Systematic Literature Review: Application of Probing Prompting Learning Model to Improve Students' Numeracy Skill

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Abstract

Numerical skills are important for students to have because numeracy skills are closely applied in everyday life. This article was written to review whether students' numeracy skills can be improved by applying the probing prompting learning model, how are the numeracy skill indicators, and how numeracy skills indicators can be integrated with probing prompting learning. The method used is the Systematic Literature Review (SLR) by reviewing 18 articles of accredited national journals on Sinta 2 to Sinta 5 and international journals indexed by Scopus with the keywords applying the probing prompting model and numeracy skills. The results showed that the implementation of the probing prompting learning model in mathematics learning could improve students' numeracy skills, and indicators of numeracy skills could be integrated into probing prompting learning.

Keywords: *numeracy skill, probing prompting, SLR*

Abstrak

Kemampuan numerasi penting untuk dimiliki oleh siswa karena kemampuan numerasi erat penerapannya dalam kehidupan sehari-hari. Artikel ini ditulis dengan tujuan untuk meninjau apakah kemampuan numerasi siswa dapat ditingkatkan dengan menerapkan model pembelajaran probing prompting, bagaimana indikator kemampuan numerasi, dan bagaimana indikator kemampuan numerasi dapat berintegrasi dengan pembelajaran probing prompting. Metode yang digunakan yaitu Systematic Literature Review (SLR) dengan mengkaji 18 artikel jurnal nasional terakreditasi pada Sinta 2 hingga Sinta 5 dan jurnal internasional terindeks Scopus dengan kata kunci penerapan model probing prompting dan kemampuan numerasi. Hasil penelitian menunjukkan bahwa dengan diterapkannya model pembelajaran probing prompting dalam pembelajaran matematika dapat meningkatkan kemampuan numerasi siswa, dan indikator kemampuan numerasi dapat diintegrasikan dalam pembelajaran probing prompting.

Kata Kunci: *kemampuan numerasi, probing prompting, SLR*

1. PRELIMINARY

Ministry of Education and Culture [1] has determined that the Indonesian people need to master six basic literacies, including (1) language literacy, (2) numeracy literacy, (3) scientific literacy, (4) digital literacy, (5) financial literacy, and (6) cultural and social literacy citizenship. It can be seen that numeracy literacy is included in it. This numeracy skill is very important for students to have because numeracy skills are needed in all aspects of life, whether at home, at work, or in society. This is because important information circulating is generally expressed in numerical or graphic form. In addition, numeracy is one of the various academic and cognitive skills that are assessed at the beginning of preschool [2]. However, in reality, students have not mastered numeracy skills. Indonesian students are not yet proficient in applying their mathematical

knowledge in various situations. They are also still not optimal in terms of interpreting mathematical sentences and symbols, as well as representing the information contained in the questions [3]. This is shown in the OECD data (2018). Indonesia's 2018 PISA score ranking in the reading aspect is ranked 72 out of 77 countries, the mathematics aspect is ranked 72 out of 78 countries, and the science aspect is ranked 70 out of 78 countries. Meanwhile, in the Indonesian TIMSS scores for grade 4 students in 2015 in the mathematics aspect, Indonesia was ranked 44th out of 49 countries, and in the science aspect, Indonesia was ranked 46th out of 49 [4].

To improve numeracy skills, the selection of the right learning model needs to be a consideration for teachers in carrying out the learning process. A learning model is a form of creation that has been planned by a teacher before starting the learning process, where the learning model can also be used as a guide for carrying out learning in the classroom with the aim that students do not feel bored with the monotonous learning model which means students are not active or passive while the teacher is more active [5]. The learning model is a conceptual framework that describes a systematic procedure in organizing learning experiences to achieve certain learning objectives and serves as a guide for learning designers and teachers in planning teaching and learning activities [6]. Therefore, the learning model is important to consider because the learning model is a guide for teachers to carry out the learning process to achieve learning objectives.

