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Yth.
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Dengan hormat,

Semoga kita senantiasa dalam limpahan keberkahan dari Allah Swt. Bersama ini, kami sampaikan proses bukti korespondensi dan proses review artikel kami berjudul "*Students' Eco-Literacy Level at Conservation-Minded University in Indonesia"* yang dipublikasikan pada Academic Journal of Interdisciplinary Studies, Volume 11 Nomor 6 Tahun 2022, tanggal publikasi online 05 November 2022. Kami sampaikan resume kronologi publikasi sebagai berikut:

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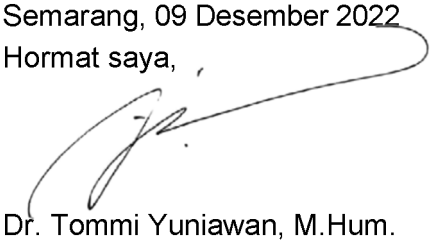

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BUKTI KORESPONDENSI ARTIKEL

“Students’ Eco-Literacy Level at Conservation-Minded University in Indonesia”

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SUBMISSION

Manuscript Submission

Tommi Yuniawan <tommiyuniawan@mail.unnes.ac.id> Mon, Aug 29, 2022 at 12:30 PM
To: ajis@richtmann.org

Dear Editor-in-chief,

I hope this email finds you well. I would like to submit my paper to be considered in your journal publication. The paper is attached to this email. Thank you and I look forward to hearing from you.

Best regards,

Tommi Yuniawan
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Students' Eco-Literacy Level at Conservation-Minded University in Indonesia

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ABSTRACT
This research aims to analyze students' eco-literacy level at a conservation-minded university in Indonesia. Universitas Negeri Semarang has been confirmed as a conservation-minded university in Indonesia. The research's source of data is students' literacy at conservation-minded university, Universitas Negeri Semarang. The data were collected from questionnaires and interviews with 200 students. The questionnaire consisted of 126 questions regarding conservation eco-literacy with Likert scale pattern, with categories: zero understanding, score 1; sufficient understanding, score 2; good understanding, score 3, based on the three pillars of conservation. This questionnaire was completed using a digital application system http://bit.do/sisteravasi. Based on the result of digital application system based data analysis, students' eco-literacy levels at conservation-minded university are: (1) regarding the value and character pillar, the highest understanding is with care conservation eco-literacy (85%); (2) in terms of art and culture pillar, the highest understanding is walking culture conservation eco-literacy (80%);and (3) concerning the natural resources and environment pillar, the highest understanding is organic waste conservation eco-literacy (80%). Students' eco-literacy level at conservation-minded universities based on digital application systems may serve as a model to help linguists examine literacy level in other studies.
Keywords: conservation-minded; eco-literacy; student; digital application system; university

Introduction

Literacy is an individual's ability to read, write, speak, count, and solve problems at the expertise level needed in work, family, and society. This notion conforms to Kern and

Baynham's (1995) opinion that literacy is an integrated form of listening, speaking, writing, reading, and critical thinking capabilities. Literacy also bears the meaning of social practice and relationships related to knowledge, language, and culture. Therefore, literacy involves a series of learning, which allows individuals to achieve knowledge, develop knowledge, and fully participate in limited and extensive communities (UNESCO, 2005).

The UNESCO Declaration (2005) also states that information literacy is related to identifying, determining, finding, evaluating, creating effectively and in an organized manner, and using and communicating information to solve various problems. The capabilities need to be obtained by every individual as the requirement for participation in the information community, and it is part of human rights regarding lifelong learning.

Currently, literacy is not merely defined as the capability to write and read. Boeriswati (2017) asserts that literacy is the capability to identify, understand, interpret, create, communicate and count, use printing and written materials related to various contexts. Literacy is not only about reading-writing. Literacy is a cultural practice related to social and political issues. Therefore, education experts present a new definition of literacy.

Literacy's characteristics are: (1) far from universality and often poorly developed, (2) obtained through hard learning and effort, obtained after mastery of oral language; (3) delivery of a message to recipient through free transfer in written form, not face to face, (4) requiring compliance with linguistic rules, (5) produced in a long period, (6) likely to be soon forgotten, but may also last longer depending on listener's emotional reaction, (7) may last longer (through publishing), may be altered before delivered to reader, (8) claimed to reflect the knowledge, personal accuracy, belief, and attitude, (9) aiming at maintaining those more traditional and avoiding informal mode, (10) implying competence in producing more words, and (11) connecting shared ideas in a complex structure (Ellis et al., 1998; Usaid, 2014). Therefore, literacy is not merely the capability to read and write mechanically.

Meanwhile, Capra (2013) (as cited in Keraf, 2014) presents the term eco-literacy or ecological literacy. According to him, eco-literacy is a human's capability that has reached a high awareness level of the importance of the environment. This idea implies that an individual has been highly aware of the importance of the environment, including maintaining and taking care of the earth, ecosystem, nature where s/he lives. Capra (as cited in Keraf, 2014) specifically defines eco-literacy as the condition of an individual who has understood the ecological and life principles according to the ecological principles in managing and socializing with humankind on earth in realizing a sustainable society.

Moreover, Capra (2013) longs for and predicts that the future of humankind, the future of the human community, and the future of planet earth highly depend on eco-literacy. Therefore, revitalization of such communities, including the education community, industrial community, and political community, is needed to protect the environment.

Universitas Negeri Semarang, Indonesia, had been confirmed as a Conservation University on March 12, 2010. This is in line with the research conducted by Mikulik and Babina (2009) that a higher education institution must be concerned with the environment for sustainable development. Thus, it is necessary to formulate environmental preservation programs. Regulation of Rector of UNNES Number 22 of 2009 defines a conservation-minded university as a university incorporating conservation principles in the conduct of education, research, and public service (sustainable protection, preservation, and utilization). The principles should be embedded in university's values and characters, arts and cultures, as well as natural resources and environment.

The above notion implies that the implementation of *tri dharma* (the three pillars) in Universitas Negeri Semarang always prioritizes the environmental conservation principles. On that ground, Universitas Negeri Semarang's vision is to become a conservation-minded

university with an international reputation (Regulation of Minister of Research, Technology, and Higher Education of the Republic of Indonesia Number 49 of 2016 on the Statute of Universitas Negeri Semarang). This idea suggests that a higher education institution, in this case Universitas Negeri Semarang, strives to be the center of activities and empowerment in preserving the environment, preventing pollution and damage to the environment, and realizing a clean, healthy, and green campus.

Ever since Universitas Negeri Semarang declares itself as a conservation-minded university, many policies and efforts have been made by Universitas Negeri Semarang to disseminate the importance of conservation efforts to all campus inhabitants and society. Simply put, Universitas Negeri Semarang becomes the pioneer of conservation to lead the society for a prosperous society on par with the global community. As a conservation-minded higher education institution, Universitas Negeri Semarang is obliged to fulfil its mandates and responsibilities by upholding preservation principles as its identity. In other words, conservation becomes the identity of all mandates and responsibilities assumed from planning to implementation and completion. This effort is the activity to build an image and reputation of a conservation-minded university.

Salim (2007) states that human's social, ideological, and organizational relationship with nature needs to be noted and developed in arranging a natural resources management strategy. This perception is the factor that influences individuals and social groups. Therefore, multidisciplinary studies are needed, such as sociology, anthropology, and natural science. In this regard, Eco-linguistics attempts to participate in reviewing the environment from a linguistic perspective.

Fill and Mühlhäusler (2001) mention four reasons of the relationship between language and environment, namely: (1) language is free and laden with meaning; (2) language is created by the world; (3) the world is created by language (structuralists and post-structuralists' general view), and (4) language is interconnected with the world (the two are arranging and arranged each other, but sometimes free). Reciprocal changes between environment and language may be learned through eco-linguistics. Eco-linguistics studies ecosystems that are part of the human life system (ecology) with language used by humans in communication with the environment (linguistic).

Literature Review

Rasna (2010) finds that the knowledge of rural and urban adolescents regarding herbs is low. This is seen in the unawareness regarding the importance of trees and plants listed in the questions. Such unawareness shows their infrequent to no interaction with the environment. The adolescents' herbal lexical depreciation is influenced by socio-cultural, socio-ecological, and socio-economic factors. Consequently, adolescents are unaware of the cognitive concept of herbs. Adolescents find it even more difficult to recognize traditional herbs; thus herbal lexical depreciation takes place.

The research conducted by Rokhman (2012) concludes that the responses of academics in Universitas Negeri Semarang to conservation symbols reflected in greeting, slogan or jargon, and use of local language. The most used model is greeting. The perception of respondents stating that greeting activity may strengthen conservation pillars is 77.9%.

Yuniawan et al. (2014) ascertain that the students' knowledge levels is still lower than 70. This means that students' conservation knowledge level is low. Furthermore, the popularity level of conservation expressions, in consecutive order, is ethics, arts, culture, conservation cadre, waste management, clean energy, biodiversity, green architecture and internal transportation, paperless, and conservation publication.

Alshorooqi and Rawadieh (2017) explore the implications of the media in democratic societies and the content of assessing the development of media. Such implications are the most prevalent in the various school textbooks. This significant finding is significant from a curricular perspective. It shows that curriculum development in the Kingdom of Bahrain is highly connected to and influenced by a set of interdependent historical and political factors.

A study conducted by Ghazali (2017) shows how students' cognition in learning are affected by their environment. He argued that individual's language acquisition device was once triggered at a particular time with the right input. These inputs are the factors that go beyond student's cognitive domain. Surveys and interviews were conducted to examine the influence of these factors on learner' proficiency in English and application. The result of this study shows that Arab English learners' ability might be an effect of psychological motivation, practical application needs, and personal reasoning. Further, these factors are often seen in students learning/personal environment. In relation to this paper, the present study proves that Ghazali's attempt to scrutinize factors affecting students learning can be a concrete reason for their ability.

Abdulkarim, Ratmaningsih, and Anggraini (2018) find: 1) the concept of the civicpedia design consisting of the home page, dictionary page, media page, quiz and contact page; 2) steps in developing teaching materials were designed based on Curriculum of 2013, compiled based on the formal education level, and contextually formulated on the current real-life controversial cases, collaborated with authentic assignments, which enhanced the students' critical thinking, and related to unknown terms with suitable images and videos; 3) the students' responses regarding the implementation civicpedia in the learning process were positive. The program display was considered good, and the interactivity aspect was deemed very good. Most students very positively perceived the use of Civicpedia in civic education learning to improve information literacy.

Yuniawan et al. (2019) reports that the level of necessity for conservation text for elementary school students' literacy enrichment leads to several aspects. Those aspects involve content, legibility, presentation and graphics, and motivation. This conservation text refers to three pillars of conservation: value and character pillar, the art and culture pillar, the natural resource, and the environment pillar. Conservation text does not only serve as a linguistic structure but also as a cognitive structure and action structure. Environmental literacy may serve as an indicator of students' ecological awareness in protecting and preserving the earth since childhood.

A study by Yuniawan et al. (2019) finds two functions of eco-lexicons contained in the conservation news texts published in mass media. Those are (1) instrumental function, such as stating a dynamic movement; (2) representation function, consisting of: (a) giving names, (b) describing characters, (c) describing activities, (d) referring to a place, (e) stating art diversity, (f) describing situations, and (g) expressing types. The function of eco-lexicons in the conservation news texts is to provide society with a better understanding and knowledge of environmental literacy.

Aiman and Hasyda (2020) investigate the functions of media-based learning in enhancing student's scientific literacy and critical thinking skill. Aiman and Hasyda (2020) employed a process-oriented guided inquiry learning (POGIL) as the medium to teach scientific literacy and critical thinking to primary school students. This study indicates some differences between students who study scientific literacy and critical thinking in POGIL and expository learning. This shows that media-based learning can be an effective way of teaching students. The study's relevancy to this present research is how media-based learning serves as the main driver for helping students gain new abilities and skills.

Khairani, Kipli, and Shamsuddin (2020) report that the students have good knowledge and a positive attitude towards biodiversity in waterfront cities. Their knowledge is a significant predictor contributing to 13.4% of their attitude towards biodiversity. In addition, female students have a significantly higher knowledge score than male students, but there is no significant difference in their attitude towards biodiversity.

Nurwidodo et al. (2020) investigate how an eco-related activity affect student's eco-literacy. This study shows that the level of students' eco-literacy was significantly influenced by school type and grade. Nurwidodo et al. (2020) ascertain that a particular principle implemented in school, in this case the eco-school program and conservation-minded university, can be major reasons for high eco-literacy.

This research focuses on students' eco-literacy in conservation-minded universities. Thus, the research questions are formulated as follows: (1) What are students' eco-literacy level of value and character pillar in a conservation-minded university in Indonesia? (2)What are students' eco-literacy level of art and culture pillar in a conservation-minded university based in Indonesia? (3)What are students' eco-literacy level of natural resource and environment pillar in a conservation-minded university in Indonesia?

