

Institute of Educational Development and Quality Assurance YOGYAKARTA STATE UNIVERSITY



CERTIFICATE

No.: 1078/UN.34.22/TU/2017

This certificate is awarded to

Ika Yuli Listyarini

as the presenter

Paper title :

Developing social care and hard work characters through service learning program: Case study of natural resources management course

in The 2nd International Conference on Teacher Education and Professional Development (InCoTEPD 2017). InCoTEPD 2017 held at Eastparc Hotel, Yogyakarta, Indonesia on 21 - 22 October 2017.

Rector of Vogyakarta State University Prof. Dr. Sutrisna Wibawa, M.Pd. REKTOR INP. 195909011986011002 Yogyakarta, 22 October 2017 Chairperson of the 2nd InCoTEPD 2017 Committee

Dr/Marzuki, M.Ag. IP 196604211992031001

Editors

Endah Retnowati Anik Ghufron Marzuki Kasiyan Adi Cilik Plerawan Ashadi

un

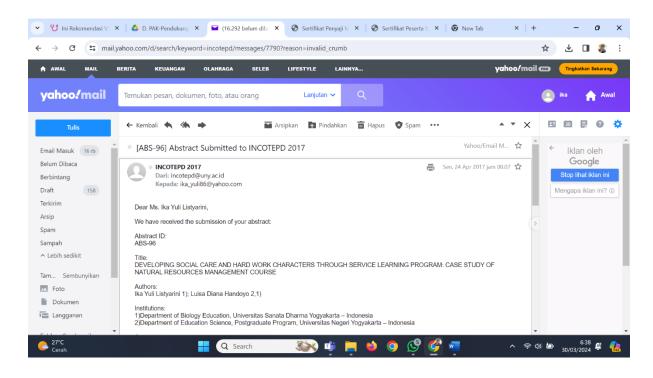
hanne

CHARACTER EDUCATION FOR 21ST CENTURY GLOBAL CITIZENS

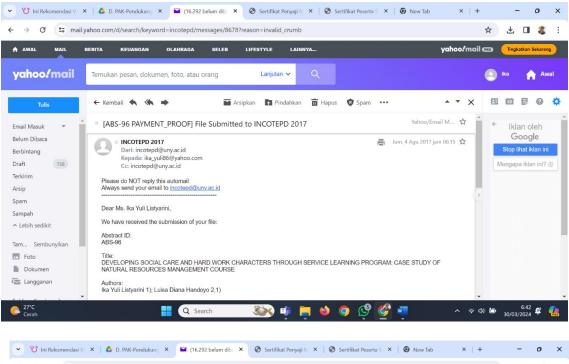
US

Seminar INCOTEPD 2017

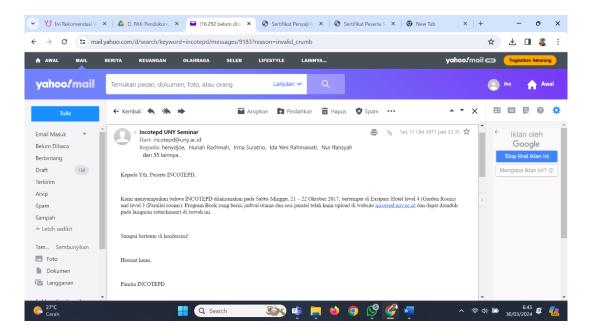
Ika Yuli Listyarini& Luisa Diana Handoyo

