

## REQUIREMENT ASSESSMENT FOR DIGITAL READING LITERACY MINIMUM COMPETENCY ON ASSESSMENT QUESTIONS

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### Abstract

Today's teachers must prioritize teaching kids to read more effectively using digital technologies. This research aims to examine the significance of creating reading literacy Minimum Competency Assessment (KKM) questions utilizing digital tools. SMP Negeri 41 Palembang and SMA Negeri 8 Inderalaya in Ogan Ilir Regency participated in the study. Interviews and questionnaires are used for data gathering. Students and faculty from two representative schools (n=370) participated in the study. The qualitative descriptive methodology was used for this study. Questions and answers were reviewed to conclude. In short, the results demonstrated that neither students nor teachers fully grasped MCA. To complete them, MCA questions must be created. They need to create reading comprehension MCA questions using digital tools. Recommendations were made to the Education Office based on the study's findings to increase MCA's visibility in the classroom and provide instructors with training on properly constructing MCA-based questions.

**Keywords:** live worksheets, minimum competency assessment, needs analysis, reading literacy

### Abstrak

Guru saat ini harus memprioritaskan mengajar anak-anak untuk membaca lebih efektif memanfaatkan teknologi digital. Tujuan dari penelitian ini adalah untuk mengkaji pentingnya membuat soal-soal Penilaian Kompetensi Minimum (KKM) literasi membaca dengan memanfaatkan perangkat digital. Baik SMP Negeri 41 Palembang maupun SMA Negeri 8 Inderalaya di Kabupaten Ogan Ilir berpartisipasi dalam penelitian ini. Wawancara dan kuesioner digunakan untuk pengumpulan data. Siswa dan fakultas dari dua sekolah perwakilan (n=370) berpartisipasi dalam penelitian ini. Metodologi deskriptif kualitatif digunakan untuk penelitian ini. Pertanyaan dan jawaban ditelaah untuk menarik kesimpulan. Singkatnya, hasil menunjukkan bahwa baik siswa maupun guru tidak memiliki pemahaman yang lengkap tentang MCA. Untuk menyelesaikannya, pertanyaan MCA harus dibuat. Mereka perlu membuat soal MCA pemahaman bacaan menggunakan alat digital. Rekomendasi dibuat untuk Dinas Pendidikan berdasarkan temuan studi untuk meningkatkan visibilitas MCA di kelas dan memberikan pelatihan kepada instruktur tentang cara membuat pertanyaan berbasis MCA dengan benar.

**Kata Kunci:** LKS, penilaian kompetensi minimum, analisis kebutuhan, literasi membaca,

### INTRODUCTION

The MCA implemented since 2021 has been used to improve the quality of learning

(Fauziah, Dewi, & Robandi, 2021; Linanda & Hendriawan, 2022). Through the MCA, teachers can discover the student progress,

development, and success related to higher-order thinking (Hakim, 2021; Ramadhani et al., 2021). In addition, the MCA is used to measure cognitive learning outcomes, including reading and numeracy literacy. Teachers must develop the MCA questions with HOTS character in learning to improve student quality. They provide the students space to develop different types of thinking structures. This results from the MCA questions, which rely on the stimulus in the form of diverse texts (Himawan & Suyata, 2021; Huang, Silitonga, & Wu, 2022; Jansen & Moller, 2022; Kageyama, Zamudio, & Barton, 2022; Rahmadani & Putri, 2021; Walid et al., 2019).

The MCA reading literacy questions measure the students' skills at a high level of thinking, namely being able to process information, evaluate, and make noise (Alzubi & Attiat, 2021; Ningsyih et al., 2022; Rufaidah & Junaidi, 2021; Setyowati, Kristiani, & Murwaningsih, 2022; Zahrudin, Ismail, & Zakiah, 2021). Therefore, the proportion of each level of thinking ability in each question item must be considered. The question items that measure high-level thinking will affect students' learning patterns. As an effort to prepare students to be able to compete globally, in addition to HOTS character questions, teachers also need a medium to prepare MCA questions according to the form of the questions (Antara & Dewantara, 2022; Latifah, Yuberti, & Agestina, 2020; Sa'adah, Rasmiwetti, & Linda, 2019; Setiyoaji et al., 2020). It is used to transfer the questions produced in the community into digital media that is interactive, practical, and comprehensive so that the assessment becomes more optimal. Practical test media do not require a long time in the process but are precise and valid in assessing.

The digital technology was website-based media, namely wizer.me and live worksheets. The media wizer.me and live worksheets were chosen because they did not need to be downloaded but open google,

chrome, or firefox, through their home page at <https://wizer.me.com> and <https://www.liveworksheets.com>. Students and teachers could use them anytime and anywhere. In addition to being easily accessible, the wizer.me and live worksheets had an attractive appearance because they could be directly added with images, audio, links, videos, and student response columns (Kumalasari & Julianto, 2021; Obradovych & Obradovych, 2022; Rahmadani & Putri, 2021; Susiyanto, 2020).

