IDEAS FOR 21ST CENTURY EDUCATION
Ideas for 21st Century Education

Editors
Ade Gafar Abdullah, Ida Hamidah, Siti Aisyah, Ari Arifin Danuwijaya, Galuh Yuliani & Heli S.H. Munawaroh
Universitas Pendidikan Indonesia, Bandung, Indonesia
Table of contents

Preface xi
Acknowledgments xiii
Organizing committees xv

Adult Education (ADE)
Practicing critical thinking through extensive reading activities 3
N. Husna
Teaching–learning sequence: Designing ionic bonding concept through model of educational reconstruction 9
E. Nursa’adah, L. Lilihasari & A. Mudzakir

Art Education (AED)
Design-based research to explore Luk Keroncong as vocal technique exercise 17
R. Milyartini

Business Education (BED)
The effect of psychological contract in improving university effectiveness 25
A.L. Kadiyono, R.A. Sulistiobudi & M. Batubara
Event as a means to educate youth through the volunteers program 31
D.R. Erlandia & I. Gemiharto
Stress at work and well-being: Study of stress level at work to improve employee well-being on Pertamina’s operators with standard ‘Pertamina Way’ in Bandung 37
M. Batubara

Course Management (CMT)
Preceptors’ perceptions of preceptorship at Surgical Care Room General Hospital Haji Adam Malik Medan 45
R.E. Nurhidayah, Y. Aryani & C.T. Siregar

Curriculum, Research and Development (CRD)
Improving the competences of vocational teachers: Graduate profile and learning outcomes of the agro-industry technology education program 51
M.N. Handayani
Authentic assessment analysis based on the KKNI curriculum in applied statistics learning 55
V. Yustitia & I.S. Wardani
The career competence profile of public elementary school students in Jakarta, Indonesia 61
A. Tjalla & H. Herdi
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Foundation (EDF)</td>
<td></td>
</tr>
<tr>
<td>Promoting undergraduate students’ critical thinking skills in zoology vertebrate courses</td>
<td>67</td>
</tr>
<tr>
<td>S. Sa’adah, F. Sudargo &amp; T. Hidayat</td>
<td></td>
</tr>
<tr>
<td>Information processing capability in the concept of biodiversity</td>
<td>71</td>
</tr>
<tr>
<td>S. Rini, A. Rahmat, T. Hidayat, M. Gemilavati &amp; D. Firgiawan</td>
<td></td>
</tr>
<tr>
<td>The contribution of creative thinking skills to students’ creativity on enzyme kinetics practical projects using local materials</td>
<td>75</td>
</tr>
<tr>
<td>D.K. Sari, A. Permanasari &amp; F.M.T. Supriyanti</td>
<td></td>
</tr>
<tr>
<td>The effect of ‘Everyone is a teacher here’ strategy on students’ results in geography</td>
<td>79</td>
</tr>
<tr>
<td>M. Melitia, G.N. Nindyra &amp; Z.K. Habibah</td>
<td></td>
</tr>
<tr>
<td>Students’ misconceptions on titration</td>
<td>83</td>
</tr>
<tr>
<td>H.R. Widarti, A. Permanasari &amp; S. Mulyani</td>
<td></td>
</tr>
<tr>
<td>Parent-adolescent conflict: Is there a difference of main sources between intergeneration?</td>
<td>89</td>
</tr>
<tr>
<td>T.H. Dahlan, I.H. Mishbach &amp; D.Z. Wyandini</td>
<td></td>
</tr>
<tr>
<td>Students’ mental model profile of microorganism after the implementation of mental model-based microbiology course</td>
<td>93</td>
</tr>
<tr>
<td>Y. Hamdiyati, F. Sudargo, S. Redjeki &amp; A. Fitriani</td>
<td></td>
</tr>
<tr>
<td>Building meaningful learning through coherence learning among mathematics, language and science lessons</td>
<td>97</td>
</tr>
<tr>
<td>A. Permanasari, T. Turmudi, V. Vismia &amp; B. Rubini</td>
<td></td>
</tr>
<tr>
<td>The analysis of junior high schools’ educational facilities, infrastructure needs and location determination based on a social demand approach and geographical information system</td>
<td>101</td>
</tr>
<tr>
<td>T.C. Kurniatun, E. Rosalin, L. Somantri &amp; A. Seriyo</td>
<td></td>
</tr>
<tr>
<td>Debriefing teachers’ competence based on reflective teaching to facilitate creative thinking skills of elementary school students</td>
<td>105</td>
</tr>
<tr>
<td>R. Witarsa, A. Permanasari &amp; U.S. Saud</td>
<td></td>
</tr>
<tr>
<td>Global Issues in Education and Research (GER)</td>
<td></td>
</tr>
<tr>
<td>The awareness of risk prevention level among urban elementary school students</td>
<td>113</td>
</tr>
<tr>
<td>R. Effendi</td>
<td></td>
</tr>
<tr>
<td>The role of academic self-management in improving students’ academic achievement</td>
<td>117</td>
</tr>
<tr>
<td>A.L. Kadiyono &amp; H. Hafiar</td>
<td></td>
</tr>
<tr>
<td>Identifying research supporting factors: What should institutions provide?</td>
<td>121</td>
</tr>
<tr>
<td>M.C. Sondari, C. Rejito &amp; L. Layyinaturobantiyah</td>
<td></td>
</tr>
<tr>
<td>Science, technology, engineering, and mathematics literacy skills: Profiles and comparison amongst prospective science teachers</td>
<td>127</td>
</tr>
<tr>
<td>C. Rochman, D. Nasrudin &amp; H.Y. Suhendi</td>
<td></td>
</tr>
<tr>
<td>Developing community-based media on environmental education to conserve mangrove and coral ecosystem in Kepulauan Seribu</td>
<td>131</td>
</tr>
<tr>
<td>D. Vivanti, M. Miarsyah, R. Komala &amp; A. Suryanda</td>
<td></td>
</tr>
<tr>
<td>Social class and access to higher education in the secondary schools: Supporting the preparation of lessons and access for national exam</td>
<td>135</td>
</tr>
<tr>
<td>The gap of the economic background of the parents towards student achievement</td>
<td>139</td>
</tr>
<tr>
<td>Perception of students towards campus internationalization</td>
<td>143</td>
</tr>
<tr>
<td>P.E. Arinda, R. Apriliandi, R. Pranacita &amp; A.G. Abdullah</td>
<td></td>
</tr>
<tr>
<td>The influence of gender differences in mathematics achievement of high school students</td>
<td>147</td>
</tr>
<tr>
<td>A. Riyanti, R. Anggraini, S. Nurohim, S. Komariah &amp; A.G. Abdullah</td>
<td></td>
</tr>
</tbody>
</table>
Student participation in the tutoring program (comparative study between socio-economic schools high and low)