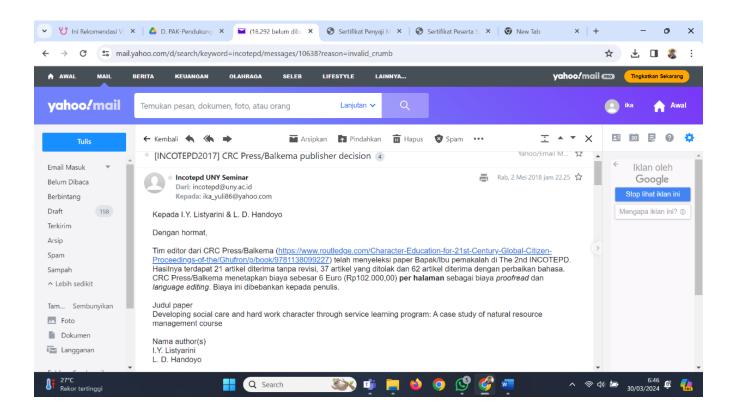


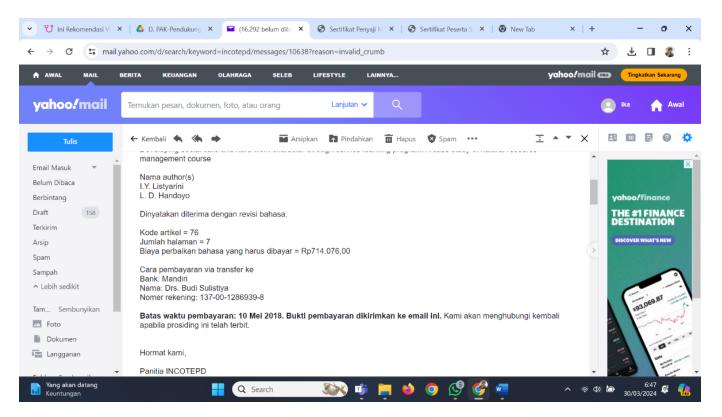
A AWAL MAIL	BERITA KEUANGAN OLAHRAGA SELEB LIFESTYLE LAINNYA	yahoo!m	ail 🕬	Tingk	atkan Sekara	ang
yahoo!mail	Temukan pesan, dokumen, foto, atau orang Lanjutan 🗸 🔍		2	ika	A	wal
Tulis	🗲 Kembali 🔦 🔦 🌩 🖬 Arsipkan 🛅 Pindahkan 🛅 Hapus 🥸 Spam 🚥	* * >	< ₿	30	P 0	\$
Email Masuk 16 rb Belum Dibaca Berbintang Draft 158	Currently, the character of social care and hard work among students is declining. This is important to develop the characte integrated into the lecture. One method that can be used for developed student's character is Service Learning (SL). SL is a le that combines lecture materials with the problems that exist in the community. Students can apply the knowledge they have le lectures to help solve problems in the community. This method is applied in the course of Natural Resource Management (NR lecture, students are expected to be able to master the concepts, principles, and applications of biological knowledge in the file health, environment, and biological resources in the management and utilization.	learning method earned in RM). From this	÷	G	an oleh oogle hat iklan ir	ni
Terkirim Arsip Spam	This study aims to describe the development of the hard work and social care characters in the course of NRM. This is a que research and using 80 participants from the NRM students as a subject. Data collecting using observation, interview, and doct techniques. The result shows that from the activities, the application of SL in NRM courses can develop a social care and hard characters. This is because students are dealing directly with the problems that exist in the community and they can solve it by knowledge they have gained in the classroom directly.	cumentation rd work	(Mengap	a iklan ini?	? ()
Terkirim Arsip Spam Sampah ^ Lebih sedikit	research and using 80 participants from the NRM students as a subject. Data collecting using observation, interview, and docu techniques. The result shows that from the activities, the application of SL in NRM courses can develop a social care and hard characters. This is because students are dealing directly with the problems that exist in the community and they can solve it by knowledge they have gained in the classroom directly. Keywords: Service learning, social care, hard work, natural resource management	cumentation rd work	~	Mengap	a iklan ini?	? (1)
Terkirim Arsip Spam Sampah ^ Lebih sedikit Tam Sembunyikan	research and using 80 participants from the NRM students as a subject. Data collecting using observation, interview, and docu techniques. The result shows that from the activities, the application of SL in NRM courses can develop a social care and hard characters. This is because students are dealing directly with the problems that exist in the community and they can solve it by knowledge they have gained in the classroom directly. Keywords:	cumentation rd work		Mengap	a iklan ini?	? ①
Terkirim Arsip Spam Sampah ^ Lebih sedikit	research and using 80 participants from the NRM students as a subject. Data collecting using observation, interview, and docut techniques. The result shows that from the activities, the application of SL in NRM courses can develop a social care and hard characters. This is because students are dealing directly with the problems that exist in the community and they can solve it by knowledge they have gained in the classroom directly. Keywords: Service learning, social care, hard work, natural resource management Topic:	cumentation rd work	~	Mengap	a iklan ini?	? ①

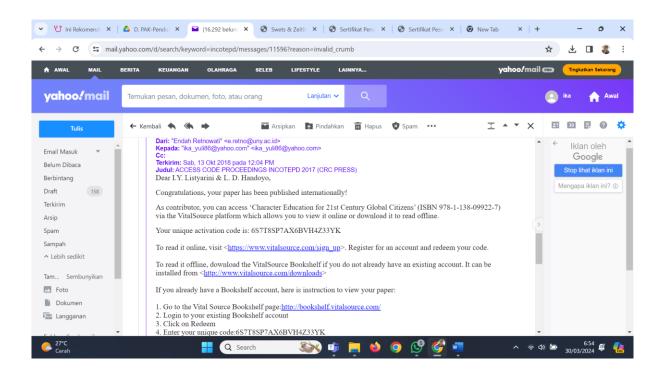


AWAL MAIL	BERITA KEUANGAN OLAHRAGA SELEB LIFESTYLE LAINNYA	yahoo/mail 🚥 🛛 Tingkatkan Sekarang
/ahoo / mail	Temukan pesan, dokumen, foto, atau orang Lanjutan 🗸 🔍	🥥 ika 🏫 Awal
Tulis	🗲 Kembali 🔦 🔦 🌩 🖬 Arsipkan 👔 Pindahkan 🛅 Hapus 🦁 Spam 🚥	• • × 🖪 🖻 🖥 🖗 🔅
mail Masuk elum Dibaca erbintang raft 158 erkirim rsip pam ampah - Lebih sedikit am Sembunyikan S Foto Dokumen	Type: payment_proof Paid amount: IDR 250000 Topic: Developing learning activities/strategies for character education Presenter: Ika Yuli Listyarini The Payment Receipt can be downloaded directly from your account, once your payment has been confirmed. Thank you. Best Regards. INCOTEPD 2017 Organizing Committee Website: http://incodepd.uny.ac.id/ktz Email: incodtepd@uny.ac.id	 Ads by Google Stop seeing this ad Why this ad? ①
Langganan	Listed in Indonesia Conference Directory <u>http://ifory.net</u> Automated Conference System provided by Konfrenzi <u>http://konfrenzi.com</u>	









