



## LOCAL WISDOM-BASED PHILOSOPHY OF SCIENCE TEXTBOOK

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### ABSTRACT

This study aims to develop a textbook for the philosophy of science based on local wisdom. The research subjects were students of the Pancasila and Civics Education Study Program at Sriwijaya University who took the philosophy of science. The research method is R&D with steps; 1) preliminary study, 2) product development, and 3) product test. Through a preliminary study, the results of the needs analysis were obtained which stated that the philosophy of science textbooks used previously did not contain local wisdom, the number of books as learning resources was still minimal and students wanted unique learning resources, one of which contained the value of local wisdom. Thus, the research team must develop the textbook immediately. The textbook prototype was validated by material experts and linguists and then tested. The result of validation by linguists is 82.5% which means it is valid and the result of material validation by material experts is 84.4% which means it is valid. Tests on students, namely with one-to-one yielded 95% small group 91.2% and field evaluation 90%, and N-Gain 0.4 which means moderate. Thus, it means that textbooks are practical to use and have a potential impact to be used as a source of learning the value of local wisdom.

**Keywords:** *Textbook Of Philosophy Of Science, Local Wisdom*

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## INTRODUCTION

The rapid development of education along with technological advances will certainly have a more or less influence on the shifting culture of a region. The biggest problem of the 21st century is the emergence of an awareness of the identity of a nation or ethnic group (Mentari, 2017:480; Tilaar, 2009:116; Eley & Ronald, 1996). This is caused by two major waves of social change, including globalization and democracy (Mentari, 2017:2). First, Globalization can threaten the nation's culture (Tilaar, 2009:4). Globalization with all its dimensions causes various cultural resilience, national identity, and identity as a nation to face threats and challenges, even the process of degradation of cultural resilience, national identity, and identity as a nation is very apparent in the lives of people in Indonesia (Rusdiyani, 2016:34). Global culture will emerge and can kill local culture, and is very dangerous. The destruction of local culture means the fading of a nation's identity. Strengthening the identity of ethnic groups or nations is very important in the era of globalization, with the aim of not letting the cultural roots that we inherited from our predecessors disappear amidst the tendency towards cultural homogeneity as an impact of globalization (Brata, 2016:12). Therefore, the existence of local wisdom is a solution as well as a characteristic and identity of a nation that we need to maintain and preserve from now on, later and forever.

*Second*, the cause of the emergence of national identity problems is the growth of democracy. Democracy and identity are two principles that complement each other (Tilaar, 2009: 117). Dahl (2001: 203; Mentari, 2017: 480) believes that "one of the dangers or problems in a democratic society is the possibility of cultural conflict". Tempo Daily (2015; Mentari, 2017: 2) noted several cultural conflict tragedies in Indonesia that originated from cultural differences, including 1) The Sampit Tragedy, this tragedy began with a conflict between the Dayak and Madurese ethnic groups that occurred in Sampit, Central Kalimantan; 2) The Maluku Conflict, a violent conflict with a background of religious differences, namely between Islamic and Christian groups; and 3) The 1998 Conflict, the economic crisis culminated in a social conflict at the end of the New Order. Cultural conflicts can be overcome by mutual understanding between groups and the need for high tolerance between each other. The big wave has an impact on the social structural order of society, especially in terms of culture, so preventive and deep-rooted prevention needs to be carried out to

become a filter for preserving regional culture by emphasizing existing local wisdom. Even the existence of regional culture is currently being abandoned and almost extinct due to the lack of recognition and understanding of regional culture (Ariatama, et al., 2022:252). So, one way that can be done to maintain this culture to survive is by strengthening the local wisdom of each region.

Local wisdom often called local wisdom can be understood as human efforts by using their intellect (cognition) to act and behave towards something, object, or event that occurs in a certain space, (Khusniati, 2014: 68). Furthermore, local wisdom can be defined as wisdom or noble values contained in local cultural riches, in the form of traditions, proverbs, and life mottos. Local wisdom does not stop at ethics but also includes norms, actions, and behavior. Thus, local wisdom seems to be a religion that guides a person in actions and deeds, both in the context of daily life and in determining the next human civilization (Wahyu, 2015: 76).