Several studies have examined the needs analysis related to learning (Alsamadani, 2017; Amin & Sundari, 2020; Bedoya, Valencia, & Motoya, 2015; Fauziah, Dewi, & Robandi, 2021; Ramadhani et al., 2021; Rosalina, 2018; Septiana, Petrus, & Inderawati, 2020; Wu & Lou, 2018). From these various studies, it can be concluded that all efforts to plan and develop the learning, including the development of questions, must begin with a needs analysis. The results of the needs analysis reveal the main considerations to be made to meet the needs of students and teachers (Mahbub, 2018; Ratri & Puspitasari, 2019; Onas, Nurhayati, & Mukmin, 2022; Vongvilay, Kartika, & Laila, 2020; Yundayani, Emzir, & Rafli, 2017). Similarly, the needs analysis can also identify the problems occurring to the students and teachers, knowledge or skills, expectations and media that are desired in the learning process. Thus, to develop reading literacy questions, it is necessary to analyze the needs of students and teachers.

The interviews with the teachers teaching in Palembang showed that the MCA questions prepared by the teacher still used low cognitive levels, namely C1, C2, and C3. Meanwhile, the MCA questions should have been at the cognitive level of C4, C5, and C6, or the HOTS character problem. Moreover, the teachers had difficulty preparing the MCA questions at a high cognitive level, namely the level of evaluation. This is because the MCA

socialization was already carried out, but the teachers' understanding of the MCA questions was still poor. This was the main reason the teachers struggled to prepare the MCA questions.

This study aimed to analyze the needs of students and teachers in the development of MCA questions, especially reading literacy, using wizer.me and live worksheets. This is necessary as preliminary information in developing MCA reading literacy questions using the wizer.me and live worksheets. In addition, the results of this analysis are expected to benefit developers/researchers in preparing the MCA questions. Therefore, the researchers limited this study to only a needs analysis stage.

### **METHOD OF RESEARCH**

The study used a qualitative descriptive approach to find out the needs of the students and teachers. The respondents were the students and teachers of SMP Negeri 41 Palembang and SMA Negeri 8 Inderalaya, Ogan Ilir District, consisting of 370 students and 13 teachers. The student respondent data was obtained on June 2, 2022, while the teacher respondent data was obtained on June 4, 2022, and June 15, 2022.

To ensure the data was collected correctly, the researchers used some measures to ensure the accuracy of data as follows:

- (1) Using reliable data resources to ensure the reliability and credibility of the systems and personnel responsible for data and information generation;
- (2) Aligning the key factors and parameters to develop the feasibility of a particular task by devising a set of basic and essential parameters to formulate a plan for data collection;
- (3) Maintaining neutrality in a way that rumors, claims, and exaggerations about specific issues or tasks might invoke a negative bias which only tended to

compromise or alter the neutral perspectives of data collection; and

- (4) Use automated and computerized programs to prevent mistakes and human error in the manual mechanism of data entry and information recording. Data collection through smart and automated systems, such as a google form, made it convenient to focus on other factors and parameters. In contrast, the system recorded real-time and accurate data in perfect tandem.

As for the steps in analyzing the data, they were as follows:

- (1) Defining questions and goals for targeted questions before searching the data for an answer. The types of questions would help determine the type of analysis needed and what data is the most relevant to include;
- (2) Collecting data included interview data of teacher respondents related to the MCA questions and student respondent questionnaire in the form of a Likert-scale with the options of Strongly Agree (SA), Agree (A), Somewhat Disagree (SD) and Disagree;
- (3) Data wrangling dealt with cleaning the data before beginning the analysis portion of this process to make sure that the data was in a usable format. In other words, this involved searching for outliers, dealing with null values, and looking for data that might have been incorrectly input;
- (4) Choosing a method of analysis for the type of analysis needed, such as diagnostic analysis to search for the cause of, and a solution to, an existing problem, the descriptive analysis used to describe the data by summarizing key sections, a predictive analysis combining historical data and statistical modeling to predict how certain metrics would perform in the future. These

types of analysis were utilized to dissect the collected data; and

- (5) Interpreting results were conducted by creating data visualizations to communicate the key metrics and trends.

The data of teacher respondents were collected by interviewing all thirteen teachers using the population sampling method. The interview questions were related to the MCA questions compiled by the teachers, the difficulties faced when preparing the MCA questions, and the causes of difficulties in preparing the MCA questions. **The interview item questions were open questions** comprising 15 questions. The 15 questions included (1) students' understanding of MCA (1 question), (2) obstacles faced by the students when answering MCA reading literacy questions (1 question), (3) teacher's obstacles in preparing MCA reading literacy questions (1 question), (4) application of HOTS in evaluation (1 question), (5) the form of questions using the MCA (1 question), text which was difficult to prepare for the MCA questions (2 questions), (6) teacher's strategies and methods in solving the MCA questions (1 question), and (7) media in applying the MCA questions (7 questions).

The questionnaire was used to collect the data from the students. It was in the form of a Likert scale with the options of Strongly Agree (SA), Agree (A), Somewhat Disagree (SD), and Disagree (D). It consisted of 18 statements covering three aspects: necessity, lack, and desire. The questionnaires for the students were given through a google form.

Before being distributed to the student respondents, the questionnaire items were validated by expert validators, namely MEP and LR. The questionnaire items were then revised based on the suggestions from the validators.

