorang, PhD (Panel)
12.00 – 12.45	Plenari Lecture 5 Asst. Prof. Patcharin Panjaburee, Ph.D. (Mahidol University – Thailand)	
12.45 – 13.30	Lunch Break/ Poster Sessions 2	Section Poster 2
13.30 – 15.30	Parallel Session 1	
15.30 – 16.00	Break/ Poster Sessions 3	Section Poster 3

15.50 – 18.00	Parallel Session 2	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 4th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2019)

Preface

The 4th 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 4th 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

Title And Authors	Page
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	
<i>Nahdyah Sari Daulay</i>	
Toba Batak Language Shift in Rantau Selatan	
<i>Helfi Vinawari S</i>	234-236
Development of Interactive Multimedia Digital Storytelling in English Subjects	237-239
<i>Juanda</i>	
The Effect of PLAN (Plan, Locate, Add and Note) Strategies on Students' Achievement in Reading Comprehension	240-244
<i>Neneng Nurhamidah</i>	
Unggah-Ungguh Code Switching in Kartini Movie	
<i>Yutika Sari</i>	245-247
Metaphors in Umpasa of the Toba Batak Wedding Ceremony	248-250
<i>Sactica Oktavyani Sagala</i>	
The Effect of Model learning and Gender Against Piano playing Skills for class V SMK Negeri 11 Medan T.A 2019/2020	251-255
<i>Gufran Nurman</i>	
The Effect of Cooperative Learning Model Based on Aceh Culture to Improve the Generic Science Skills of Student	256-260
<i>Safitri Raufa</i>	
Gender Conversation in Workplace Context	
<i>Aisyah Fitriani Dasopang</i>	261-265
Management and Development Quality of Teacher Performance Through Teacher Competence in the First Middle School in Banda Aceh	266-268
<i>Faisal Anwar</i>	
Modality used in Beauty Product Advertisements on Instagram Caption	269-272
<i>Indah Eka Sari</i>	
Attitudinal Appraisal in Ahok's Speech	
<i>Firdha Sabrina</i>	273-276
Appraisal Attitudes by the Judges on Indonesian Idol "Grand Final" Session	
<i>Mieta Setieya</i>	277-280
The Development of Virtual Laboratory-Based Learning Media of Biology on The Topic of Bacterial for High School Students	281-284
<i>Lailatussyifa</i>	
Analysis of Economic Opening on Rupiah Exchange Rate on United States Dollars (2008-2018)	285-289
<i>Sri Wahyuni</i>	
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

Determinant Analysis of Sharia Banking Efficiency in Indonesia

Rahmat Putra Ahmad Hasibuan
Department of Economics
Universitas Negeri Medan
Medan, Indonesia
edumaximal@gmail.com

Dede Ruslan
Department of Economics
Universitas Negeri Medan
Medan, Indonesia

Fitrawaty
Department of Economics
Universitas Negeri Medan
Medan, Indonesia

Abstract— The purpose of this research is to measure the level of sharia banking efficiency in Indonesia period 2010-2017. The samples used in this study were 8 sharia banks in Indonesia. The method used in this research consists of two stages, which it begins by measuring the efficiency level with the data envelopment Analysis (DEA) Furthermore, DEA results are regressed by using Data Panels with Random Effect models to determine the factors that affect efficiency with financial indicators SIZE, CAR, FDR, NPF, BOPO which are processed using STATA. The results of the study can be concluded that the SIZE and CAR variables have a positive effect but are not significant, the FDR variable is positive and significant, while the NPF and BOPO variables are influential and significant to the efficiency

Keywords—*efficiency; SIZE; CAR; FDR; NPF; BOPO*

I. INTRODUCTION

Banking became the main thing in measuring the country's economic growth. The banking sector as a sub-systems in a country's economy has a fairly important role. Even in the life of modern society everyday, most of them almost involve the services of the banking sector [1]. Banks with its intermediate function can raise funds from the community in various forms of deposits. Further from the accumulated funds, the bank redistributed in the form of giving credit to the business sector or other parties in need. The growing community life and transactions of the economy of the country, will also require an increase in the role of the banking sector through the development of services products [2]

In Indonesia, banking is classified as two, namely Sharia banks and conventional banks. But along with the development of Indonesian banking, now appears dual banking system, which is conventional banking that has the Sharia business unit. The emergence of Sharia banking is expected to encourage and accelerate the economic progress of a community in conducting banking activities, in accordance with the principles of Islamic.

