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by Santi Oktarina

Submission date: 30-Aug-2024 09:21PM (UTC+0700)

Submission ID: 2441262636

File name: 10._sinta_2_firda,_santi,_eko.pdf (365.39K)

Word count: 3851

Character count: 22809

The Analysis of ¹ Test Instrument Needs for Indonesian Language Lesson

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ARTICLE INFO

Keywords:

High order thinking;
The Learners' needs;
Test Instrument.

Article history:

Received 2021-05-20
Revised 2021-05-31
Accepted 2021-06-01

ABSTRACT

¹ This research describes the learners' needs toward HOTS test instrument development for the seventh-grade learners of a Public Junior High School Palembang. Test instrument has important roles in finding out the learners' skills in understanding the materials. The stage of this research is part of research and development by Gall & Borg. It is a stage of ¹ collecting data or information to determine the needs of a ¹ developed product. The findings showed the students' needs ¹ for the HOTS-based developed instrument from the discussion of the questionnaire and interview. On the other hand, the teacher realized that HOTS-based questions and learning for students had not answered their needs. Therefore, the teacher had to revise. It could be done by adjusting the materials needed by learners with those considered relevant to HOTS.

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1. INTRODUCTION

This research is a part of the evaluation promoted by educators to determine their learners' learning outcomes. One of the most applied cognitive assessments is a test. This instrument has an important role in determining the learners' skills and understanding of a certain material. A test is a formal systematical procedure to obtain learning outcome information of learners (Misri & Kamelia, 2018).

An evaluative instrument should measure learners' lower and higher cognitive skills. At present, learners should be capable of processing information and making decisions. Therefore, the proportions of each cognitive skill on each test item should receive attention because it influences learners' learning patterns. Diella & Ardiansyah (2020) found many test instruments that could not meet the excellent test requirement. One of the causal causes of low educator's skills is - making instrument test. Thus, it makes the instrument inaccurately measures learners' cognitions (Hadi et al., 2020). Therefore, there is a need for a test instrument from test development.

The educational assessment standard mentions that applicable assessment instruments should meet some requirements. They are substance, construction, language, and empirical validity evidence (Khamim, 2019). An excellent instrument must be valid, reliable, and free from biases (Diella & Ardiansyah, 2020). Hardi & Rizal (2020) mention that many textbooks present materials that make learners active. The materials also have a systematic conceptual presentation, although they do not have adequate higher-order thinking skill exercises for learners. Educators can train their learners to think with higher-order thinking skills by providing analytical, evaluative, and creative questions.

Many studies developed test instruments or analyzed the test instruments. Imania & Bariah (2019) also analyzed the learners' needs toward the test instruments. The results showed that learners needed an online-instrument test. However, the authors did not describe the required components in the online test instruments. Nofiana et al. (2016) (M1) developed a test instrument for Biology lessons and developed a test instrument by combining Higher-Order Thinking Skills. However, the study did not explain why the learners needed HOTS. Saputra & Bunawan (2017) developed an instrument to measure the science-cognitive skills of learners. In the research, the researcher did not completely mention the needs of the learners. Hartini & Martin (2020) developed a test instrument for a basic physics lesson. The result was a developed product based on higher-order thinking skills. The researcher did not explain the learners' needs for HOTS-based products in the research. The researcher attempted to fill the research gaps in the analysis of learners' need from previous studies. The researcher analyzed the learners' needs toward the HOTS-based Indonesian language test instrument in this research.

The Indonesian language is a textual-based lesson orientation, as stated in the 2013 curriculum (Marlina & Atmazaki, 2019). Indonesian language lessons at Junior High School, especially the seventh graders, consist of two types of texts, literary text and non-literary text. 2013 curriculum instructs three textual learning stages. They are modeling, cooperating, or developing the text and constructing and developing the text autonomously (Marlina & Atmazaki, 2019). They explain that the final textual learning objective is to make learners understand and use the texts based on learned social purposes. Therefore, the Indonesian language lesson as a science puller in the 2013 curriculum provides opportunities to develop national belief in the Indonesian language's national identity language. On the other hand, Higher-Order Thinking Skills, as instructed by the Ministry of Education and Culture of the Republic of Indonesia, improve learners' and graduates' qualities (Wardani et al., 2020). The improvements are observable from thinking skills. They are critical thinking skills to accept various information and creative thinking skill to solve problems with the background knowledge in complex situations (Puspitasari & Nugroho, 2020). This matter applies to developing a test instrument for learners.