Factors affecting the study completion time of Bogor Agricultural University’s graduate students and its managerial implications
F. Siregar, D. Syah & N. Nahrowi

The location analysis of junior high schools in West Java Coastal Zone
T.C. Kurniatun, E. Rosalin, L. Somantri & A. Setiyoko

The inclusion of gender issues in global education in contemporary Indonesia
E. Haryanti

Learning Teaching Methodologies and Assessment (TMA)
The relationship between metacognitive skills and students’ achievement analyzed using problem based learning
B. Milama, N.A. Damayanti & D. Murniati

Perception towards school physics learning model to improve students’ critical thinking skills
N. Marpaung, L. Liliasari & A. Setiawan

The implementation of 5E learning cycle model-based inquiry to improve students’ learning achievements
A. Malik, Y. Dirgantara & A. Agung

Development and validation of creative thinking skills test in the project of laboratory apparatus modification
C. Diawati, L. Liliasari, A. Setiabudi & B. Buchari

The implementation of guided inquiry learning to improve students’ understanding on kinetic theory of gases
D. Nanto, R.D. Iridat & Y.A. Bolkiah

Creativity assessment in project based learning using fuzzy grading system

Students’ attitude towards mobile-assisted language assessment: A case of speaking class

Student’s understanding consistency of thermal conductivity concept
I.S. Budiarti, I. Suparmi, A. Cari, V. Vyantii, C. Winarti & J. Handhika

Students’ science literacy skills in ecosystem learning
M. Arohman

Developing historical thinking skills in learning history through teaching and learning methods
E.M. Karina, D. Supardan & A. Zainul

The effect of the outdoor learning model on biology learning motivation in SMAN 2 Bekasi on biodiversity matter
E. Suryani

Spatial thinking in frame-based learning of plant anatomy and its relation to logical thinking
E. Ernayanti, N.Y. Rustaman & A. Rahmat

