

Bacterial

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2nd ICEL 2014

THE SECOND INTERNATIONAL CONFERENCE ON EDUCATION AND LANGUAGE



20, 21, 22 MAY 2014

Bandar Lampung University, Indonesia

PROCEEDINGS

Hosted by
Teacher Training and Education Faculty (FKIP),
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PROCEEDINGS

**THE SECOND INTERNATIONAL CONFERENCE
ON EDUCATION AND LANGUAGE**

2nd ICEL 2014

20 -22 MAY 2013



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PREFACE

The activities of the International Conference are in line and very appropriate with the vision and mission of Bandar Lampung University (UBL) to promote training and education as well as research in these areas.

On behalf of the Second International Conference of Education and Language (2nd ICEL 2014) organizing committee, we are very pleased with the very good responses especially from the keynote speakers and from the participants. It is noteworthy to point out that about 80 technical papers were received for this conference

The participants of the conference come from many well known universities, among others: University of Wollongong, NSW Australia, International Islamic University Malaysia, Kyoto University (Temple University (Osaka), Japan - Jawaharlal Nehru University, New Delhi, India - West Visayas State University College of Agriculture and Forestry, Lambunao, Iloilo, Philippine - Bahcesehir University, Istanbul, Turkey - The Higher Institute of Modern Languages, Tunisia - University of Baku, Azerbaijan - Sarhad University, KPK, Pakistan - Medical Sciences English Language Teacher Foundation Program, Ministry of Health, Oman - Faculty School of Arts and Sciences, Banga, Aklan Philippines - Sultan Ageng Tirtayasa, Banten, - Pelita Harapan University, Jakarta - STIBA Saraswati Denpasar, Bali - University of Muhammadiyah Yogyakarta - Ahmad Dahlan University Yogyakarta - Sriwijaya University, Palembang - Islamic University of Malang - IAIN Raden Fatah Palembang - Universitas Diponegoro, Semarang, Indonesia - Universitas Haluoleo Kendari - State Islamic University of Sunan Gunung Djati, Bandung - Tadulako University, Central Sulawesi - Sanata Dharma University - Lampung University and Open University,

I would like to express my deepest gratitude to the International Advisory Board members, sponsors and also to all keynote speakers and all participants. I am also grateful to all organizing committee and all of the reviewers who contribute to the high standard of the conference. Also I would like to express my deepest gratitude to the Rector of Bandar Lampung University (UBL) who gives us endless support to these activities, so that the conference can be administrated on time.

Bandar Lampung, 20 May 2014

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Table Of Content

Preface	ii
Steering Committee.....	iii
Table of Content	iv

Keynote Speakers :

1. Recent Trends In Asian ESP – Amporn Sa-ngiamwibool	I-1
2. Improving Teaching And Research Capacity In Indonesia Education Through Asean Collaboration - Didik Sulistyanto	I-6
3. Foreign Language In Nation Building: A Case Study Of India – Gautam Kumar Jha	I-11
4. The Influence Of Learning Styles, Motivation, And Types Of School On Students’ English Achievement At Junior High Schools In Bandar Lampung – Harpain	I-17
5. Teachers And Students’ Perceptions Of Communicative Competence In English As A Foreign Language In Indonesia – Hery Yufrizal	I-26
6. Enhancing Teaching Capability Through Thailand’s Teacher TV Program - Rapin Chayvimol	I-34
7. Is Cooperative Learning Appropriate Instructional Methodology To Support The Implementation of Curriculum 2013 in indonesia? : Theoretical And Cultural Analysis - Yanuar Dwi Prastyo	I-41

Paper Presenter :

