The Development of Local Wisdom-Based Contextual Social Science Teaching Materials with The Theme of *Indahnya Kebersamaan* (The Beauty of Togetherness) for The Fourth Grade Level of Elementary School

Rosikhatul Ilmiyah[1]✉ , Wasino[2] & Udi Utomo[3]

[1] Public Elementary School Ngelokulon, Mijen, Demak, Jawa Tengah, Indonesia
[2] History Science, Universitas Negeri Semarang, Indonesia
[3] Drama, Dance and Music Arts Education, Universitas Negeri Semarang, Indonesia

Article Info	Abstract
	The learning process of Social Science (IPS) in Elementary School has not been yet optimum because teachers lacked knowledge about the contextual approach, had limited learning resources, namely teaching materials as well as the inability to develop teaching materials. Therefore, this study attempted to produce Central Java local wisdom-based contextual Social Science teaching materials with the theme of "*Indahnya Kebersamaan*" (The Beauty of Togetherness) for the fourth grade level of Elementary School (SD). This study employed Research and Development (R & D) method with the trial design of pre-test and post-test control group. Meanwhile, the data analysis technique used to examine the effectiveness of the teaching materials was N-Gain test by comparing pre-test and post-test scores of the experimental class and the control class. Further, the results of this study showed that: (1) there was a need on the development of Social Science teaching materials which could be used as learning resources to improve the Social Science learning quality in Elementary School. Additionally, the developed teaching materials were declared valid by having the average score of 84.38 with very valid criterion and very well applicable, (2) the characteristics of the developed teaching materials contained 7 components of the contextual approach which utilized Central Java local wisdom, and (3) the effectiveness test of the teaching materials showed that the experimental class achieved higher cognitive learning outcome with the N-Gain value of 0.46 than the control class of 0.19. In conclusion, the developed teaching materials can be used by teachers and students as learning resources in the learning process of Social Science to improve its quality.

✉ Correspondence address:
 Ngelokulon, Mijen, Demak, Jawa Tengah
 E-mail: kakrossrossy@gmail.com

INTRODUCTION

The Social Science subject in the national education system has a strategic position in the instillation of cultural values to build a life of nation and state. Musadad & Wasino (2012) explain that Social Science learning is aimed at building youth generation characters as democratic and responsible citizens. That is why the core competence of Social Science is to help students using knowledge and attitudes to be competent to live in society.

However, the facts show that the learning of Social Science in Elementary School has not been yet optimum, and the learning outcomes of this subject in several schools were low. For example, the learning outcome of Social Science in Mijen State Elementary School 1 (SDN Mijen 1), from 25 fourth grade students in total, there were only 11 students who passed the passing grade score (KKM) with the percentage of 44% and 14 students got scores below KKM with the percentage of 56%. Also, the learning outcome of Social Science in Ngelokulon State Elementary School (SDN Ngelokulon), from 28 fourth grade students in total, there were only 11 students who passed KKM with the percentage of 39% and 17 students got scores below KKM with the percentage of 61%. Further, the learning outcome of Social Science in Ngegot State Elementary School (SDN Ngegot), from 24 fourth grade students in total, there were only 10 students who passed KKM with the percentage of 42% and 14 students got scores below KKM with the percentage of 58%.

Furthermore, in terms of learning observation, the researchers got data which showed that the learning process of Social Science was less interesting, monotonous, and dominated by teachers. Teachers only used one textbook, namely teacher's book and students' book from Kemendikbud (Ministry of Education and Culture). Moreover, teachers only explained materials written in the textbook with no improvisation or development which can encourage students' interest and motivation.

In learning process, a teaching material is one of components which can influence the quality of learning. After being analyzed, the currently used textbook to teach Social Science in Elementary School apparently showed several weaknesses, namely: (1) nonlinearity of the book contents with the core competence (KD) of Social Science, namely KD 3.2 and KD 4.2, (2) materials contained in the textbook have not yet covered the diversity of social, economic, cultures, ethnic, and religions in Central Java Province and were only in form of passages, (3) material contexts provided in the textbook were too general and less contextual with students' daily life, (4) materials contained in the textbook have not yet utilized Central Java region local wisdom, and (5) there was no evaluation exercises at the end of learning process.