Hypnoteaching and learning motivation enhancement
F. Faucan & L. Indriastuti

The development of an Augmented Reality (AR) technology-based learning media in metal structure concept
F.S. Irwansyah, I. Ramdani & I. Farida

The effectiveness of the local culture-based physics model in developing students’ creative thinking skills and understanding of the Nature of Science (NOS)
I.W. Suastra
Developing creative thinking ability and science concept understanding through SCSS problem solving oriented performance assessment teaching at primary schools  
I.N. Jampel & I.W. Widiana  
Identification of consistency and conceptual understanding of the Black principle  
C. Winarti, A. Cari, I. Suparmi, J. Budiarti, H. Handhika & V. Viyanti  
Relationship between vocational/senior high school educational background and the generic medical ability of midwifery students on a microbiology course  
Y. Saparudin, N. Rustaman & A. Fitriani

Other Areas of Education (OAE)
Identification of scientific literacy aspects of a science textbook for class V of elementary school  
S.S. Nurfaidah  
*Arung Masala Uli-e*: The idea of the leader in Buginese myth  
A.B.T. Bandung  
The effectiveness of educational qualifications in organizational career development for education staff  
A.Y. Rahyasih & D.A. Kurniady  
Adventure-based counseling model to improve students’ adversity intelligence  
N. Rusmana & K. Kusherdynana  
The effectiveness of implementing an experience-based counseling model in reducing the tendency of students towards bullying behavior  
N. Rusmana, A. Hafina & I. Saripah  
The enhancement of self-regulated learning and achievement of open distance learning students through online tutorials  
U. Rahayu, A. Widodo & S. Redjeki

Pedagogy (PDG)
Promoting individually-tailored teacher development program using the dynamic model of educational effectiveness research  
S.N. Azkiyah  
Students’ understanding, communication skills and anxiety of mathematics in an Islamic Junior High School using brain-based learning  
T. Dahlan  
Realizing a good education in an Indonesian university context  
A. Aamurrahman, F.A. Hamied & E. Emilia  
Self-criticism on the teacher-training program from the faculty of education  
A. Sofyan  
The implementation of asking and group competition learning strategies to improve students’ creative thinking skills  
D.F. Wulandari, N. Rustaman, A. Setiawan & I. Hamidah  
Implementation of the government’s law on the management of Islamic religious education in the community  
D.F. Sjoraida, A. Asmawi, D. Mariana & R.K. Anwar  
Education of cultural and national characteristics based on local wisdom through social studies at SMP Negeri 1 Singaraja school, Bali  
I.W. Kertih  
The impact of a STEM project-based learning approach in vocational high school on students’ mathematical communication ability  
A. Ismayani & Y.S. Kasunah
Students’ attitude to biodiversity in Ciptagelar indigenous village
H.W. Kelana, T. Hidayat & A. Widodo

Determinate factors of mathematics problem solving ability toward spatial, verbal and mathematical logic intelligence aspects
K. Kusaeri & B. Sholeh

Relationship between factors that improve student achievement in primary teacher education institutes
S. Ratnaningsih

Ubiquitous Learning (UBL)
Developing dynamic instructional media to promote explorative activities in geometry lessons
S. Sariyasa

Internship information system availability on vocational high school websites
N. Amelia, A.G. Abdullah, M. Somantri & A.A. Danuwijaya

High school students’ perceptions of the application of Edmodo to English language learning
P. Purnawarman, A.A. Danuwijaya & A.R. Ningrum

A web-based model to enhance competency in the interconnection of multiple levels of representation for pre-service teachers
I. Farida, L. Liliasari, W. Sopandi & D.H. Widyantoro

Author index
Preface

Invited speakers, Distinguished Guests, Presenters, Participants, and Authors of Asian Education Symposium.

It is such an honor to have had you at the Asian Education Symposium (AES) 2016, organized by the School of Postgraduate Universitas Pendidikan Indonesia. The AES 2016 is an international refereed conference dedicated to the advancement of theories and practices in education. The AES 2016 promotes collaborative excellence between academicians and professionals in education. The conference aimed to develop a strong network of researchers and pioneers in education worldwide. The aim of AES 2016 was to provide an opportunity for academicians and professionals from various educational fields with cross-disciplinary interests to bridge the knowledge gap, promote research esteem and the evolution of pedagogy.

