Embedding Scholarly Literacy in the Curriculum of UNNES: Preparing Successful Students in Disruption Era

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Abstract. Scholarly literacy in higher education is very important for students to achieve successful in their study. Unfortunately, the strategic role of literacy is not optimized by students. As a result, many lecturers and stakeholders complain about the competencies of students and graduates. Based on the study of curriculum and student achievement documents, UNNES made an adaptive curriculum in order to succeed UNNES students and its graduates in the disruption era. The successful of student as an impact of the integration of scholarly literacy in the UNNES's curriculum can be seen from the increase of students’ achievement, the students’ entrepreneurship, and the improvement of graduates’ quality. There are two patterns that used by UNNES to integrate scholarly literacy, namely: direct learning and indirect learning. Direct learning is implemented by courses, while indirect learning is done by scientific activities which carried out through student activities. The learning pattern is carried out through blended learning.

1. Introduction
The literacy in higher education is the main point for students to achieve their academic success [1]. This strategic role of literacy is not optimized by students. As a result, many lecturers in universities complain about this academic literacy limitations [2]. The lecturers ‘complaints are students’ ability to communicate and express an idea deeply and rationally. Students are not influent and inaccurate when they utter something to others. This is due to students’ limitations and lacks of interacting and dealing with literacy activities.

The issue of literacy in universities is not only happened Indonesia, but also in other countries as well. For example, literacy practices at Sana'a University, Yemen where students tend to find difficulties in practicing literacy, especially asking questions. This study also found that students have very shallow understanding of textbooks, talking too much, describing things without schematics, and lack of knowledge and references. This illustration is actually the same with Indonesian students’ literacy practice [3].

Oral tradition that rooted in Indonesia is one of academic literacy weakness factors in the field of basic education to higher education [4]. Therefore, Indonesia is still heavily exposed to persistent problems of drop out (DO), poverty, and unemployment. All these issues are closely related to low literacy [5]. As intellectuals, students are not the biggest contributor of literacy culture in Indonesia. They prefer to get information that is "read by others". They prefer to act as "passive readers" who calmly chew all the perceptions expressed by some media that cannot be accounted for. They prepare to have the culture of hanging out in cafes, malls, and cinemas that increasingly marginalize the tradition of literacy among students [6].
The cultural shift away from the literacy tradition has increased the changing direction, values and identity of human identity. Missing information makes a person's life “shakier”, he does not know the direction of life, the value of life, and maybe the identity of life. In this context, someone will be prone to commit deviant behaviour and harm many people [7]. On the other hand, literacy can provide opportunities to economic and social development towards the welfare of life, both individuals and communities [8]. Human literacy is the most significant asset for many countries in the world, especially those that develop and make literacy as the main agenda of development which costs a lot. Expensive financing will not be in vain when humans have intelligence and character. However, the significance of literacy has not been able to provide awareness to various parties to improve literacy skills, especially in facing the era of industrial revolution 4.0.

In the era of industrial revolution 4.0, UNNES faces serious challenges. UNNES is expected to be able to create human resources who have superior character, high-level thinking skills, multiple intelligences, soft skills, and lifelong learners. Such HR criteria are needed in the comparison and competition with other nations in the world. Graduates with such skills can only be created through the development of an adaptive curriculum. The Ministry of Research, Technology and Higher Education underlines that universities should make a number of changes to welcome the era of industrial revolution 4.0. First, aligning the paradigm of Tridharma of higher education with the Industrial Revolution 4.0. Second, reorienting the curriculum by emphasizing new literacy (digital literacy, technology, and humanity), organizing extracurricular activities in order to develop leadership and work in teams, and fostering entrepreneurship and internship. Third, finding a new format of learning system by implementing a system of distance education based on hybrid / blended / online learning. Fourth, encouraging the science and technology index to become a global rating. Associated with changes in the reorientation of the curriculum with an emphasis on new literacy, the question is what’s the package of the UNNES curriculum that is projected to prepare quality human resources to achieve success? Therefore, this study will obtain the integration of scientific literacy of scholars in achieving the success of studies and careers in the era of disruption.