Local wisdom can be understood as ideas, values, and local views that are wise, full of wisdom, and have good values, which are embedded and followed by members of the community, (Priyatna: 2016: 1313). Local wisdom can be concluded as ideas, and good values that develop, grow, and experience dynamics from time to time in an indigenous society that has existed since ancient times. These values are used as noble values by most indigenous peoples in Indonesia and are still relevant to the phenomena and socio-cultural problems of today's society. These values were explored and crystallized by the Founding Fathers of Indonesia into values, and basic norms to become the foundation and fundamental norms of Indonesia, which we know as "Pancasila". Pancasila is used as the basis and foundation in all aspects of Indonesian life, especially in the world of education which is carried out in the teaching and learning process in the classroom. In addition, a local wisdom-based education model is needed to be used as an education model that has high relevance for the development of life skills by relying on the empowerment of local skills and potential in each region, which is then passed on in the learning process (Nadlir, 2016: 207).

Learning based on local excellence (local wisdom) does not just appear, but there is a reference that underlies it. The reference used is at least in two things, namely learning as one aspect of fulfilling educational goals and the legal basis of national education policy. Education is a learning program, in short, a basic element of behavioral change (education) that takes place both inside and outside the classroom as an interaction between learners, teachers in a certain

environment, (Prasetyo, 2013:4). The legal basis of the national policy on local excellence-based education (local wisdom) (PBKL), including: (a) Government Regulation Number 19 of 2005 Chapter III Article 14 paragraph 1, that "For SMA/MA/SMALB or other equivalent forms can include local excellence-based education", (b) Government Regulation Number 17 of 2010 Article 34, that "Local excellence-based education is education that is organized after meeting the National Education Standards and enriched with regional competitive and/or comparative advantages", (c) Government Regulation Number 17 of 2010 Article 35 paragraph 2, that "District/city governments implement and/or facilitate the pioneering of programs and/or educational units that have or almost meet the National Education Standards to be developed into international standard and/or local excellence-based programs and/or educational units", and (d) Renstra Kemendiknas 2010-2014 that: Education must foster an understanding of the importance of sustainability and balance of the ecosystem, namely the understanding that humans are part of the ecosystem. Education must provide an understanding of values.

In addition, Civic Education plays an important role in the development of a multicultural society in Indonesia. Based on Law Number 20 of 2003 concerning the National Education System (Sisdiknas), Civic Education is the name given to compulsory subjects in the elementary and secondary school curriculum, as well as compulsory subjects in the college curriculum. Civic Education, which plays an important role in multicultural education, prepares students to become citizens who are firmly and consistently committed to maintaining the Unitary State of the Republic of Indonesia. To realize the goals of national education, education is needed that can instill the noble values of the nation through local wisdom and national spirit. The goals of national education are in line with the goals of education according to Ki Hajar Dewantara which are to be achieved, namely (1) increasing independence, (2) fostering a spirit and sense of nationality, and (3) rooted in national culture (Suparlan, 2004:183; Mentari, 2017:7).

The science plays an important role in realizing these goals, one of which is through Civic Education. Civic Education (Budimansyah, 2009: 20; Fatimah & Marini, 2022: 139) has three roles which include; first, based on the Psycho-Pedagogical Development approach. Civic Education is a curricular program in formal educational institutions (schools/universities) and non-formal (outside school), which acts as a vehicle for the glorification and empowerment of children

and youth according to their potential to become smart and good citizens. Second, based on the Socio-Cultural Development approach. Civic Education is a socio-cultural movement of citizenship that acts as a vehicle for the self-actualization of citizens both individually and in groups according to their rights, obligations, and socio-cultural context, through active participation intelligently and responsibly. Third, based on the Socio-Political Intervention approach. Civic Education is a national political education program for state administrators, members, leaders of social organizations, and political organizations that is packaged in various forms of fostering civic knowledge, civic skills, and civic virtues (civic disposition) that refers to the conceptual pedagogical principle to develop reasoning power (state of mind), not a vehicle for political indoctrination, and as a process of intelligence.