The sampling method used to collect the data of students was population sampling. Therefore, the number of students selected as a sample was 370 students. The student needs questionnaire data were analyzed by (1) checking and clarifying the answer data from the respondents, (2) summing up the answers, (3) converting the results into the percentages, (4) describing the data, and (5) drawing conclusions from the data.

The data were converted into percentages using the following formula as follows.

$$= \frac{\text{the number of respondents choosing the option}}{\text{The total number of respondents}} \times 100\%$$

The teacher needs questionnaire data were analyzed by (1) analyzing the data, (2) describing the data, and (3) drawing general conclusions from the data.

## DISCUSSION / RESEARCH FINDINGS

### Student Needs

The results of the analysis of student needs were described based on several categories, such as the following.

Table 1 Students' Knowledge of MCA

No.	Statement	Percentage
1.	I am aware of the Minimum Competency Assessment (MCA).	85%
2.	In my opinion, the National Assessment is the same as the National Examination.	58%

Regarding the students' knowledge of MCA, there were 85% of students (315 students) agreed that they knew MCA. However, it is necessary to doubt the students' knowledge of the high MCA. Supposedly if students had high knowledge of MCA, the next statement that the National Assessment was the same as the National Examination got a high percentage.

On the other hand, 58% of students stated that the National Assessment was the same as the National Examination. Only 42% of students think the National Assessment was not the same as the National Examination. This indicates that students did not know in depth the Minimum Competency Assessment stated in the first statement.

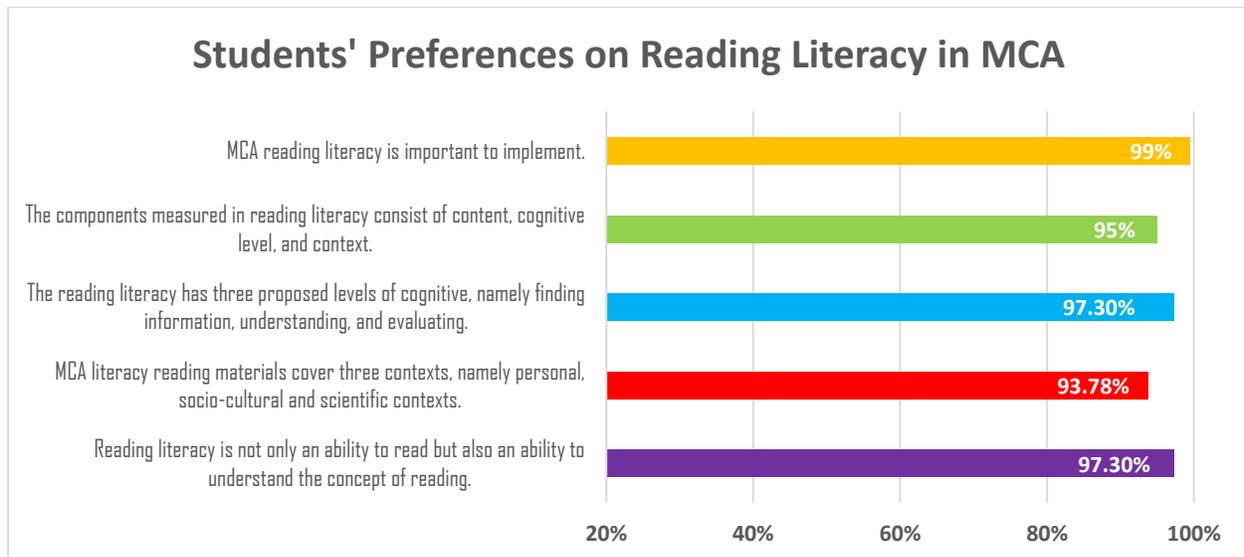


Diagram 1 Students' Preferences on Reading Literacy in MCA

Regarding reading literacy in MCA in Diagram 1, 99% of the students (368) agreed that reading literacy was important to apply and did it in MCA. The students also agreed that the components measured in reading literacy comprised content, cognitive level, and context. This is evidenced by the percentage of affirmative statements of 95% of the students. Furthermore, 97.30% of students (360) agreed that reading literacy had three proposed cognitive levels: finding information, understanding, and evaluating and reflecting. In addition, 93.78% of the students (347) agreed that the MCA literacy

reading materials included three contexts: personal, socio-cultural, and scientific. Regarding reading literacy, which was not only being able to read but also being able to understand the concept of reading, 97.30% of the students (360 students) agreed.

Data on the high percentage of student preferences related to reading literacy in MCA needs to be a concern. However, this data supports that students knew the MCA comprehensively. More precisely, students could show that the components measured in reading literacy were related to text content, cognitive level, and context.