These conditions indicate that the teaching materials used have not yet been able to optimize Social Science learning process. Another thing which appears to be more concerning is teachers' inability in developing teaching materials. This inability is revealed by Zuriah, Sunaryo, & Yusuf (2016) that is teachers have got not experience and special competent in developing innovative teaching materials. It happens because of the limited understanding about knowledge in making and developing creative and innovative teaching materials.

Social Science learning process will be optimum when it is supported by teaching materials which are suitable with the context where students live. It somehow directs to the contextual approach or contextual teaching and learning. Jhonson (2009) explains that contextual learning enables students to relate learning materials with daily life contexts to find meanings. Hudson & Whisler (2005) also explain that contextual model makes learning activity not only merely in form of remembering materials, but also creating learning experiences which challenge thinking skills and directly faced by students, so the knowledge they obtain can be meaningful and long last in their brain.

Sarie, Rahayu, & Isnaeni's study results (2016) show that CTL approach is able to optimize students' learning outcome. It is known that the learning outcome of cognitive, affective and psychomotor of experimental class was

higher than the control class, namely the gain score of experimental class was 0.75 higher than the control class.

According to Utari, Degeng & Akbar (2016) learning contextualization can be done by the instillation of local wisdom values where students live. The introduction to surrounding local wisdom is important as an effort to preserve local cultures. That is why there is a need to develop teaching materials of Social Science with the contextual approach which utilizes local wisdom. In line to this, the wisdom utilized in this study came from Central Java. By doing so, it is hope that the developed teaching materials can be used by teachers and students as learning resources in Social Science learning process in order to improve its quality.

METHODS

This study belonged to Research and Development (R&D). In this study, research and development was used to develop Central Java local wisdom-based Social Science teaching materials with the theme of "*Indahnya Kebersamaan*" for the fourth grade level of Elementary School. In addition, Thiagarajan & Semmel development model (1974) was used, namely 4-D (Four D) model. It consists of four steps which are definition stage, designing stage, development stage, and dissemination stage.

The development trial process was done by conducting small scale trial in SDN Ngelokulon. Meanwhile, the trial of the design of final product was done by employing Pre-test – Post-test Control Group Design. SDN Mijen 1 was involved as the experimental class and SDN Ngegot as the control class. Both classes did pre-test and post-test after receiving treatments. The treatment in the experimental class was done by using the developed teaching materials, while the control class used teaching materials provided by the Government. Alternatively, the students' pre-test data of the small scale trial were used to calculate and analyze the level of difficulty, discriminating power, and test items reliability.

The effectiveness test was analyzed by using prerequisite test, hypothesis test, and N-Gain test. It involved normality and homogeneity tests. For more, the hypothesis test (average test) was done by using statistical test of independent sample t-test to know the average differences of the learning outcomes of the experimental and control classes. On the one hand, the improvement of the learning outcome of the students in the experimental and control classes was based on the scores of pre-test – post-test calculated through N-gain formula

RESULTS AND DISCUSSION

The developed Social Science teaching materials were actually a development of the thematic textbook implemented in the 2013 curriculum with the theme of "*Indahnya Kebersamaan*". This teaching materials used the contextual approach which utilized Central Java local wisdom. Furthermore, the characteristics of the developed teaching materials covered 7 components of the contextual approach which utilized Central Java local wisdom, namely constructivism, inquiry, questioning, learning community, modelling, reflection, and authentic assessment.

These teaching materials do not only contain Social Science materials related to Central Java local wisdom. They also give chances to students to construct their knowledge through activities which require them to be active such as doing interview, observation, practice, discussion, presentation, and so on.

The teaching materials also provide questioning activities in each meeting. The questions in the materials are directed to make students know what has been known, arouse curiosity, focus attention on materials, stimulate students' responses, and know whether students have understood the materials presented.