If education for children is not based on nationality, then children will not be able to have a sense of love for their nation and will become increasingly separated from their nation, and could then become our enemies. Because national education is our right and obligation" (Dewantara, 1928; 2013). National education should create a sense of love for one's own culture and spirituality (mental culture) (Dewantara, 2013:88; Mentari, 2017). Ki Hajar Dewantara also stated that "national education should create a sense of love for one's own culture and spirituality (mental culture)" (Dewantara, 2013:88; Mentari, 2017). Dewantara (2013:139) also stated that a) public education must be inspired by the nobility of human nature; therefore, it must prioritize all spiritual values (mental culture) and revive the spirit of idealism; b) public education must educate towards intellectual character, namely the development of the whole soul (character building); c) public education must educate towards family, namely feeling like living together, experiencing hardship and happiness together, sharing responsibility, etc.; starting from family in a small environment, to large kinship (for example the kinship of nations).

Therefore, the Indonesian nation as a great nation with cultural diversity and uniqueness and distinctiveness that accompanies the nation's culture, is also open to the entry of new cultures from other nations while still having a sense of love for the homeland and culture it has. So, new cultures should not replace the position of local wisdom or local culture but become unique in diversity to become a global culture. Local wisdom of the community is the identity of the nation that must be developed and preserved in every aspect of life, including through education that is actualized in lectures. Local wisdom is built from social

values that are upheld in the social structure of the community itself and have a function as a guideline, controller, and sign for behaving in various dimensions of life both when dealing with others and with nature, (Asriati, 2012: 112).

Education as a strategic effort in inheriting the nation's culture has a great responsibility for maintaining the values of the nation's local wisdom among students. The philosophy of science course provides an opportunity for students to conduct a comprehensive study and is useful for: 1. Training radical thinking about the nature of science 2. Training reflective thinking within the scope of science 3. Avoiding absolute scientific truth, and considering science as the only way to obtain truth 4. Avoiding scientific egoism, namely not respecting other points of view outside their field of science, (Widyawati, 2013: 94). The ability to think and actualize science is certainly inseparable from the local wisdom of the community. Therefore, the lectures carried out in addition to achieving an understanding of the material are also directed at motivating students to continue to maintain and preserve the local wisdom of the Indonesian people. Students' understanding of the lecture material is also influenced by the learning resources used. Local wisdom is based on philosophy, values, ethics, and behavior that are traditionally institutionalized to manage natural and human resources, formulated as a formulation of a community's worldview regarding natural and social phenomena that are traditional or stable in a region. (Pingge, 2017). Thus, the role of the philosophy of science in the development of science distinguishes science from 2 (two) points of view, namely the positivistic view that gives birth to empirical science and the normative view that gives birth to normative science or legal dogmatics, (Tutik, 2014: 253). This is where the role of local wisdom is in giving color to empirical sciences and normative sciences.

In the philosophy of science course which is rich in theories and concepts, it must be supported by textbooks that can simplify these concepts and theories so that they are easy to understand. Peter Caws (Widyawati, 2013; Milasari et al., 2021: 218), gives the meaning of philosophy of science as part of philosophy that has the activity of studying science in the context of the whole human experience. The philosophy of science is an integrated part of the history of the development of science, and the main cause is due to the most important principles in the development of science, namely ontology, epistemology, and axiology. Situmerang (2021: 78-81) emphasizes that humans always try to develop knowledge which includes what knowledge is (ontology) and how to obtain knowledge to encourage them to become unique creatures on this earth which is

also part of the study of the philosophy of knowledge or epistemology, what knowledge is used for (axiology).