AWAL MAIL	BERITA KEUANGAN OLAHRAGA SELEB LIFESTYLE LAINNYA Yahoo/mail 🖽 Tingkatkan Seka	irang
yahoo/mail	Temukan pesan, dokumen, foto, atau orang Lanjutan 🗸 Q	Awal
Tulis	← Kembali ♠ ♠ ➡ Arsipkan 🖿 Pindahkan 💼 Hapus 🔮 Spam ••• 王 ▲ ▼ 🗴 🖪 🗰 🖗 🕼) X
imail Masuk 👻 Jelum Dibaca Jerbintang Oraft 158 ierkirim Avsip ipam	 S. Choöse Kedeem – your eBook, will download automatically. G. To view your eBooks, click All Titles on your Bookshelf, then double-click your book title. If you have query with your access or download, please contact VitalSource – help@yitalsource.com who will be able to assist you. They will aim to respond to you within 24 hours. Please do not reply to this email for technical download problem. For any other queries, you may contact incotepd@uny.c.id. INCOPTEPD committee would like to congratulate you again, hope your publication becomes fruitful. Look forward to meeting you again in the next INCOTEPD at Universitas Negeri Yogyakarta. All the best, INCOTEPD Committee 	ini
ampah Lebih sedikit am Sembunyikan Foto Dokumen Langganan	Term Endah Retnowati Cognitive psychology, instructional design, mathematics education Dept. of Mathematics Education Universitas Negeri Yogyakarta Can Collaborative Learning Improve the Effectiveness of Worked Examples in Learning Mathematics? Retnowati, Endah, Ayres, Paul; Sweller, John doi: 10.1037/edu0000167	

Preface

The 2nd International Conference on Teacher Education and Professional Development was held in Yogyakarta (Indonesia) on 21–22 October 2017. The conference is an annual event, conducted by Universitas Negeri Yogyakarta's Institute of Educational Development and Quality Assurance. Similar to the previous conference, this conference received enthusiastic response from scholars and practitioners particulcarly interested in character education. Participants from Australia, Japan, Malaysia, the Netherlands, and many cities in Indonesia attended this year's conference.

Exploring the theme "Character Education for 21st Century Global Citizens", the committee has invited Prof. dr. Ali Ghufron Mukti, M.Sc., Ph.D. (General Director of Higher Education and Human Resources from the Ministry of Research, Technology, and Higher Education of the Republic of Indonesia) as a keynote speaker. Moreover, the committee has also invited Prof. Azyumardi Azra, Ph.D., Prof. Dr. Wiel Veugelers, Asst. Prof. Dr. Betania Kartika Muflih, Emeritus Prof. Dr. Terry Lovat, Prof. Dr. Kerry John Kennedy and Prof. Suyanto, Ph.D as invited speakers. Participants presented their papers, which are categorized under subthemes: 1) Values for 21st century global citizens, 2) Preparing teachers for integrative values education, 3) Teacher professional development for enhanced character education, 4) Curriculum/syllabus/lesson plan/learning materials development for integrated values education, 5) Developing learning activities/tasks/strategies for character education, 6) Assessing student's character development (values acquisition assessment), 7) Creating/managing conducive school culture to character education, and 8) Parents and public involvement in character education.

There were approximately 232 submissions from various countries to the conference. The committee selected 127 papers to be presented in this year's conference. The scientific committee has reviewed 117 papers that are qualified for publication. After a careful consideration, there are 83 papers (covering sub-themes 1 to 7) included in the proceeding of the conference that is published by CRC Press/Balkema and submitted for indexation to Thomson Reuters/Scopus.

Marzuki, Universitas Negeri Yogyakarta, Indonesia Endah Retnowati, Universitas Negeri Yogyakarta, Indonesia Anik Ghufron, Universitas Negeri Yogyakarta, Indonesia Kasiyan, Universitas Negeri Yogyakarta, Indonesia Adi Cilik Pierawan, Universitas Negeri Yogyakarta, Indonesia Ashadi, Universitas Negeri Yogyakarta, Indonesia

Acknowledgement

Prof. Monica J. Taylor, Ph.D., University of London, UK Prof. Lesley Harbon, University of Technology Sydney, Australia Dr. Alfredo Bautista, National Institute of Education, Singapore Heidi Layne, Ph.D., University of Helsinki, Finland Prof. Dr. Ng Shun Wing, Hong Kong Institute of Education, Hong Kong Dr. Derek Patton, Melbourne Graduate School of Education, Australia Dorothea Wilhelmina Hancock, Ph.D., Queensland University of Technology, Australia Prof. Micha De Winter, Ph.D., Uthrecht University Prof. Anne Burns, BA (Hons), Diploma in Adult TESOL, PhD, Med, UNSW, Australia Prof. Azyumardi Azra, Ph.D., Universitas Islam Negeri Syarif Hidayatullah, Jakarta, Indonesia Prof. Wiel Veugelers, University of Humanistic Studies in Utrecht Ass. Prof. Dr. Betania Kartika, M.A., International Islamic University, Malaysia Emiritus Prof. Terry Lovat, Ph.D., University of New Castle, Australia Prof. Kerry Kennedy., Education University of Hong Kong, Hong Kong Prof. Suyanto, Ph.D., Universitas Negeri Yogyakarta, Indonesia Prof. Dr. Anik Ghufron, M.Pd., Universitas Negeri Yogyakarta, Indonesia Prof. Dr. Suwarna, M.Pd., Universitas Negeri Yogyakarta, Indonesia Prof. Sukirno, Ph.D., Universitas Negeri Yogyakarta, Indonesia Prof. AK Projosantosa, Ph.D., Universitas Negeri Yogyakarta, Indonesia Prof. Suwarsih Madya, Ph.D., Universitas Negeri Yogyakarta, Indonesia Prof. Darmiyati Zuchdi, Ed.D., Universitas Negeri Yogyakarta, Indonesia Prof. Dr. Sri Atun, Universitas Negeri Yogyakarta, Indonesia Prof. Sugirin, Ph.D., Universitas Negeri Yogyakarta, Indonesia Prof. Dr. Sunaryo Kartadinata, Universitas Pendidikan Indonesia, Bandung, Indonesia Dr. Marzuki, Universitas Negeri Yogyakarta, Indonesia Endah Retnowati, Ph.D., Universitas Negeri Yogyakarta, Indonesia Dr. Kasiyan, Universitas Negeri Yogyakarta, Indonesia Adi Cilik Pierawan, Ph.D., Universitas Negeri Yogyakarta, Indonesia