The AES 2016 main theme was Ideas for 21st Century Education. Education plays an important role in countries all over the globe. It will enable countries to achieve sustainable development goals by 2030. As for countries in the Asian region, education is a vehicle that can move people’s mobility particularly in a time when we are welcoming the Asian Economic Community. It is without a doubt, there is a need to develop a strong collaboration and partnership among countries, both at regional and international levels. This symposium was one of our attempts to provide space for networking among academics and researchers in education. It is our hope that the symposium would contribute to the development of education as a distinct body of knowledge.

This symposium was a platform for us to disseminate and discuss our research findings. It is our expectation that the conversation from this symposium will inform policy and practices of education. It was also hoped that this symposium will open up future research on education, while at the same allowing all participants to expand their network. It is our hope that during this two-day symposium, all the participants had engaged in fruitful and meaningful discussions.

This AES 2016 proceedings contains papers that have been subjected to a double blind refereeing process. The process was conducted by academic peers with specific expertise in the key scopes and research orientation of the papers. It provides an opportunity for readers to engage with a selection of refereed papers that were presented during the symposium. The scopes of this symposium proceedings are: i) art education, ii) adult education, iii) business education, iv) course management, v) curriculum, research and development, vi) educational foundations, vii) learning/teaching methodologies and assessment, viii) global issues in education and research, ix) pedagogy, x) ubiquitous learning, and xi) other areas of education. We strongly believe that the selected papers published in the symposium proceedings will pay a significant contribution to the spread of knowledge.

We also would like to express our gratitude to all the keynote speakers from overseas who have travelled to our country to deliver and exchange their ideas. Our appreciation also goes to all the committee members who have worked hard to make this event possible. Once again, deepest gratitude for everybody’s participation to the symposium as well as the proceedings.

Ade Gafar Abdullah,
Ida Hamidah,
Siti Aisyah,
Ari Arifin Danuwijaya,
Galuh Yuliani &
Heli S.H. Munawaroh

Universitas Pendidikan Indonesia, Bandung, Indonesia
Acknowledgments

Furqon—Universitas Pendidikan Indonesia, Indonesia  
Asep Kadarohman—Universitas Pendidikan Indonesia, Indonesia  
Edi Suryadi—Universitas Pendidikan Indonesia, Indonesia  
Aim Abdulkarim—Universitas Pendidikan Indonesia, Indonesia  
Didi Sukyadi—Universitas Pendidikan Indonesia, Indonesia  
M. Solehudin—Universitas Pendidikan Indonesia, Indonesia  
Takuya Baba—Hiroshima University, Japan  
Christine C.M. Goh—Nanyang Technological University, Singapore  
Allan L. White—University of Western, Australia  
Tuğba Öztürk—Ankara University & University of Philippines, Philippines  
Vasilis Strogilos—NIE Nanyang Technological University, Singapore  
Tom Nelson Laird—Indiana University, US  
Simon Clarke—The University of Western Australia, Australia  
Diana Baranovich—University of Malaya, Malaysia  
Taehee Kim—Youngsan University, Busan South Korea  
Ikuro Yamamoto—Kinjo Gakuin University Japan, Japan  
Numyoot Songthanapitak—President of RAVTE  
Frank Bünning—University of Magdeburg, Germany  
Margarita Pavlova—UNESCO-UNEVOC Center, Hongkong  
Maizam Alias—Univestiti Tun Hussein Oman, Malaysia  
Takahashi Mitsuru—Tohoku University, Japan  
Shahbaz Khan—Director and Representative of UNESCO Indonesia, Indonesia  
Gumpunat Boriboon—Srinakharinwirot University, Bangkok, Thailand
Organizing committees

ADVISORS

Prof. Furqon
Prof. Asep Kadarohman
Dr. Edi Suryadi
Prof. Aim Abdulkarim
Prof. Didi Sukyadi
Dr. M. Solehuddin
Prof. Takuya Baba
Prof. Christine C.M. Goh
Prof. Allan L. White
Dr. Tuğba ÖzTÜRK
Prof. Tom Nelson Laird
Prof. Simon Clarke
Dr. Diana Baranovich
Prof. Taehee Kim
Prof. Ikuro Yamamoto
Assoc. Prof. Numyoot Songthanapitak
Prof. Frank Bünning
Dr. Margarita Pavlova
Prof. Maizam Alias
Prof. Takahashi Mitsuru
Prof. Dr. Shahbaz Khan
Gumpanat Boriboon, Ph.D