2. Method

This research used document analysis techniques [9]. Documents were the development of student success as the party to the curriculum. The success was seen from the achievements of UNNES students. The data was analysed by three steps, namely data reduction, data presentation, and drawing conclusions [10]. Data was reduced by the process of selecting, concentrating, simplifying, abstraction, and transforming "rough" data that appears in data sources. Then, arranged data was presented systematically. The presented data was manifested in matrices and tables to make it easier to see and understand by researcher. Conclusion was done by formulating patterns and techniques for reasoning student arguments. The test was carried out by checking different data sources and discussions with colleagues and UNNES leaders.

3. Result

UNNES implements 2012 curriculum to students of class 2012 to 2014. 2015 curriculum applies to students of class 2015 to 2017. 2015 curriculum has been revised and it is called as 2018 curriculum which applies to students of class 2018. 2012 curriculum is based on competence and conservation, while 2015 curriculum is based on conservation and IQF. 2018 curriculum base is not much different with 2015 curriculum conservation-based and IQF. In implementing the curriculum, especially competency-based ones, there are two fundamental weaknesses. First, the Competency-Based Curriculum bases its development on the agreement and the preparation of graduate competencies by the organizers of the study programs that will be compiled by the curriculum. Second, the absence of measurement parameters in the CBC system makes it difficult to assess on one education level program which is higher or lower than the other.

Indonesian National Qualification Framework (INQF) becomes a measurement parameter in the form of a qualification level from level 1 (lowest) to level 9 (highest). Each level of the IQF is
compatible with the level of Learning Achievement (CP) of the study program at a certain level. CP at each level of the IQF is described in the description of attitudes and values, abilities, knowledge, responsibilities and rights with a concise statement called generic descriptors. Each descriptor is an indicator of depth and level of CP according to the level of study program.

The development of university curriculum should be based on the dynamics of community needs, regulations related to higher education, vision and mission of higher education, especially the study programs and development of science, technology, and art. Law Number 12 of 2012 concerning Higher Education, Article 35, Paragraph (1) confirms that the Higher Education Curriculum is a set of plans and arrangements regarding the purpose, content, and teaching materials as well as the methods used to guide learning activities to achieve goals higher education. In Paragraph (2) it is affirmed that the curriculum is developed by each tertiary institution by referring to the National Standards of Higher Education for each study program which includes the development of intellectual intelligence, noble character and skills.

Based on the development of an adaptive curriculum on changes in disruption era, UNNES students’ achievements have increased. These number of achievements become the chancellor's performance pact of the Minister of Research, Technology and Higher Education.

3.1 Increasing Student Achievement

In 2018, many UNNES students had achievements in various fields, both national and international level. The achievements of UNNES students were ranked 7th nationally based on ratings at The Ministry of Research, Technology and Higher Education. This ranking rose by 4 levels from 2017 of ranked 11th. Comparing with other state universities, UNNES has a productive Sports Science study program which creates to outstanding athletes. This is a distinct advantage for UNNES in improving student achievement in the field of sports. In addition, student achievement is also carried out through the development of talents and interests in the arts, creativity and reasoning of students, as well as in other fields of activity managed through student activity units.

The number of Student achievements reaches a realization of 183% (target of 350 students, realized 640 students). This achievement that exceeds 100% is due to the attention of all UNNES elements towards student achievement. Both through cadre and priority of the budget to realize student achievements. One of the major concerns of the UNNES leadership is the issuance of Rector UNNES Rule Number 10 of 2018 on Student Reputation and Achievement for the Year of Internationalization.

3.2 Increasing Student Entrepreneurship

The number of UNNES students who are self-employed increase from year to year because the increase of programs for student entrepreneurship that carried out in several faculties such as in the Faculty of Mathematics and Natural Sciences (FMIPA). In addition, there is an entrepreneurship program implemented at the university level. Student entrepreneurship program provides tangible results for students in preparing to become young entrepreneurs. Two of the successful young student entrepreneurs are Mohammed Aripin and Ayu Murya who work at Geokonsulindo company. The company is engaged in mapping services with drones that have accurate and detailed advantages.

The number of students entrepreneurship is realized by 129% (target of 300 students, 388 students are realized). The realization of performance that exceeds 100% is due to the increasing number of students who are interested in developing independent businesses through the entrepreneurship program implemented by UNNES. These main performance indicators are supported by three activities, namely; 1) Number of students who have mentoring entrepreneurial product development; 2) Number of entrepreneurship corners; and 3) Number of outstanding works of conservation-minded students.