Ashadi, Ed.D., Universitas Negeri Yogyakarta, Indonesia

Table of contents

Preface	xi
Acknowledgement	xiii
Organizing committees	XV
Values for 21st century global citizens	
Moral and citizenship education in 21st century: The role of parents and the community <i>W. Veugelers</i>	3
How to control hate speech and hoaxes: Character language for character citizens <i>J. Jumanto</i>	13
Can students develop self-regulated learning through worked examples? S. Nurhayati, E. Retnowati & Y.A. Alzuhdy	21
Presenting Indonesian character in English language teaching materials: Is it possible? S. Sudartini	29
Questioning western character hegemony in Indonesian aesthetics books <i>K. Kasiyan</i>	35
Constructing global citizenship: Kindergarten and primary schoolteachers' understanding of globalization and education <i>H. Yulindrasari & S. Susilowati</i>	43
The seafarers' characters standard for international shipping industry W. Pratama, P. Pardjono & H. Sofyan	49
Preparing teachers for integrated values education	
The importance of Halal education in forming the civilized and exemplary global citizen <i>B. Kartika</i>	59
Online learning as an innovative model of Teachers' Professional Development (TPD) in the digital era: A literature review W. Wuryaningsih, M. Darwin, D.H. Susilastuti & A.C. Pierewan	69
The practice of early childhood musicality education in Germany L. Kurniawati	79
Constraints on the physics practicum for visually impaired students in inclusive junior high schools <i>J. Arlinwibowo, H. Retnawati & R.G. Pradani</i>	83
Teachers' intention to implement instructional innovation: Do attitudes matter? <i>B. Basikin</i>	91

Developing social care and hard work characteristics through a service learning program: A case study of a natural resource management course <i>I.Y. Listyarini & L.D. Handoyo</i>	459
Design of a learning environment for children's basic character development <i>R. Mariyana, A. Listiana & B. Zaman</i>	467
The effect of science fair integrated with project-based learning on creativity and communication skills <i>I.D. Tantri & N. Aznam</i>	473
Water safety as preventive action and for child character behavior development in aquatic learning <i>E. Susanto</i>	481
The implementation of integrity values in the elementary schools: Problems and potential solutions <i>S. Rahmadonna, Suyantiningsih & R.A. Wibowo</i>	487
Intellectual character in the learning of musical interpretation as an enhancement of 21st-century skills <i>A.N. Machfauzia</i>	493
Fostering students' character of patriotism and critical thinking skills R. Yo, N. Sudibjo & A. Santoso	499
Improving character education through industrial ethics using a model of private sector cooperation <i>M. Khairudin, K.I. Ismara & S. Soeharto</i>	511
An exercise model to develop the biomotor ability of endurance in teenage martial arts athletes <i>N.A. Rahman & S. Siswantoyo</i>	517
Implementation of a work-based learning model to improve work attitudes and learning achievements of students in vocational education D. Rahdiyanta & A. Asnawi	525
Culture-based character education in a national character education course <i>D. Kumalasari</i>	533
Developing the culture of quality in learning: A case study in Indonesia <i>A. Ghufron</i>	543
Character education in Indonesian English as a Foreign Language (EFL) textbooks: Does it still exist? S.D. Amalia	549
Profile of student character on discipline behavior and cleanliness culture in higher education <i>M. Mutaqin</i>	555
The implementation of a local wisdom-based character education model in primary schools in Bantul, Yogyakarta <i>R. Rukiyati, L. Hendrowibowo & M. Murtamadji</i>	561
The strengthening of multicultural values within civic learning: How do teachers make it work? S. Samsuri & S. Suharno	569

Developing social care and hard work characteristics through a service learning program: A case study of a natural resource management course

I.Y. Listyarini & L.D. Handoyo Universitas Sanata Dharma, Indonesia

ABSTRACT: Currently, the characteristics of social care and hard work among students are in decline. One method that can be used to develop such characteristics in students is Service Learning (SL). SL is a learning method that combines lecture materials with the problems that exist in the community: students apply the knowledge they have acquired in lectures to help solve problems in the community. This method is employed in a Natural Resource Management (NRM) course. This study aims to describe the development of the hard work and social care characteristics through the implementation of SL in this course. This research uses qualitative and quantitative methods, with 76 student participants from the NRM course as subjects. Data is collected using observation, questionnaire, and documentation techniques. The results show that through the application of SL activities in NRM courses, social care and hard work characteristics can be developed in students. This is because students are dealing directly with the problems that exist in the community and they can solve them by direct application of the knowledge they have gained in the classroom.

1 INTRODUCTION

In the 21st century, the rapid development of technology and information has brought many changes in all areas, including education. This development has had positive impacts such as easier access to information from anywhere, anytime, and the development of digital media that increasingly support learning. However, there have also been negative impacts, such as a decline in character of the younger generation, which is evident in the declining spirit of hard work among students. This is indicated by the existence of an instant culture when performing tasks, the emergence of copy-paste culture, a dependence on the internet, and a declining interest in reading among students.