CONFERENCE CHAIR

Prof. Anna Permanasari

COMMITTEE

Dr. Ida Hamidah
Dr. Ade Gafar Abdullah
Vina Adriany, Ph.D
Dr. Siti Nurbayani
Dr. Ana
Dr. Vanessa Gaffar
Dr. Dian Budiana
Dr. Siti Aisyah
Didin Wahyudin, Ph.D
Ari Arifin Danuwijaya, M.A.
Self-criticism on the teacher-training program from the faculty of education

A. Sofyan
Universitas Islam Negeri Syarif Hidayatullah, Jakarta, Indonesia

ABSTRACT: This study aims to describe problems with institutions and teacher training programs in the Faculty of Education and to find the solutions. The issue of how to develop a high-quality teacher is vitally important to the future of education in Indonesia. There were many unresolved issues, ranging from general low quality, uneven distribution, and the lack of standardization for institutions and teachers. All of these reasons added to the problems that already exist and affected everyone, including stakeholders, in making major decisions. More than one million teachers were becoming professional through Education Faculty with Teacher Training (PLPG or PPG) activities or portfolio assessments. However, the program has not significantly increased the quality of education in Indonesia. This paper is a self-criticism and self-evaluation for the Faculty of Education, in preparing the teacher training program.

1 INTRODUCTION

Issues around teachers in Indonesia are now shifting from one of shortages in the number of teachers to an uneven distribution. The ratios of teachers to students in Indonesia are now 1:15 (school) and 1:10 (madrasah); similar to Japan (1:17). However, in terms of quality, career coaching and the competence of teachers, we are still far below a decent standard. Referring to the teacher competency test results (UKG) that were implemented in 2015 and earlier, Indonesia gained an average score of below 50, which indicates a low level of teacher competence. Similarly, the teacher competence based on early competency testing (UKA), as a pre-requirement for teachers to follow the training (PLPG), showed low scores. Even after 9–10 days of PLPG training, teacher competence did not improve.

These low quality conditions were due to many factors, including the quality of the Institute of Teachers’ Education (so called LPTK), the raw input (the students entering LPTK were of low standard), and low levels of passion of LPTK alumni in being teachers. Teaching was not considered the best profession for well-educated children.

2 LITERATURE REVIEW

2.1 Profesional teachers

The teaching profession in Indonesia is defined as functional. This means that being a teacher requires special skills and cannot be done by just anyone. As mentioned in the Law of the Republic of Indonesia Number 14 (Year 2005, Chapter 1, Article 1, Paragraph 1), teachers are professional educators with the primary task of educating, teaching, guiding, directing, training, assessing, and evaluating students on early childhood education (ECD), formal education, primary education and secondary education. The professionalism of teachers is a necessity.

Being a professional is a job or activity carried out for the duration (generally) of a person's life that provides a source of income and requires expertise and skills, or skills that meet certain quality standards or norms and requires professional education (Chapter 1, Article 1, Paragraph 4).

Associated with the teaching profession, the law on teachers and lecturers (Chapter IV) mandated a teacher to have certain qualifications and competencies, outlined in the Minister of National Education (MONE) No. 16 of 2007. In regulating the standards of academic qualifications and competence of the teachers, it mentioned that all teachers, in both ECD, primary and secondary education, should have a minimum level of academic qualification, being a Diploma IV or Strata (S1) within the appropriate field, or similar, that could suit their students’ characters. In addition, teachers are required to show some competencies in their performance, across four integrated areas: pedagogical, personality, social, and professional (Cronbach et al., 1973).

Pedagogical competence shows an understanding and the application of the principles of learning and educational psychology. Personal competence
shows a behavior and noble spirit with an honest and good work ethic. Social competence is the ability to socialize well with learners, colleagues, and the wider community. Professional competence is mastering of the science of teaching.

The Faculty of Education in Indonesia, which produces teachers, is the LPTK. The LPTK is a college that was given the task by the Government for the procurement program of teachers in ECD, formal education, basic education, and secondary education, as well as to organize and develop pedagogy and non-educational aspects (Chapter 1, Article 1, Paragraph 14). Thus, LPTK is formally recognized by the Government to educate prospective teachers. In Indonesia, there are more than 250 LPTK; 13 are state LPTK, 19 are FKIP State University; and 234 are private LPTK.