Methods

Sample/participants

This research aimed to analyze the quality of students' eco-literacy at a conservation-minded university in Indonesia. This notion implies that Universitas Negeri Semarang students are assumed to have mastered conservation lexicon or environment lexicon. Nurgiyantoro, B. (2001) states that mastery is an individual's capability that may be realized both theoretically and practically. An individual is deemed to master a skill when s/he is able to understand it and apply it in certain situations. According to Capra (2013) (in Keraf, 2014), eco-literacy describes the society's high awareness of the importance of the environment and its contents.

Research Design

Philosophically, this research is based on a phenomenological perspective. Phenomenology is a philosophical basis of which application is through various critical and scientific thinking phases starting from inductive thinking, in which the researcher catches several social phenomena in the field, analyzes such phenomena, and then theorizes based on the observed phenomena (Bungin, 2008). Therefore, the research data were in verbal forms, i.e., the form of conservation eco-literacy and numeric symbols in the form of a percentage. All data were retrieved using qualitative and quantitative descriptive approach. In this approach, the research analyzes the words, describes the data from the respondent's perspective, and studies the situation (Creswell, 1998).

The qualitative technique application is based on the phenomenological epistemological conception presented by Husserl. This concept elaborates that human awareness actively contains experience objects (Holstein and Gubrium in Denzin and Lincoln, 2009). This research's qualitative nature is related to the research data in the form of conservation eco-literacy, and the quantitative nature is related to the research data in the form of students' eco-literacy level at a conservation-minded university.

Data Collection Procedures

The data were collected using questionnaires and interview techniques (Sudaryanto, 2015; Mahsun, 2005). A questionnaire is a number of written questions used to collect information from respondents. According to Arikunto (2016), a questionnaire is a written question used to collect information from respondents in the sense of report on personal matters

or anything they are aware of. This idea is in line with Sugiyono's opinion (2001), which defines a questionnaire as a data collecting technique performed by giving a set of written questions or statements to respondents for their response.

In this research, the questionnaires were distributed using a digital application system of 126 questions of conservation eco-literacy. The questionnaire employed a Likert scale method, with categories: zero-understanding, in which respondent does not understand and not know about conservation eco-literacy, score 1; sufficient understanding, in which respondent sufficiently understands and knows conservation eco-literacy, score 2; good understanding, in which respondent understands and knows conservation eco-literacy, score 3. The conservation eco-literacy test was also based on the conservation pillar as part of the conservation-minded university. There were three considerations in using online questionnaire: (1) online questionnaire was related to the conservation-minded university's policy of natural resource and environment pillar, promoting the paperless movement; (2) utilizing the facility, the questionnaire can reach wider audiences; and (3) the use of online questionnaire minimized error level in data analysis. The rationale was that the system automatically conducted quantitative data analysis process.

Data Analysis

This research employed a percentage technique for data analysis in examining numeric symbols of students' conservation eco-literacy level at a conservation-minded campus. The phases of numeric counting of literacy eco-lexicon conservation level are: (1) selecting respondent's category by status (student); (2) counting number of data for each item (from the Likert scale); (3) dividing the total sums of the results by the total respondents pursuant to the selected category. The calculation employed the formula below.

$$\text{Percentage of zero-understanding} = \frac{\text{number of "zero-understanding"}}{\text{number of respondents}} \times 100\%$$

$$\text{Percentage of sufficient understanding} = \frac{\text{number of "sufficient understanding"}}{\text{number of respondents}} \times 100\%$$

$$\text{Percentage of good understanding} = \frac{\text{number of "understanding"}}{\text{number of respondents}} \times 100\%$$

Generally, the following is the formula.

$$P = (\sum [(] \_1 + \_2 + \cdots + \_n))/(\sum) \times 100\%$$

Explanation:

P	= Percentage
X	= Filled in with lexicon item
Y	= Status (e.g.: student)
Y	= Number of respondents
n	= Total respondents

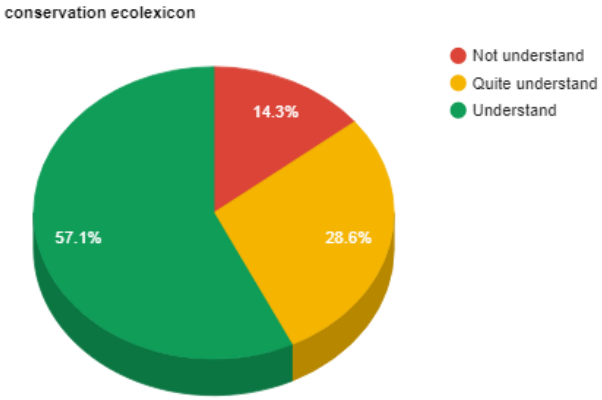
Results

Currently, literacy is often used together with other words, such as digital literacy, computer literacy, virtual literacy, and mathematics literacy. This is a transformation of the meaning of literacy due to the current development. Literacy covers responses, understanding, and life activities arranged and applied through continuous learning activities (Rokhman, 2017).

This output of conservation eco-literacy system application (sisteravasi) substantively contains 126 conservation lexicons, including 45 conservation lexicons of value and character pillar; 30 conservation lexicons of art and culture pillar; 51 conservation lexicons of natural resource and environment pillar. The percentage output is displayed in the following Figure 1.

Figure 1

Report output



Based on the result of digital application system development, the data regarding the conservation eco-literacy system aim to help identify students' conservation eco-literacy level. The output obtained is in the form of a framework-based online system as a measurement instrument of conservation eco-lexicon literacy level.

This application system accommodates the conservation eco-literacy level in three pillars: the value and character pillar, art and culture pillar, and natural resource and environment pillar. Each of the pillars has three categories: conservation eco-literacy expressed in good understanding, sufficient understanding, and zero-understanding by respondents. This is in line with the Regulation of Rector of UniversitasNegeri Semarang Number 6 of 2017 on Conservation Principle. This principle is supported by three pillars previously mentioned. According to the regulation, UNNES's conservation ideology is *arum luhuring pawiyatan ing astanira, "harum and luhurnya wilayah ini bergantung kepada tangan-tangan kita* [this area's fame and honor are at our hands]". Such a principle bears the meaning of house of science where an excellent civilization is developed. This notion is confirmed by Rokhman (2014) that higher education institution's essential purpose is to serve as the center of scientific activities. Therefore, any thoughts, attitudes, movements, and steps of campus inhabitants should be based on scientific processes. Based on the development of the digital application system, the result of students' eco-literacy level at the conservation-minded campus is presented in Table 1.

Table 1

Students' top ten conservati on eco-literacy with good understanding criteria on three pillars

Value and Character Pillar		Art and Culture Pillar		Natural Resource (HR) and Environment Pillar	
Ecolexicon	%	Eco-lexicon	%	Eco-lexicon	%
care	85%	walking culture	80%	organic waste	80%
honesty	84%	cycling culture	78%	waste free	79%
conservation	82%	speaking culture	75%	planting movement	79%
justice	80%	cultural village	64%	inorganic waste	79%
sportsmanlike	80%	culture conservation	62%	smoke free	78%
inspirational	79%	art conservation	61%	conservation campus	78%
UNNES conservation	79%	language conservation	60%	global warming	78%
innovative	78%	ethics, art and culture	54%	conservation education	78%
conservation-minded	75%	conservation exercise	47%	reservoir	77%
conservation education	74%	Noble-cultured	45%	mini forest	76%

Of the data in the table, students' eco-literacy levels at the conservation-minded campus are explained as follows: (a) In terms of value and character pillar, the highest understanding is care conservation eco-literacy of 85%. (b) The highest understanding in art and culture pillar is walking culture conservation eco-literacy, 80%. (c) The highest understanding of the natural resources and environment pillar is organic waste conservation eco-literacy, 80%.

Discussion

The principle of a conservation-minded university is incorporated in Universitas Negeri Semarang's image and reputation. Conservation-minded university's image and reputation have become a trend among people. In other words, the conservation-minded university has attracted the higher education institution world's attention. This idea is in line with Ruslan's opinion (2010), claiming that an image is realized as acceptance and response, either positive or negative, particularly by the public (target audience) and community.

Generally, a positive image is central to public's trust. Therefore, a conservation-minded university must represent such an image to create a positive impression regarding Universitas Negeri Semarang. The conservation-minded university is not merely a name or differentiator but also a critical factor in competitive advantage. This corresponds to the opinions of Salim (2007), Al Gayoni (2012), Mbete (2013) that socio-ecological changes significantly influence the use of language and changes in cultural values in a community. The digital application system-based data analysis also results in the conservation eco-literacy level at the three aforementioned pillars.

Students' Eco-Literacy of Value And Character Pillar

In the value and character pillar, the highest understanding is eco-literacy. Sequentially, the ten-highest aspects of understanding eco-literacy conservation are care, honesty, conservation, justice, sportsmanlike, inspirational, UNNES conservation, innovative, conservation-minded, and conservation education presented in Table 2.

Table 2

Students' ten highest conservation eco-literacy at value and character pillar

Value and Character Pillar					
Understanding		Sufficient Understanding		Zero-understanding	
Ecolexicon	%	Ecolexicon	%	Ecolexicon	%
care	85%	conservation award	54%	*upakarti krida adhikarana*	73%
honesty	84%	campus of excellent academic civilization	49%	*upakaratama reh adiwangsa*	73%
conservation	82%	conservation curriculum	48%	*upakarti artheswara adhikarana*	72%
justice	80%	conservation principle	48%	*upakarti mandala bumi adisajjana*	70%
sportsmanlike	80%	conservation vision	48%	*upakara dayaning bawana*	69%
inspirational	79%	conservation developer	47%	*upakara bhirawa santosa*	68%
UNNES conservation	79%	Value conservation	43%	*upakarti reksa bhinneka adhikarana*	65%
innovative	78%	conservation spirit	41%	*upakarti reksa*	64%

conservation-minded	75%	moral conservation	40%	*manggala budaya upakarti udyakarya guna*	64%
conservation education	74%	conservation value	39%	*upakara bagyaning sasama*	60%

The above pillars have been practiced in students' daily life, both in academic and non-academic environments. Based on the data, the highest is literacy level with very good understanding and conservation eco-literacy. This explains that care is the students' priority. Such a high understanding is expected to improve their caring to others, promoting students' empathy. As the agent of changes, it is also expected that the students promote the understanding of the value and character pillar to society.

The second and third-highest percentage in the criteria of good understanding regarding value and character pillar is honesty. This result signifies that honesty serves as the value and character upheld by the students. Therefore, we may conclude that most students still believe that upholding honesty may improve their quality of life, both on campus and community. The high understanding of honesty conservation of eco-literacy among the students is expected to improve Universitas Negeri Semarang students' performance and capabilities. Following the previous aspect is conservation eco-literacy. Considering its status as a conservation-minded Universitas Negeri Semarang has managed to disseminate from conservation values, to examples of conservation acts, vision and mission of Universitas Negeri Semarang as a conservation university, etc. This way, students are expected to become individuals who will uphold conservation values in the future.

Furthermore, the criteria of sufficient understanding and zero-understanding conservation eco-literacy arising in the almost equal distribution of eco-lexicon are regarding conservation award given to figures deemed actively implementing conservation in their respective field. Conservation award given by Universitas Negeri Semarang is in the form of *upakarti*. In the sufficient understanding criteria, conservation eco-literacy mostly understood by respondent students is conservation eco-literacy of conservation award. In contrast, the lowest level of sufficient understanding is conservation eco-literacy of conservation value.

Conservation eco-literacy of conservation award is an award given to an individual for his/her attitude in maintaining and protecting something regularly to prevent its damage or destruction by way of preservation. This means that, based on the distribution of conservation eco-literacy with sufficient understanding criteria, students have had sufficient understanding of conservation awards. However, with conservation eco-literacy of conservation values, students' understanding level is still low, which means that their recognition and understanding of conservation values have not run well; thus, the expected result is yet achieved.

Regarding the zero-understanding category, the highest percentage of students' non-understanding of the criteria related to the names of conservation award is with *upakarti krida adhikarana* criteria. This means that only a few students understand *upakarti krida adhikarana*. The *upakarti bagyaning sasama* category takes low criteria of zero-understanding. This notion means that, of the ten names of Conservation Awards, *upakarti bagyaning sasama* is familiar to students (i.e., award given to an individual with a significant contribution to education).

The questionnaire reports that many students are yet to understand the conservation category. Therefore, dissemination of information to the students is essential; this approach can be performed through social media, considering that current students tend to prefer this type of intercation. This way, students are expected to easily and quickly receive information regarding the award.

Students' Eco-Literacy of Art and Culture Pillar

In the pillar of Art and Culture, the students' comprehension comprises good, sufficient, and zero-understanding criteria. In the good understanding criteria, the highest understanding level or the conservation eco-literacy of the students encompass several aspects; those are, in the consecutive order, walking culture, cycling culture, speaking culture, cultural village, culture conservation, art conservation, language conservation, art and culture ethics, conservation exercise, and noble cultured campus. This is seen in Table 3.