The learning model studied in this study is the probing prompting learning model. The reason for using the probing prompting model is that the probing-prompting learning steps can help students analyze the information obtained and interpret the results of the analysis to make decisions, which is in line with the definition of numeracy skill, that is the ability possessed by a person in using his mathematical knowledge in explaining events, solving problems, or making decisions in everyday life [1]. The probing prompting learning model is a derivative of the PBL (Problem-Based Learning) learning model [7]. Probing prompting is a learner-centered learning model where students are given questions that direct students to understand concepts and questions are asked to measure students' knowledge of the depth of concepts and communicate them mathematically [8]. This probing prompting model involves students being active in learning and guides students to solve a problem by directing them with questions so that it is hoped that mastery of concepts and learning outcomes can increase [9].

Therefore, the research questions related to the background and objectives of this article are as follows.

1. Can the probing prompting learning model improve students' numeracy skills?

2. What are the indicators of students' numeracy skills?

3. Can indicators of numeracy skills be integrated into the probing prompting learning model?

2. METHOD

The method used in this study is the SLR (Systematic Literature Review) method. This method is carried out by identifying, reviewing, evaluating, and interpreting the studies that have been selected as study material. With this method, researchers review and identify journals systematically, which in each process follow the steps that have been set [10]. This data collection was carried out by documenting all the articles obtained in this research article. An analysis of 30 articles has been carried out with the keywords applying the probing prompting model and numeracy skills, before finally the researcher decided to use 18 articles from the accredited national journals Sinta 2 to Sinta 5 and the Scopus-indexed international journals that match the needs of the content and purpose of the article writing. The selected articles are articles that have similar research and then the articles are analyzed and summarized. The results of the research are then incorporated into a complete discussion in this article.

3. RESULTS AND DISCUSSIONS

3.1 Improving Students' Numeracy Skills with Probing Prompting Learning Model

The results of the research data included in this literature review are analyses and summaries of documented articles related to the application of the probing prompting learning model and students' numeracy skills, which are presented in Table 1 and Table 2.

Probing Prompting Model

Probing prompting is learning in which the teacher presents a series of investigative questions so that a thought process occurs that links students' knowledge and experience with the knowledge to be learned [29]. In general, two questioning techniques can increase student participation and help them understand a subject during the learning process. Shoimin [12] said that the probing prompting learning model can encourage students to think actively, provide opportunities for students to ask for explanations from the teacher, differences of opinion between students can be directed by the teacher, give questions that can focus students' attention, train students' courage, communication can occur in various directions, and students can study independently. In this learning model, students are given questions in the form of probing and prompting. Probing questions are specific forms of probing questions. This question is asked to get a more detailed answer or to improve the quality of the answer to make it more precise. In other words, probing techniques can help students avoid giving quick answers like yes or no. A prompting question is a

form of guiding question that tries to find a better answer. If students fail to answer a question, the

teacher will try to obtain a satisfactory response by asking additional questions [30].

Table 1. Research Results Related to the Implementation of the Probing Prompting Learning Model

Researchers	Name of Journal	Research Results
Ulya & Rahayu (2018) [11]	Teknodika	This study reveals that ethnomathematics-based probing prompting learning is effective for improving mathematical literacy skills.
Hartinah, et al. (2019) [12]	Journal for the Education of Gifted Young Scientists	This study shows that there is an effect of the Ethnomathematics-based probing prompting learning model on mathematical communication skills.
Nelwati & Yeni (2019) [13]	Math Educa Journal	The results showed that the mathematical communication skills of students who were taught using the probing prompting learning method were higher than students who were taught using a scientific approach.
Sadiah, Komala & Sugiarni (2019) [14]	Pi: Mathematics Education Journal	The results of this study indicate that the increase in the high category in the ability to understand mathematical concepts of students who use the probing prompting learning model is better than students who use the ordinary learning model.
Setiawati, Sudiarta & Ardana (2020) [15]	Jurnal Pendidikan dan Pembelajaran Matematika	This study shows that the mathematics learning achievement of class X SMA Negeri 1 Sukasada students who take lessons using the probing prompting model with the help of index card match is better than students who take lessons using conventional learning models.
Lestari, Marta & Indah (2020) [16]	Journal on Teacher Education	The results of this study revealed that the use of the probing prompting model can improve students' mathematical problem-solving abilities as indicated by an increase in the average results of mathematical problem-solving abilities in the first cycle which reached 57.36 and in the second cycle it reached 78.36.
Nuraeni & Kusuma (2020) [17]	Jurnal Silogisme: Kajian Ilmu Matematika dan Pembelajarannya	The results showed that the application of CTL with the probing prompting technique in learning could improve students' creative thinking skills and mathematical disposition.
Sahensolar & Susilowaty (2020) [18]	Jurnal Padegogik	The results of the study revealed that students' mathematical connection skills using both the ALC learning model and probing prompting were included in the high category. The response given by students is also positive.
Praja, et al. (2021) [19]	Faktor: Jurnal Ilmiah Kependidikan	The results showed that there was an increase in mathematical exploration ability after the probing prompting model was used. In addition, there is a relationship between mathematical exploration ability and students' self-confidence.