Additionally, the activities of learning community in this teaching materials are reflected in the activity of "*Ayo Berdiskusi*" (Let us Discuss) and presentation. Students are divided into heterogeneous groups, and then cooperate to solve problems. The learning community is the implementation of cooperative learning, a

learning innovation that can maximize learning outcome.

The activities of modelling in this teaching materials are realized in a learning process by which students are invited to practice traditional games. Prior to this activity, teachers and students' representatives demonstrate how to play the games so that other students can copy. Through these activities, others can understand that what is done by the models are the minimum standard competence to achieve. The following is a figure of modelling activities in the social science teaching materials regarding traditional games and a figure of students learning activities practicing the traditional games.

Pembelajaran 3: Permainan Tradisional Jawa Tengah

Jawa Tengah mempunyai banyak sekali permainan tradisional, antara lain permainan bentengan, engklek dan egrang. Tahukah kamu bagaimana memainkannya? Ayo kita pelajari bersama!

Permainan Engklek

Permainan Engklek adalah permainan tradisional yang sangat banyak dimainkan oleh anak-anak di Jawa Tengah. Engklek merupakan permainan lompat pada bidang datar yang digambar diatas tanah, Permainan engklek biasanya dimainkan oleh dua sampai lima orang. Ayo kita coba!

Cara Bermain Engklek:
1) Lompatlah dengan menggunakan satu kaki di setiap petak-petak yang telah digambar
2) Siapkanlah gacuk sebelum bermain
3) Lemparlah gacuk sebelum bermain
4) Petak yang ada gacuknya tidak boleh diinjak/ditempati oleh setiap pemain
5) Lompatlah ke petak berikutnya dengan satu kaki mengelilingi petak-petak yang ada
6) Pilihlah sbeuah petak yang dijadikan sawah setelah menyelesaikan satu putaran. Petak itu boleh diinjak dengan dua kaki. Pemain lain tidak boleh menginjak petak itu selama permainan
7) Pemain yang memiliki sawah yang paling banyak adalah pemenangnya

Figure 1. Figure of Modelling Activities in The Social Science Teaching Materials Regarding Traditional Games

There are reflection activities at the end of the learning process in this teaching materials. The aim is to view or reflect things that have been learned or studied or done before. By doing so, it is hoped that students can do introspection for the betterment on the learning activities ahead.

Assessment activities in these teaching materials emphasize on students' learning processes and outcomes. The process assessment is done within learning process by using non-test technique and used to assess students' affective and psychomotor skills. On the other hand, outcome assessment is done at the end of learning process by using test technique to assess students' cognitive skills. Those assessment activities show the availability of authentic assessment inside the contextual teaching materials.

Figure 2. Figure of Students Learning Activities Practicing The Traditional Games

Physical dimensions of Central Java local wisdom utilized in the teaching materials covered a cultural inheritance, traditional foods, traditional games, customs, as well as arts. For more, the cultural inheritance utilized in this teaching materials is Central Java traditional house, namely *Joglo* house. The local wisdom of *Joglo* house was presented clearly to make students easy to understand.

Additionally, the traditional foods attached in the teaching materials are *lentog tanjung, sego ndoreng, nasi tumpeng, sego lengko, sego megono, nasi godhog, sate blengong,* and *nasi gandul*. Those various foods from several regions in Central Java reflect the identity of a particular region which differs from one another.

Traditional games utilized in the teaching materials consist of *egrang* game, *bentengan* and *engklek*. From these games, students are expected to understand the values of local wisdom contained in traditional games such as motoric, cognitive, and moral values that are necessary to preserve.

For the customs, the teaching materials involved *sedekah bumi* and *syawalan* customs. From those customs, students are hoped to understand the values of local wisdom contained

in the customs of *sedekah bumi* and *syawalan*, namely the value of grateful in life.

The draft of the developed teaching materials were validated by four validators, namely two lecturers of Social Science Faculty of UNNES and the rest two practitioners were elementary school teachers. They validated five aspects which were (1) contents appropriateness, (2) presentation appropriateness, (3) language appropriateness, (4) graphics appropriateness, and (5) Central Java local wisdom components appropriateness. According to the validation, the researchers obtained some suggestions to revise the teaching materials before being tested in a small scale.