Table 3

Students' ten highest conservation eco-literacy at art and culture pillar

Art and Culture Pillar					
Understanding		Sufficient Understanding		Zero-understanding	
Ecolexicon	%	Ecolexicon	%	Ecolexicon	%
walking culture	80%	noble cultured campus	48%	sekaringrat dance	64%
cycling culture	78%	coastal folklore	47%	*sekardomas*	59%
speaking culture	75%	conservation kroncong	46%	*Syair hijau*	56%
cultural village	64%	conservation batik of house of science	45%	*Wayang krucil*	53%
culture conservation	62%	batik conservation	44%	*pakarjawi*	51%
art conservation	61%	coastal culture	44%	*Selasa legen*	50%
language conservation	60%	Conservation *gending* (music)	44%	*Seni topeng ireng* (black mask art)	47%
ethics, art and culture	54%	cultural pillar	44%	conservation *langgam*	37%
conservation exercise	47%	*Gending semarangan*	43%	Gending semarangan	34%
noble cultured campus	45%	*Guyup rupa*	43%	conservation poem	33%

Based on the data analysis result, the students' most understanding level at art and culture pillar is in the aspect of walking culture. Walking culture is popular among students of Universitas Negeri Semarang since it is continuously promoted as a conservation movement. On top of that, the university limits the use of vehicles in campus environment.

Besides walking culture, cycling culture is familiar among the students. In support of cycling culture in the campus environment, the university management has provided bicycles for the students within the campus. The aspect of a noble cultured campus is in the low literacy level. Disseminating the values of noble cultured campus is one of the jobs to be accomplished.

The conservation eco-literacy with the highest sufficient understanding level is the aspect of noble cultured campus. Universitas Negeri Semarang focuses on nature conservation and cultural conservation. Nevertheless, the notion of noble cultured campus is still a familiar concept.

The sufficient understanding criteria with the lowest percentage are with conservation eco-literacy of *guyup rupa*. This means that many students still do not understand *guyup rupa*. Guyup rupa is arts performance presenting artists' works. Based on secondary data analysis, students are yet to fully understand conservation eco-literacy of guyup rupa, despite the program continuously conducted by Visual Arts Department students.

In the zero-understanding criteria, there are ten principles of eco-literacy conservation, which the students least understand. Still, some students were able to comprehend some of the principles, such as *Sekaringrat* dance, *sekar domas*, *syair hijau*, *wayang krucil*, *pakarjawi*,

selasa legen, *topeng ireng* dance, conservation *langgam*, *gending semarangan*, and conservation poem.

Of the data analysis result in the zero-understanding criteria, one principle of the conservation of eco-literacy sufficiently understood by the students is the conservation poem. Disseminating the meaning of conservation through a poem is a preferable method.

Another principle of the conservation eco-literacy with the lowest zero-understanding criteria is *Sekaringrat* dance. The students have zero-understanding of *Sekaringrat* dance, despite the fact that the dance is frequently performed in Universitas Negeri Semarang official events. *Sekaringrat* dance is a dance performed by nine dancers as the symbol of Universitas Negeri Semarang's nine faculties. This dance represents the glory of Universitas Negeri Semarang. Therefore, it is necessary to introduce *Sekaringrat* Dance to students and society.

Students' Eco-Literacy at Natural Resource and Environment Pillar

The subsequent analysis is related to the natural resource and environment pillar. The research reported varied results of the questionnaire distributed to the students. In the good understanding criteria, the highest understanding level is the organic waste principle. This principle is followed by the principle of waste-free, planting movement, inorganic waste, smoke-free, conservation campus, global warming, conservation education, reservoir, and mini forest. Conservation eco-literacy of mini-forest is in the lowest position with the good understanding criteria. Although included in good understanding criteria, many students are yet aware of the idea of mini-forest; the data is displayed in Table 4.

Table 4

Students' ten-highest conservation eco-literacy at natural resource and environment pillar

Natural Resource (HR) and Environment Pillar					
Understanding		Sufficient Understanding		Zero-understanding	
Ecolexicon	%	Ecolexicon	%	Ecolexicon	%
organic waste	80%	environmental journalism	47%	*siomon*	43%
waste free	79%	conservation based governance	47%	green belt	38%
planting movement	79%	herbal plant	45%	h-bat conservation	31%
inorganic waste	79%	education garden	43%	h-bat campus	30%
smoke free	78%	herbal garden	43%	biodiversity	28%
conservation campus	78%	house of science	42%	green corridor	27%
global warming	78%	handmade paper	40%	biopore	25%
conservation education	78%	conservation driver	40%	Environmental journalism	19%
reservoir	77%	green corridor	39%	conservation based governance	18%
mini forest	76%	h-bat conservation	38%	paperless	16%

Based on the data analysis, students' understanding of organic waste conservation eco-literacy is high. This finding denotes that most of the students are aware of and understand anything classified as organic waste. The university has also made efforts to uphold its vision and mission to be a conservation university by providing trash bins for different waste types, e.g., organic waste, inorganic waste, and plastic waste, in every department. The university has

also utilized organic waste (for compost) in maximizing its commitment to environmental conservation.

The majority of students also understand conservation eco-literacy of the waste-free category. Many waste disposal spots are provided in all faculties, the central library, auditorium, rectorate, and along pathways connecting faculties. In realizing a waste-free campus atmosphere, the Universitas Negeri Semarang has also provided personnel assigned to clean pathways connecting faculties and gardens in Universitas Negeri Semarang. A reservoir was also built to contain water, which is cleaned once a few days.

Following the waste-free principle is the planting movement; this principle has been one of the obligations that all Universitas Negeri Semarang students must adhere to. Universitas Negeri Semarang provides one seedling distributed to each student in a planting-together event in empty land spots. This is undoubtedly beneficial for improving students' understanding related to the importance of planting activity.

There are ten conservation eco-literacy from the highest to lowest levels of understanding in the sufficient understanding criteria; those principles are: environment journalism, conservation-based governance, herbal plant, education garden, herbal garden, house of science, handmade paper, conservation driver, green corridor, and h-bat conservation.

According to the data analysis, environmental journalism is at a relatively high level of understanding. Following environmental journalism is conservation-based governance. Universitas Negeri Semarang has also performed conservation-based governance, such as using solar power for lamps along the pathway from the Faculty of Languages and Arts to the Rectorate of Universitas Negeri Semarang. This is seen in the existing solar panels installed at some spots along Universitas Negeri Semarang's pathways.

Among the principles in the sufficient understanding criteria that fall under the lowest level are h-bat conservation eco-lexicon. Only a few students fully comprehend h-bat conservation. Therefore, the conservation eco-literacy of h-bat conservation needs to be informed to the students.

The next analysis is on zero-understanding criteria, in which the students have the lowest understanding in the plant planting system category. Conservation eco-literacy of plant planting system is originally from plant planting and nurturing information system, a reporting portal for planting by students. This system is developed under the Regulation of Rector of Universitas Negeri Semarang No. 26 of 2009 concerning the One-student-one-plant movement. All students are urged to plant a tree at least one time during their study in Universitas Negeri Semarang. Despite the regulation, many students are not aware of the function of the planting system. On that ground, it is necessary to find out the reasons for such unawareness.

Based on the data analysis, in the pillar of natural resources and environment pillar, the one in the zero-understanding criteria with the highest level of understanding is paperless movement. Although it is included in the zero-understanding criteria, few students understand the policy. The paperless policy has established by Universitas Negeri Semarang in support of its vision and mission to be a conservation university.

Conclusion

Students' eco-literacy level at digital-based, conservation-minded universities in Indonesia may be classified into three pillars: (1) value and character, art and culture, and (3) natural resource and environment. Students' eco-literacy level at value and character pillar of the good understanding category is care conservation eco-literacy (85%); in the sufficient understanding category is conservation award (54%), and; in the zero-understanding category is *upakarti krida adhikarana* (73%). Students' eco-literacy level at art and culture pillar of the good understanding category is walking culture conservation eco-literacy (80%); in the

sufficient understanding category is noble cultured campus (48%), and; in the zero-understanding category is *Sekaringrat* dance (64%). Students' eco-literacy level at natural resources and environment pillar in the good understanding category is organic waste conservation eco-literacy (80%); in the sufficient understanding category is environmental journalism (43%), and; in the zero-understanding category is *siomon* (43%). Furthermore, of the data analysis result, students' highest eco-literacy level at conservation-minded university is the care conservation pillar of eco-literacy, and the lowest is *upakarti krida adhikarana* pillar.

Recommendation

Students' eco-literacy level at conservation-minded universities in Indonesia based on digital application systems may be used as a model by many linguists to describe literacy level in other studies. Conservation eco-literacy level can serve as the indicator of society's ecological awareness in taking care of the earth. Eco-literacy is expected to help the goal for education for sustainable development. Research on the principle, moral, norm, arts, and culture of environmental conservation is of important paramount.

Goleman, Bennett, and Barlow (2010) mention five points in developing eco-literacy in a contextualized learning: (1) Develop empathy for all forms of life. This principle focuses on people's awareness of showing empathy to the environment. (2) Embrace sustainability as a community practice; this principle focuses that students are in demand of participating in group learning to promote awareness of taking care of others. (3) Make the invisible visible; this principle focuses on the implication of the practical study. By practical study, students will learn how to be responsible and aware of their surroundings. (4) Anticipate unintended consequences; this principle focuses on promoting students' responsibilities for everything they do. Teaching such consequences is essential to show respect and accountability for their activity. (5) Understand how nature sustains life; this principle focuses on doing self-evaluation. This principle teaches students how to be aware of consequences and wrongdoings.

Finally, a study on the conservation of eco-literacy principles may be developed to "Conservation Linguistics" study by linguists and interdisciplinary researchers as a linguistic analysis model.

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Students' Eco-Literacy Level at Conservation-Minded University in Indonesia

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ABSTRACT

This research aims to analyze students' eco-literacy level at a conservation-minded university in Indonesia. Universitas Negeri Semarang has been confirmed as a conservation-minded university in Indonesia. The research's data source is students' literacy at a conservation-minded university, Universitas Negeri Semarang. The data were collected from questionnaires and interviews with 200 students. The questionnaire consisted of 126 questions regarding conservation eco-literacy with a Likert scale pattern, with categories: zero understanding, score 1; sufficient understanding, score 2; good understanding, score 3, based on the three pillars of conservation. This questionnaire was completed using a digital application system http://bit.do/sisteravasi. Based on the result of digital application system-based data analysis, students' eco-literacy levels at conservation-minded universities are: (1) regarding the value and character pillar, the highest understanding is with care conservation eco-literacy (85%); (2) in terms of art and culture pillar, the highest understanding is walking culture conservation eco-literacy (80%); and (3) concerning the natural resources and environment pillar, the highest understanding is organic waste conservation eco- literacy (80%). Students' eco-literacy level at conservation-minded universities based on digital application systems may serve as a model to help linguists examine literacy levels in other studies.

Keywords: conservation-minded; eco-literacy; student; digital application system; university

1. Introduction

Literacy is an individual's ability to read, write, speak, count, and solve problems at the expertise level needed in work, family, and society. This notion conforms to Kern and Baynham's (1995) opinion that literacy is an integrated form of listening, speaking, writing, reading, and critical thinking capabilities. Literacy also bears the meaning of social practice and relationships related to knowledge, language, and culture. Therefore, literacy involves a series of learning, which

allows individuals to achieve knowledge, develop knowledge, and fully participate in limited and extensive communities (UNESCO, 2005).

The UNESCO Declaration (2005) also states that information literacy is related to identifying, determining, finding, evaluating, creating effectively and in an organized manner, and using and communicating information to solve various problems. The capabilities need to be obtained by every individual as the requirement for participation in the information community, and it is part of human rights regarding lifelong learning.

Currently, literacy is not merely defined as the capability to write and read. Boeriswati (2017) asserts that literacy is the ability to identify, understand, interpret, create, communicate, count, and use printed and written materials related to various contexts. Literacy is not only about reading and writing. Literacy is a cultural practice related to social and political issues. Therefore, education experts present a new definition of literacy.

Literacy's characteristics are: (1) far from universality and often poorly developed, (2) obtained through hard learning and effort, obtained after mastery of oral language, (3) delivery of a message to recipient through free transfer in written form, not face to face, (4) requiring compliance with linguistic rules, (5) produced in an extended period, (6) likely to be soon forgotten, but may also last longer depending on listener's emotional reaction, (7) may last longer (through publishing), may be altered before delivered to reader, (8) claimed to reflect the knowledge, personal accuracy, belief, and attitude, (9) aiming at maintaining those more traditional and avoiding informal mode, (10) implying competence in producing more words, and (11) connecting shared ideas in a complex structure (Ellis et al., 1998; Usaid, 2014). Therefore, literacy is not merely the capability to read and write mechanically.

Meanwhile, Capra (2013) (as cited in Keraf, 2014) presents the term eco-literacy or ecological literacy. According to him, eco-literacy is a human capability that has reached a high awareness level of the importance of the environment. This idea implies that an individual has been highly aware of the importance of the environment, including maintaining and taking care of the earth,

ecosystem, and nature where s/he lives. Capra (as cited in Keraf, 2014) defines eco-literacy as the condition of an individual who has understood the ecological and life principles according to the ecological principles in managing and socializing with humankind on earth to realize a sustainable society.