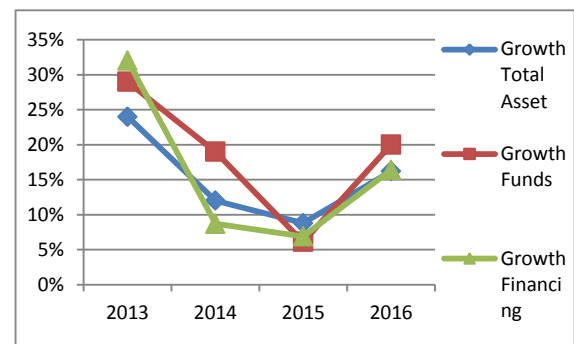


Fig. 1. Sharia banking financial indicators development year 2013-2016

Slowing the financial growth of Sharia banking is caused by unstable economic conditions, Judging from the figure 1 that the growth of total assets, third party funds and financing tends to continue to decline from the year 2013 to 2015 and start improving in 2016.

The good indicator of Sharia bank performance is the number of assets, which during the 2013-2016 period of the sharia banking asset is slowing down the amount of financing distributed to the public. In this case, the sharia banking industry is increasingly reviewing the financing that has been and that will be given. Management performs control and repairs the quality of financing to reduce the occurrence of problematic financing. The financing of the problem is seen in the NPF (non performing finance) Sharia banking industry in 2015 which reaches 4.93%, almost touching the maximum limit of NPF which is assessed healthy by BI is a maximum of 5%. The high NPF ratio causes Sharia banking to provide more capital reserves to cover the amount of financing that has been problematic. On the other hand the Financing Deposit ratio (FDR) was decreasing from the previous year.

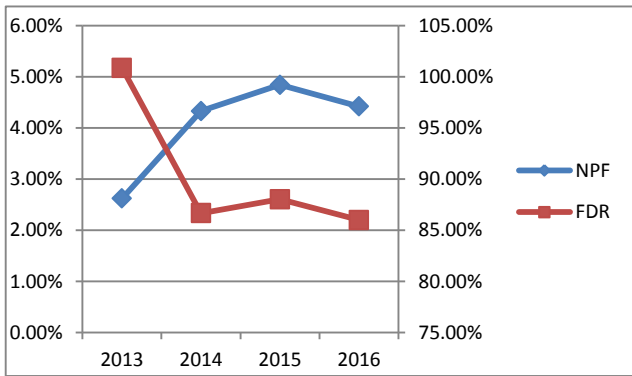


Figure 2. Development of NPF and FDR Sharia banking 2013 – 2016

Instability of domestic and global economic conditions also give effect to the development of non-performing finance and financing to deposit ratio. In 2013 there were 2.62% Non-performing finance (NPF) on both BUS and UUS. This percentage is still said to be quite normal, before increasing in the years 2014 and 2015 by 4.33% and 4.84% that almost touched the maximum limit of 5% stipulated by Bank Indonesia. In 2016 non-performing finance conditions decreased to 4.42%, but the magnitude is still categorized large enough for problematic financing.

Also can be seen the development of financing deposit ratio (FDR) from year 2013-2016 on the chart above. FDR as a picture of Sharia bank liquidity is good enough in the year 2013 for 100.86%. Then, due to the global economic turmoil that affected the economic growth of Indonesia, especially the banking sector, there was a decline in FDR in 2014 (86.66%), increased 2015 (88.03%) And there was a decline back in 2016 to 85.99%. In addition to external factors, namely the development of domestic and global economies, the decline in the FDR implies that the performance of Sharia banks and Sharia unit enterprises has not been optimal in carrying out their functions as intermediation agencies in the distribution Financing to the community. Financial ratios such as Non performing Finance (NPF) and Financing deposit ratios can indicate the quality of Sharia banking performance.

II. LIERATURE REVIEW

The concept of efficiency was first introduced by Farrrel When measuring efficiency empirically. According to the efficiency of the company consists of two components, namely technical efficiency and alokative efficiency. Technical efficiency reflects the capability of the company in generating output with a number of inputs available. While the alokative efficiency reflects the company's ability to optimize its input, its price structure and production technology. Both sizes are then combined into economic efficiency. [3]

According to Muhamad Nadratuzzaman Hosen & Rafika Rahmawati (2014) Categorizes the level of efficiency of a bank in the category as described in the table below. [4]

TABLE 1. CATEGORY OF BANK

Efficiency levels	Efficiency levels	Categories
< 65%	Inefisien	0
65-85%	Low efficiency	1
86-96%	Intermediate efficiency	2
97-100%	High efficiency	3