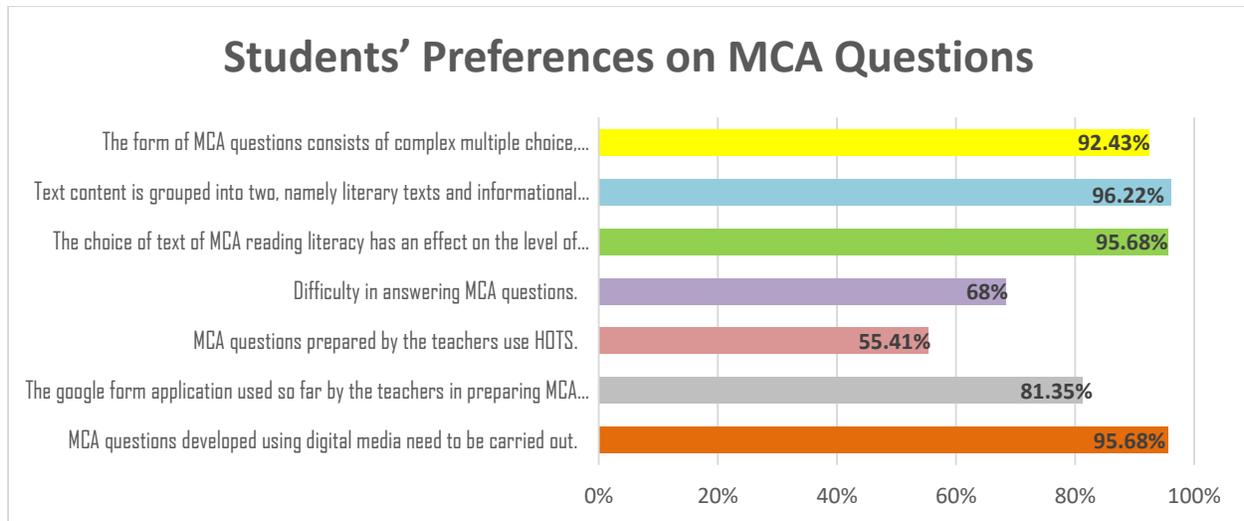
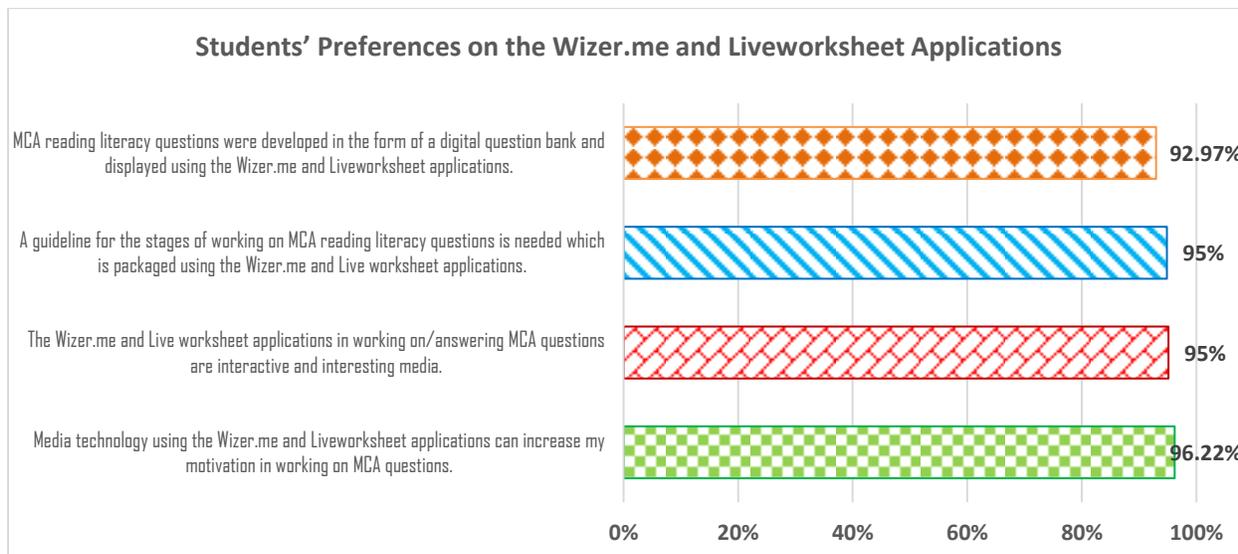


Diagram 2 Students' Preferences on MCA Questions

Regarding the MCA questions in **Diagram 2**, 92.43% of the students (342) agreed that the form of MCA questions could consist of short fills, descriptions, matchmaking, multiple choice, and multiple complex choices. Regarding the content of the questions, 96.22% of the students (356 students) agreed that the text content of the MCA questions was grouped into informational and literary. As for the selection of MCA question texts, 95.68% of the students (354 students) agreed that the selection of AKM question texts for reading literacy was based on their thinking ability. The data relating to students' preferences for MCA questions also shows that students' knowledge of MCA literacy was very high. 68% of the students still had difficulty answering MCA questions. The

applications that the teachers used were also less interesting. This is due to the less interesting use of the application. There 55.41% of the questions the teachers applied used HOTS. Based on the percentage of the students, 81.35% of them agreed that the google form application used so far by the teachers in preparing the MCA questions was not interesting. Consequently, the students agreed that the MCA questions developed using digital media had to be put into effect. Previous research has proven that generation Z needs digital media in various learning and assessment processes (Muliani, Ginting, & Sakdiah, 2022; Pangestuti & Prasmala, 2018; Susiyanto, 2020; Wijaya, Arifin, & Badri, 2021).