It is further emphasized that philosophy does two things: on the one hand, it builds theory- theories about humans and the universe and presents them as foundations for beliefs and actions; on the other hand, philosophy critically examines everything that can be presented as a foundation for beliefs and actions (Gie, 2007:59; Kirom, 2021:100). In this case, it can be concluded that the philosophy of science is related to the development of thought patterns and humans themselves, both about other humans, the universe, and about the foundations of beliefs and actions that are studied in depth and critically from all things. Peursen (1985; Kirom, 2021), stated that science can be seen as a system that is interwoven and consistent with the principles (consistent) of expressions whose true or false nature can be determined. Furthermore, awareness of the existence of the expected relationship can foster an affective aspect of the knowledge learned (Kompas, September 20, 2007; Widyawati, 2013:87).

Knowledge comes from curiosity, and it does not just come by itself. So, in the process of gaining knowledge, there will be a learning process that involves all the senses of the body simultaneously, integrated, and comprehensively. So, the result of the process is not only new knowledge or understanding, but there will be an upgrade of skills and competencies possessed by each human being in the progress of improving self-image completely and comprehensively. So, this emphasis justifies that not only is there a process of transfer of knowledge, but there is also a transfer of value and transfer of competence in each person. This needs to be done considering that the Philosophy of Science course has a goal not only limited to the cognitive realm but more to the affective and psychomotor realms. In essence, learning is a change in someone who initially did not know to know, and change occurs because of the effort from within each individual. Gagne (1977; Komalasari, 2010:2) defines learning as an effort in the process of changing a person's behavior which includes, changes in tendencies (such as interests, attitudes, or values), and changes in abilities, namely increasing the ability to perform various types of performance. Learning is also an activity where someone makes or produces a change in behavior that someone makes or produces a change in behavior that exists in themselves in knowledge, attitudes, and skills (Komalasari, 2010:2). Learning is a process of gaining knowledge, comprehension, or mastery through experience and study (Hergenhahn, & Matthew, 2008: 2). In conclusion, learning does not only include changes that

include the cognitive domain (knowledge) but also combines the attitudes (affective) and skills (psychomotor) of an individual, in this case the learner. Learning must also pay attention to several principles, namely: a) the principle of readiness, b) the principle of association, c) the principle of practice, and d) the principle of effect/result.

Therefore, in the learning process in the classroom, an educator must certainly prepare the learning process well. One of the factors that influences the learning process in the classroom is related to learning resources, namely teaching materials. Akbar (2013; Dianti, 2021) states that textbooks are textbooks used as references for certain courses. Textbooks are one of the materials that can be used in the learning process which has an important meaning in teaching and learning activities in the classroom. Teaching materials that are created and developed need to be developed based on experience or contextually. So, learning that takes place in the classroom can create a safe, enjoyable, and meaningful learning atmosphere for students/learners who take part in the learning process. Learning as a form of educational practice is a dynamic process consisting of several main components, namely educators, learners (students), and learning materials to foster students' awareness of national defense, learning activities carried out are directed at efforts to motivate students to have motivation and enthusiasm in studying various national problems about the national material being studied (Nurmalisa, 2020:35).

This is by the research of Su'udiah, et al. (2016) whose results show that textbooks developed with a contextual basis are proven to be valid, interesting, practical, and effective to be used as learning resources. This is reinforced by the development of textbooks by the opinion of Mulyasa (2014; Wulanzani, 2016: 1830-1835; Tinja, 2017: 1258) who stated that books that are developed must be able to support the learning process and display integrity of the competencies that will be mastered by students or learners in learning activities so that students/learners can master competency in its entirety. Based on the description above, researchers are motivated to discuss the development of valid, practical, and effective local wisdom-based philosophy of science textbooks for use in the learning process. The development of local wisdom-based philosophy of science textbooks, which are taken from the local wisdom of the Palembang and Lampung regions with Piil Pesengiri.