In addition to the declining characteristic of hard work, another characteristic that has also started to decline is social attitude. In the current era, often referred to as the digital era, almost everyone is never without a gadget or smartphone. With smartphones, everyone can access virtually all of the information that exists in any part of the world, and is able to communicate with anyone without distance limitations through the use of social media. The variety of social media makes almost everyone more interested in cyberspace. They spend a lot of time with their smartphones instead of interacting with their immediate family, friends, and surroundings. This causes social attitudes toward each other and the surrounding environment to degrade.

This declining character, especially among the next generation in the form of students, has attracted serious attention from the Indonesian government. Through the Ministry of Education and Culture, it has formulated 18 character values for the nation that will be integrated into learning activities at all levels of education, from early childhood to higher education. The 18 national character values include religious values, honesty, tolerance, discipline, hard work, creativity, independence, democracy, curiosity, the spirit of nationality, love of country, appreciation of achievement, friendship, peace, reading, social care, and responsibility (Listyarti, 2012).

At Sanata Dharma University, a private university in Indonesia, the biology education study program, in particular, has been trying to develop the character of students through academic and non-academic activities. One of the compulsory subjects in the program for a second-semester student is Natural Resource Management (NRM), and one of the learning methods developed in this course is Service Learning (SL). Service learning is a learning method that combines learning materials in the classroom with service activities in the community. With service learning, students can directly apply the science or concept they learn in the classroom to help solve problems that exist in the community. Student character will be developed through all the stages of service learning, which are referred to as IPARD, namely Investigation, Planning and Preparation, Action, Reflection, and Demonstration. From the lectures on NRM, students are expected to be able to master the concepts, principles and application of biological knowledge in the fields of food, health, environment (biological) and biological resources. In NRM lectures, SL is applied to Participatory Rural Appraisal (PRA) materials.

2 STATE OF THE ART

2.1 Service learning

The learning method is one of the important aspects of achieving learning objectives. Service learning is a method of learning that has been developed in America since the 1970s (Kezar & Rhoads, 2001). Service learning is experiential learning, in which students experience and are directly involved in activities devoted to human and community needs (Jacoby, 2015), and adheres to Dewey's opinion that a person learns from their experience (Speck & Hoppe, 2004). Service learning provides students with experience through interaction with the community. In this case, service learning integrates community service activities with learning concepts and is reinforced by reflection to enrich the learning experience, caring for the community and encouraging community engagement. This is in line with the definition provided by The Community Service Act of 1990 (Jacoby, 2015):

A method by which students or participants can learn and develop themselves through active participation in an organized service activity that is conducted based on the problems encountered in the community; in its implementation there is coordination between primary schools, secondary schools, higher education institutions, or service programs to communities with the communities to be served; integrated in the academic curriculum or the educational component as well as allowing time for students or participants to reflect on the service experience to the community.

Service learning can also be categorized as contextual learning, where students learn directly from the community. Community context is important as a learning resource in service learning. Armed with the theories they have learned in the classroom, students try to apply the theories to solve problems in society. Service learning enables a learning process in which students use their academic understanding and abilities in various contexts inside and outside the school to solve real-world problems (Curry et al., 2012). Contextual learning also makes learning more meaningful and memorable in students' minds (Johnson, 2014). Thus, students can prepare themselves to be citizens who have a share in solving community problems using their acquired knowledge.

Youth Service America (2011) describes steps in the implementation of service learning, summarized as IPARD, and illustrated in Figure 1. In the Investigation stage students are invited to analyze the context of the problems in the community. In the Planning and Preparation stage, students create a plan of what activities will be done to overcome the problems that exist in the community. In the third stage, Action, students carry out this activity plan directly within the community. At the Reflection stage, students look back at the experience of their action and learn to evaluate the activities that have been conducted. The last stage is Demonstration, where students convey and share the results of their activities and their evaluations (Cahyani et al., 2012).

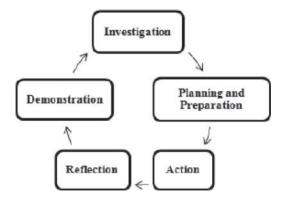


Figure 1. Schematic stages in service learning.

A meta-analysis by Warren (2012) describes the benefits of service learning in improving learning outcomes. This is in line with Weiler's research, which states that there are significant differences in learning achievement between students involved in service learning and those who are not (Weiler, et al., 1998). In addition to the cognitive domain, service learning also has an impact in the affective domain, such as increasing self-esteem and social responsibility, developing tolerant behavior toward cultural differences, developing student leadership capacity, increasing motivation to learn, and developing characteristics such as creativity, responsibility, hard work, and communication in students (Warren, 2012; Kezar & Rhoads, 2001; Handoyo, 2014).

2.2 Social care characteristic

The characteristic of social care is one of the values of humanity (Soenarko & Mujiwati, 2015). The term "social care" is obviously formed from two words: according to the online Indonesian Dictionary, *Kamus Besar Bahasa Indonesia* (KBBI, 2017), "care" means to heed or pay attention to something; "social" means (1) with respect to society or (2) paying attention to the public interest (aid, charity, etc.). On the basis of these meanings, the term "social care" can be interpreted as attentiveness to something happening in society.