**Diagram 3 Students' Preferences on the Wizer.me and Liveworksheet Applications**

Regarding the applications of wizer.me and liveworksheets used in the MCA, 92.97% of the students (356 students) agreed that the reading literacy MCA questions were developed in the form of digital question banks and displayed by using the wizer.me and liveworksheets applications. Judging from the percentage results, 95% of the students (352 students) also needed guidelines for the stages of answering the reading literacy MCA questions packaged using the wizer.me and liveworksheets applications. Students also agreed that the applications of wizer.me and liveworksheet in answering the MCA questions were interactive and interesting media to increase student motivation in answering the MCA questions. This student's opinion is in line with various research results (Ahmad, 2022; Hendrayani et al., 2022; Kaliappen et al., 2021; Kumalasari & Julianto, 2021; Nirmayani, 2022; Rahmadani & Putri, 2021; Simanjuntak et al., 2022; Zaini et al., 2021) proving students' interest in the wizer.me and liveworksheets applications.

### Teacher Needs

The results of the teacher need analysis showed that students still needed to be given a lot of exposure to reading and answering MCA-type questions. The students were not able to answer the MCA-type questions. This is because they were unwilling to read questions or texts that were long and difficult to understand. The teacher stated that developing MCA questions containing various text variations was necessary. This is expected to make students understand the problem.

Regarding the problems faced by the teachers, they did not yet master the forms of reading literacy questions involving HOTS; they had difficulty in preparing MCA questions, and they had difficulty in presenting statements on questions. According to the teachers, there were several types of texts that were the most difficult to prepare for the MCA-type questions, for example, literary texts such as short stories, fables, biographies, poems, folklore, short stories, inspirational stories, and anecdotes, and informational texts such as expositions, observation, response, editorial, scientific journal, response,

observation report, procedure, exposition, debate, and negotiation.

The teachers' learning strategy and teaching methods to fulfill student competencies in solving MCA questions were to provide a first understanding of MCA and then practice the MCA-type questions and apply them to the daily test questions.

The teachers also applied HOTS in evaluating because applying HOTS-based learning evaluations is necessary to hone students' logic, critical thinking, and creativity. Applying HOTS-oriented evaluation is a process of collecting data and information as a consideration in making decisions on learning strategies that use high-level thinking processes to encourage students to seek and explore information independently so that they can be critical and creative to be able to solve problems.

Related to the media used, the teachers found it difficult to develop a learning media that was interesting to the students; as a result, the media used by the students bored them with learning. At first, the preparation of the MCA questions was in the paper. Then it was converted into a digital form often used by teachers using Google Forms. However, the google forms could only include multiple-choice question forms, fill-ins, and blurbs. Furthermore, the google form application did not support complex multiple-choice question forms and matchmaking because there was no such feature available. Consequently, the teachers stated that there was a need for MCA questions to be developed in the form of a digital question bank.

The teacher stated that some of the desired criteria were to make it easier for the students to answer the MCA questions, motivate students, interactive, interesting, and easy-to-understand questions, media in digital form, easy to use, have guidelines for using the media, have features that support

the form of MCA questions such as, multiple choice, complex multiple-choice, matchmaking, short fills, and blurbs. After analyzing the data according to the needs of teachers and students, the development of minimum competency assessment questions for reading literacy using the *wizer.me* and *liveworksheets* applications were easy to use, and some features support the forms of MCA questions such as multiple choice, multiple complex-choice, matchmaking, short fills, and blurbs.

The selection of texts on MCA influences students' thinking levels (Cahyanovianty & Wahidin, 2021; Fasha & Triyastuti, 2022). The needs analysis results in this study showed that the teachers still understood the difficulty in preparing high-level MCA questions in literary and informational texts. This finding strengthens the results of several studies concluding that the cause of teachers' difficulties in preparing MCA questions is the low ability to make these questions (Aisyah et al., 2021; Cahyana, 2020; Megawati, Wardani, & Hartatiana, 2020).

The results of the needs questionnaire showed that the students and teachers needed the use of media in developing MCA questions. Student motivation is also affected by the media used. Based on several studies, it is concluded that the use of *wizer.me* and *liveworksheets* is considered interactive and interesting media, so it is expected to increase motivation in learning (Ahmad, 2022; Amalia & Lestyanto, 2021; Kaliappen et al., 2021).

*Wizer.me* and *liveworksheets* are free and easy to create interactive multimedia worksheets (Kaliappen et al., 2021; Obradovych & Obradovych, 2022). Through *wizer.me*, the teachers could create their interactive student worksheets appropriate to the creativity. Similar to the *liveworksheets*, it offers various diverse and

electronic worksheets such as pdf, word, or jpg (Felitasaria & Rusmini, 2022; Hendrayani et al., 2022). Wizer.me and liveworksheets both have interesting features, namely being able to add photos, videos, audio, and links so that they can make the appearance more attractive (Anggrahini & Rusmini, 2022; Felitasaria & Rusmini, 2022; Hidayah & Asari, 2022; (Zaini et al., 2021).