## METHODS

This research is a type of research and development that refers to the R & D Cycle Borg and Gall (Borg and Gall, 2003; Sukmadinata, 2007; El Faisal, 2016; Nurdiansyah, 2018) and is aligned with the research objectives that have been set. Borg and Gall (1983, Zaida, 2015:150) suggest the main steps of Research and Development as follows: (1) Research and information collecting, (2) Planning, (3) Develop preliminary form of product, (4) Preliminary *field testing*, (5) *Main product revision*, (6) *Main field testing*, (7) *Operational product revision*, (8) *Operationalfield testing*, (9) *Final product revision*, and (10) *Dissemination and implementation*. The research and development model from Borg & Gall (1983: 775; Lestariningsih, et al., 2017:89), namely: (1) preliminary study, (2) planning, (3) product design, (4) initial trial, (5) revision of initial trial results, (6) field trial, (7) revision of field trial results, (8) operational field trial, (9) refinement of the final product, and (10) dissemination and implementation.

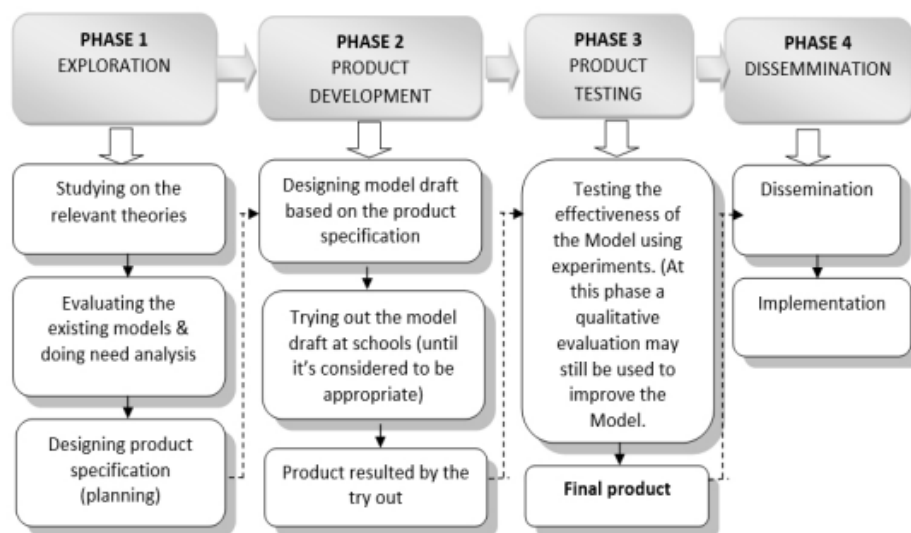


Figure 1. Research and Development –adapted from Borg and Gall (1983)

Some views on development research are efforts to develop and validate products used in learning, Purnama (2013). In addition, to achieve research objectives, the research team requires maximum data and information according to research needs. This is very possible to achieve if you follow the data collection steps that are by the problems faced, so that the data collection techniques used can solve the problems appropriately, Hanafi (2017). Documentation is used to obtain data on basic competencies, indicators, and philosophy of science materials. This technique is carried out during the preliminary study by analyzing the syllabus of the Philosophy of Science course, questionnaires are

used to obtain data from validators and respondents regarding the validity and impact of implementing local wisdom-based philosophy of science textbooks. Questionnaires are used at the product development and trial stages. The questionnaire instrument is in the form of a list of questions/statements by putting a checkmark on the alternative answers that are considered correct, then, observation or observation is "the activity of recording phenomena that is carried out systematically". Observations were conducted to obtain activity data during the learning process using a local wisdom-based philosophy of science textbook. The observation instrument was in the form of a checklist, meaning that the researcher gave a checkmark on the activity indicators that appeared, and the test was conducted at the textbook trial stage to respondents to determine student mastery after following the learning process. After the data was collected, it would be analyzed using quantitative descriptive data analysis techniques. Descriptive analysis is used to analyze data obtained through preliminary studies, product design, product development, and product trials with a percentage interpreted according to predetermined criteria, (Sugiono: 2012). Thus, the results of the study will be described descriptively, not only based on empirical data alone.