HOTS-based tests should include high-cognitive skills, complex problem solving, and various cognitive actions (Puspitasari & Nugroho, 2020). The same matter also applies to seventh graders of Public JHS Palembang. The researcher answered the learners' needs toward the HOTS test instrument. This research analyzed the learners' needs toward HOTS-based Indonesian language test instruments. The novelty of this research dealt with detailed explanations about the learners' needs. The researcher expected the results to contribute and provide theoretical and practical benefits. Theoretically, this research could be relevant review material for future researchers to develop similar research or literature reviews. Practically, the researcher expected the results provided benefits for learners, educators, and schools.

The benefits for the learners are to improve their thinking skills and prepare their readiness to work on the computer-based national examination. The researcher expected the results could be alternatives for educators to facilitate the assessment process and add educators' knowledge about technology uses as evaluative media. For schools, the results could be references to improve the teaching-learning process.

2. METHODS

¹ This research describes the learners' and educators' needs toward the HOTS-test instrument for seventh graders of Public JHS 4 Palembang. Thus, this research was the preliminary research of a Research & Development. The researcher modified the R&D from Gall, Gall & Borg (2013) and Djiwandono (2011). The researcher used a qualitative approach to collect the empirical materials from noticing the learners' and educators' needs (Devetak et al., 2010).

In Gall, Gall & Borg R&D model, the researcher collected the data and information to find the needs toward the developed products. The researchers considered the learners' and educators' needs toward the HOTS-test instrument with valuable character contents. In this research, the school's seventh-graders were 320 learners from 10 classes. However, the researcher only took 10% of the population, 32 learners.

The researchers used questionnaires and interviews as data collection instruments. The questionnaire was useful to find the learners' needs toward HOTS-based questions. Then, the interview was useful for this qualitative research. The researchers used it to clarify the questionnaire data analysis results (Rosaliza, 2015). The results of the questionnaire were (1) checked and clarified, (2) analyzed based on the applied aspects, (3) described as preliminary research, and (4) concluded. The interview was very useful to analyze data, describe, and conclude data objectively. Then, the conclusions were useful to complete the test data results.

⁵ 3. FINDINGS AND DISCUSSION

The Analysis of Learners' Needs

The research scope dealt with Indonesian language lesson material for seventh graders in the second semester. The contents of the materials were correlated with the basic and standard competencies. The researchers also considered the curriculum for the Indonesian language of seventh graders of JHS and applied objectives or indicators formulated by educators. The scope of the material about a text in the second semester made educators analyze the learners' needs. For example, the difficult sub-materials for learners included descriptive text, fantasy story, procedure text, observation result report, fiction and non-fiction book, personal and formal letters, people's poetry, fable, and urban story.

The researcher analyzed the needs by distributing the questionnaire and conducting an interview. The learners admitted that they needed the mentioned materials. The evidence is observable from the percentage. A percentage of 68.75% of learners required the materials. Here are the table presenting the learners' need for the materials.

Table 1 The Percentage of Learners' Needs toward the Materials

Materials	Highly Needed
Descriptive text	37.5%
Fantasy story text	81.25%
Procedure text	53.13%
Observational report	84.4%
Fiction and non-fiction books	87.5%
Personal and formal letters	37.5%
People's poetry	37.5%
Fable or urban tale	81.5%
Average	68.75%

From the questionnaire, 22 learners highly need HOTS question items. They realized that HOTS trained them to think creatively and logically. Puspitasari & Nugroho (2020), Rozi et al. (2020), and Singh et al. (2020) found that learners needed high-order thinking skills to solve daily life problems.

For example, they could use the skills to make decisions and think critically. Thus, they need to think logically and reflectively and have relevant background knowledge about the encountered problems. HOTS allow learners to think critically and creatively. These thinking ways improve learners' problem-solving skills. This would be different if learners only developed high-order thinking skills on certain cognitive levels.

Misrom et al. (2020) and Suherman et al. (2020) explain that *Higher Order Thinking Skill (HOTS)* has four triggering factors. The first factor is a learning situation that requires specific learning energies from other learning situations. Secondly, intelligence is perceived as a knowledge union. It influences the learning environment, strategy, and learning awareness. Third, understanding shifts from unidimensional, linear, hierarchal, or spiral into multi-dimensional and interactive positions. Fourth, a more specific higher-order thinking skill may take the form of reasoning, analytical skill, problem-solving skill, and creative and critical thinking.