## CONCLUSION

Analysis of the needs for developing MCA literacy questions using wizer.me and liveworksheets includes MCA knowledge, understanding literacy in MCA, developing MCA questions, and using applications used in MCA. Needs analysis on MCA knowledge shows that the students knew MCA but did not understand the MCA questions. Analysis of teacher needs shows that teachers did not fully understand MCA, especially in developing HOTS-type questions. Lastly, concerning application use, it was concluded that students and teachers need to use digital media, namely by using the wizer.me application and liveworksheets in developing the MCA questions. These digital applications are expected to increase students' motivation in reading various texts, which are a stimulus in answering the MCA reading literacy questions

This study has weaknesses. Of course, statements that explore various needs components through questionnaires have weaknesses. Therefore, the questionnaire data should be explored through in-depth interviews on questionable respondents' statements. Further research is needed to find out students' understanding of MCA literacy reading by asking students to work on HOTS-type questions according to text content, cognitive level, and text context. Based on the research analysis of the need to develop MCA reading literacy

questions using digital applications, socialization related to MCA comprehension and training is needed to train or prepare MCA questions.

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## REFERENCES

- Ahmad, R. (2022). Efektivitas conceptual understanding procedures menggunakan live workhseets terhadap asesmen kompetensi minimum (akm) di sekolah dasar. (*JKPD*) *Jurnal Kajian Pendidikan Dasar*, 7(1), 45–53. <https://doi.org/https://doi.org/10.26618/jkpd.v7i1.6736>
- Aisyah, N., Mania, S., Amin, M., Nur, F., & Angriani, A. D. (2021). Analysis of mathematics problems based on hots and students' problem-solving ability. *Al Asma: Journal of Islamic Education*, 3(2), 223–231.
- Alsamadani, H. A. (2017). Needs analysis in esp context: saudi engineering students as a case study. *Advances in Language and Literary Studies*, 8(6), 58–68. <https://doi.org/http://dx.doi.org/10.7575/aiac.all.v.8n.6p.58>
- Alzubi, E. M., & Attiat, M. M. (2021). Language teacher practices predicting students' reading self-efficacy: Jordanian students' participation in PISA 2018. *Cypriot Journal of Educational Sciences*, 16(6), 3213–3231. <https://doi.org/https://doi.org/10.18844/cjes.v16i6.6542>
- Amalia, A. D., & Lestyanto, L. M. (2021). LKS berbasis saintifik berbantuan live

- worksheets untuk memahami konsep matematis pada aritmetika sosial. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 5(3), 2911–2933. <https://doi.org/https://doi.org/10.31004/cendekia.v5i3.822>
- Amin, F. M., & Sundari, H. (2020). EFL students' preferences on digital platforms during emergency remote teaching: video conference, lms, or messenger application? *Studies in English Language and Education*, 7(2), 362–378. <https://doi.org/https://doi.org/10.24815/siele.v7i2.16929>
- Anggrahini, A., & Rusmini, R. (2022). Improving science process skills and collaboration on the lesson reaction rate using electronic student worksheet assisted with liveworksheets website. *Journal of The Indonesian Society of Integrated Chemistry*, 14(1), 28–43. <https://doi.org/10.22437/jisic.v14i1.17859>
- Antara, I. G. W. S., & Dewantara, K. A. K. (2022). E-scrapbook: the needs of hots oriented digital learning media in elementary schools. *Journal for Lesson and Learning Studies*, 5(1), 71–76. <https://doi.org/10.23887/jlls.v5i1.48533>
- Bedoya, P. A., Valencia, L. M., & Montoya, J. C. (2015). Students' needs analysis in an efl program for university professors. *HOW*, 22(2), 11–36. <https://doi.org/https://doi.org/10.19183/how.22.2.118>
- Cahyana, A. (2020). *Prospek AKM Dan Survei Karakter: Memperkuat Basis Praliterasi Dan Pranumerasi Usia Dini*.
- Cahyanovianty, A. D., & Wahidin, W. (2021). Analisis kemampnan numerasi peserta didik kelas viii dalam menyelesaikan soal asesmen kompetensi minimum (AKM). *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 5(1), 1439–1448. <https://doi.org/https://doi.org/10.31004/cendekia.v5i2.651>
- Fasha, E. F., & Triyastuti, I. Y. (2022). Analisis kemampuan berfikir tingkat tinggi berbasis mnumerasi. *Dialektika Jurnal Pendidikan*, 6(1), 1–7.
- Fauziah, A., Dewi, E. S. F., & Robandi, B. (2021). Analisis pemahaman guru sekolah menengah pertama (SMP) mengenai asesmen kompetensi minimum (AKM). *Edukatif: Jurnal Ilmu Pendidikan*, 3(4), 1550–1558. <https://doi.org/https://doi.org/10.31004/edukatif.v3i4.608>
- Felitasaria, A., & Rusmini, R. (2022). Development of e-worksheet assisted by liveworksheets to improve science process skills and collaboration on chemical equilibrium materials. *Scientiae Educatia: Jurnal Pendidikan Sains*, 11(1), 10–23. <https://doi.org/http://dx.doi.org/10.24235/sc.educatia.v11i1.10235>
- Hakim, W. (2021). Analisis kebutuhan bahan ajar matematikaterintegrasi agama berbasis AKM. *Jurnal Pusaka*, 10(1), 29–39.
- Hendrayani, A., Permana, N. D., Ilhami, A., & Syarif, M. I. (2022). The development of student live worksheets based on problem based learning in the optical instrument chapter. *JIS Edu: Indonesian J. Integr. Sci. Education*, 4(1), 75–82. <https://doi.org/http://dx.doi.org/10.29300/ijisedu.v4i1>
- Hidayah, N., & Asari, S. (2022). Investigating students' listening skill using liveworksheet as an outline teaching platform. *J-SHMIC: Journal of English for Academic*, 9(1), 51–59. [https://doi.org/https://doi.org/10.25299/jshmic.2022.vol9\(1\).8611](https://doi.org/https://doi.org/10.25299/jshmic.2022.vol9(1).8611)
- Himawan, R., & Suyata, P. (2021). Analisis kebutuhan pengembangan soal hots