1. The Model Of The Development Of Instructional Material For Enhancing Students’ English Speaking Skills At Elementary Schools In Bandar Lampung - Akhmad Sutiyono	II-1
2. Error Correction And Feedback In Speaking : A Comparative Study Of Teacher (Lecturer) And Student Preferences In Responding Students’ Errors In Speaking At English Education Study Program - Bambang Irfani	II-8
3. Performance Assessment In Teaching EFL Reading In Indonesia: Viewed From First Language (Li) Use To Check Learners’ Comprehension - Candra Jaya	II-19
4. Deaf Education And Teachers Training In Zambia - Chibesa, R. Simbule.....	II-25
5. The Effectiveness Of Using Cooperative Learning Type Number Heads Together (NHT) Improving Reading Comprehension Of The Students At SMP N 20 Tangerang - Destiani Rahmawati.....	II-30
6. Fostering Collaborative Inquiry Learning Through Cloud-Based Application - Dony Saputra, Dedy Iskandar, Nasril Sany	II-37
7. SIPEBI: A Model Of Cultural Edutainment Web Portal As A Medium For Students’ Self-Directed-Learning And Alternative Assessment - Dony Saputra, Santo Tjhin, Tubagus Zufri	II-43
8. Bacteria Material In The Short Story Based On The Characters Of Punokawan For Biology Learning - Endah Rita Sulistya Dewi, Prasetyo	II-49
9. Teaching English Based On Character Education At Senior High School Metro - Fenny Thresia	II-53
10. Causes Of Private Tutoring In English: Perspectives Of Saudi Secondary School Students And Their Parents – Ghazi N. Alotaibi.....	II-60

11. Local Voices In Creative Writing – Harris Hermansyah Setiajid	II-66
12. Some Theories Of Educational Marketing – Hasbi	II-71
13. Problems In Developing Seminar Course For Biology Education Students – Herawati Susilo	II-81
14. Improving Students’ Speaking Skill Through Audio Visual Media At 4 th Grade Of Labschool Elementary School East Jakarta – Herlina	II-87
15. Teaching Speaking To Young Learners Through Role Play – Iin Inawati	II-97
16. Designing And Developing Learning Apps For Esl Learners – Learners Ismail Fayed, Azidah Abu Ziden	II-106
17. ESP Needs Analysis Based Syllabus Of Economics Faculty Students, Universitas “45” Makassar – Lalu Abdul Khalik.....	II-116
18. The Improvement Of Students' Ability To Learn Cell Biology And Discuss Its Application In Live Through The Implementation Of The Student Team Achievement Divisions (STAD) With Lesson Study (LS) – Marheny Lukitasari, Herawati Susilo	II-128
19. Using Translation As An Activity In Content-Based Instruction – Melinda Roza.	II-134
20. Student Teacher’s Reflective Skill: Phenomenology Study About The Experience Of Teaching Practice In Esl Classrooms In A Primary School In Batam – Meri Fuji Siahaan	II-139
21. Students’ Understanding On Cultural Concept: Case Study In Mathematics Department – Muhammad Arief Budiman	II-148
22. The Possibility Of Generalizing Types Of Basic Sentences In Bahasa Indonesia In Relation With The Learning Of Basic Sentence Structure In English -- Nana Suciati	II-155
23. Fishbone Strategy In Teaching English In Indonesia: A Tool Organizer For Learning EFL Reading – Nasir	II-160
24. Coaching Model Of Science Teacher Professionalism Through MGMP Teaching Clinic Management – Nguh Ayu Nyoman Murniati	II-166
25. Exploring The Learning Of Language Through Global Dance And Music: A Theoretical Analysis – Norah Banafi.....	II-170
26. English Teaching Media In Class Implementing Curriculum 2013 – Putra Mahardhika	II-177
27. Language Equation: Enchancing Stories Writing Skill – Sakulkaew Kaewmulkit.....	II-181
28. Indonesian Scientific Writing By Using Communicative Approach – Sobri.....	II-189
29. Indonesian Curriculum Development: Meaning-Based Curriculum And Competency-Based Curriculum In The Context Of Teaching English Subject – Subandi	II-198
30. Distribution Of Daily Use Local Language In Indonesia – Suparman Ibrahim Abdullah, Yunita, Maria C	II-206
31. How To Teach Science For Elementary Gifted Students. A Case Study Done At CGS Cianjur In Indonesia – Surachman Dimiyati, Asnah Said	II-212
32. Critics And Suggestions For GPO In Science Teaching A Free Online Resource For Teachers In Indonesia Implemented By Universitas Terbuka – Surachman Dimiyati, Mujadi	II-216
33. An Investigation Of Thai High School Students’ English Language Learning Problems – ThanThamajaree, Amporn Sa-ngiamwibool.....	II-221