According to Sujanto (2007), LPTK do not get adequate resources to prepare good prospective teachers. Also, there are few professors who pursue science education, and teacher training was considered a key factor resulting in the low education quality in Indonesia.

2.2 Tasks and competencies teacher

The Law of National Education System No. 20 (Year 2003, Article 39, Paragraph 2) stated that educators are professionals in charge of planning and implementing the learning process, assessing the results of learning, coaching and training, and conducting research and community service, particularly for educators at a college.

Furthermore, Article 40, Paragraph 2 stated the obligations of teachers as follows: (1) to create an atmosphere of meaningful, fun, creative, dynamic and dialogical education; (2) to be a committed professional and improve the quality of education; and (3) to set an example and keep the good name of the institution, profession and position, in accordance with the trust given to him.

Operationally the statute of teachers and lecturers of Article 20 states that, in carrying out professional duties, teachers are obliged to plan learning and implement the learning process to high quality, as well as assess and evaluate learning outcomes. Thus, teachers, as one component of the subsystem of national education, which are directly in contact with the ‘raw input’, have an important role, especially in preparing students to not only face the future with confidence, but also build with purpose and responsibility in the face of new challenges in the era of globalization.

The roles played by teachers in the classroom to learners, as stated by Gagne (1977), are to plan for learning, manage learning and instruct. However, Petres, as quoted by Sudjana & Rivai (2002), said there are three tasks and responsibilities of teachers: (1) the teacher as a teacher; (2) the teacher as a mentor; and (3) the teacher as class administrator. The third task of the teacher is the primary duty of the teaching profession. Teacher stresses the duty plan on implementation and improvement of the learning system. In this position, the teacher’s role is very big in the development of learning, which is in charge, as well as being a source, of learning activities. Teachers must be full of initiative and creativity, because teachers know the circumstances, especially with regard to the characteristic of learners and their backgrounds.

Teachers as mentors apply pressure to show that the teacher’s task is not only to teach, but also to provide assistance to learners in solving life problems they are faced with, in regard of knowledge, values, and skills towards the formation of attitudes and personality. Strictly speaking, this is an aspect of education, which is to not only convey knowledge, but also about personality development and the formation of values in students. While the task as administrator is essentially the link between the management areas of learning and management in general.

Thus, the study of the performance of a systematic effort of the profession, through an accurate description of the knowledge skills, tasks, and other critical capabilities, is meant to see a vocational profession as a teachers, especially in the classroom. According to Brophy (1992), mastery learning principles will depict skilled teachers in managing learning activities within the scope of the tasks: plan, organize, lead and evaluate. This concept, in a brief study, can be grouped into clusters of planning, implementation and evaluation of learning.

Competency comes from the word that means the ability or skill. Mulyasa (2007) suggest that teacher competence, as a descriptive of a qualitative nature of teacher behavior, appears to be entirely meaningful. The opinion gives the meaning that the competence of teachers is a qualitative description of the nature of teacher behaviors. Stated in the law of the Republic of Indonesia Number 14 (Year 2005), competence is a set of knowledge, skills and behaviors that must be owned, lived and ruled by a teacher or lecturer in performing the duties of professionalism.

3 RESEARCH METHODS

This study followed a qualitative approach by narrative. The data were analyzed by descriptive analysis, to describe the phenomena of the teacher profession program in the Faculty of Education or LPTK.
4 RESULTS AND DISCUSSION

In accordance with the mandate of law no. 14 of 2005 on Teachers and Lecturers, teachers must be qualified as professional academics, of which their qualification and competence have to be proved by a teaching certificate. For this task, the government appointed several LPTK as the organizers. Starting in 2007, teachers who met minimum academic qualifications, of Diploma IV or S1 with working experience of ten years minimum, were prioritized to obtain teacher certification using portfolio assessment, PLPG, and PPG.

After three years, the portfolio was deemed to be not objective enough, because many documents of the portfolio were fabricated. Furthermore, the consortium of teacher certification (KSG) agreed to use education and training of the teaching profession (PLPG) as a media to certify teachers. PLPG participants were invited to attend PLPG for 90 hours (8–10 days). The numbers of teachers who could follow the program were limited based on the quota for each region. By 2015, the government had a target to certify all teachers who served before 2005 through a portfolio or PLPG. However, they failed to achieve this target. Hundreds of thousands of teachers were still not certified.