Learners admitted they needed relevant text to improve their HOTS, especially critical thinking and problem-solving skills. Heretofore, learners found the applied texts were irrelevant. They also thought the teachers only copied from the textbooks (interview result). The researcher also found the same result in the questionnaire. It revealed all learners needed relevant text types to solve problems.

Agastya et al. (2018), Anggraini & Qur'aini (2020), Basid et al. (2018), Imania & Bariah (2019), Misri & Kamelia (2018), dan Sakti (2019) also found six aspects to measure learners' problem-solving skills. The first aspect is to determine the problem by identifying the problem, explaining the problem, determining the data needs, and determining the important information. Secondly, the aspect to explore problems determines the object and checks the assumption to formulate hypotheses of the problem. The third aspect is solving problems, selecting principal theories, determining information, and finding solutions. Fourth, learners implement the designed plan. Fifth, the learners check and evaluate the applied solutions for solving the problems. Sixth, the learners evaluate by checking the solutions and assumptions; and predicting the obtained results while implementing the solution.

In this research, learners also needed new challenges to training their HOTS. The questionnaire results showed 100% of learners needed new challenges. However, they would require adequate time with the new challenges they had. The result was in line with interview results with the learners on 08/17/2020. On the other hand, learners' challenges were in line with their needs toward the materials about texts. In this research, the researcher found four-highly needed materials by the learners. They were fantasy stories, observational reports, fiction and non-fiction books, and fable of urban stories. The materials were new materials that could challenge learners. Thus, if the researcher used them as question item materials, the learners might find new challenges within the questions. The challenging matters did not deal with the text lengths but the content of the passages. They argued that these texts could train them to think better (Interview, 09/04/2020).

The Analysis of Teachers' Needs

The objective analysis was useful to find out the actual condition in the field about the promoted evaluations, facilities, supportive infrastructures, and learners' skills to use technology as evaluative media. The researcher analyzed the condition by interviewing the educators.

Educators, the Indonesian language, admitted that they needed evaluation to find out the learning activity effectiveness, learning outcomes for better improvement, remediation, or continuity of the applied method, providing information about learners' development to reach the curriculum, reporting the learning outcomes for parents, and comparing the pre-and post-learning outcomes. Arianto (2017) also found that evaluation could be an important component in education and had various objectives.

Fachri (2018) dan Nofiana et al. (2016) explain that the function of evaluation is to select, diagnose, place, and measure the successes. Evaluation is selective. It means evaluation functions as a guideline to select and place the learners based on their skills. Evaluation has a diagnostic function. It means evaluation allows educators to find out the weaknesses of learners and the causes. Evaluation is also useful to assign learners to certain placements. Evaluation is useful to assess success. It means evaluation for determining a program's success.

In this case, teachers need the information of evaluation results to determine the following learning. This research found the teacher found how to improve the learners' HOTS. If learners had difficulties following the lesson with HOTS-based questions, then the teachers could improve each learning activity. In a different case, if the learners could not work on the HOTS questions excellently, the question design probably did not meet the learners' expectations, for example, monotonous questions. Learners probably did not expect these questions. Thus, learners did not feel any challenges while working on the questions. The results were in line with interview results: 09/04/2020, 20:36; 09/10/2020, 20:01; and 09/10/2020, 19:52. The findings from the interview asserted the teachers' need to find out the HOTS level of the learners. However, the learners admitted that the questions were monotonous; had longer length and inadequate completion time.

From the findings, teachers had to improve the given HOTS-question design. The teachers had to consider the learners' HOTS needs. Amiro & Daryanto (2016:4) explain two functions of learning evaluation. First, the formative function improves specific learning parts or curriculum after teachers find the evaluation results. Second, the summative function to conclude the superiority comprehensively after teachers get the evaluation results. However, this function only occurs if teachers have completely developed the curriculum.

On the other hand, HOTS-based learning development is developed by the Ministry of Education and Culture via the Directorate General of Teachers and Education Personnel (Dirjen GTK) (Airyana et al., 2018). This learning development aims to improve the learning quality and the graduate quality. This program development followed the policy of the Ministry of Education and Culture. The researcher integrated character education empowerment and HOTS-learning orientation. The government expects learners to reach various implementation competence with higher-order thinking skills. The competencies are critical thinking, creative and innovative thinking, communication skill, collaboration, and self-confidence.