## **RESULTS AND DISCUSSION**

This research and development refers to the Borg and Gall Cycle because it aims to produce products and test their effectiveness. The research process can be described into three stages, namely needs analysis, product design, and product development.

### **Needs Analysis**

Textbooks are one type of teaching material that can be used as a guide for students and lecturers in carrying out lecture activities. Textbooks have different characteristics from reference books in general. The preparation of textbooks is adjusted to the curriculum, written and designed based on the needs of students, using communicative language, referring to the competencies that must be achieved, arranging for the instructional process, and having a feedback mechanism from students. In general, it can be said that textbooks can develop the potential of students to become independent learners, (Irawati & Saifuddin, 2018: 98).

The importance of having a textbook is also done by researchers through a needs analysis carried out by researchers at the preliminary stage through the distribution of online questionnaires and discussions with the team of lecturers teaching the philosophy of science course as well as the team of lecturers and students who are members of this research activity. Based on the results of the distribution of the questionnaire, the responses obtained with an average value of ten question items were 88.05% with the conclusion that the available philosophy of science textbooks are not adequate to be used as learning resources, philosophy of science books should be adjusted to the environment where students learn and have their uniqueness that makes students feel more interested in learning, one of which is by adding local wisdom values. In addition, students want the textbook to be packaged attractively and add elements of images to make it more enjoyable to read.

Based on the results of discussions with the team of lecturers teaching the philosophy of science course as well as the team of lecturers and students involved in this research activity, an agreement was reached on the material to be included in the local wisdom-based philosophy of science textbook by paying attention to the semester learning plan (RPS).

### **Product Designs**

In the product design process, in addition to considering the results of the preliminary study and referring to the results of the needs analysis, the research team also discussed analyzing the material contained in the learning implementation plan (RPS) to be used as a basis for developing material in sub-chapters of the local wisdom-based philosophy of science textbook in line with the opinion of Putra and Syarifuddin, (2019: 42) that "The results of the needs analysis are used as a basis for formulating recommendations for developing guided discovery-based teaching materials. These recommendations at least cover aspects of the material, content aspects, appearance aspects, and language aspects". Thus, through the analysis of material aspects, the philosophy of science textbook describes the material in chapters. These materials are Chapter 1 History and Development of Science, chapter 2 development of Philosophy of Science in Modern and Contemporary Times, chapter 3 basic concepts of Science, chapter 4 nature of Science, chapter 5 scientific reasoning, chapter 6 syllogism, chapter 7 scientific work and Chapter 8 local wisdom, plus a glossary and

bibliography. In addition, examples of relevant local wisdom values will also be included in the appropriate chapters.

### Product Development

After the book was completed in eight chapters, the research team compiled an instrument for the study. Instruments for language validation and material validation. For language validation, the team asked Dr. Zahra Alwi as a validator and obtained a score of 77.5% with the note that overall this textbook used good and correct Indonesian. However, several corrections need to be revised, such as 1) the use of separating punctuation to state up to (-); 2) writing italics for foreign terms contained in Indonesian text; 3) writing capital letters, such as names of religions, names of countries; 4) writing words that have excess/lack of letters; 5) excessive words such as many countries; 6) several sentences that are unclear in meaning. Thus, the local wisdom-based philosophy of science textbook (prototype) must be revised before being tested on students. After being revised, the validation results showed a score of 82.5% with a good meaning. Thus, the instrument is suitable for use in product trials. Example of a language validation instrument.

Table 1. Language Validation Instrument

No	Rated Aspect	Assessment			
		SB	B	TB	STB
1.	Correctness of sentence structure				
2.	Effectiveness of sentences				
3.	Standardization of terms and sentences				
4.	Ease of understanding messages or information				
5.	Ability to motivate students/learners				
6.	Suitability of language to the intellectual development of students/learners				
7.	Suitability of language to the level of emotional development of students/learners				
8.	Language suitability with local wisdom of the South Sumatra and Lampung communities				
9.	Use of punctuation marks				
10.	Use of capital letters				

**Source:** Researcher's Process (2021)

Furthermore, to validate the material of the local wisdom-based philosophy of science textbook, the team asked Dra. Sri Artati Waluyati, M.Si. as a validator, the results obtained were 78.1% with the note that the local wisdom-based philosophy of science textbook must contain local wisdom values in each chapter and contain local wisdom values from South Sumatra and Lampung, not just in one specific chapter. Thus, the local wisdom-based philosophy of science textbook (prototype) must be revised before being tested on students. After being revised, the validation results showed a value of 84.4% with a good meaning. Thus, the instrument is suitable for use in product trials. Example of a material validation instrument.