According Silkman, There are three types of efficiency measurement approach, especially banking, namely: 1. Ratio approach 2. Regression approach 3. Frontier approach [5] The frontier approach in measuring efficiency is differentiated into two types, namely parametric and non parametric frontier approaches. The parametric frontier approach can be measured by parametric statistical tests such as using the Stochastic Frontier Approach (SFA), the Thick Frontier Approach (TPA) and the Distribution Free Approach (DFA). The Nonparametric frontier approach is measured by non-parametric statistical tests using the Data Envelopment Analysis (DEA) method. Parametric statistical tests take into consideration the type of spread or distribution of data, the model stipulates the presence of certain conditions of the population parameter that is the source of its research. While Non-parametric statistics are tests whose models do not specify a terms that is about the population parameters that are the parent of the research samples. In this research researchers use a non parametric frontier approach.

The non parametric frontier approach used in this research is an intermediate approach. According to Berger and Humphrey, [6] The intermediation approach is a more precise approach to evaluating the performance of financial institutions generally because of the characteristics of financial institutions as financial intermediations Raise funds from the unit surplus and distribute it to the deficit unit. Using this intermediate approach is also expected to describe the real banking function. According to the Molyneux, [7] The intermediation approach is superior to evaluating the efficiency frontier in financial institutions ' profitability. Because it minimizes the total cost and not just the production cost, it is necessary to maximize the profit.

Technical efficiency measurements tend to be limited to technical and operational relationships in the input conversion process into output. The effort to improve technical efficiency requires only internal micropolicy, namely with optimal control and allocation of resources. A company is said to be technically efficient when generating maximum output with certain resources or producing a certain amount of output using minimal resources. The efficiency of a company is measured by the capability of generating output at minimum

or maximum cost of profit. The Issue of technical efficiency (TE) is the ability to make decisions to produce output from a set of inputs (output oriented) or to output using the lowest input amount (input oriented) where an example is the quality of the workforce identified as inputs in output production for economic growth [8]. Banking technical efficiency is measured by calculating the ratio between outputs and banking inputs. The DEA (Data Envelopment Analysis) will calculate the bank using the input n to produce a different m output.

$$E_s = \frac{\sum_{i=1}^m u_i Y_{is}}{\sum_{j=1}^n V_j X_{js}}$$

E_s : Efficiency of Bank techniques s
 Y_{is} : Number of outputs I produced by the bank s
 X_{js} : Number of J inputs used by the bank s
 U_i : The output weights I generated by the bank s
 V_j : The J input weight provided by the bank s, and Count from 1 to M and counted from 1 to n

The equation above indicates the use of one input variable and one output. Ratio of efficiency (tests), then maximised with constraints as follows:

$$\frac{\sum_{i=1}^m U_i Y_{ir}}{\sum_{j=1}^n V_j X_{jr}} \leq 1$$

For $r = 1$
 U_i and $V_j \geq 0$

Where n indicates the number of banks in the sample. The first inequality indicates the presence of the company's efficiency ratio of no more than 1, while the inequalities of the second positive weighted ratio numbers will vary between 0 and 1. A bank is said to be efficient when having a ratio number approaching 1 or 100%. Conversely if approaching 0 indicates lower bank efficiency or inefficiencies occur. With the help of the Frontier Analysis Application program, the level of efficiency is calculated based on available data.

The Result of Nadiah Hidayati's research about determinant of Islamic Indonesian banks, Sharia Bank (BUS) and Sharia Unit Enterprises (UUS) in Indonesia are technically not fully operational efficiently. Secondly, the financing and CAR variables have a positive and significant impact BUS and UUS efficiency levels. Thirdly, wadiah deposits have significant negative To BUS and UUS efficiency in Indonesia. [9]

A. Hypotheses

Referring to the foundation of the theory and previous research, it can be derived hypothesis as follows:

1. Sharia banking efficiency in Indonesia is still relatively low

2. There are factors SIZE, CAR, FDR that positively affect the value of efficiency in Sharia banking. While the NPF and BOPO negatively affect the value of Sharia banking efficiency.

B. Research design

Based on the research hypothesis, the research design can be described and made the regression equation as follows:

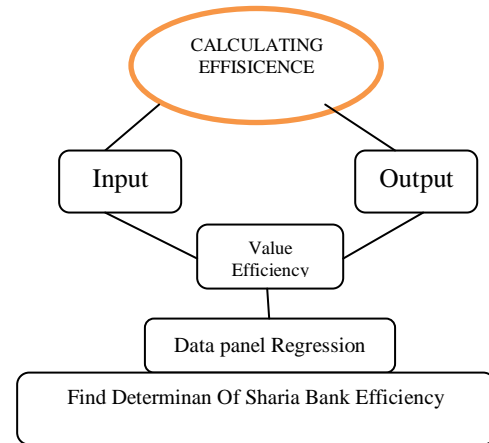


Fig. 3. Design Method

III. RESEARCH METHODS

The population used in this study is sharia banking consisting of 13 sharia banks, 21 Sharia unit businesses. The samples used in this study were determined by purposive sampling techniques: 4 Government Sharia banks and 4 private sharia banks, where both government and private Sharia banks were the largest unit of sharia banking. So that it can describe the actual financial condition of any bank.