4. CONCLUSION

The researcher found that learners needed test instruments developed with HOTS from the questionnaire and interview. The researcher found 22 learners that needed HOTS questions. They realized learning and HOTS-based questions could improve their critical thinking and problem-solving skills. They also realized that they could obtain the materials in the Indonesian language, especially new materials and new challenges. On the other hand, the teachers realized that learners could not answer HOTS learning and questions. Therefore, teachers must improve the use of HOTS by adjusting the learning materials needed for the learners. For example, teachers connected relevant materials with HOTS. The results were observable from the high-frequency needs of four materials. They were fantasy stories, observation reports, fiction and non-fiction books, and fable of urban stories. Teachers could start the learning and create HOTS-based questions. They must remember that not all materials could use HOTS-based questions.

The research implications used information from the analysis needed to develop an accurate test instrument. The researchers recommend future researchers use these findings because they probably do not have adequate time to collect the preliminary research data. The limitation of this research was the data collection technique. The researchers only used questionnaires and interviews to determine the teachers' and learners' needs. Future researchers should use observation when the learners use the existing instrument first.

REFERENCES

- Afriani, Erika. (2018). *Pengembangan Tes Higher Ordes Thinking Skills (HOTS) Materi Gerak Lurus Berubah Beraturan untuk SMA*. Prossiding Pendidikan Vol.1 . Pontianak: Program Studi Pendidikan Fisika FKIP Untan.
- Agastya, N. L. P. M., Hati, G., & Machdum, S. V. (2018). Elemen-elemen pendukung proses assesment pada program pengembangan masyarakat untuk lingkungna kondusif bagi anak. *Sosio Konsepsia*, 8(01), 97–112. <https://doi.org/https://doi.org/10.33007/ska.v8i1.1458>

- Anggraini, P., & Qur'aini, H. B. (2020). Pengembangan pembelajaran kontekstual guru SMP Muhammadiyah 2 Kota Batu berbasis ekologi sosial. *Jurnal Pengabdian Pada Masyarakat*, 5(3), 757–767. <https://doi.org/10.30653/002.202053.583>
- Basid, A., Jannah, N. I., & Hamzah, M.-Z. (2018). Pola kehidupan masyarakat Pontianak dalam Novel Kau, Aku, dan Sepucuk Angpau Merah karya Tere Liye berdasarkan perspektif strukturalisme genetik. *LINGUA*, 15(2).
- Devetak, I., Glažar, S. A., & Vogrinc, J. (2010). The role of qualitative research in science education. *Eurasia Journal of Mathematics, Science and Technology Education*, 6(1), 77–84. <https://doi.org/10.12973/ejmste/75229>
- Diella, D., & Ardiansyah, R. (2020). Four-tier diagnostic test instrument for ecosystem concept: validity and reliability. *Biodik*, 6(1), 1–11. <https://doi.org/10.22437/bio.v6i1.8093>
- Fachri, M. (2018). Urgensi Evaluasi Pembelajaran Dalam Pendidikan Urgensi evaluasi pembelajaran alam pendidikan. *Edureligia; Jurnal Pendidikan Agama Islam*, 2(1), 64–68. <https://doi.org/10.33650/edureligia.v2i1.758>
- Hadi, R., Sastrawijaya, Y., & Oktaviani, V. (2020). Pengaruh pelatihan penyusunan soal menggunakan moodle terhadap kinerja guru dalam menyusun soal test di SMAN 100 Jakarta. *Jurnal Pinter*, 4(2). <https://doi.org/10.21009/pinter.4.2.1>
- Hardi, V. A., & Rizal, M. S. (2020). Analisis buku teks pelajaran bahasa Inggris SD berdasarkan karakteristik pembelajar muda pada kelas rendah. *Jurnal Basicedu*, 3(2), 524–532. <https://doi.org/10.31004/basicedu.v4i4.605>
- Hartini, T. I., & Martin. (2020). Pengembangan instrumen soal HOTS (higher order thinking skill) pada mata kuliah fisika dasar 1. *Jurnal Pendidikan Fisika*, 8(1), 18–21. <https://doi.org/10.24252/jpf.v8i1.11687>
- Imania, K. A., & Bariah, S. K. (2019). Rancangan pengembangan instrumen penilaian pembelajaran berbasis daring. *Jurnal Petik*, 5(1), 31–47. <https://doi.org/10.31980/jpetik.v5i1.445>
- Khamim, K. (2019). Analisis penilaian pendidikan pada pendidikan dasar dan menengah di Indonesia. *Misykat*, 8(5), 55. <https://doi.org/10.33511/misykat.v4n1.125-144>
- Marlina, T., & Atmazaki, A. (2019). Implementasi kurikulum 2013 dalam mata pelajaran bahasa Indonesia di SMA Negeri 7 Padang. *Jurnal Pendidikan Bahasa Dan Sastra Indonesia*, 9(1), 12–19. <https://doi.org/10.24036/108281-019883>
- Misri, M. A., & Kamelia, N. R. (2018). Pengembangan instrumen test materi matriks berdasarkan konsep HOT. *Beta: Jurnal Tadris Matematika*, 11(2), 1–12. <https://doi.org/10.20414/betajtm.v9i2.xxx>
- Misrom, N. S., Abdurrahman, M. S., Abdullah, A. H., Osman, S., Hamzah, M. H., & Fauzan, A. (2020). Enhancing students' higher-order thinking skills (HOTS) through an inductive reasoning strategy using GeoGebra. *International Journal of Emerging Technologies in Learning*, 15(3), 156–179. <https://doi.org/10.3991/ijet.v15i03.9839>
- Nofiana, M., Sajidan, S., & Puguh, P. (2016). Pengembangan instrumen evaluasi higher order thinking skills pada materi Kingdom Plantae. *J. Pedagogi Hayati*, 01(01), 46–53. <https://doi.org/10.31629/ph.v1i1.37>
- Puspitasari, Y. D., & Nugroho, P. A. (2020). Peningkatan higher order thinking skill dan kemampuan kognitif pada mahasiswa melalui pendekatan science, environment, technology and society berbantuan modul pembelajaran. *Jurnal IPA & Pembelajaran IPA*, 4(1), 11–28. <https://doi.org/10.24815/jipi.v4i1.14608>
- Rosaliza, M. (2015). Wawancara, Sebuah Interaksi Komunikasi Dalam Penelitian Kualitatif. *Jurnal Ilmu Budaya*, 11(2), 71–79. <https://doi.org/10.31849/jib.v11i2.1099>
- Rozi, A., Khoiri, A., Dewi Mutia Farida, R., Sunarsi, D., Jasmani, Paeno, Munawaroh, & Iswadi, U. (2020). The fullness of higher-order thinking skills (HOTS) in applied science textbooks of vocational schools. *Journal of Physics: Conference Series*. <https://doi.org/10.1088/1742-6596/1764/1/012143>
- Sakti, I. (2019). Implementasi model perangkat pembelajaran berorientasi HOTS (Higher Order Thinking Skill) dan pendidikan karakter melalui PBL (Problem Based Learning) pada mata kuliah