34. Improving Learning Motivation And Cognitive Learning Outcomes Using Blended Learning-Based Guided Inquiry Strategy Through Lesson Study In Genetics – Waris, Herawati Susilo..... II-226
35. The Effect Of Active Learning Methods Terjun-Tulis-Saji To The Improvement Of Scientific Literacy And Mastery Of Biology Competencies Of Senior High School Students – Wirastini, Komang Ayu, Herawati Susilo, Hadi Suwono II-232
36. A Three-Dimensional Contextualization Established For An English Language-Learning-&-Teaching To Get Along With In The Classroom – Yan Pei-heng, Yan Jing, Chen Si II-238
37. The Influence Of Physical Fitness Test Towards Students' Motivation In Learning Physical Education Of Grade XI – Noviana Amelia, Simon Mulia..... II-245
38. Distinctive Feature Of Phoneme In Savunese Language – Rudolof Jibrael Isu II-254

BACTERIA MATERIAL IN THE SHORT STORY BASED ON THE CHARACTERS OF PUNOKAWAN FOR BIOLOGY LEARNING

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Abstract

Character building education can be internalized through education components as learning tools the form of teaching material. Bacteria material are abstract thing which may appears more attractive as a teaching material if it delivered through short stories which based from the Punokawan characters and figures. This kind of teaching strategies are expected to be something that can explore the local culture or local wisdom. The purpose of this study is to deliver the teaching material of Bacteria in Biology class in the form of short stories which based on Punokawan character, as well as the understanding concept of the students. It showed by providing teaching material in the form of short stories which contain of materials and character values will affected the excavation of character values and students' understanding concept.

Keyword : Biology Learning, Characters Of Punokawan, Bacteria Material

I. INTRODUCTION

Biology teaching material for senior high students sometimes still to be found as an abstract which make the material is difficult to understand and to be understood just like the bacteria material which given to the tenth grade students. Bacteria is a microorganism which has the characterization of small size and invisible , so it make the material not interesting for the students.

The character learning which implemented by the teacher give opportunities for students to know, feel, and do the character behavior in the learning process. Character building education are taught by three stages which are *Moral Knowing* or the stage of knowing the definition of the character behavior, *Moral Feeling* or the stage of feeling the character behavior, and *Moral Action* or the stage of implementing the character behavior^[4].

The local wisdom is more visualization a specific phenomenon which usually will be the special characterization of a certain society. Punokawan are fiction Javanese puppet figures which always be presented by *Dhalang* in the *wayang* or Javanese puppet show. The main characters of Punokawan are *Semar, Nala Gareng, Petruk, and Bagong* that each of their characters could be taken as a role model. The punokawan characters are made based on the closest characteristics of Javanese people's variety characterizations which indicating as multifarious roles such as knights, advisors, clowns or even the source of the propriety and benevolence^{[5],[11]}.

From the result of the survey showed that a number of students like some reading materials in the form of short stories^[6], so the teaching material which developed in this research was formed in a short stories of Punokawan Javanese puppet characterization plot. Punokawan is a local wisdom from Central Java and the story is about four main characters that have so much meaningful character values^[2]. Through the form of short story, the teaching material which based on standard competence and basic competence is expected to be a teaching material which can encourage the students to be more interested in Biology material especially bacteria material and also the students are expected to adapt the good characters and make it as their daily behavior.

2. MATERIALS AND METHODOLOGY

2.1. Subject and the research location

The subject of the research were tenth grade students, and the research is conducted in Semarang.

2.2. Research design

The research is conducted in a year with two stages using the *Research and Development* design (Borg and Gall (1989)^[7].