3.3 Quality Improvement of UNNES Graduates

Graduates literacy skills can only be created by integrating new literacy in high school curriculum. The realizations of graduates’ quality are marked by (1) competent and professional certified graduates and (2) graduates work according to the field. The success of graduates can be seen in the following table:
Table 1. Quality Improvement of UNNES Graduates

| Goal | Key Performance Indicators | Realization 2017 | 2018 |
|------|---------------------------|------------------|------|
| Quality Improvement of Graduates | Graduates Certified Competency and Professional | 3.20% | 70% | 70.8% | 101% |
| | Graduates who work directly in their fields | 80% | 80% | 90% | 113% |

Certified competency and professional professions are supported by professional study programs, namely Professional Counselors and Teacher Professional Education. Both of these study programs annually accept students and graduate students. The number of students who have started to increase is the acceptance of teacher professional program students.

As many as 103 study programs at UNNES, 75% are teacher study programs. UNNES graduates and alumni work in the fields of education and teacher training. UNNES graduates also work directly as teachers, both teachers at the early childhood, elementary, junior high and high school levels, both general and vocational.

This achievement exceeds 100% of graduates working in accordance with their midwives due to (1) the success of student affairs in the development of student entrepreneurship, (2) the success of the UNNES Career and Counseling Development Center and Student Affairs Division in collaborating with labor providers, (3) the increasing need for labor provided by the government and the private sector in 2018, as well as 4) the curriculum of courses at UNNES has been largely relevant to the needs of the labor market in the era of the Industrial Revolution 4.0. In 2017, UNNES’s graduates number 7,501 graduates, of which 90% of graduates have worked in their fields both in the education and non-education fields. This data was taken in the UNNES Tracer Study data collection in 2018.

4. Discussion

Indonesia becomes the world's 7th largest economic power by 2030 [11]. Indonesia becomes the world's 4th largest economic power by 2050. This prediction is in line with the various social and demographic advantages that the Indonesian people have. In the period 2020 to 2045, Indonesia enjoys a demographic bonus due to the dominance of the population of productive age [12].

Despite getting optimistic predictions, there are various conditions that show Indonesia's competitive advantage is still relatively low compared to other countries. The World Economic Forum (WEF) data shows Indonesia's competitiveness is still ranked 36th out of 137 countries. While the World Intellectual Property Organization (WIPO) shows Indonesia's innovation competitiveness is still ranked 87th out of 127 countries. WIPO also shows that Indonesia's Knowledge & Technology Outputs are ranked 70th out of 127.

In such conditions, higher education is desirable to be an institution that improve the quality of human resources. This is very urgent because Indonesian also face a new era of life called the era of disruption. This era brings significant changes to life because it is able to change the way of humans life activities. In providing employment, for example, McKinsey (2017) states that 75–375 million workers throughout the world are changing their professions due to the era of disruption. Ideally, higher education is in the flow of change, controlling the direction and speed of change with social and cultural capital they have. Universities should give command when the change must be accelerated, stopped, or diverted in its direction.

Every change certainly provides opportunities and challenges to anyone. When we can put ourselves intensively in the vortex of the dynamics of change, we have a great opportunity to contribute and give a role and contribution to thinking that is useful for the benefit of humanity. At least we can think, research, analyse positive and negative impacts on human life by using our scientific analysis knife. Next, we use it as the first step for us to care, criticize, and not fail to
understand the latest dynamics. Then we can make materials to contribute more to the nation and the country. One of them is in the form of an integrase literacy model in the UNNES curriculum in the face of disruption era. There are two patterns used by UNNES in integrating scholarly literacy, namely: direct learning and indirect learning. Direct learning is carried out through all courses taken by student subjects, while indirect learning is done through scientific activities conducted through student activities, for example, seminars, workshops, scientific writing competitions, debates, and so on.

Literacy has an influence on competencies mastered. Science, technology and art and wrapped in character, the quality of human life can be determined. On the other hand, a good quality of life is a determinant of well-being. On this basis, many countries make large investments to equip their citizens with science, technology and character. In the future the people's welfare will be able to increase and in turn the welfare of the country can also increase. Thus, scientific literacy that is based on science in each of its activities is a force that pursues and continues to be developed for the younger generation.