- fisika dasar. *Prosiding Seminar Nasional Fisika, VIII(3)*, SNF2019-PE-389–400. <https://doi.org/10.21009/03.snf2019.01.pe.50>
- Saputra, F. B. An., & Bunawan, W. (2017). Pengembangan instrumen test untuk mengukur pengetahuan keterampilan proses sains siswa di SMA. *Jurnal Inovasi Pembelajaran Fisika, 1(1)*, 7–16. <https://doi.org/https://doi.org/10.24114/inpafi.v8i3.19796>
- Singh, C. K. S., Singh, T. S. M., Ja'afar, H., Tek, O. E., Kaur, H., Mostafa, N. A., & Yunus, M. M. (2020). Teaching strategies to develop higher-order thinking skills in English literature. *International Journal of Innovation, Creativity, and Change, 11(8)*, 211–231.
- Suherman, S., Prananda, M. R., Proboningrum, D. I., Pratama, E. R., Laksono, P., & Amiruddin. (2020). Improving higher-order thinking skills (HOTs) with project-based learning (PjBL) model assisted by Geogebra. *Journal of Physics: Conference Series, 1467(1)*. <https://doi.org/10.1088/1742-6596/1467/1/012027>
- Wardani, N. E., Kurwidaria, F., & Supriyadi, F. X. (2020). Higher Order Thinking Skills in Learning Indonesian Language and Literature at Madiun City Junior High School Higher Order Thinking Skills dalam Pembelajaran Bahasa dan Sastra Indonesia di Sekolah Menengah Pertama Kota Madiun. *Lingua Didaktika, 14(1)*, 29–43. <https://doi.org/10.24036/ld.v14i1.108330>
- Whardani, Dyah Febria, Aminuddin Prahatama Putra. (2017) Pengembangan Instrumen Tes Standar Kognitif pada Mata Pelajaran IPA Kelas 7 SMP di Kabupaten Banjar. *Proceeding Biology Education Conference Vol 13 (1)* 75-82.

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