Regarding the teachers competencies, some findings were uncovered as follows: based on the competency test results for prospective teachers, the average teachers' scores of mastery of content was still very low; only 44% of the teachers answered 50% of the questions correctly. It was recorded that the teachers were most poorly qualified in the subjects of physics and mathematics, while they were best at English. In addition, the percentage of teachers' pedagogic ability, based on the test results from 2015, was only 56.69%. Others findings on the teachers' competence revealed the quality of teachers was uneven amongst the Indonesian islands.

Research on the UKG showed no significant difference between the teachers at district and city areas. Teacher competence, based on the UKG scores, decreased significantly after the age of 41-years-old. Moreover, there was no significant difference between the certified and non-certified teachers. The UKG scores of teachers who teach at government schools were higher than those of teachers at private schools. The higher qualifications of the teachers, the better of the UKG score. PLPG was expected to overcome many obstacles stated previously. However, some policies were considered to slow down the process. For instance, the regulation that allows graduate students from non-teacher education institutes to become a teacher by following the PLPG program underestimated the teaching profession. This condition is very much different from the medical profession, of which only medical graduates can become a doctor to follow the physician profession education. This policy should be reconsidered since the current ratio of teachers to students, being 1 to 15, is similar to the ratio in developed countries. Therefore, it is not necessary to create teachers via PPG.

5 CONCLUSIONS

The quality of national education is based on the Faculty of Education in preparing professional teachers. The certification programs by portfolio assessment or PLPG did not significantly increase teaching skills. Therefore, the Faculty of Education must reform the curriculum and improve the teaching skills for preparing the Teacher Profession Program (PPG) after undergraduate level.