The suggestions from validators were to simplify the teaching materials to be easily understood, put sources of every figure, revise presentation systematic. Those suggestions were used to revise the teaching materials. The results of the validation of the Central Java local wisdom-based contextual Social Science teaching materials were presented in Table 1.

Table 1. The Results of Teaching Materials Validation

Aspects	Validation results			
	V_1	V_2	V_3	V_4
Content appropriateness	21	20	20	21
Presentation appropriateness	22	19	22	21
Language appropriateness	17	14	16	17
Graphics appropriateness	15	12	12	13
Local wisdom components	4	4	3	4
Total	79	69	73	76
Scores	89.77	78.41	82.95	86.36
Criteria	Very valid	Valid	Very valid	Very valid
Average scores	84.38			
Criteria	Very valid			

Based on Table 1, the results of the teaching materials validation obtained scores 89.77 from validator 1, 78.41 from validator 2, 82.95 from validator 3, and 86.36 from validator 4. It showed that the developed teaching materials obtained the average score of 84.38 with very valid criterion.

After the product was declared valid, the researchers did a development trial in SDN Ngelokulon. In this phase, teachers conducted Social Science teaching and learning process using Central Java region local wisdom-based contextual Social Science teaching materials.

During the learning process, the researchers observed learning activities. The observation results showed that the use of Central Java region local wisdom-based contextual Social Science teaching materials could facilitate learning process, made Social Science learning process interesting, students could build, arrange, and find new knowledge, students' learning motivation increased, and also students were active in the learning process. In the last meeting, the researchers conducted interview with the fourth grade teachers of SDN Ngelokulon. The interview was done to discuss the use of Central Java region local wisdom-based contextual Social Science teaching materials.

From the interview, it was known that the use of Central Java region local wisdom-based contextual Social Science teaching materials made students active, passionate, enthusiastic in learning, and could receive the learning materials well. On the other hand, weaknesses were also found in the Central Java region local wisdom-based contextual Social Science teaching materials, namely the use of very long passages in the materials which was suggested to be simplified, and jumbled page numbers to rearrange. Findings in this section of trial were then revised to be the final product.

The final product of the development of teaching materials consisted of 13 parts, namely cover, preface, about, table of contents, KI arrangement, KD arrangement, learning activities and developed competences, theme foreword, learning titles, "*Ayo Membaca*" (Let us Read) activities, "*Ayo Berdiskusi*" (Let us Discuss) activities, *"Ayo Renungkan"* (Let us Reflect)

activities, and *"Kerjasama dengan Orang Tua"* (Collaboration with Parents) activities.

The final product was tested in a large scale to examine its effectiveness. The effectiveness was seen from the analysis of students' cognitive skills by using written test, students' attitude analysis by using affective observation sheet and students' skills analysis by using psychomotor observation sheet.

Data analysis results showed that the experimental class and the control class learning outcomes were normally distributed and had no variance difference (homogenous). Therefore, the hypothesis test was done by using statistical test of independent sample t test to measure posttest average scores between the experimental and the control class. Based on the t test, the researchers obtained significance value of 0.000. From this calculation, it was known that 0.000 < 0.05 or significance value < 0.05. In conclusion, there was a difference in learning outcome between the experimental and the control class. Moreover, the differences in learning outcome can be seen in Table 2.

Table 2. The Differences in Learning Outcomes

	Classes	N	Mean	Std. deviation	Std. error mean	N-gain
Scores	Experimental	33	75.00	6.225	1.084	0.46
	Control	31	61.84	7.616	1.368	0.19

Based on Table 2, the experimental class average was 75.00, while the control class was 61.84. Thus, the average score of the experimental class was higher than the control class. It showed that the learning outcome of the experimental class was better than the control class. Also, the N-gain results of the experimental class was 0.46. It proved that the improvement was on N-gain $0,30 \leq (g) < 0,70$, meaning that it was on fair criterion. Meanwhile, the control class showed 0.19, meaning that the improvement was on N-gain $(g) < 0,30$ and belonged to low criterion. Based on these results of N-gain, it could be concluded that both classes got improvement, but the experimental class was higher than the control class.