- dalam pembelajaran teks pidato persuasif di MGMP SMP wilayah Kabupaten Bantul. *Ghâncaran: Jurnal Pendidikan Bahasa Dan Sastra Indonesia*, 2, 117–128. <https://doi.org/10.19105/ghancaran.vi.5399>
- Huang, Y.-M., Silitonga, L. M., & Wu, T.-T. (2022). Applying a business simulation game in a flipped classroom to enhance engagement, learning achievement, and higher-order thinking skills. *Computers & Education*, 183. <https://doi.org/https://doi.org/10.1016/j.compedu.2022.104494>
- Jansen, T., & Moller, J. (2022). Teacher judgments in school exams: Influences of students' lower- order-thinking skills on the assessment of students' higher-order- thinking skills. *Teaching and Teacher Education*, 111, 1–10. <https://doi.org/https://doi.org/10.1016/j.tate.2021.103616>
- Kageyama, Y., Zamudio, S. Z., & Barton, M. (2022). Incorporation of simulation features to improve higher order thinking skills. *The International Journal of Management Education*, 20, 1–19.
- Kaliappen, N., Ismail, W. N. A., Ghani, A. B. A., & Sulisworo, D. (2021). Wizer.me and socrative as innovative teaching method tools: integrating tpack and social learning theory. *International Journal of Evaluation and Research in Education*, 10(3), 1028–1037.
- Kumalasari, O. D., & Julianto, J. (2021). Pengembangan lembar kerja peserta didik ilmu pengetahuan alam berbantu website wizer.me materi energi alternatif kelas iv sekolah dasar. *Jurnal PGSD*, 9(7), 2827–2837.
- Latifah, S., Yuberti, Y., & Agestiana, V. (2020). Pengembangan media pembelajaran interaktif berbasis hotspots menggunakan aplikasi lectora inspire. *Jurnal Penelitian Pembelajaran Fisika*, 11(1), 9–16. <https://doi.org/gris.ac.id/index.php/JP2> F DOI: 1
- Linanda, T., & Hendriawan, D. (2022). Analisis kemampuan literasi baca tulis siswa kelas v dalam menyelesaikan soal asesmen kompetensi minimum. *Jurnal Perseda*, 5(1), :49-56. <https://doi.org/https://doi.org/10.37150/perseda.v5i1.1579>
- Mahbub, M. A. (2018). English teaching in vocational high school: a need analysis. *JEELS*, 5(2), 229–258.
- Megawati, M., Wardani, A. K., & Hartatiana, H. (2020). Kemampuan berpikir tingkat tinggi siswa smp dalam menyelesaikan soal matematika model pisa. *Jurnal Pendidikan Matematika*, 12(1), 15–24. <https://doi.org/https://doi.org/10.22342/jpm.14.1.6815.15-24>
- Muliani, M., Ginting, F. W., & Sakdiah, H. (2022). Pelatihan asesmen hasil belajar digital terintegrasi quizzz dan google form sebagai solusi pembelajaran di masa new normal. *Jurnal Pengabdian Magister Pendidikan IPA*, 5(1). <https://doi.org/https://doi.org/10.29303/jpmi.v3i2.1165>
- Ningsyih, S., Yulianci, S., Haryati, M. S., Syarifuddin, S., Zulharman, Z., & Ahyar, A. (2022). Analisis kemampuan literasi membaca peserta didik melalui pembelajaran tarl pada program gemar literasi sekolah dasar. *Seminar Nasional INOVASI*.
- Nirmayani, L. H. (2022). Kegunaan aplikasi liveworksheet sebagai lkpd interaktif bagi guruguru sd di masa pembelajaran daring pandemi covid 19. *Edukasi: Jurnal Pendidikan Dasar*, 3(1), 9–16.
- Obradovych, O., & Obradovych, A. (2022). Using of interactive worksheets (platform wizer.me) as a form of