Being a caring person means being able to see what others need and doing something to help them. Raatma (2014) states that caring people choose not to be selfish or hurt others. Nowadays, social care has a broad scope, not only caring for oneself and one's immediate family, but also for the surrounding environment, society and the wider world. Soenarko and Mujiwati (2015) state that social care is not just a feeling in the heart, but involves real action: "When seeing people who are victims of disaster or suffering, directly or on television, then saying 'pity', it has not really touched the essence of social concern if it is not followed by an action."

The characteristic of social care involves not only knowing whether something is right or wrong, but being willing to take some action in response. This social caring characteristic is, in fact, a sensitivity of attention that will ultimately lead to an attitude of empathy toward the distress of others. Among others, the characteristic of social care can be seen in three indicators: (1) ability to share in the suffering of others; (2) willingness to give help to alleviate the suffering of others; (3) the willingness to make sacrifices in providing any kind of help in response to the suffering of others (Soenarko & Mujiwati, 2015). The indicators of social care developed in this research were a sense of empathy to the problems of society, and an ability to provide solutions to those problems.

2.3 Hard work characteristic

Hard work is one of the characteristics identified in the character education of Indonesia. According to Listyarti (2012) and Mustari (2011), hard work is a behavior that demonstrates genuine efforts to overcome barriers to learning and tasks, and to complete tasks as well as

possible. This definition is consistent with the opinion of Kesuma et al. (2011), which states that hard work is a continuous effort to complete a task. In this case, working hard does not mean completing the task thoroughly and then stopping, but is more directed to a larger vision that must be achieved for the good of people and the environment.

In terms of learning, hard work can be interpreted as a behavior that shows genuine efforts in overcoming barriers to learning and tasks, and complete the task as well as possible (List-yarti, 2012; Mustari, 2011). The hard work indicator used in this research is not succumbing to despair in performing the given tasks.

3 RESEARCH METHODOLOGY

This study uses a research method that combines the qualitative and the quantitative. Qualitative data were obtained from an initial questionnaire and student reflection, while quantitative data was obtained from this initial questionnaire and the final student questionnaire about student perceptions of the development of social caring and hardworking characteristics. The initial questionnaire took the form of an open questionnaire to explore the characters of students before service learning, and the final questionnaire was a closed questionnaire about the perceptions of students in relation to their characters.

The subjects of this research were 76 students participating in the NRM course. Service learning was conducted in the sub-village of Turgo, Pakem sub-district, Sleman regency, Yogyakarta, in May 2017. The target community was Turgo villagers who owned livestock in the form of cattle and goats.

4 RESULTS AND DISCUSSION

4.1 Implementation of service learning for Natural Resource Management course

Service learning in NRM courses was conducted in the second semester of 2016/2017. A total of 76 students were divided into 16 groups with a total of four to five students per group. Students undertook service learning, especially in relation to Participatory Rural Appraisal material. In this material, students were invited to provide assistance to the community according to the PRA concept in terms of management of the natural resources that exist around it.

The student groups carried out service learning according to the five previously described IPARD stages, as detailed below.

4.1.1 Investigation

The Investigation phase was conducted on 20 May 2017 in Turgo village. At this stage of the process, the student groups carried out observations in the residents' houses to identify the potential and constraints in the management of natural resources, especially in the management of livestock and cattle. The 16 groups of students were distributed among 16 residents who became resource persons.

From the observation, it was found that the Turgo community has the potential in cattle and goats for milk and animal waste. Until now, the milk produced has been sold in raw form to a cooperative at a relatively low price. The selling price for the milk does not cover the cost to the farmers of their care of the livestock, such as feed, medicines, or vitamins. According to residents, cow's milk has previously been processed into instant ginger milk but now such processing has stopped. There needs to be an effort to assist the community in overcoming obstacles in terms of milk management as a natural society resource. The data obtained at the Investigation stage provides the material for planning of the next activity.

4.1.2 *Planning and preparation*

The results of the students' observations are, as indicated above, the basis for the Planning and Preparation stage, which is held in the classroom at a regular time. In this stage, the data collected by the students during the observation provided the data for the class as a whole.

From the collected data, students jointly formulated what activities can be done in conjunction with the community to overcome obstacles in the management of natural resources. Theories that students have acquired during lectures form a basis for the activities they will carry out. From the discussion, it was agreed that the students would focus their assistance activities on cattle and goat farmers, especially in the case of processing milk into more valuable products such as ice cream and yogurt. The choice of processed products is determined by the availability of tools in the community, and students donated two sets of ice-creammaking machines and yogurt makers to community groups as an incentive.

4.1.3 Action

The Action stage, in the form of a Participatory Rural Appraisal implementation, was held on 25 May 2017 at the home of Mr. Musimim. This activity was attended by citizens who were members of the cattle and goat breeder groups. At this stage, the student group, together with the associated lecturers, presented the details of their earlier observations. Afterwards, the students started the PRA in conjunction with the community in terms of planning future activities with the input and the provision of tools by the students. PRA is principally a mentoring of, by, and for society. The students act as facilitators for community discussions, and discuss matters related to milk processing plans for yogurt and ice cream with the community.

4.1.4 Reflection

In the Reflection stage, students reflect on their experiences during the preceding Investigation, Planning and Preparation, and Action stages. This reflection is guided by questions such as "How did you feel when you first got the task of doing service learning?", "What can you learn from the community in relation to the PRA activities you pursued?" and "What intentions arise in your personal life after the experience of your service learning activities in the community?"

From the students' reports, it was found that most students were afraid, worried, hesitant, and/or curious when they first received the service learning task. Some students felt happy about the forthcoming service learning task because they were pleased to be out of the classroom and gaining more understanding of the course through direct practice in the community.