Students' psychomotor assessment was done through performance assessment which emphasized on the process of presentation activities. The psychomotor aspect was measured by using observation sheet. It was measured in terms of four criteria, namely (1) students' courage in presentation performance, (2) speaking fluency in presentation, (3) intonation in presentation, and (4) presentation technique. The average results of psychomotor learning outcome on courage in presentation performance aspect was 2.88, speaking fluency in presentation was 2.55, intonation in presentation was 2.73, and presentation technique was 2.80. Therefore, the final average was 2.74 with good criterion.

Toharudin, Hendrawati, & Rustaman (2011) argue that the purposes of developing teaching materials are to help students to develop their skills of cognitive, affective and psychomotor. Based on the large scale trial, it was proved that the Central Java region local wisdom-based contextual Social Science teaching materials was effective. The effectiveness was proved to improve students' cognitive, affective and psychomotor aspects. It is in line with the results of Rohmah, Hariyono & Sudarmiatin's study (2017) that a Social Science learning process done by using a contextual-based Social Science Elementary School textbook is effective to improve learning outcome. Noviana and Bakri (2015) also state that the implementation of local wisdom-based Social Science Education teaching materials helps students to understand potentials and condition of their surrounding environment. It is proved by the improvement of students' understanding in learning the local wisdom-based Social Science Education teaching materials.

The contextual learning is focused on how students understand the meaning of what they learn, what it is, what is the status, how it is obtained, and how students show what they have learned so that it can develop the level of cognitive skills and train students to think

critically and creatively in collecting data, understanding problems and solving the problems. (Nasrun, 2014)

The improvement on students' learning outcome was because the developed Social Science teaching materials were close to their daily life and served real condition, so students could understand the meaning of things they learned. It is in line with Nasrun's opinion (2014) that the contextual learning is focused on how students understand the meaning of what they learn, what it is, what is the status, how it is obtained, and how students show what they have learned, so that it can develop cognitive skills level, and train students to think critically and creatively in collecting data, understanding problems, and solving the problems.

The relevance of Social Science materials with the real world condition of students can encourage them to implement knowledge they have in their daily life. This is in accordance to Deen & Smith's statement (2006) that the contextual learning will give direct knowledge and accustom students to learn based on what they do in their daily life. For more, Glynn & Winter (2004) also say that contextual is an approach with the concept of study taught based on real life situation and requires realization that will show students skills in achieving learning objectives.

What is more, the closeness of the materials with students' real life would lead them to build, arrange, and find new knowledge in their daily life. This surely can make learning process easier, and can encourage students to make relationship between knowledge they have with the implementation in daily life. Also, the developed teaching materials which utilized local wisdom can function as a medium to contextualize Social Science learning. Purnamasari & Wasino (2011) in their study also contextualized history subject learning by utilizing local ancient sites. The results show that the quality of the history subject learning improved on the learning evaluation with high learning activities. The developed teaching materials can be used by teachers and students as

resources in the process of Social Science learning to improve its quality.

CONCLUSION

There is a need for the development of Central Java local wisdom-based Social Science teaching materials with contextual approach that can be used as learning resources to improve the quality of Social Science learning in Elementary School. Further, the developed teaching materials were declared valid with the final average score of 84.38 with very valid criterion and can be implemented well. Again, the developed teaching materials is effective to improve the learning outcomes of Social Science by having the improvement of learning outcome of the experimental class was higher than the control class.