TABLE 2. NAME AND CODE OF SAMPLE BANK RESEARCH

	Name of Bank	Code of bank
Government Banks	Bank Muamalat	1
	Bank Mandiri	2
	Syariah	
	BNI Syariah	3
	BRI Syariah	4
Private Bank	BCA SYARIAH	5
	Bukopin Syariah	6
	Bank Mega Syariah	7
	Panin Bank Syariah	8

The method of data analysis used in this research is a quantitative analysis expressed by numbers and calculations using statistical methods. The study consisted of two phases. At the first stage, the level of efficiency in each bank is estimated using Data Envelopment Analysis and in the second step is to test the determination of Sharia banking efficiency in Indonesia is estimated using the data panel regression

To answer the second hypothesis used a double linear analytable method with the processing technique of data panels. The analytical models developed are:

$$Effi_{it} = \beta_{0it} + \beta_1 Size_{it} + \beta_2 NPF_{it} + \beta_3 BOPO_{it} + \beta_4 CAR_{it} + \beta_5 FDR_{it} + \varepsilon_{it}$$

- Effi = Efficiency
- Size = Total assets
- NPF = Non Performing Financing
- BOPO= Operational expenditure on operational income
- CAR = Capital adequacy ratio
- FDR = Financing deposit ratio
- ε_i = Error Term
- i* = Bank
- t* = Year

IV. RESULTS AND DISCUSSION

The result of Data Envelopment Analysis as below:

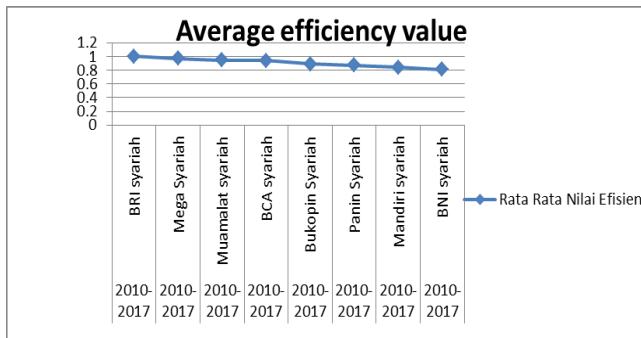


Fig. 2. Result of Analysis

From the chart can show that the best level of efficiency is Bank Bri Syariah with a value of 1, followed by Bank Mega Syariah (0.973616), Bank Muamalat (0.943426), BCA Syariah (0.939235), Bukopin Syariah (0.892746), Panin Bank Syariah (0.874654), Mandiri Syariah (0.841564), and BNI Syariah (0.813395).

Then the result of determinan sharia bank efficiency as below:

TABEL 3. T TESTING RESULTS FOR THE SIGNIFICANCE OF THE MODEL COEFFICIENT OF DATA REGRESSION PANEL. * SIGNIFICANT TO SIGNIFICANT LEVELS (A) BY 5%.

Dependen Variabel	Independen Variabel	Koefisien Regresi	Standar Error	Statistik t	P-value (Prob.)
EFISIENSI	Konstanta	1,009119	0,063244	15,95592	0,0000
	NPF_GROSS	-1,666159	0,471622	-3,532829	0,0008*
	CAR	0,004488	0,003269	1,372881	0,1752
	SIZE	0,964983	2,367050	0,407673	0,6850
	BOPO	-0,108399	0,030741	-3,526227	0,0008*
	FDR	0,070168	0,033049	2,123136	0,0381*
	DUMMY	-0,024203	0,082808	-0,292282	0,7711