Moreover, Capra (2013) longs for and predicts that the future of humankind, the future of the human community, and the future of planet earth highly depend on eco-literacy. Therefore, revitalizing such communities, including the education community, industrial community, and political community, is needed to protect the environment.

Universitas Negeri Semarang of Indonesia was confirmed as a Conservation University on March 12, 2010. This is in line with the research conducted by Mikulik and Babina (2009) that a higher education institution must be concerned with the environment for sustainable development. Thus, it is necessary to formulate environmental preservation programs. Regulation of Rector of UNNES Number 22 of 2009 defines a conservation-minded university as a university incorporating conservation principles in the conduct of education, research, and public service (sustainable protection, preservation, and utilization). The principles should be embedded in the university's values and characters, arts, cultures, natural resources, and environment.

The above notion implies that the implementation of *tri dharma* (the three pillars) in Universitas Negeri Semarang always prioritizes environmental conservation principles. On that ground, Universitas Negeri Semarang's vision is to become a conservation-minded university with an international reputation (Regulation of Minister of Research, Technology, and Higher Education of the Republic of Indonesia Number 49 of 2016 on the Statute of Universitas Negeri Semarang). This idea suggests that a higher education institution, in this case, Universitas Negeri Semarang, strives to be the center of activities and empowerment in preserving the environment, preventing pollution and damage to the environment, and realizing a clean, healthy, and green campus.

Ever since Universitas Negeri Semarang declared itself as a conservation-minded university, many policies and efforts have been made by Universitas

Negeri Semarang to disseminate the importance of conservation efforts to all campus inhabitants and society. Simply put, Universitas Negeri Semarang becomes the pioneer of conservation to lead the society to a prosperous society on par with the global community. As a conservation-minded higher education institution, Universitas Negeri Semarang is obliged to fulfill its mandates and responsibilities by upholding preservation principles as its identity. In other words, conservation becomes the identity of all mandates and responsibilities assumed from planning to implementation and completion. This effort is the activity to build an image and reputation of a conservation-minded university.

Salim (2007) states that human's social, ideological, and organizational relationship with nature needs to be noted and developed in arranging a natural resources management strategy. This perception is the factor that influences individuals and social groups. Therefore, multidisciplinary studies such as sociology, anthropology, and natural science are needed. In this regard, Eco-linguistics attempts to participate in reviewing the environment from a linguistic perspective.

Fill and Mühlhäusler (2001) mention four reasons for the relationship between language and environment, namely: (1) language is free and laden with meaning; the world creates (2) language; (3) the world is created by language (structuralists and post-structuralists general view), and (4) language is interconnected with the world (the two are arranging and arranged each other, but sometimes free). Reciprocal changes between environment and language may be learned through eco-linguistics. Eco-linguistics studies ecosystems that are part of the human life system (ecology) with language used by humans in communication with the environment (linguistic).

2. Literature Review

Rasna (2010) finds that the knowledge of rural and urban adolescents regarding herbs is low. This is seen in the unawareness regarding the importance of trees and plants listed in the questions. Such unawareness shows their infrequent to no interaction with the environment. The adolescents' herbal lexical depreciation is

influenced by socio-cultural, socio-ecological, and socio-economic factors. Consequently, adolescents are unaware of the cognitive concept of herbs. Adolescents find it even more difficult to recognize traditional herbs; thus, herbal lexical depreciation takes place.

The research conducted by Rokhman (2012) concludes that the responses of academics in Universitas Negeri Semarang to conservation symbols are reflected in greetings, slogans or jargon, and the use of local language. The most used model is greeting. The perception of respondents stating that greeting activity may strengthen conservation pillars is 77.9%.

Yuniawan et al. (2014) ascertain that the students' knowledge levels is still lower than 70. This means that students' conservation knowledge level is low. Furthermore, in consecutive order, the popularity level of conservation expressions is ethics, arts, culture, conservation cadre, waste management, clean energy, biodiversity, green architecture and internal transportation, paperless, and conservation publication.

Alshorooqi and Rawadieh (2017) explore the implications of the media in democratic societies and the content of assessing the development of media. Such implications are the most prevalent in the various school textbooks. This significant finding is significant from a curricular perspective. It shows that curriculum development in the Kingdom of Bahrain is highly connected to and influenced by a set of interdependent historical and political factors.

A study by Ghazali (2017) shows how their environment affects students' cognition in learning. He argued that individual's language acquisition device was once triggered at a particular time with the right input. These inputs are the factors that go beyond student's cognitive domain. Surveys and interviews were conducted to examine these factors' influence on learner' English proficiency and application. The result of this study shows that Arab English learners' ability might affect psychological motivation, practical application needs, and personal reasoning. Further, these factors are often seen in students learning/personal environment. In relation to this paper, the present study proves that Ghazali's

attempt to scrutinize factors affecting students' learning can be a concrete reason for their ability.

Abdulkarim, Ratmaningsih, and Anggraini (2018) find: 1) the concept of the civicpedia design consisting of the home page, dictionary page, media page, quiz, and contact page; 2) steps in developing teaching materials was designed based on Curriculum of 2013, compiled based on the formal education level, and contextually formulated on the current real-life controversial cases, collaborated with authentic assignments, which enhanced the students' critical thinking, and related to unknown terms with suitable images and videos; 3) the students' responses regarding the implementation civicpedia in the learning process were positive. The program display was considered good, and the interactivity aspect was deemed very good. Most students very positively perceived the use of Civicpedia in civic education learning to improve information literacy.

Yuniawan et al. (2019) report that the level of necessity for conservation text for elementary school students' literacy enrichment leads to several aspects. Those aspects involve content, legibility, presentation and graphics, and motivation. This conservation text refers to three pillars of conservation: the value and character pillar, the art and culture pillar, the natural resource, and the environment pillar. Conservation text does not only serve as a linguistic structure but also as a cognitive structure and action structure. Environmental literacy may indicate students' ecological awareness in protecting and preserving the earth since childhood.

The function of eco-lexicons in conservation news texts is to provide society with a better understanding and knowledge of environmental literacy. A study by Yuniawan et al. (2019) finds two functions of eco-lexicons contained in the conservation news texts published in mass media. Those are (1) instrumental function, such as stating a dynamic movement; (2) representation function, consisting of (a) giving names, (b) describing characters, (c) describing activities, (d) referring to a place, (e) stating art diversity, (f) describing situations, and (g) expressing types.

Aiman and Hasyda (2020) investigate the functions of media-based learning in enhancing students' scientific literacy and critical thinking skills. Aiman and Hasyda (2020) employed process-oriented guided inquiry learning (POGIL) to teach primary school students scientific literacy and critical thinking. This study indicates differences between students who study scientific literacy and critical thinking in POGIL and expository learning. This shows that media-based learning can be an effective way of teaching students. The study's relevancy to this present research is how media-based learning serves as the main driver for helping students gain new abilities and skills.

According to Khairani et al. (2020), the students have good knowledge and a positive attitude towards biodiversity in waterfront cities. Their knowledge is a significant predictor contributing to 13.4% of their attitude towards biodiversity. In addition, female students have a significantly higher knowledge score than male students, but there is no significant difference in their attitude towards biodiversity.

Nurwidodo et al. (2020) investigate how an eco-related activity affects student’s eco-literacy. This study shows that the level of students’ eco-literacy was significantly influenced by school type and grade. Nurwidodo et al. (2020) ascertain that a particular principle implemented in school, the eco-school program and conservation-minded university, can be major reasons for high eco-literacy.

This research focuses on students’ eco-literacy in conservation-minded universities. Thus, the research questions are formulated as follows: (1) What are students' eco-literacy level of value and character pillars in a conservation-minded university in Indonesia? (2)What are students' eco-literacy level of art and culture pillars in a conservation-minded university based in Indonesia? (3)What are students' eco-literacy levels of natural resource and environment pillars in a conservation-minded university in Indonesia?

3. Methods

3.1 Sample/Participants

This research aimed to analyze the quality of students' eco-literacy at a conservation-minded university in Indonesia. This notion implies that Universitas Negeri Semarang students are assumed to have mastered the conservation lexicon or environment lexicon. Nurgiyantoro, B. (2001) states that mastery is an individual's capability that may be theoretically and practically realized. An individual is deemed to master a skill when s/he is able to understand it and apply it in certain situations. According to Capra (2013) (in Keraf, 2014), eco-literacy describes the society's high awareness of the importance of the environment and its contents.

3.2 Research Design

Philosophically, this research is based on a phenomenological perspective. Phenomenology is a philosophical basis of application through various critical and scientific thinking phases starting from inductive thinking, in which the researcher catches several social phenomena in the field, analyzes such phenomena, and then theorizes based on the observed phenomena (Bungin, 2008). Therefore, the research data were in verbal forms, i.e., the form of conservation eco-literacy and numeric symbols in the form of a percentage. All data were retrieved using the qualitative and quantitative descriptive approaches. In this approach, the research analyzes the words, describes the data from the respondent's perspective, and studies the situation (Creswell, 1998).

The qualitative technique application is based on the phenomenological epistemological conception presented by Husserl. This concept elaborates that human awareness actively contains experience objects (Holstein and Gubrium in Denzin and Lincoln, 2009). This research's qualitative nature is related to the research data in the form of conservation eco-literacy, and the quantitative nature is related to the research data in the form of students' eco-literacy level at a conservation-minded university.

3.3 Data Collection Procedures

The data were collected using questionnaires and interview techniques (Sudaryanto, 2015; Mahsun, 2005). A questionnaire is a number of written questions used to collect information from respondents. According to Arikunto (2016), a questionnaire is a written question used to collect information from respondents in the sense of reporting on personal matters or anything they are aware of. This idea is in line with Sugiyono's opinion (2001), which defines a questionnaire as a data-collecting technique performed by giving respondents a set of written questions or statements for their responses.

In this research, the questionnaires were distributed using a digital application system of 126 questions on conservation eco-literacy. The questionnaire employed a Likert scale method, with categories: zero understanding, in which the respondent does not understand and not know about conservation eco-literacy, score 1; sufficient understanding, in which the respondent sufficiently understands and knows conservation eco-literacy, score 2; good understanding, in which respondent understands and knows conservation eco-literacy, score 3. The conservation eco-literacy test was also based on the conservation pillar as part of the conservation-minded university. There were three considerations in using an online questionnaire: (1) online questionnaire was related to the conservation-minded university's policy of natural resource and environment pillar, promoting the paperless movement; (2) utilizing the facility, the questionnaire can reach wider audiences; and (3) the use of online questionnaire minimized error level in data analysis. The rationale was that the system automatically conducted quantitative data analysis process.

3.4 Data Analysis

This research employed a percentage technique for data analysis in examining numeric symbols of students' conservation eco-literacy level at a conservation-minded campus. The phases of numeric counting of literacy eco-lexicon conservation level are: (1) selecting the respondent's category by status (student); (2) counting the number of data for each item (from the Likert scale);

(3) dividing the total sums of the results by the total respondents pursuant to the selected category. The calculation employed the formula below.

$$\text{Percentage of zero understanding} = \frac{\text{number of "zero-understanding"}}{\text{number of respondents}} \times 100\%$$

$$\text{Percentage of sufficient understanding} = \frac{\text{number of "sufficient understanding"}}{\text{number of respondents}} \times 100\%$$

$$\text{Percentage of good understanding} = \frac{\text{number of "understanding"}}{\text{number of respondents}} \times 100\%$$

Generally, the following is the formula.

$$P = (\sum \llbracket() \_1 + \_2 + \cdots + \_n))/(\sum) \times 100\%$$

Explanation:

P = Percentage

X = Filled in with lexicon item

Y = Status (e.g.: student)

Y = Number of respondents

n = Total respondents

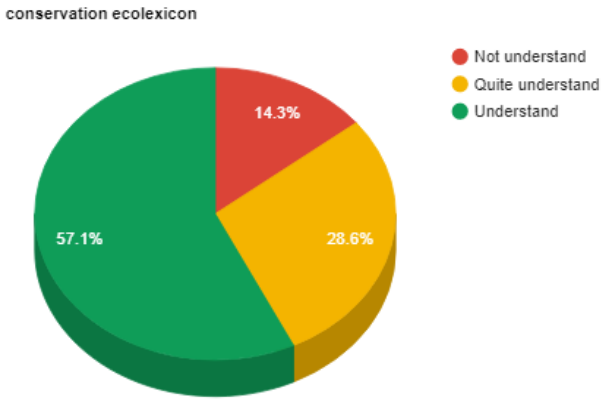
4. Results

Currently, literacy is often used together with other words, such as digital literacy, computer literacy, virtual literacy, and mathematics literacy. This is a transformation of the meaning of literacy due to the current development. Literacy covers responses, understanding, and life activities arranged and applied through continuous learning activities (Rokhman, 2017).