REFERENCES

Deen, I. S., & Smith, B. P. (2006). Contextual Teaching and Learning Practices in The Family and Consumer Sciences Curriculum. *Journal of Family and Consumer Sciences Education*, 24(1), 14-27. Retrieved from http://www.natefacs.org/Pages/v24no1/v24no1Shamsid-Deen.pdf

Glynn, S. M., & Winter, L. K. (2004). Contextual Teaching and Learning of Science in Elementary Schools. *Journal of Elementary Science Education*, 16(2), 51-63. Retrieved from https://eric.ed.gov/?id=EJ798807

Hudson, C. C., & Whisler, V. R. (2005). Contextual Teaching and Learning for Practitioners. *Systemics, Cybernetics and Informatics*, 6(4), 54-58. Retrieved from http://www.iiisci.org/journal/cv$/sci/pdfs/e668ps.pdf

Jhonson, E. B. (2009). *CTL Contextual Teaching and Learning*. Bandung: Mizan Media Utama.

Musadad, A. A. & Wasino. (2012). Model Pelatihan IPS Sejarah Berbasis Pendidikan Multikulturan untuk Guru SMP. *Paramita,* 22(2), 226-237. Retrieved from https://journal.unnes.ac.id/nju/index.php/paramita/article/view/2123

Nasrun, N. (2014). Contextual Learning Approach in Improving Critical Thinking Skills of Guidance and Counseling Students of State University of

Medan. *International Journal of Sciences: Basic and Applied* Research, 18(1), 151-161. Retrieved from http://gssrr.org/index.php?journal=JournalOfBasicAndApplied&page=article&op=view&path%5B%5D=2618

Noviana, E., & Bakri, R. M. (2015). Implementasi Bahan Ajar Pendidikan Ilmu Pengetahuan Sosial Berbasis Kearifan Lokal di Kelas IV Sekolah Dasar Negeri 04 Buantan Besar Kecamatan Siak Kabupaten Siak. *Primary: Jurnal Pendidikan Guru Sekolah Dasar,* 4(1), 1-11. Retrieved from https://ejournal.unri.ac.id/index.php/JPFKIP/article/view/2716

Purnamasari, I & Wasino. (2011). Pengembangan Model Pembelajaran Sejarah Berbasis Situs Sejarah Lokal di SMA Negeri Kabupaten Temanggung. *Paramita*, 21(2), 202-212. Retrieved from https://journal.unnes.ac.id/nju/index.php/paramita/article/view/1040

Rohmah, D. F., Hariyono, & Sudarmiatin. (2017). Pengembangan Buku Ajar IPS SD Berbasis Kontekstual. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan,* 2(5), 719-723. Retrieved from http://journal.um.ac.id/index.php/jptpp/article/view/9200

Sarie, F. N., Rahayu, E. S. & Isnaeni, W. (2016). Pendekatan Contextual Teaching and Learning Bervisi SETS dalam Mengoptimumkan Multiple Intelligence dan Hasil Belajar. *Journal of Primary Education*, 5(2), 81-87. Retrieved from https://journal.unnes.ac.id/sju/index.php/jpe/article/view/12896

Thiagarajan, S., Semmel, D. S & Semmel, M. I. (1974). *Instructional Development for Training Teachers of Exceptional Children: A Sourcebook.* Indiana: Indiana University Bloomington. Retrieved from https://eric.ed.gov/?id=ED090725

Toharudin, U., Hendrawati, S, & Rustaman, A. (2011). *Membangun Literasi Sains Peserta Didik*. Bandung: Humaniora.

Utari, U., Degeng, I. N. S., & Akbar, S. (2016). Pembelajaran Tematik Berbasis Kearifan Lokal di Sekolah Dasar dalam Menghadapi Masyarakat Ekonomi Asean (MEA). *Jurnal Teori dan Praksis Pembelajaran IPS*, 1(1), 39-44. Retrieved from http://journal.um.ac.id/index.php/jtppips/article/view/5861

Zuriah, N., Sunaryo, H., & Yusuf, N. (2016). IbM Guru dalam Pengembangan Bahan Ajar Kreatif Inovatif Berbasis Potensi Lokal. *Jurnal Dedikasi*. 13(3), 39-49. Retrieved from http://ejournal.umm.ac.id/index.php/dedikasi/article/view/3136

.