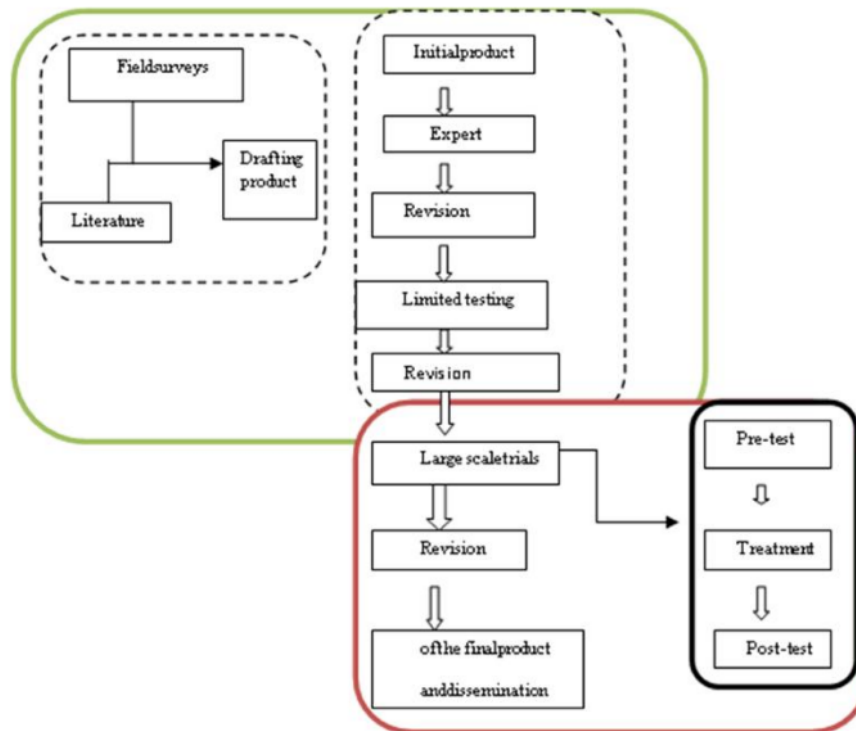


Figure 1. Research Diagram

2.3. The Data Source

The Data Source of this study were students, teachers, documents, and the process of teaching and learning. The type of the data was using qualitative approach. The data of this research was qualitative data: a) Observation result b) Interview result c) Questionnaire result d) Documentation

2.4. Technique Data Analysis

1. Validity Analysis and Instrument Reliability

a. Validity

To obtain a valid learning tool and observation instrument by conducting the validity of volume and construction. The validity conducted by involving the expert of the field.

b. Reliability

The reliable observation instrument will be calculated by using inter observer agreement technique. Two observers in the experiment using the same instrument to observe the same variables . Both observers were asked to judge in accordance with the observation instruments tested . The formula used to calculate the reliability is:

$$\text{Percent agreement (R)} = 100 \left[1 - \frac{A-B}{A+B} \right]$$

Description :

A = Frequency aspects of behavior observed by observers by giving high frequency

B = Frequency aspects of behavior observed by other observers by giving low frequency .

2.5. Character Analysis

To determine the extent of the using of teaching material on character and student learning outcomes , then the calculation is conducted by using the g - factor (Ngains) .

$$g = \frac{S_{post} - S_{pre}}{S_{max} - S_{Pre}}$$

Description :

S_{post} = Post-test scores
S_{pre} = Pre-test scores
S_{max} = Maximum score

Criteria gain stage :

g ≤ 0.30 : Low
0.30 < g ≤ 0.70 : Average
0.70 < g : High^[8].

3. RESULT AND DISCUSSION

According to the flow of the research which been described on the figure 1, this research has taken its stage of the teaching material in short story form obtained and conducted the validity on the teaching material in short story form upon the content of the short story, materials, and teacher's assessment for the learning process and the test. The structure of the short story material which been formulated has the order of 1) Short story teaching material tells about a story or a tale where the stories visualized an incident or even a condition which the students experienced and the story is packaged in the form of the story of Punokawan, the function of the story is to stimulate student's learning motivation about the material. 2) material content were taken in accordance of the standard competency and basic competency of KTSP senior High curriculum. 3) the wise words which taken from the various references.