This output of conservation eco-literacy system application (SISTERAVAS) substantively contains 126 conservation lexicons, including 45 conservation lexicons of the value and character pillar; 30 conservation lexicons of the art and culture pillar; 51 conservation lexicons of the natural resource and environment pillar. The percentage output is displayed in the following Figure 1.

Figure 1

Report output



Based on the result of digital application system development, the data regarding the conservation eco-literacy system aim to help identify students' conservation eco-literacy level. The output obtained is in the form of a framework-based online system as a measurement instrument of conservation eco-lexicon literacy level.

This application system accommodates the conservation eco-literacy level in three pillars: the value and character, art and culture, and natural resource and environment. Each of the pillars has three categories: conservation eco-literacy expressed in good understanding, sufficient understanding, and zero-understanding by respondents. This is in line with the Regulation of Rector of UniversitasNegeri Semarang Number 6 of 2017 on Conservation Principle. This principle is supported by the three pillars previously mentioned. According to the regulation, UNNES's conservation ideology is *arum luhuring pawiyatan ing astanira, "harum and luhurnya wilayah ini bergantung kepada tangan-tangan kita* [this area's fame and honor are at our hands]". Such a principle bears the meaning of a house of science where an excellent civilization is developed. This notion is confirmed by Rokhman (2014) that higher education institution's essential purpose is to serve as the center of scientific activities. Therefore, any thoughts, attitudes, movements, and steps of campus inhabitants should be based on scientific processes. Based on the development of the digital application system, the result of students' eco-literacy level at the conservation-minded campus is presented in Table 1.

Table 1

Students' top ten conservation eco-literacy with good understanding criteria on three pillars

Value and Character Pillar		Art and Culture Pillar		Natural Resource (HR) and Environment Pillar	
Ecolexicon	%	Eco-lexicon	%	Eco-lexicon	%
care	85%	walking culture	80%	organic waste	80%
honesty	84%	cycling culture	78%	waste-free	79%
conservation	82%	speaking culture	75%	planting movement	79%
justice	80%	cultural village	64%	inorganic waste	79%
sportsmanlike	80%	culture conservation	62%	smoke-free	78%
inspirational	79%	art conservation	61%	conservation campus	78%
UNNES conservation	79%	language conservation	60%	global warming	78%
innovative	78%	ethics, art, and culture	54%	conservation education	78%
conservation-minded	75%	conservation exercise	47%	reservoir	77%
conservation education	74%	Noble-cultured campus	45%	mini forest	76%

Of the data in the table, students' eco-literacy levels at the conservation-minded campus are explained as follows: (a) In terms of value and character pillar, the highest understanding is care conservation eco-literacy of 85%. (b) The highest understanding of art and culture pillar is walking culture conservation eco-literacy, 80%. (c) The highest understanding of the natural resources and environment pillar is organic waste conservation eco-literacy, 80%.

5. Discussion

The principle of a conservation-minded university is incorporated into Universitas Negeri Semarang's image and reputation. Conservation-minded university's image and reputation have become a trend among people. In other words, the conservation-minded university has attracted the higher education institution world. This idea is in line with Ruslan's opinion (2010), claiming that an image is realized as acceptance and response, either positive or negative, particularly by the public (target audience) and community.

Generally, a positive image is central to public's trust. Therefore, a conservation-minded university must represent such an image to create a positive impression regarding Universitas Negeri Semarang. The conservation-minded university is not merely a name or differentiator but also a critical factor in competitive advantage. This corresponds to the opinions of Salim (2007), Al Gayoni (2012), and Mbete (2013) that socio-ecological changes significantly influence the use of language and changes in cultural values in a community. The digital application system-based data analysis also results in the conservation eco-literacy level at the three aforementioned pillars.

5.1 Students' Eco-Literacy of Value And Character Pillar

In the value and character pillar, the highest understanding is eco-literacy. Sequentially, the ten-highest aspects of understanding eco-literacy conservation are care, honesty, conservation, justice, sportsmanlike, inspirational, UNNES conservation, innovation, conservation-minded, and conservation education presented in Table 2.

Table 2

Students' ten highest conservation eco-literacy at value and character pillar

Value and Character Pillar		
Understanding	Sufficient Understanding	Zero-understanding

Ecolexicon	%	Ecolexicon	%	Ecolexicon	%
care	85%	conservation award	54%	*upakarti krida adhikarana*	73%
honesty	84%	the campus of excellent academic civilization	49%	*upakaratama reh adiwangsa*	73%
conservation	82%	conservation curriculum	48%	*upakarti artheswara adhikarana*	72%
justice	80%	conservation principle	48%	*upakarti mandala bumi adisajjana*	70%
sportsmanlike	80%	conservation vision	48%	*upakara dayaning bawana*	69%
inspirational	79%	conservation developer	47%	*upakara bhirawa santosa*	68%
UNNES conservation	79%	Value conservation	43%	*upakarti reksa bhinneka adhikarana*	65%
innovative	78%	conservation spirit	41%	*upakarti reksa manggala budaya*	64%
conservation-minded	75%	moral conservation	40%	*upakarti udyakarya guna*	64%
conservation education	74%	conservation value	39%	*upakara bagyaning sasama*	60%

The above pillars have been practiced in students' daily life, both in academic and non-academic environments. Based on the data, the highest is literacy level with very good understanding and conservation eco-literacy. This explains that care is the students' priority. Such a high understanding is expected to improve their caring for others, promoting students' empathy. As the agent of change, it is also expected that the students promote an understanding of the value and character pillar of society.

The second and third-highest percentage in the criteria of good understanding regarding value and character pillar is honesty. This result signifies that honesty serves as the value and character upheld by the students. Therefore, we may conclude that most students still believe that upholding honesty may improve their quality of life, both on campus and community. The high understanding of honesty conservation of eco-literacy among the students is expected to improve Universitas Negeri Semarang students' performance and capabilities. Following the previous aspect is conservation eco-literacy. Considering its status as a conservation-minded, Universitas Negeri Semarang has managed to disseminate conservation values to examples of conservation acts, the vision, and mission of Universitas Negeri Semarang as a conservation university, etc. This way, students are expected to become individuals who will uphold conservation values in the future.

Furthermore, the criteria of sufficient understanding and zero-understanding conservation eco-literacy arising in the almost equal distribution of eco-lexicon are regarding conservation awards given to figures deemed actively implementing conservation in their respective field. The conservation award given by Universitas Negeri Semarang is in the form of *upakarti*. In the sufficient understanding criteria, conservation eco-literacy is mostly understood by respondent students as the conservation eco-literacy of conservation award. In contrast, the lowest level of sufficient understanding is the conservation eco-literacy of conservation value.

Conservation eco-literacy of conservation award is an award given to an individual for his/her attitude in maintaining and protecting something regularly to prevent its damage or destruction by way of preservation. This means that students have had sufficient understanding of conservation awards based on the distribution of conservation eco-literacy with sufficient understanding criteria. However, with the conservation eco-literacy of conservation values, students' understanding level is still low, which means that their recognition and understanding of conservation values have not run well; thus, the expected result is yet achieved.

Regarding the zero-understanding category, the highest percentage of students' non-understanding of the criteria related to the names of conservation awards is with *upakarti krida adhikarana* criteria. This means that only a few students understand *upakarti krida adhikarana*. The *upakarti bagyaning sasama* category takes low criteria of zero-understanding. This notion means that, of the ten names of Conservation Awards, *upakarti bagyaning sasama* is familiar to students (i.e., an award given to an individual with a significant contribution to education).

The questionnaire reports that many students are yet to understand the conservation category. Therefore, dissemination of information to the students is essential; this approach can be performed through social media, considering that current students tend to prefer this type of interaction. This way, students are expected to easily and quickly receive information regarding the award.

5.2. Students' Eco-Literacy of Art and Culture Pillar

In the pillar of Art and Culture, the students' comprehension comprises good, sufficient, and zero-understanding criteria. In the good understanding criteria, the highest understanding level or the conservation eco-literacy of the students encompasses several aspects. In consecutive order, those are walking culture, cycling culture, speaking culture, cultural village, culture conservation, art conservation, language conservation, art and culture ethics, conservation exercise, and noble cultured campus. This data is seen in Table 3.

Table 3

Students' ten highest conservation eco-literacy at art and culture pillar

Art and Culture Pillar					
Understanding		Sufficient Understanding		Zero-understanding	
Ecolexicon	%	Ecolexicon	%	Ecolexicon	%
walking culture	80%	noble cultured	48%	*sekaringrat* dance	64%

		campus			
cycling culture	78%	coastal folklore	47%	*sekardomas*	59%
speaking culture	75%	conservation kroncong	46%	*Syair hijau*	56%
cultural village	64%	conservation batik of the house of science	45%	*Wayang krucil*	53%
culture conservation	62%	batik conservation	44%	*pakarjawi*	51%
art conservation	61%	coastal culture	44%	*Selasa legen*	50%
language conservation	60%	Conservation *gending* (music)	44%	*Seni topeng ireng* (black mask art)	47%
ethics, art, and culture	54%	cultural pillar	44%	conservation *langgam*	37%
conservation exercise	47%	*Gending semarangan*	43%	*Gending semarangan*	34%
noble cultured campus	45%	*Guyup rupa*	43%	conservation poem	33%

Based on the data analysis result, the students' most understanding level at the art and culture pillars is in the aspect of walking culture. Walking culture is popular among students of Universitas Negeri Semarang since it is continuously promoted as a conservation movement. On top of that, the university limits the use of vehicles in the campus environments.

Besides walking culture, cycling culture is familiar among the students. In support of the cycling culture in the campus environment, the university management has provided bicycles for the students within the campus. The aspect of a noble cultured campus is the low literacy level. Disseminating the values of a noble cultured campus is one job to accomplish.

The conservation eco-literacy with the highest sufficient understanding level is the aspect of a noble cultured campus. Universitas Negeri Semarang focuses on

nature conservation and cultural conservation. Nevertheless, the notion of a noble cultured campus is still a familiar concept.

The sufficient understanding criteria with the lowest percentage are with conservation eco-literacy of *guyup rupa*. This means that many students still do not understand *guyup rupa*. Guyup rupa is an arts performance presenting artists' works. Based on secondary data analysis, students are yet to fully understand the conservation eco-literacy of *guyup rupa*, despite the program continuously conducted by Visual Arts Department students.

In the zero-understanding criteria, there are ten principles of eco-literacy conservation, which the students least understand. Still, some students were able to comprehend some of the principles, such as *Sekaringrat* dance, *sekar domas*, *syair hijau*, *wayang krucil*, *pakarjawi*, *selasa legen*, *topeng ireng* dance, conservation *langgam*, *gending semarangan*, and conservation poem.

Of the data analysis result in the zero-understanding criteria, one principle of the conservation of eco-literacy sufficiently understood by the students is the conservation poem. Disseminating the meaning of conservation through a poem is a preferable method.

Another principle of conservation eco-literacy with the lowest zero-understanding criteria is *Sekaringrat* dance. The students have zero understanding of *Sekaringrat* dance, despite the fact that the dance is frequently performed in Universitas Negeri Semarang official events. *Sekaringrat* dance is a dance performed by nine dancers as the symbol of Universitas Negeri Semarang's nine faculties. This dance represents the glory of Universitas Negeri Semarang. Therefore, it is necessary to introduce *Sekaringrat* Dance to students and society.

5.3 Students' Eco-Literacy at Natural Resource and Environment Pillar

The subsequent analysis is related to the natural resource and environment pillar. The research reported varied results from the questionnaire distributed to the students. The highest understanding level in the good understanding criteria is the organic waste principle. This principle is followed by the principle of waste-free, planting movement, inorganic waste, smoke-free, conservation campus,

global warming, conservation education, reservoir, and mini forest. Conservation eco-literacy of mini-forest is in the lowest position with the good understanding criteria. Although included in good understanding criteria, many students are unaware of the idea of a mini-forest; the data is displayed in Table 4.

Table 4

Students' ten-highest conservation eco-literacy at the natural resource and environment pillar

Natural Resource (HR) and Environment Pillar					
Understanding		Sufficient Understanding		Zero-understanding	
Ecolexicon	%	Ecolexicon	%	Ecolexicon	%
organic waste	80%	environmental journalism	47%	*siomon*	43%
waste-free	79%	conservation based governance	47%	green belt	38%
planting movement	79%	herbal plant	45%	h-bat conservation	31%
inorganic waste	79%	education garden	43%	h-bat campus	30%
smoke-free	78%	herbal garden	43%	biodiversity	28%
conservation campus	78%	house of science	42%	green corridor	27%
global warming	78%	handmade paper	40%	biopore	25%
conservation education	78%	conservation driver	40%	Environmental journalism	19%
reservoir	77%	green corridor	39%	conservation based governance	18%
mini forest	76%	h-bat conservation	38%	paperless	16%

Based on the data analysis, students' understanding of organic waste

conservation eco-literacy is high. This finding denotes that most of the students

are aware of and understand anything classified as organic waste. The university has also made efforts to uphold its vision and mission to be a conservation university by providing trash bins for different waste types, e.g., organic waste, inorganic waste, and plastic waste, in every department. The university has also utilized organic waste (for compost) to maximize its commitment to environmental conservation.