Table 2. Material Validation Instrument

No	Rated Aspect	Assessment			
		SB	B	TB	STB
1.	The material presented is the learning outcomes of the course.				
2.	The material is presented systematically.				
3.	The concepts in the material are by and integrate the local wisdom values of South Sumatra and Lampung.				
4.	The examples are related to the material and values of the local wisdom of South Sumatra and Lampung.				
5.	The material presented can be understood well by students.				
6.	The material presented can facilitate students to be actively involved in the learning process.				
7.	The issues raised in the learning material integrate the local wisdom values of South Sumatra and Lampung.				
8.	Examples of cases/problems and local wisdom values that are close to students' daily lives				

*Source:* Researcher's Process (2021)

### Product Trial

After the product is declared valid or worthy of being tested, the researcher conducts a product trial with several stages, namely one to one, the results of the response are 95% with a very good category and a student activity level of 78%, with several comments from students, namely related to the philosophy of science textbook that has been compiled, namely this philosophy of law textbook

is very useful and presented very systematically related to the material in it, and is very complete and easy to understand, then according to students, the arrangement and explanation in the book are very good and complete, only the suggestion is that in the table of contents, the sub-material sequence number should be given to make it easier for readers to find the chapter they want to read, and also in the image table, the image must be colored to attract the reader's attention so that it looks clearer. Also in the glossary, if explaining a term, after the colon it must begin with a capital letter if it is in the form of a sentence and the Philosophy of Science book is very good, both in terms of material and others. After being revised, the researcher conducted a small group trial stage.

Next, the small group stage obtained a response result of 91.2% with a very good category and a student activity level of 76% with comments that the substance of the book was well contained and summarized. However, for more pictures, so that the book does not look like just writing, the pictures in this book would be better if there were more with elements of local wisdom which of course are placed in the material section that is relevant to the picture, this book is following the needs of readers or students in understanding or studying material about the philosophy of science. Where this book is easy to understand because it has been written systematically or in stages, and the examples in this book are per the material which makes it easier for readers to understand the contents of the material, comments, and input, earlier in the book I read there were still some words that were misspelled, besides that even though there are already some pictures in the book, it is better to add more to make it more interesting, the material is all good, maybe for the illustrations it can be added a little, so it is not full material, in each chapter, it might be better to give 1-2 pictures to attract the attention of book readers. After being revised, the researcher conducted a trial at the field evaluation stage.

Finally, at the field evaluation stage, a response of 90% was obtained with a very good category and an activity level of 77.2% with the conclusion that this book is practical to use. The pretest results obtained an average value of 66.3 and the posttest obtained an average value of 79.6 with an increase of 13.3 (0.13%) with an N gain of 0.4 with a moderate category indicating that this textbook has a potential effect as a learning resource based on local wisdom in philosophy of science lectures. Thus, the data analysis is carried out based on the expert validation test instrument and this field test aims to assess whether the resulting

product is appropriate or not as one of the products that can be used in learning, (Hidayat et al, 2017: 90).

## CONCLUSION

The development of a philosophy of science textbook based on local wisdom is valid for use because it has been validated by language experts and material experts. It is practical to use based on the results of one-to-one, small group, and field evaluation trials with the results of responses obtained in all stages of the trial. This textbook also has a potential effect to be used as a learning resource based on local wisdom in the philosophy of science lectures based on the results of the pre-post test with an N-gain value of 0.4 in the moderate category.

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