REFERENCES

Author index

Abdullah, A.G. 135, 139, 143, 147, 153, 195, 199, 347
Agung, A. 181
Amelia, N. 347
Arohman, M. 207
Aryani, Y. 45
Bandung, A.B.T. 263
Batubara, M. 25, 37
Bolkiah, Y.A. 189
Budiarti, I.S. 203
Cari, A. 203, 249
Dahlan, T. 293
Dahlan, T.H. 89
Danuwijaya, A.A. 195, 199, 347, 351
Diawati, C. 185
Effendi, R. 113
Erlandia, D. 31
Farida, I. 233, 359
Fauzan, F. 229
Firgiawan, D. 71
Gemilawati, M. 71
Habibah, Z.K. 79
Hafiar, H. 117
Hafina, A. 277
Hamidi, D.L. 195
Hamidah, I. 305
Hamied, F.A. 297
Handayani, M.N. 51
Handhika, H. 249
Handhika, J. 203
Haryanti, E. 165
Herdies, H. 61
Hidayat, T. 67, 71, 327
Husna, N. 3
Indriastuti, L. 229
Iradat, R.D. 189
Irwansyah, F.S. 233
Ismayani, A. 321
Jampel, I.N. 243
Kadiyono, A.L. 25, 117
Karima, E.M. 211
Kartika, R. 153
Kelana, H.W. 327
Kerti, W. 317
Komala, R. 131
Komariyah, S. 147
Konaah, A. 135
Kurniady, D.A. 267
Kurniatun, T.C. 101, 161
Kusari, K. 333
Kusheidyana, K. 271
Kusumah, Y.S. 321
Layyinaturrobiani, L. 121
Liliasari, L. 9, 177, 185, 359
Lukman, A.A. 135
Maftuh, B. 139
Malik, A. 181
Marina, D. 311
Marpaung, N. 177
Meilin, M. 79
Miamysrah, M. 131
Milama, B. 173
Milyartini, R. 17
Misbach, I.H. 89
Mudzakir, A. 9
Mulyani, S. 83
Murniati, D. 173
Nahrowi, N. 157
Nandiyanto, A.B.D. 195, 199
Nanto, D. 189
Nasrudin, D. 127
Nindya, G.N. 79
Ningrumb, A.R. 351
Nurbayani, S. 135
Nurfaiadah, S.S. 259
Nurhidayah, R.E. 45
Nurohimi, S. 147
Nursa’adah, E. 9
Nurulloh, M. 195
Permanasari, A. 75, 83, 97, 105
Prancitira, R. 143
Purnawarman, P. 351
Rahayu, U. 283
Rahmat, A. 71, 223
Rahyasih, A.Y. 267
Ramdani, I. 233
Ratnaningsih, S. 337
Rejeki, S. 93, 283
Rejito, C. 121
Rini, S. 71
Riyanti, A. 147
Rochman, C. 127
Rosalin, E. 101, 161
Rubini, B. 97
Rubini, N. 271, 277
Rusmanan, N. 253, 305
Rustaman, N.Y. 223
Sa’adah, S. 67
Saparudin, Y. 253
Sari, D.K. 75
<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saripah, I.</td>
<td>277</td>
</tr>
<tr>
<td>Saripudin, S.</td>
<td>195</td>
</tr>
<tr>
<td>Sariyasa, S.</td>
<td>343</td>
</tr>
<tr>
<td>Saud, U.S.</td>
<td>105</td>
</tr>
<tr>
<td>Setiabudi, A.</td>
<td>185</td>
</tr>
<tr>
<td>Setiawan, A.</td>
<td>177, 305</td>
</tr>
<tr>
<td>Setiyoko, A.</td>
<td>101, 161</td>
</tr>
<tr>
<td>Sholeh, B.</td>
<td>333</td>
</tr>
<tr>
<td>Sirait, L.</td>
<td>139</td>
</tr>
<tr>
<td>Siregar, C.</td>
<td>101, 161</td>
</tr>
<tr>
<td>Siregar, F.</td>
<td>157</td>
</tr>
<tr>
<td>Sjoraida, D.</td>
<td>311</td>
</tr>
<tr>
<td>Sofyan, A.</td>
<td>301</td>
</tr>
<tr>
<td>Somantri, L.</td>
<td>101, 161</td>
</tr>
<tr>
<td>Somantri, M.</td>
<td>347</td>
</tr>
<tr>
<td>Sondari, M.</td>
<td>121</td>
</tr>
<tr>
<td>Sopandi, W.</td>
<td>359</td>
</tr>
<tr>
<td>Suastra, I.</td>
<td>239</td>
</tr>
<tr>
<td>Sudargo, F.</td>
<td>67, 93</td>
</tr>
<tr>
<td>Sugiarti, A.</td>
<td>135</td>
</tr>
<tr>
<td>Suhendi, H.</td>
<td>127</td>
</tr>
<tr>
<td>Sulastri, T.</td>
<td>139</td>
</tr>
<tr>
<td>Sulistiohadi, R.A.</td>
<td>25</td>
</tr>
<tr>
<td>Supardan, D.</td>
<td>211</td>
</tr>
<tr>
<td>Suparmi, I.</td>
<td>203, 249</td>
</tr>
<tr>
<td>Supriyanty, F.</td>
<td>T. 75</td>
</tr>
<tr>
<td>Suryana, A.</td>
<td>131</td>
</tr>
<tr>
<td>Suryani, E.</td>
<td>217</td>
</tr>
<tr>
<td>Syah, D.</td>
<td>157</td>
</tr>
<tr>
<td>Tjalla, A.</td>
<td>61</td>
</tr>
<tr>
<td>Triawan, M.</td>
<td>139</td>
</tr>
<tr>
<td>Turmudi, T.</td>
<td>97</td>
</tr>
<tr>
<td>Utami, L.</td>
<td>153</td>
</tr>
<tr>
<td>Vismaia, V.</td>
<td>97</td>
</tr>
<tr>
<td>Vivanti, D.</td>
<td>131</td>
</tr>
<tr>
<td>Viyanti, V.</td>
<td>203, 249</td>
</tr>
<tr>
<td>Wardani, I.</td>
<td>55</td>
</tr>
<tr>
<td>Widarti, H.</td>
<td>83</td>
</tr>
<tr>
<td>Widi, I.W.</td>
<td>243</td>
</tr>
<tr>
<td>Widodo, A.</td>
<td>283, 327</td>
</tr>
<tr>
<td>Widyantoro, D.</td>
<td>H. 359</td>
</tr>
<tr>
<td>Wilodati, W.</td>
<td>153</td>
</tr>
<tr>
<td>Winarti, C.</td>
<td>203, 249</td>
</tr>
<tr>
<td>Wulandari, D.</td>
<td>F. 305</td>
</tr>
<tr>
<td>Wyandini, D.</td>
<td>Z. 89</td>
</tr>
<tr>
<td>Yustitia, V.</td>
<td>55</td>
</tr>
<tr>
<td>Yusuf, H.M.</td>
<td>153</td>
</tr>
<tr>
<td>Zainul, A.</td>
<td>211</td>
</tr>
</tbody>
</table>