The majority of students also understand the conservation eco-literacy of the waste-free category. Many waste disposal spots are provided in all faculties, including the central library, auditorium, rectorate, and pathways connecting faculties. In realizing a waste-free campus atmosphere, the Universitas Negeri Semarang has also provided personnel assigned to clean pathways connecting faculties and gardens in Universitas Negeri Semarang. A reservoir was also built to contain water, cleaned once a few days.

Following the waste-free principle is the planting movement; this principle has been one of the obligations that all Universitas Negeri Semarang students must adhere to. Universitas Negeri Semarang provides one seedling distributed to each student in a planting-together event in empty land spots. This is undoubtedly beneficial for improving students' understanding of the importance of planting activities.

There are ten conservation eco-literacy from the highest to lowest levels of understanding in the sufficient understanding criteria; those principles are environment journalism, conservation-based governance, herbal plant, education garden, herbal garden, house of science, handmade paper, conservation driver, green corridor, and h-bat conservation.

According to the data analysis, environmental journalism is at a relatively high level of understanding. Following environmental journalism is conservation- based governance. Universitas Negeri Semarang has also performed conservation- based governance, such as using solar power for lamps along the pathway from the Faculty of Languages and Arts to the Rectorate of Universitas Negeri Semarang. This is seen in the existing solar panels installed at some spots along Universitas Negeri Semarang's pathways.

Among the sufficient understanding criteria principles that fall under the lowest level are h-bat conservation eco-lexicon. Only a few students fully comprehend h-bat conservation. Therefore, the conservation eco-literacy of h-bat conservation needs to be informed the students.

The next analysis is on zero-understanding criteria, in which the students have the lowest understanding in the plant planting system category. Conservation eco-literacy of plant planting system is originally from plant planting and nurturing information system, a reporting portal for planting by students. This system is developed under the Regulation of Rector of Universitas Negeri Semarang No. 26 of 2009 concerning the One-student-one-plant movement. All students are urged to plant a tree at least one time during their study at Universitas Negeri Semarang. Despite the regulation, many students are not aware of the function of the planting system. On that ground, it is necessary to find out the reasons for such unawareness.

Based on the data analysis, in the pillar of natural resources and environment, the one in the zero-understanding criteria with the highest level of understanding is paperless movement. Although it is included in the zero-understanding criteria, few students understand the policy. The paperless policy has established by Universitas Negeri Semarang to support its vision and mission to be a conservation university.

6. Conclusion

Students' eco-literacy level at digital-based, conservation-minded universities in Indonesia may be classified into three pillars: (1) value and character, art and culture, and (3) natural resource and environment. Students' eco-literacy level at value and character pillar of the good understanding category is care conservation eco-literacy (85%); in the sufficient understanding category is conservation award (54%), and; in the zero-understanding category is *upakarti krida adhikarana* (73%). Students' eco-literacy level in the art and culture pillar of the good understanding category is walking culture conservation eco-literacy (80%); in the sufficient understanding category is noble cultured campus (48%),

and; in the zero-understanding category is *Sekaringrat* dance (64%). Students' eco-literacy level at natural resources and environment pillar in the good understanding category is organic waste conservation eco-literacy (80%); in the sufficient understanding category is environmental journalism (43%), and; in the zero-understanding category is *siomon* (43%). Furthermore, of the data analysis result, students' highest eco-literacy level at conservation-minded universities is the care conservation pillar of eco-literacy, and the lowest is *upakarti krida adhikarana* pillar.

7. Recommendation

Students' eco-literacy level at conservation-minded universities in Indonesia based on digital application systems may be used as a model by many linguists to describe literacy levels in other studies. Conservation eco-literacy level can indicate society's ecological awareness in taking care of the earth. Eco-literacy is expected to help the goal of education for sustainable development. Research on the principle, morals, norm, arts, and culture of environmental conservation is of important paramount.

Goleman, Bennett, and Barlow (2010) mention five points in developing eco-literacy in contextualized learning: (1) Develop empathy for all forms of life. This principle focuses on people's awareness of showing empathy to the environment. (2) Embrace sustainability as a community practice; this principle focuses that students in demand of participating in group learning to promote awareness of taking care of others. (3) Make the invisible visible; this principle focuses on the implication of the practical study. By practical study, students will learn how to be responsible and aware of their surroundings. (4) Anticipate unintended consequences; this principle focuses on promoting students' responsibilities for everything they do. Teaching such consequences is essential to show respect and accountability for their activity. (5) Understand how nature sustains life; this principle focuses on doing self-evaluation. This principle teaches students how to be aware of consequences and wrongdoings.

Finally, a study on the conservation of eco-literacy principles may be developed as a "Conservation Linguistics" study by linguists and interdisciplinary researchers as a linguistic analysis model.

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Students' Eco-Literacy Level at Conservation-Minded University in Indonesia

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Abstract

This research aims to analyze students' eco-literacy level at a conservation-minded university in Indonesia. Universitas Negeri Semarang has been confirmed as a conservation-minded university in Indonesia. The research's data source is students' literacy at a conservation-minded university, Universitas Negeri Semarang. The data were collected from questionnaires and interviews with 200 students. The questionnaire consisted of 126 questions regarding conservation eco-literacy with a Likert scale pattern, with categories: zero understanding, score 1; sufficient understanding, score 2; good understanding, score 3, based on the three pillars of conservation. This questionnaire was completed using a digital application system http://bit.do/sisteravasi. Based on the result of digital application system-based data analysis, students' eco-literacy levels at conservation-minded universities are: (1) regarding the value and character pillar, the highest understanding is with care conservation eco-literacy (85%); (2) in terms of art and culture pillar, the highest understanding is walking culture conservation eco-literacy (80%); and (3) concerning the natural resources and environment pillar, the highest understanding is organic waste conservation eco-literacy (80%). Students' eco-literacy level at conservation-minded universities based on digital application systems may serve as a model to help linguists examine literacy levels in other studies.

Keywords: *conservation-minded; eco-literacy; student; digital application system; university*

1. Introduction

Literacy is an individual's ability to read, write, speak, count, and solve problems at the expertise level needed in work, family, and society. This notion conforms to Kern and Baynham's (1995) opinion that literacy is an integrated form of listening, speaking, writing, reading, and critical thinking capabilities. Literacy also bears the meaning of social practice and relationships related to knowledge, language, and culture. Therefore, literacy involves a series of learning, which allows individuals to achieve knowledge, develop knowledge, and fully participate in limited and extensive communities (UNESCO, 2005).

The UNESCO Declaration (2005) also states that information literacy is related to identifying, determining, finding, evaluating, creating effectively and in an organized manner, and using and communicating information to solve various problems. The capabilities need to be obtained by every individual as the requirement for participation in the information community, and it is part of human rights regarding lifelong learning.

Currently, literacy is not merely defined as the capability to write and read. Boeriswati (2017) asserts that literacy is the ability to identify, understand, interpret, create, communicate, count, and use printed and written materials related to various contexts. Literacy is not only about reading and writing. Literacy is a cultural practice related to social and political issues. Therefore, education experts present a new definition of literacy.

Literacy's characteristics are: (1) far from universality and often poorly developed, (2) obtained through hard learning and effort, obtained after mastery of oral language, (3) delivery of a message to recipient through free transfer in written form, not face to face, (4) requiring compliance with linguistic rules, (5) produced in an extended period, (6) likely to be soon forgotten, but may also last longer depending on listener's emotional reaction, (7) may last longer (through publishing), may be altered before delivered to reader, (8) claimed to reflect the knowledge, personal accuracy, belief, and attitude, (9) aiming at maintaining those more traditional and avoiding informal mode, (10) implying competence in producing more words, and (11) connecting shared ideas in a complex structure (Ellis et al., 1998; Usaid, 2014). Therefore, literacy is not merely the capability to read and write mechanically.

Meanwhile, Capra (2013) (as cited in Keraf, 2014) presents the term eco-literacy or ecological literacy. According to him, eco-literacy is a human capability that has reached a high awareness level of the importance of the environment. This idea implies that an individual has been highly aware of the importance of the environment, including maintaining and taking care of the earth, ecosystem, and nature where s/he lives. Capra (as cited in Keraf, 2014) defines eco-literacy as the condition of an individual who has understood the ecological and life principles according to the ecological principles in managing and socializing with humankind on earth to realize a sustainable society.

Moreover, Capra (2013) longs for and predicts that the future of humankind, the future of the human community, and the future of planet earth highly depend on eco-literacy. Therefore, revitalizing such communities, including the education community, industrial community, and political community, is needed to protect the environment.

Universitas Negeri Semarang of Indonesia was confirmed as a Conservation University on March 12, 2010. This is in line with the research conducted by Mikulik and Babina (2009) that a higher education institution must be concerned with the environment for sustainable development. Thus, it is necessary to formulate environmental preservation programs. Regulation of Rector of UNNES Number 22 of 2009 defines a conservation-minded university as a university incorporating conservation principles in the conduct of education, research, and public service (sustainable protection, preservation, and utilization). The principles should be embedded in the university's values and characters, arts, cultures, natural resources, and environment.

The above notion implies that the implementation of *tri dharma* (the three pillars) in Universitas Negeri Semarang always prioritizes environmental conservation principles. On that ground, Universitas Negeri Semarang's vision is to become a conservation-minded university with an

international reputation (Regulation of Minister of Research, Technology, and Higher Education of the Republic of Indonesia Number 49 of 2016 on the Statute of Universitas Negeri Semarang). This idea suggests that a higher education institution, in this case, Universitas Negeri Semarang, strives to be the center of activities and empowerment in preserving the environment, preventing pollution and damage to the environment, and realizing a clean, healthy, and green campus.

Ever since Universitas Negeri Semarang declared itself as a conservation-minded university, many policies and efforts have been made by Universitas Negeri Semarang to disseminate the importance of conservation efforts to all campus inhabitants and society. Simply put, Universitas Negeri Semarang becomes the pioneer of conservation to lead the society to a prosperous society on par with the global community. As a conservation-minded higher education institution, Universitas Negeri Semarang is obliged to fulfill its mandates and responsibilities by upholding preservation principles as its identity. In other words, conservation becomes the identity of all mandates and responsibilities assumed from planning to implementation and completion. This effort is the activity to build an image and reputation of a conservation-minded university.

Salim (2007) states that human's social, ideological, and organizational relationship with nature needs to be noted and developed in arranging a natural resources management strategy. This perception is the factor that influences individuals and social groups. Therefore, multidisciplinary studies such as sociology, anthropology, and natural science are needed. In this regard, Eco-linguistics attempts to participate in reviewing the environment from a linguistic perspective.

Fill and Mühlhäusler (2001) mention four reasons for the relationship between language and environment, namely: (1) language is free and laden with meaning; the world creates (2) language; (3) the world is created by language (structuralists and post-structuralists general view), and (4) language is interconnected with the world (the two are arranging and arranged each other, but sometimes free). Reciprocal changes between environment and language may be learned through eco-linguistics. Eco-linguistics studies ecosystems that are part of the human life system (ecology) with language used by humans in communication with the environment (linguistic).

2. Literature Review

Rasna (2010) finds that the knowledge of rural and urban adolescents regarding herbs is low. This is seen in the unawareness regarding the importance of trees and plants listed in the questions. Such unawareness shows their infrequent to no interaction with the environment. The adolescents' herbal lexical depreciation is influenced by socio-cultural, socio-ecological, and socio-economic factors. Consequently, adolescents are unaware of the cognitive concept of herbs. Adolescents find it even more difficult to recognize traditional herbs; thus, herbal lexical depreciation takes place.

The research conducted by Rokhman (2012) concludes that the responses of academics in Universitas Negeri Semarang to conservation symbols are reflected in greetings, slogans or jargon, and the use of local language. The most used model is greeting. The perception of respondents stating that greeting activity may strengthen conservation pillars is 77.9%.

Yuniawan et al. (2014) ascertain that the students' knowledge levels is still lower than 70. This means that students' conservation knowledge level is low. Furthermore, in consecutive order, the popularity level of conservation expressions is ethics, arts, culture, conservation cadre, waste management, clean energy, biodiversity, green architecture and internal transportation, paperless, and conservation publication.

Alshorooqi and Rawadieh (2017) explore the implications of the media in democratic societies and the content of assessing the development of media. Such implications are the most prevalent in the various school textbooks. This significant finding is significant from a curricular perspective. It shows that curriculum development in the Kingdom of Bahrain is highly connected to and influenced by a set of interdependent historical and political factors.

A study by Ghazali (2017) shows how their environment affects students' cognition in learning. He argued that individual's language acquisition device was once triggered at a particular time with

the right input. These inputs are the factors that go beyond student's cognitive domain. Surveys and interviews were conducted to examine these factors' influence on learner' English proficiency and application. The result of this study shows that Arab English learners' ability might affect psychological motivation, practical application needs, and personal reasoning. Further, these factors are often seen in students learning/personal environment. In relation to this paper, the present study proves that Ghazali's attempt to scrutinize factors affecting students' learning can be a concrete reason for their ability.