- The NPF GROSS variable of EFFICIENCY with the value of regression coefficient (Coefficient) of -1.666159 (negative influence) and P-value (Prob.) of 0.0008 (P-value < 0.05) so that the test can be concluded that there is a significant negative influence NPF_GROSS to EFFICIENCY of -1.666159
- The effect of the bank's CAR on technical efficiency is demonstrated by the value of $\beta_2 = 0.004488$ with a probability of 0.1752 which means the CAR value affects positively but insignificant to the level of technical efficiency of Sharia banking.
- The effect of the bank's SIZE on technical efficiency is demonstrated by the value of $\beta_3 = 0.964983$ with a probability of 0.6850 which means the SIZE value affects positively but insignificant to the level of technical efficiency of sharia banking
- BOPO variables against EFFICIENCY with a regression coefficient value (Coefficient) of -0.108399 (negative influence) and P-value (Prob.) of 0.0008 (P-value < 0.05) so that testing can be concluded that there is a significant negative influence on BOPO To EFFICIENCY of -0.108399
- Variable FDR to EFFICIENCY with a regression coefficient value (Coefficient) of 0.070168 (positive influence) and P-value (Prob.) of 0.0381 (P-value < 0.05) so that testing can be concluded that there is a significant positive effect of FDR To EFFICIENCY of 0.070168.

V. CONCLUSIONS AND SUGGESTION

A. Conclusion

- The Sharia Bank's 2010-2017 research period has not been fully efficient. In the period 2010-2017 only one relatively stable bank with high efficient bank BRI Syariah, while there are still banks that are not efficient and more efficient low. It continued to fluctuate until the year 2017.
- The variables used to describe the direction of influence in general in accordance with the hypotheses of previous research and study. Non Performing Financial (NPF) has a significant negative impact on the efficiency of sharia banking in Indonesia, Capital Adequacy ratio (CAR) is positively influential but not significant to the efficiency of Syariah in Indonesia, SIZE Positively influential but not significant to the efficiency of Sharia banking in Indonesia, the operational burden on operating income (BOPO) affects negatively but and significantly to the efficiency of Sharia banking in Indonesia, Financing To Deposit Ratio (FDR) positively and significantly affects the efficiency of banking in Indonesia. DUMMY explained there is no difference in EFFICIENCY value between government banks and private banks.

B. Suggestion

- Minimizing the risk of NPF in several ways such as improving the performance of financing analysts that identifies the financial condition of the customer, so that it can prevent before the undesirable occurrence of the problem financing. It can then form a reserve of loss of value (CKPN) for financial and non-financial assets in accordance with applicable financial accounting standards. Therefore, sharia banks must have a set of procedures to form adequate backups. So that more Sian will face financing risk. Sharia banks must also maintain sufficient capital and secure liquidity policies.
- Keeping BOPO as efficient as possible so that the bank's financial quality is better so that sharia banks can expand more freely by raising new products

according to research & Development conducted by the bank. Some things can be done to reconsider the BOPO is by evaluating all forms of bank spending such as rent, use of third party services, and tighten efficient and economical training for the human resources of Sharia banking.

- Maximizing the quality of FDR needs to be taken seriously in such a strong and intensive monitoring. In the current condition, even the monitoring is still done. Smooth financing Monitoring is a continuous development for customers. This strategy should be able to maintain the financing quality of each bank so that the financial ratio remains in healthy condition and avoid the problematic financing.

REFERENCES

- [1] Rose, Peter S, 1995. Commercial Bank Management. Illinois, Irwin
- [2] Hempel, George H., Alan B. Coleman, Donald G. Simonson, 1994. Bank Management Text And Cases, John Wiley & Sons.
- [3] Farrell, M.L. 1957. The Measurement of Productive Efficiency, Journal of The Royal Statistical Society, 120, p.253-281
- [4] to Muhamad Nadratuzzaman Hosen, 2014 "EfisiEnsi Perbankan di indonesia: bank syari'ah vs bank konvEnsional" Buletin Ekonomi Moneter dan Perbankan, Volume 18, Nomor 3.
- [5] Silkman Richard H. ed. 1986. *Measuring Efficiency: An Assesment of Data Envelopment Analysis*. Jossey-Bass Inc., Publishers.
- [6] Berger, A.N. dan Humphrey, D.B. 1997. Efficiency of financial institutions: International survey and directions for future research. European Journal of Operational Research, 98, 175-212. Emerald: Group Publishing Limited.
- [7] Molyneux, P dan Iqbal M. 2008. *Banking and Financial Systems*, London:Palgrave Macmillan.
- [8] Ruslan Dede. 2016. Analysis Efficiency Production and Strategies of Small-Medium Scale Enterprises. Advances in Economics, Business and Management: Research. Atlantis-Press.com
- [9] Nadiyah Hidayati I, H Siregar, Syamsul H Pasaribu 2017. Determinan of Efficiency of islamic banking in Indonesia. Jurnal Buletin Ekonomi Moneter dan Perbankan Volume 20, Nomor 1, Juli 2017. Bogor