- implementation of flipped classroom ideas. *III CISP Conference Globalization of Scientific Knowledge: International Cooperation and Integration of Sciences*. <https://doi.org/https://doi.org/10.36074/grail-of-science.17.06.2022.063>
- Onas, F., Nurhayati, & Mukmin, S. (2022). The lecturer's and college students' need toward schoology based student worksheet. *Jurnal Pendidikan Indonesia*, *11*(2), 183–191. <https://doi.org/https://dx.doi.org/10.23887/jpi-undiksha.v11i2>
- Pangestuti, A. A., & Prasmala, E. R. (2018). Pengembangan media pembelajaran digital daily assessment bagi mahasiswa program studi pendidikan biologi ikip budi utomo malang. *Jurnal Pendidikan Biologi*, *10*(1), 17–27. <https://doi.org/http://dx.doi.org/10.17977/um052v10i1p17-27>
- Rahmadani, E., & Putri, F. A. (2021). Pengembangan lembar kerja siswa interaktif menulis deskriptive text menggunakan media wizer dalam mempromosikan higher order thinking skills (hots) untuk siswa kelas 8 di mtsn 2 medan. *BAHAS*, *32*(1), 27–38.
- Ramadhani, Z., Reza, O., Saputra, D. P. J., Afifullah, M. Y., & Dramadi, D. (2021). Analisis penerapan asesmen kompetensi minimum (AKM) terhadap siswa sekolah menengah pertama (SMP) di Kabupaten Magetan. *INNOVATIVE: Journal of Social Science Research*, *1*(2), 342–345. <https://doi.org/ttps://doi.org/10.31004/innovative.v1i2.2959>
- Ratri, D. P., & Puspitasari, I. (2019). Need analysis for developing course book for english for elementary school students with local-content values. *Indonesian Journal of English Education*, *6*(1), 1–9. <https://doi.org/http://doi.org/10.15408/i>jee.v6i1.9908
- Rosalina, M. (2018). Analysis the use of schoology e-learning towards students' learning motivation enhancement in STKIP Surya. *Indonesian Journal of Science and Education*, *2*(1), 89–95. <https://doi.org/10.31002/ijose.v2i1.614>
- Rufaidah, V. W., & Junaidi, H. (2021). Evaluasi program literasi informasi pada kegiatanhari kunjung perpustakaan di pustaka kementan. *Visi Pustaka*, *2*(3), 197–205.
- Sa'adah, S. I., Rasmiwetti, & Linda, R. (2019). Pengembangan soal hots dengan wondershare quiz creator sebagai media display pada materi stoikiometri kelas x. *JTK: Jurnal Tadris Kimiya*, *4*(2), 177–188. <https://doi.org/http://doi.org/10.15575/jtk.v4i2.5469>
- Septiana, I., Petrus, I., & Inderawati, R. (2020). Needs analysis-based english syllabus for computer science students of Bina Darma University. *Journal of English Education*, *8*(2), 299–310. <https://doi.org/10.25134/erjee.v8i2.3027>
- Setiyoaji, W. T., Supriana, E., & Laksono, Y. A. (2020). Pengembangan e-book berbasis android dengan soal hots untuk membantu menganalisis besaran pada materi gerak lurus. *Jurnal Pendidikan Fisika Dan Teknologi (JPFT)*, *6*(1), 114–120. <https://doi.org/http://dx.doi.org/10.29303/jpft.v6i1.1725>
- Setyowati, F. A., Kristiani, K., & Murwaningsih, T. (2022). The effectiveness of visual picture economics textbook based on problem based learning in improving reading literacy skills. *Journal of Education Technology*, *6*(3). <https://doi.org/https://doi.org/10.23887/jet.v6i3.46435>
- Simanjuntak, M. A., Manurung, A. R.,

- Sitorus, N., & Pangaribuan, M. (2022). The use of wizer.me as a media to stimulate students' motivation in writing descriptive text in sma swasta hkbp doloksanggul. *Jurnal Kewarganegaraan*, 6(3), 5197–5208. <https://doi.org/https://doi.org/10.31316/jk.v6i3.3909>
- Susiyanto, D. (2020). *Merancang Lembar Kerja Siswa Interaktif Menggunakan Wizer.me*. Ahlimedia Press.
- Vongvilay, P., Kartika, D., & Laila, M. (2020). Need analysis of english material for vocational school of health: a case study at one school at karanganyar. *Ethical Lingua*, 7(2), 360–368. <https://doi.org/10.30605/25409190.186>
- Walid, A., Sajidan, S., Ramli, M., & Kusumah, R. G. T. (2019). Construction of the assessment concept to measure students' high order thinking skills. *Journal for the Education of Gifted Young*, 7(2), 237–251. <https://doi.org/https://doi.org/10.17478/jegys.528180>
- Wijaya, A. M., Arifin, I. F., & Badri, M. Il. (2021). Media pembelajaran digital sebagai sarana belajar mandiri di masa pandemidalam mata pelajaran sejarah. *Jurnal Sandhyakala*, 2(2), 1–10.
- Wu, J., & Lou, Y. (2018). Needs analysis of chinese chemical engineering and technology undergraduate students in yangtze university in english for specific purposes. *Creative Education*, 9, 2592–2603. <https://doi.org/10.4236/ce.2018.915195>
- Yundayani, A., Emzir, E., & Rafli, Z. (2017). Need analysis: the writing skill instructional material context for academic purposes. *Journal of English Education*, 6(1), 59–70. <https://doi.org/10.25134/erjee.v6i1.771>
- Zahrudin, M., Ismail, S., & Zakiah, Q. Y. (2021). Policy analysis of implementation of minimum competency assessment as an effort to improve reading literacy of students in schools. *Paedagoria: Jurnal Kajian, Penelitian Dan Pengembangan Kependidikan*, 12(1), 83–91. <https://doi.org/10.31764>
- Zaini, M., Amintarti, S., Ilmy, L. A., Rahmadayanti, D., Nada, Q., Hilmia, N., Adawiyah, R., & Mardhatilah, R. (2021). Practicality and effectiveness of biological liveworksheets in measuring high school students' critical thinking skills. *European Modern Studies Journal*, 5(6), 389–401.