Abdulkarim, Ratmaningsih, and Anggraini (2018) find: 1) the concept of the civicpedia design consisting of the home page, dictionary page, media page, quiz, and contact page; 2) steps in developing teaching materials was designed based on Curriculum of 2013, compiled based on the formal education level, and contextually formulated on the current real-life controversial cases, collaborated with authentic assignments, which enhanced the students' critical thinking, and related to unknown terms with suitable images and videos; 3) the students' responses regarding the implementation civicpedia in the learning process were positive. The program display was considered good, and the interactivity aspect was deemed very good. Most students very positively perceived the use of Civicpedia in civic education learning to improve information literacy.

Yuniawan et al. (2019) report that the level of necessity for conservation text for elementary school students' literacy enrichment leads to several aspects. Those aspects involve content, legibility, presentation and graphics, and motivation. This conservation text refers to three pillars of conservation: the value and character pillar, the art and culture pillar, the natural resource, and the environment pillar. Conservation text does not only serve as a linguistic structure but also as a cognitive structure and action structure. Environmental literacy may indicate students' ecological awareness in protecting and preserving the earth since childhood.

The function of eco-lexicons in conservation news texts is to provide society with a better understanding and knowledge of environmental literacy. A study by Yuniawan et al. (2019) finds two functions of eco-lexicons contained in the conservation news texts published in mass media. Those are (1) instrumental function, such as stating a dynamic movement; (2) representation function, consisting of (a) giving names, (b) describing characters, (c) describing activities, (d) referring to a place, (e) stating art diversity, (f) describing situations, and (g) expressing types.

Aiman and Hasyda (2020) investigate the functions of media-based learning in enhancing students' scientific literacy and critical thinking skills. Aiman and Hasyda (2020) employed process-oriented guided inquiry learning (POGIL) to teach primary school students scientific literacy and critical thinking. This study indicates differences between students who study scientific literacy and critical thinking in POGIL and expository learning. This shows that media-based learning can be an effective way of teaching students. The study's relevancy to this present research is how media-based learning serves as the main driver for helping students gain new abilities and skills.

According to Khairani et al. (2020), the students have good knowledge and a positive attitude towards biodiversity in waterfront cities. Their knowledge is a significant predictor contributing to 13.4% of their attitude towards biodiversity. In addition, female students have a significantly higher knowledge score than male students, but there is no significant difference in their attitude towards biodiversity.

Nurwidodo et al. (2020) investigate how an eco-related activity affects student's eco-literacy. This study shows that the level of students' eco-literacy was significantly influenced by school type and grade. Nurwidodo et al. (2020) ascertain that a particular principle implemented in school, the eco-school program and conservation-minded university, can be major reasons for high eco-literacy.

This research focuses on students' eco-literacy in conservation-minded universities. Thus, the research questions are formulated as follows: (1) What are students' eco-literacy level of value and character pillars in a conservation-minded university in Indonesia? (2)What are students' eco-literacy level of art and culture pillars in a conservation-minded university based in Indonesia? (3)What are students' eco-literacy levels of natural resource and environment pillars in a conservation-minded university in Indonesia?

3. Methods

3.1 Sample/Participants

This research aimed to analyze the quality of students' eco-literacy at a conservation-minded university in Indonesia. This notion implies that Universitas Negeri Semarang students are assumed to have mastered the conservation lexicon or environment lexicon. Nurgiyantoro, B. (2001) states that mastery is an individual's capability that may be theoretically and practically realized. An individual is deemed to master a skill when s/he is able to understand it and apply it in certain situations. According to Capra (2013) (in Keraf, 2014), eco-literacy describes the society's high awareness of the importance of the environment and its contents.

3.2 Research Design

Philosophically, this research is based on a phenomenological perspective. Phenomenology is a philosophical basis of application through various critical and scientific thinking phases starting from inductive thinking, in which the researcher catches several social phenomena in the field, analyzes such phenomena, and then theorizes based on the observed phenomena (Bungin, 2008). Therefore, the research data were in verbal forms, i.e., the form of conservation eco-literacy and numeric symbols in the form of a percentage. All data were retrieved using the qualitative and quantitative descriptive approaches. In this approach, the research analyzes the words, describes the data from the respondent's perspective, and studies the situation (Creswell, 1998).

The qualitative technique application is based on the phenomenological epistemological conception presented by Husserl. This concept elaborates that human awareness actively contains experience objects (Holstein and Gubrium in Denzin and Lincoln, 2009). This research's qualitative nature is related to the research data in the form of conservation eco-literacy, and the quantitative nature is related to the research data in the form of students' eco-literacy level at a conservation-minded university.

3.3 Data Collection Procedures

The data were collected using questionnaires and interview techniques (Sudaryanto, 2015; Mahsun, 2005). A questionnaire is a number of written questions used to collect information from respondents. According to Arikunto (2016), a questionnaire is a written question used to collect information from respondents in the sense of reporting on personal matters or anything they are aware of. This idea is in line with Sugiyono's opinion (2001), which defines a questionnaire as a data- collecting technique performed by giving respondents a set of written questions or statements for their responses.

In this research, the questionnaires were distributed using a digital application system of 126 questions on conservation eco-literacy. The questionnaire employed a Likert scale method, with categories: zero understanding, in which the respondent does not understand and not know about conservation eco-literacy, score 1; sufficient understanding, in which the respondent sufficiently understands and knows conservation eco-literacy, score 2; good understanding, in which respondent understands and knows conservation eco-literacy, score 3. The conservation eco-literacy test was also based on the conservation pillar as part of the conservation-minded university. There were three considerations in using an online questionnaire: (1) online questionnaire was related to the conservation-minded university's policy of natural resource and environment pillar, promoting the paperless movement; (2) utilizing the facility, the questionnaire can reach wider audiences; and (3) the use of online questionnaire minimized error level in data analysis. The rationale was that the system automatically conducted quantitative data analysis process.

3.4 *Data Analysis*

This research employed a percentage technique for data analysis in examining numeric symbols of students' conservation eco-literacy level at a conservation-minded campus. The phases of numeric counting of literacy eco-lexicon conservation level are: (1) selecting the respondent's category by status (student); (2) counting the number of data for each item (from the Likert scale); (3) dividing the total sums of the results by the total respondents pursuant to the selected category. The calculation employed the formula below.

Percentage of zero understanding = $\frac{\text{Number of zero understanding}}{\text{Number of respondents}} \times 100\%$

Percentage of sufficient understanding = $\frac{\text{Number of sufficient understanding}}{\text{Number of respondents}} \times 100\%$

Percentage of good understanding = $\frac{\text{Number of good understanding}}{\text{Number of respondents}} \times 100\%$

Generally, the following is the formula.

$$P = (\sum [(X]]\_1 + X\_2 + \cdots + X\_n))/(\sum Y) \times 100\%$$

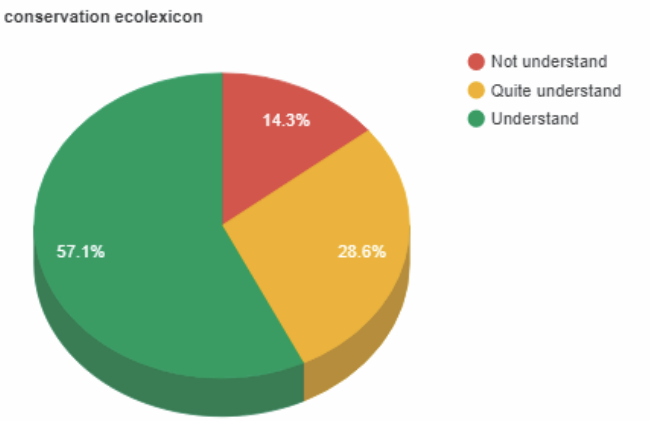
Explanation:
P = Percentage
X = Filled in with lexicon item
Y = Status (e.g.: student)
Y = Number of respondents
n = Total respondents

4. Results

Currently, literacy is often used together with other words, such as digital literacy, computer literacy, virtual literacy, and mathematics literacy. This is a transformation of the meaning of literacy due to the current development. Literacy covers responses, understanding, and life activities arranged and applied through continuous learning activities (Rokhman, 2017).

This output of conservation eco-literacy system application (SISTERAVAS) substantively contains 126 conservation lexicons, including 45 conservation lexicons of the value and character pillar; 30 conservation lexicons of the art and culture pillar; 51 conservation lexicons of the natural resource and environment pillar. The percentage output is displayed in the following Figure 1.

Figure 1: Report output



Based on the result of digital application system development, the data regarding the conservation eco-literacy system aim to help identify students' conservation eco-literacy level. The output obtained is in the form of a framework-based online system as a measurement instrument of conservation eco-lexicon literacy level.

This application system accommodates the conservation eco-literacy level in three pillars: the value and character, art and culture, and natural resource and environment. Each of the pillars has three categories: conservation eco-literacy expressed in good understanding, sufficient understanding, and zero-understanding by respondents. This is in line with the Regulation of Rector of UniversitasNegeri Semarang Number 6 of 2017 on Conservation Principle. This principle is supported by the three pillars previously mentioned. According to the regulation, UNNES's conservation ideology is *arum luhuring pawiyatan ing astanira, "harum and luhurnya wilayah ini bergantung kepada tangan-tangan kita* [this area's fame and honor are at our hands]". Such a principle bears the meaning of a house of science where an excellent civilization is developed. This notion is confirmed by Rokhman (2014) that higher education institution's essential purpose is to serve as the center of scientific activities. Therefore, any thoughts, attitudes, movements, and steps of campus inhabitants should be based on scientific processes. Based on the development of the digital application system, the result of students' eco-literacy level at the conservation-minded campus is presented in Table 1.

Table 1: Students' top ten conservation eco-literacy with good understanding criteria on three pillars

Value and Character Pillar		Art and Culture Pillar		Natural Resource (HR) and Environment Pillar	
Ecolexicon	%	Eco-lexicon	%	Eco-lexicon	%
care	85%	walking culture	80%	organic waste	80%
honesty	84%	cycling culture	78%	waste-free	79%
conservation	82%	speaking culture	75%	planting movement	79%
justice	80%	cultural village	64%	inorganic waste	79%
sportsmanlike	80%	culture conservation	62%	smoke-free	78%
inspirational	79%	art conservation	61%	conservation campus	78%
UNNES conservation	79%	language conservation	60%	global warming	78%
innovative	78%	ethics, art, and culture	54%	conservation education	78%
conservation-minded	75%	conservation exercise	47%	reservoir	77%
conservation education	74%	Noble-cultured campus	45%	mini forest	76%

Of the data in the table, students' eco-literacy levels at the conservation-minded campus are explained as follows: (a) In terms of value and character pillar, the highest understanding is care conservation eco-literacy of 85%. (b) The highest understanding of art and culture pillar is walking culture conservation eco-literacy, 80%. (c) The highest understanding of the natural resources and environment pillar is organic waste conservation eco-literacy, 80%.

5. Discussion

The principle of a conservation-minded university is incorporated into Universitas Negeri Semarang's image and reputation. Conservation-minded university's image and reputation have become a trend among people. In other words, the conservation-minded university has attracted the higher education institution world. This idea is in line with Ruslan's opinion (2010), claiming that an image is realized as acceptance and response, either positive or negative, particularly by the public (target audience) and community.

Generally, a positive image is central to public's trust. Therefore, a conservation-minded university must represent such an image to create a positive impression regarding Universitas Negeri

Semarang. The conservation-minded university is not merely a name or differentiator but also a critical factor in competitive advantage. This corresponds to the opinions of Salim (2007), Al Gayoni (2012), and Mbete (2013) that socio-ecological changes significantly influence the use of language and changes in cultural values in a community. The digital application system-based data analysis also results in the conservation eco-literacy level at the three aforementioned pillars.

5.1 Students' Eco-Literacy of Value And Character Pillar

In the value and character pillar, the highest understanding is eco-literacy. Sequentially, the ten-highest aspects of understanding eco-literacy conservation are care, honesty, conservation, justice, sportsmanlike, inspirational, UNNES conservation, innovation, conservation-minded, and conservation education presented in Table 2.

Table 2: Students' ten highest conservation eco-literacy at value and character pillar

Value and Character Pillar					
Understanding		Sufficient Understanding		Zero-understanding	
Ecolexicon	%	Ecolexicon	%	Ecolexicon	%
care	85%	conservation award	54%	*upakarti krida adhikarana*	73%
honesty	84%	the campus of excellent academic civilization	49%	*upakaratama reh adiwangsa*	73%
conservation	82%	conservation curriculum	48%	*upakarti artheswara adhikarana*	72%
justice	80%	conservation principle	48%	*upakarti mandala bumi adisajjana*	70%
sportsmanlike	80%	conservation vision	48%	*upakara dayaning bawana*	69%
inspirational	79%	conservation developer	47%	*upakara bhirawa santosa*	68%
UNNES conservation	79%	Value conservation	43%	*upakarti reksa bhinneka adhikarana*	65%
innovative	78%	conservation spirit	41%	*upakarti reksa manggala budaya*	64%
conservation-minded	75%	environmental conservation	41%	*upakara dyaning gawa*	64%
conservation education	74%	conservation value	40%	*wrikaya bhawana shigha*	64%

The above pillars have been practiced in students' daily life, both in academic and non-academic environments. Based on the data, the highest is literacy level with very good understanding and conservation eco-literacy. This explains that care is the students' priority. Such a high understanding is expected to improve their caring for others, promoting students' empathy. As the agent of change, it is also expected that the students promote an understanding of the value and character pillar of society.