On the basis of the reflections captured, the service learning activity increases the intention in students to directly apply the science or theory they have acquired in class to the community, as exemplified in the following quotations:

Intentions that arise in service learning activities are to take advantage of the ability that has been obtained in the classroom to be applied into the community. The way it is applied is not only done alone, but it can invite communities to utilize the existing natural resources by producing a local product so as not to rely on products from abroad. (Angela Ivanka Novitasari)

More active in socialization activities in the community as well as developing the potentials that exist in society. (Ghina Salsabila)

The intention that came to me after doing the activity is that I want to do a similar activity in my hometown, Manado; there are no cows but many plants like nutmeg and cloves; I want to manage the existing plants and create a new activity that can help the people in my village. (Maria Ni Luh Rosariana)

Students also feel happy when undertaking service learning, as expressed in the following quotation:

My impression when doing the observation is very happy. Because what I get in the lectures I can apply in the community; one of them is that I can directly analyze what resources exist in Dusun Turgo and what are the obstacles faced by citizens directly. (Refika Yeisa Mukswadini)

In general, students acquire learning from the service learning activities performed. They learn from the community not in terms of cognitive development, but more in relation to the character and behavior of the communities they observed during the activities. Students can also learn from the community, for example, in terms of the hard work of citizens in working and caring for livestock, understanding of the potential of surrounding natural resources, spirit in overcoming the problems of livestock management, and the struggle in life for citizens facing obstacles every day.

Students' understanding of PRA materials is also reinforced by the application of service learning. PRA is an approach and method that allows communities to jointly analyse life issues in order to formulate real plans and policy. In this case, the community plays a direct role as planners, executors, and supervisors of the activities undertaken. In simple terms, the PRA principle is from, by and for the community. In the NRM lectures, students are invited to apply the PRA principle in the Turgo village community. In this case, the student acts as a facilitator in service learning activities conducted directly in the community to explore the potential and problems of natural resource management in Turgo, here in relation to cattle and goats. From the results of these observations, students jointly formulate with the community what activities can be done. The results of student discussions are shared with the community in routine monthly meetings. In the meetings, the students present the observations made and offer alternative activities that can be done within the community to overcome the problems they face. The students and the community discuss these activities together. Through all of these stages, students learn to act as facilitators in PRA activities in the community. From this practice, students really experience the PRA process so that their understanding of PRA material and classroom theory is far more profound.

4.1.5 Demonstration

In the Demonstration stage, students document their service learning experience in a personalized report. These reports are used as data in understanding the character development of students as a consequence of undertaking service learning.

4.2 Development of social care characteristic

The development of students' social care characteristic was seen in the results of the initial and final questionnaires administered. From the initial questionnaire, it was found that 50% of students feel they have done something for the community. This relates to the activities associated with the observation of water quality in the Boyong river in the village. In the activity, the students observed the condition and the quality of water and then presented the results to the people in the watershed as inputs for future river management. The results from the final questionnaire are shown in Figure 2.

The social care characteristic is seen in terms of two aspects, that is, student involvement and empathy. From the questionnaires it was found that 12.5% of the students reported being very actively involved in offering ideas to help solve problems in the community, with a further 67.1% reporting active involvement. However, 17.8% of the students reported far less involvement, and 2.6% felt uninvolved in contributing ideas. In terms of empathy, 43.4% of

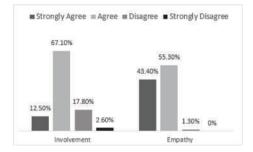


Figure 2. Increased student involvement and empathy after implementation of service learning.

the students reported feeling very empathetic, with a further 55.3% feeling moderately empathetic, and just 1.3% not feeling empathetic to the problems that exist in society.

From the data, it can be seen that after implementing service learning, most students have an increased sense of social care in relation to the problems existing in the community. This sense of social care arises from the students' interactions with the problems that exist in society. Through direct observation, students can observe the real conditions in society, along with the problems faced. This improves students' sense of empathy and gives them the desire to help the community with new ideas and direct engagement. Students have a desire to help people using the knowledge and skills they have acquired in their course.

The social care characteristic is basically an attitude that heeds (shows concern about) something that happens in society. Being a caring person means being able to see what others need and doing something to help such people. Someone who has social concern not only knows about whether something is right or wrong, but shows a willingness to do something to help people in need (Soenarko & Mujiwati, 2015). This is seen in the students after they have carried out service learning. Besides the empathetic attitude exhibited, it also appears in the creative ideas the students offer; for example, the processing of cow's milk into products such as ice cream and yogurt.

In addition to the questionnaire results, students' social caring character also appears in their reflections, as seen in the following quotations: "I feel sad because there are various problems that arise in the citizens" (Ghina Salsabila); "The intention that comes to me is a hard work effort ... In addition, I also want to see high caring in the community so as to seek solutions when faced with obstacles" (Isidorus Purnama Jaya).

4.3 Development of hard work characteristic

In this research, the hard work characteristic focused on the ability not to easily succumb to despair in carrying out the given tasks. The results of the preliminary questionnaire indicate that during the course of NRM, hard work is needed, especially when doing tasks, making reports, carrying out observations, and undertaking the exam.

The final questionnaire data is shown in Figure 3. The results showed that 23.7% of students felt that the existence of challenges such as lecturing tasks did not decrease their spirits at all in terms of implementing service learning, and a further 58.5% of students felt other duties did not lower their spirits. By contrast, 16.45% of students reported that many duties lowered their spirits, and 1.3% of students reported that many tasks in implementing service learning greatly lowered their spirits.