In the past two decades, literacy has faced new challenges in implementing college management [13], [14], [15], [16]. The social and cultural changes that occurred in the 1990s have led to a more diverse student population and more diverse learning needs in the context of higher education [17]. The use of the internet in various personal and professional fields has aroused great interest in the field of digital competence in educational programs and teaching and learning processes in universities.

5. Conclusion

Higher education has a strategic position to take on the role of presenting various forms of benefit to citizens of the world, both on the scientific and practical level. The potential of higher education resources which managed and directed professionally will be able to produce public intellectuals. The importance of the role of universities produce competent and world-competitive people through literacy development. Speed and ability to respond to the dynamics of science development and technology will be able to take a role, seize opportunities and improve future designs. In such a situation, UNNES should continue to grow and improve its quality and capacity. Increasing the quality and capacity of itself will be able to increase benefits for the progress of the nation and state.
References
[1] Donohue, J., & Erling, E. (2012). Investigating the relationship between the use of English for academic purposes and academic attainment. *Journal of English for Academic Purposes, 11*(3), 210-219. doi: 10.1016/j.jeap.2012.04.003

[2] Chimbganda, A. B. (2011). Discovering Academic Literacy Skill I English of first Year ESL Student in Humanities at the University of Botswana. *International Journal of Linguistics, Vol. 3, No. 1 E21.* (pp. 1-18).

[3] Abu-Asba, A., Asman, H. and Mustaffa, R. (2014). Investigating Academic Literacy Practice in Science domain: The case of Yemen. *International Journal of Education and Research, Vol. 2 No. 3 March.*

[4] Purwanto, Wachid Eko. 2007. “Menghidupi Tradisi Literasi: Problematical bagi Siswa, Guru, Sekolah dan Negara”, dalam http://www..titikoma.com/esai. Diakses pada tanggal 11 November 2008.

[5] Wagner, Daniel A. (2000). *Literacy, Culture, and Development: Becoming Literate in Morocco.* New York: Cambridge University Press.

[6] Wulansari, Dewi. (2011). “Kultur Literasi Mahasiswa”. Suara Merdeka. Semarang, Jawa Tengah, Indonesia: March 12th, 2011. Also available (online) on http://www.suaramerdeka.com/v1/index/read/cetak/2011/03/2011/139673/Kultur-Literasi-Mahasiswa (accessed in Cianjur, Indonesia: 9 August 2013).

[7] Maryam S. (2014). Peran Literasi dalam Pengembangan dan Pembinaan Nilai-Nilai Keindonesiaan di Era Globalisasi. *Jurnal kependidikan, Vol. 7 No. 10* 2014.

[8] Ambigapati. (1999). *Literasi dan Pengajaran.* Penang: USM.

[9] Owen, G. T. (2014). Qualitative methods in higher education policy analysis: Using interviews and document analysis. *The Qualitative Report, 19*(26), 1.

[10] Miles, M.B. & Huberman, A.M. (1994). *Qualitative Data Analysis.* London: Sage Publishers.

[11] McKinsey Global Institute. 2012. The archipelago economy: Unleashing Indonesia’s potential. https://www.mckinsey.com/~/media/mckinsey/featured%20insights/asia%20pacific/the%20archipelago%20economy/mgi_unleashing_indonesia_potential_executive_summary.ashx

[12] PricewaterhouseCoopers. 2017. PwC Annual Report 2016-2017. https://www.pwc.nl/nl/assets/documents/pwc-annualreport2016-2017-print-totaal.pdf

[13] Lea, M. R., & Street, B. V. (1998). Student writing in Higher Education: An academic literacies approach. *Studies in Higher Education, 23*(2), 157-172.

[14] Lea, M. R., & Street, B. V. (2006). The ‘academic literacies’ Model: Theory and applications. *Theory Into Practice, 45*(4), 368-377.

[15] Thesen, L., & Cooper, L. (Eds.). (2014). *Risk in Academic Writing: Postgraduate students, their teachers and the making of knowledge.* Bristol, PA: Falmer Press.

[16] Wingate, Ursula (2015). Academic Literacy and Student Diversity: The Case of Inclusive Practice. Bristol: Multilingual Matters.

[17] Goodfellow, R., & Lea, M. R. (2013). *Literacy in the Digital University: Critical perspective on learning, scholarship, and technology.* New York & London: Routledge.