The second and third-highest percentage in the criteria of good understanding regarding value and character pillar is honesty. This result signifies that honesty serves as the value and character upheld by the students. Therefore, we may conclude that most students still believe that upholding honesty may improve their quality of life, both on campus and community. The high understanding of honesty conservation of eco-literacy among the students is expected to improve Universitas Negeri Semarang students' performance and capabilities. Following the previous aspect is conservation eco-literacy. Considering its status as a conservation-minded, Universitas Negeri Semarang has managed to disseminate conservation values to examples of conservation acts, the vision, and mission of Universitas Negeri Semarang as a conservation university, etc. This way, students are expected to become individuals who will uphold conservation values in the future.

Furthermore, the criteria of sufficient understanding and zero-understanding conservation eco-literacy arising in the almost equal distribution of eco-lexicon are regarding conservation awards given to figures deemed actively implementing conservation in their respective field. The conservation award given by Universitas Negeri Semarang is in the form of *upakarti*. In the sufficient understanding criteria, conservation eco-literacy is mostly understood by respondent students as the conservation eco-literacy of conservation award. In contrast, the lowest level of sufficient understanding is the conservation eco-literacy of conservation value.

Conservation eco-literacy of conservation award is an award given to an individual for his/her

attitude in maintaining and protecting something regularly to prevent its damage or destruction by way of preservation. This means that students have had sufficient understanding of conservation awards based on the distribution of conservation eco-literacy with sufficient understanding criteria. However, with the conservation eco-literacy of conservation values, students' understanding level is still low, which means that their recognition and understanding of conservation values have not run well; thus, the expected result is yet achieved.

Regarding the zero-understanding category, the highest percentage of students' non-understanding of the criteria related to the names of conservation awards is with *upakarti krida adhikarana* criteria. This means that only a few students understand *upakarti krida adhikarana*. The *upakarti bagyaning sasama* category takes low criteria of zero-understanding. This notion means that, of the ten names of Conservation Awards, *upakarti bagyaning sasama* is familiar to students (i.e., an award given to an individual with a significant contribution to education).

The questionnaire reports that many students are yet to understand the conservation category. Therefore, dissemination of information to the students is essential; this approach can be performed through social media, considering that current students tend to prefer this type of interaction. This way, students are expected to easily and quickly receive information regarding the award.

5.2 Students' Eco-Literacy of Art and Culture Pillar

In the pillar of Art and Culture, the students' comprehension comprises good, sufficient, and zero-understanding criteria. In the good understanding criteria, the highest understanding level or the conservation eco-literacy of the students encompasses several aspects. In consecutive order, those are walking culture, cycling culture, speaking culture, cultural village, culture conservation, art conservation, language conservation, art and culture ethics, conservation exercise, and noble cultured campus. This data is seen in Table 3.

Table 3: Students' ten highest conservation eco-literacy at art and culture pillar

Art and Culture Pillar					
Understanding		Sufficient Understanding		Zero-understanding	
Ecolexicon	%	Ecolexicon	%	Ecolexicon	%
walking culture	80%	noble cultured campus	48%	*sekaringrat* dance	64%
cycling culture	78%	coastal folklore	47%	*sekardomas*	59%
speaking culture	75%	conservation kroncong	46%	*Syair hijau*	56%
cultural village	64%	conservation batik of the house of science	45%	*Wayang krucil*	53%
culture conservation	62%	batik conservation	44%	*pakarjawi*	51%
art conservation	61%	coastal culture	44%	*Selasa legen*	50%
language conservation	60%	Conservation *gending* (music)	44%	*Seni topeng ireng* (black mask art)	47%
ethics, art, and culture	54%	cultural pillar	44%	conservation *langgam*	37%
conservation exercise	47%	*Gending semarangan*	43%	*Gending semarangan*	34%
noble cultured campus	45%	*Guyup rupa*	43%	conservation poem	33%

Based on the data analysis result, the students' most understanding level at the art and culture pillars is in the aspect of walking culture. Walking culture is popular among students of Universitas Negeri Semarang since it is continuously promoted as a conservation movement. On top of that, the university limits the use of vehicles in the campus environments.

Besides walking culture, cycling culture is familiar among the students. In support of the cycling culture in the campus environment, the university management has provided bicycles for the students within the campus. The aspect of a noble cultured campus is the low literacy level. Disseminating the values of a noble cultured campus is one job to accomplish.

The conservation eco-literacy with the highest sufficient understanding level is the aspect of a noble cultured campus. Universitas Negeri Semarang focuses on nature conservation and cultural conservation. Nevertheless, the notion of a noble cultured campus is still a familiar concept.

The sufficient understanding criteria with the lowest percentage are with conservation eco-literacy of *guyup rupa*. This means that many students still do not understand *guyup rupa*. Guyup rupa is an arts performance presenting artists' works. Based on secondary data analysis, students are yet to fully understand the conservation eco-literacy of *guyup rupa*, despite the program continuously conducted by Visual Arts Department students.

In the zero-understanding criteria, there are ten principles of eco-literacy conservation, which the students least understand. Still, some students were able to comprehend some of the principles, such as *Sekaringrat* dance, *sekar domas*, *syair hijau*, *wayang krucil*, *pakarjawi*, *selasa legen*, *topeng ireng* dance, conservation *langgam*, *gending semarangan*, and conservation poem.

Of the data analysis result in the zero-understanding criteria, one principle of the conservation of eco-literacy sufficiently understood by the students is the conservation poem. Disseminating the meaning of conservation through a poem is a preferable method.

Another principle of conservation eco-literacy with the lowest zero-understanding criteria is *Sekaringrat* dance. The students have zero understanding of *Sekaringrat* dance, despite the fact that the dance is frequently performed in Universitas Negeri Semarang official events. *Sekaringrat* dance is a dance performed by nine dancers as the symbol of Universitas Negeri Semarang's nine faculties. This dance represents the glory of Universitas Negeri Semarang. Therefore, it is necessary to introduce *Sekaringrat* Dance to students and society.

5.3 *Students' Eco-Literacy at Natural Resource and Environment Pillar*

The subsequent analysis is related to the natural resource and environment pillar. The research reported varied results from the questionnaire distributed to the students. The highest understanding level in the good understanding criteria is the organic waste principle. This principle is followed by the principle of waste-free, planting movement, inorganic waste, smoke-free, conservation campus, global warming, conservation education, reservoir, and mini forest. Conservation eco-literacy of mini-forest is in the lowest position with the good understanding criteria. Although included in good understanding criteria, many students are unaware of the idea of a mini-forest; the data is displayed in Table 4.

Table 4: Students' ten-highest conservation eco-literacy at the natural resource and environment pillar

Natural Resource (HR) and Environment Pillar					
Understanding		Sufficient Understanding		Zero-understanding	
Ecolexicon	%	Ecolexicon	%	Ecolexicon	%
organic waste	80%	environmental journalism	47%	*siomon*	43%
waste-free	79%	conservation based governance	47%	green belt	38%
planting movement	79%	herbal plant	45%	h-bat conservation	31%
inorganic waste	79%	education garden	43%	h-bat campus	30%
smoke-free	78%	herbal garden	43%	biodiversity	28%
conservation campus	78%	house of science	42%	green corridor	27%
global warming	78%	handmade paper	40%	biopore	25%
conservation education	78%	conservation driver	40%	Environmental journalism	19%
reservoir	77%	green corridor	39%	conservation based governance	18%
mini forest	76%	h-bat conservation	38%	paperless	16%

Based on the data analysis, students' understanding of organic waste conservation eco-literacy is high. This finding denotes that most of the students are aware of and understand anything classified as organic waste. The university has also made efforts to uphold its vision and mission to be a conservation university by providing trash bins for different waste types, e.g., organic waste,

inorganic waste, and plastic waste, in every department. The university has also utilized organic waste (for compost) to maximize its commitment to environmental conservation.

The majority of students also understand the conservation eco-literacy of the waste-free category. Many waste disposal spots are provided in all faculties, including the central library, auditorium, rectorate, and pathways connecting faculties. In realizing a waste-free campus atmosphere, the Universitas Negeri Semarang has also provided personnel assigned to clean pathways connecting faculties and gardens in Universitas Negeri Semarang. A reservoir was also built to contain water, cleaned once a few days.

Following the waste-free principle is the planting movement; this principle has been one of the obligations that all Universitas Negeri Semarang students must adhere to. Universitas Negeri Semarang provides one seedling distributed to each student in a planting-together event in empty land spots. This is undoubtedly beneficial for improving students' understanding of the importance of planting activities.

There are ten conservation eco-literacy from the highest to lowest levels of understanding in the sufficient understanding criteria; those principles are environment journalism, conservation-based governance, herbal plant, education garden, herbal garden, house of science, handmade paper, conservation driver, green corridor, and h-bat conservation.

According to the data analysis, environmental journalism is at a relatively high level of understanding. Following environmental journalism is conservation-based governance. Universitas Negeri Semarang has also performed conservation-based governance, such as using solar power for lamps along the pathway from the Faculty of Languages and Arts to the Rectorate of Universitas Negeri Semarang. This is seen in the existing solar panels installed at some spots along Universitas Negeri Semarang's pathways.

Among the sufficient understanding criteria principles that fall under the lowest level are h-bat conservation eco-lexicon. Only a few students fully comprehend h-bat conservation. Therefore, the conservation eco-literacy of h-bat conservation needs to be informed the students.

The next analysis is on zero-understanding criteria, in which the students have the lowest understanding in the plant planting system category. Conservation eco-literacy of plant planting system is originally from plant planting and nurturing information system, a reporting portal for planting by students. This system is developed under the Regulation of Rector of Universitas Negeri Semarang No. 26 of 2009 concerning the One-student-one-plant movement. All students are urged to plant a tree at least one time during their study at Universitas Negeri Semarang. Despite the regulation, many students are not aware of the function of the planting system. On that ground, it is necessary to find out the reasons for such unawareness.

Based on the data analysis, in the pillar of natural resources and environment, the one in the zero-understanding criteria with the highest level of understanding is paperless movement. Although it is included in the zero-understanding criteria, few students understand the policy. The paperless policy has established by Universitas Negeri Semarang to support its vision and mission to be a conservation university.

6. Conclusion

Students' eco-literacy level at digital-based, conservation-minded universities in Indonesia may be classified into three pillars: (1) value and character, art and culture, and (3) natural resource and environment. Students' eco-literacy level at value and character pillar of the good understanding category is care conservation eco-literacy (85%); in the sufficient understanding category is conservation award (54%), and; in the zero-understanding category is *upakarti krida adhikarana* (73%). Students' eco-literacy level in the art and culture pillar of the good understanding category is walking culture conservation eco-literacy (80%); in the sufficient understanding category is noble cultured campus (48%), and; in the zero-understanding category is *Sekaringrat* dance (64%). Students' eco-literacy level at natural resources and environment pillar in the good understanding

category is organic waste conservation eco-literacy (80%); in the sufficient understanding category is environmental journalism (43%), and; in the zero-understanding category is *siomon* (43%). Furthermore, of the data analysis result, students' highest eco-literacy level at conservation-minded universities is the care conservation pillar of eco-literacy, and the lowest is *upakarti krida adhikarana* pillar.

7. Recommendation

Students' eco-literacy level at conservation-minded universities in Indonesia based on digital application systems may be used as a model by many linguists to describe literacy levels in other studies. Conservation eco-literacy level can indicate society's ecological awareness in taking care of the earth. Eco-literacy is expected to help the goal of education for sustainable development. Research on the principle, morals, norm, arts, and culture of environmental conservation is of important paramount.

Goleman, Bennett, and Barlow (2010) mention five points in developing eco-literacy in contextualized learning: (1) Develop empathy for all forms of life. This principle focuses on people's awareness of showing empathy to the environment. (2) Embrace sustainability as a community practice; this principle focuses that students in demand of participating in group learning to promote awareness of taking care of others. (3) Make the invisible visible; this principle focuses on the implication of the practical study. By practical study, students will learn how to be responsible and aware of their surroundings. (4) Anticipate unintended consequences; this principle focuses on promoting students' responsibilities for everything they do. Teaching such consequences is essential to show respect and accountability for their activity. (5) Understand how nature sustains life; this principle focuses on doing self-evaluation. This principle teaches students how to be aware of consequences and wrongdoings.

Finally, a study on the conservation of eco-literacy principles may be developed as a "Conservation Linguistics" study by linguists and interdisciplinary researchers as a linguistic analysis model.

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Students' Eco-Literacy Level at Conservation-Minded University in Indonesia

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