Kesuma et al. (2011) state that hard work is the ongoing effort in seeing a task through to completion. Student participants of the NRM course showed the characteristic of hard work during the implementation of service learning. On the basis of the results of the final questionnaire, most (82.2%) students felt that tasks from other courses did not lower their spirits in implementing service learning. The observation also shows that students can carry out the service learning tasks well and in accordance with the schedule that has been determined. Busyness and other tasks did not cause students to neglect the service learning tasks. Students can manage their time effectively so that service learning activities can be done. This shows that students already possess the hard work characteristic, which must continue to be developed.

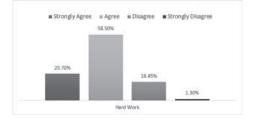


Figure 3. Hard work characteristic of students after implementation of service learning.

5 CONCLUSION

From the results it can be concluded that service learning can develop students' social care and hard work characteristics. The characteristic of social care is visible in students' ability to show empathy, and in the efforts by students to offer their ideas and involvement in giving assistance to society through Participatory Rural Appraisal in relation to the problem of milk processing. The hard work characteristic appears in the efforts made by students to implement and complete service learning activities effectively, in accordance with a predetermined schedule.

REFERENCES

- Cahyani, V.A., Santosa, S. & Indrowati, M. (2012). Pengaruh penerapan service learning terhadap hasil belajar biologi siswa kelas XI SMA Negeri 1 Boyolali tahun pelajaran 2011/2012 [The influence of service learning toward biology learning achievement of XI degree students at SMA Negeri 1 Boyolali in academic year 2011/2012]. In Biologi, Sains, Lingkungan, dan Pembelajarannya dalam Upaya Peningkatan Daya Saing Bangsa, Seminar Nasional IX Pendidikan Biologi FKIP UNS [Biology, science, environment, and learning in efforts to increase the competitiveness of the nation, National Biology Education Seminar IX, FKIP, UNS] (pp. 76–83). Retrieved from http://eprints.uns.ac.id/12281/1/1027-2406-1-SM.pdf.
- Curry, K.W., Wilson, E., Flowers, J.L. & Farin, C.E. (2012). Scientific basis vs. contextualized teaching and learning: The effect on the achievement of postsecondary students. *Journal of Agricultural Education*, 53(1), 57–66.
- Furco, A. & Root, S. (2010). Research demonstrates the value of service learning. The Phi Delta Kappan, 91(5), 16–20.
- Handoyo, L.D. (2014). Menumbuh kembangkan karakter mahasiswa melalui service learning program di mata kuliah ilmu gizi dan kesehatan [Growing student character through service learning program in nutrition and health sciences course]. Jurnal Kependidikan Widya Dharma, 25(2), 183–200.
- Hudson, C.C. & Whisler, V.R. (2008). Contextual teaching and learning for practitioners. Systemics, Cybernetics and Informatics, 6(4), 54–58.
- Jacoby, B. (2015). Service-learning essentials: Questions, answers, and lessons learned. San Francisco, CA: Jossey-Bass.
- Johnson, E.B. (2014). Contextual teaching and learning: Menjadikan kegiatan belajar-mengajar mengasyikkan dan bermakna [Contextual teaching and learning: Making learning activities fun and meaningful]. Bandung, Indonesia: Penerbit Kaifa.
- KBBI. (2017). Kamus Besar Bahasa Indonesia [Indonesian dictionary]. Retrieved from http://kbbi.web. id/sosial.
- Kesuma, D., et al. (2011). *Pendidikan karakter: Kajian teori dan praktik di sekolah* [*Character education: Theory and practice at school*]. Bandung, Indonesia: Remaja Rosdakarya.
- Kezar, A. & Rhoads, R.A. (2001). The dynamic tensions of service learning in higher education: A philosophical perspective. *The Journal of Higher Education*, 72(2), 148–171.
- Listyarti, R. (2012). *Pendidikan karakter dalam metode aktif, inovatif, dan kreatif* [Character education in active, innovative, and creative methods]. Jakarta, Indonesia: Erlangga.
- Mustari, M. (2011). Nilai karakter: Refleksi untuk pendidikan karakter [Character value: Reflection for character education]. Yogyakarta, Indonesia: Laksbang Pressindo.
- Raatma, L. (2014). Caring. Ann Arbor, MI: Cherry Lake.
- Soenarko, B. & Mujiwati, E.S. (2015). Peningkatan nilai kepedulian sosial melalui modifikasi model pembelajaran konsiderasi pada mahasiswa tingkat I program studi PGSD FKIP Universitas Nusantara PGRI Kediri [Increasing the value of social concern through modification of learning model consideration for level I students of PGSD study program, FKIP, Universitas Nusantara PGRI Kediri]. *Efektor*, 26(April), 33–47.
- Speck, B.W. & Hoppe, S.L. (2004). Service-learning: History, theory, and issues. Westport, CT: Praeger.
- Warren, J.L. (2012). Does service-learning increase student learning? A meta-analysis. *Michigan Journal of Community Service Learning*, 18(2), 56–61.
- Weiler, D., LaGoy, A., Crane, E., and Rovner, A. (1998). An Evaluation of K-12 Service-Learning in California: Phase II Final Report. Emeryville, CA: RPP International with The Search Institute.
- Youth Service America. (2011). Semester of Service Strategy Guide Revised for 2011. Washington, WA: YSA Committed.