The validity result of material content for feasibility of presented material has not visualization the material in row yet, the used references for developing the teaching material in the form of short story was not emerged in a product, it required a description of the story to stimulate student's psychomotor as an example of scientific activities, also required an material expansion in case of giving a good role model for the students.

Teacher assessment results indicate that teaching materials in on both criteria, it is supported by the presence of students placed as the subject, easy to use, teaching materials have a fascination with the existence of a story in it, the story is adapted from the material to be discussed as well as the material does not come out of the should. For the aspects of the character of the three charges raised characters need some corrections in unyielding character, two other characters who belonged to the good character.

Character values which instilled through the study of teaching materials include three things 1) carefully, 2) caring and 3) unyielding, as for the limited test results can be presented in Figure 2 below

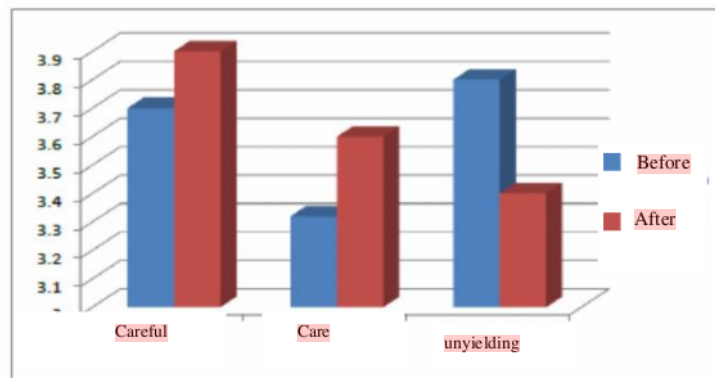


Figure2. Graph results of trials of teaching materials to the implementation of the short story form character values

The results of these tests indicated that the understanding of concepts which contained in the learning outcomes of students was increased, given the appearance of bacterial material in the form of short stories

with story plot was more interesting to read by the students than in the form of text books. Furthermore, there is a positive impact on the implementation of the values of the characters has increased in the character of careful and caring, but for the unyielding character has not shown an increase. If there was a conducted analysis using n-gain then it was known that n-gain for the careful was one of the characters which had the most meaningful and highest changes, while for the caring character had an average impact of changes which shown by using 0.4 n-gain analysis. And for the unyielding character the n-gain scored the lowest.

Based on the results of the validation which performed by an expert or experts in charge of both the short story and the material contained inside it had obtained average score which is 4 in other words that the teaching material can be used. Based on that condition, a test was conducted. The obtained result from limited testing indicate that careful and caring character had increased while the unyielding character had not..

The increase of the character was becoming the focus in this study which can not be separated from the short story teaching material which used in the students' learning process. The implementation of values in school has strategic role. To implement those character values the teacher must have some strategies to act such as the teacher must able to be an caretaker, role model or advisor also the teacher should be able to excavate the learning material with rich moral values^[3].

Noting explanation of things that should be done by the teacher, can be accepted that by providing teaching materials which in a form of short stories that containing content material and character values will affected on the excavation of character values in students. Given the guidance of teachers to provide not only by physically meet with students, but with one particular instrument is the short story form of teaching materials.

Explanation on why the character of careful and caring on students were increased better than the character of unyielding was about the short stories which been used as a media to deliver the material, the character of careful and caring were touching and relating with daily lives and the routinity of 31 students. While short stories was used as the media to deliver the material and the characters were based on the student real daily lives.

4. CONCLUSION

1. This research has obtained teaching material in the form of short stories with the average score of 4 or the other words that the teaching material is value stated as good.
2. Teaching material in the form of short stories which been tested had good impact by the evidence of the increase on the character of careful and caring
3. Teaching material in the form of short stories can attract the student in learning the bacteria material and increasing the students' understanding concept.

5. ADVICE

Further research can be conducted by showing that other biological material can be made in the form of character-based stories.

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