Table 2. Research Results Related to Students' Numeracy Skill

Researchers	Name of Journal	Research Results
Machromah et al. [20]	Turkish Journal of Computer and Mathematics Education	The findings reveal that the Minimum Competency Assessment framework is in line with the PISA framework, which includes content, context, and cognitive level. As a result, PISA characteristics can be used to construct problems that can support students' numeracy skills.
Ambarwati & Kurniasih (2021) [21]	Jurnal Cendekia: Jurnal Pendidikan Matematika	The results of the study indicate that learning the Problem-Based Learning model assisted by Youtube media has an influence on students' numeracy literacy skills, indicated by an effect size of 0.710 which is included in the medium category.
Baharuddin & Sukmawati (2021) [22]	Pedagogy: Jurnal Pendidikan Matematika	This study revealed that subjects with high initial ability were able to reveal 3 indicators of numeracy skill, subjects with moderate initial ability were able to reveal 2 indicators of numeracy skill, and subjects with low initial ability were able to reveal only 1 indicator of numeracy skill.
Kamsurya & Masnia (2021) [23]	Jurnal Ilmiah Mandala Education	The results of the study prove that there is an increase in students' ability to solve numeracy problems after applying learning through HLT with a Realistic Mathematics Approach using the context of the traditional game Dengklaq.
Sari, Lukman & Muharram (2021) [24]	Fondatia: Jurnal Pendidikan Dasar	The results of this study indicate that the ability of students to solve geometry problems in the Minimum Competency Assessment (AKM) for numeracy is still low, with a percentage of 17.65%.
Suriyani & Wahyuni (2021) [25]	Jurnal Education and Development	Research shows that the development of mathematical reasoning instruments is effective in stimulating students' numeracy skills.
Widiastuti & Kurniasih (2021) [26]	Jurnal Cendekia: Jurnal Pendidikan Matematika	This study shows that the use of a problem-based learning model assisted by Cabri 3D V2 software can improve numeracy literacy skills.
Winarni, et al. (2021) [27]	Aksioma: Jurnal Program Studi Pendidikan Matematika	The results showed that mathematics learning videos were effective for use in classroom learning in terms of students' numeracy literacy skills and digital literacy skills.
Ate & Lede (2022) [28]	Jurnal Cendekia: Jurnal Pendidikan Matematika	This study revealed that students' ability to solve numeracy literacy questions was still low, indicated by 73.3% of students in the poor category and 26.7% in the low category.

Students' Numeracy Skill

The term numeracy is defined as the ability to work with precise numbers such as counting, comparing, adding, etc [31]. Another opinion related to numeracy skills is a person's ability to formulate, apply, and interpret mathematics in various contexts, including the ability to reason mathematically, and to use concepts, procedures, and facts to describe, explain or predict phenomena/events [32]. According to Aningsih [33], the meaning of numeracy is not only being

able to carry out procedures in solving mathematical problems but also utilizing mathematics in everyday life, as in literate which means (literacy) towards mathematics.

3.2 Indicator of Numeracy Skill

Various indicators of numeracy skills were put forward. One of them is the indicator of numeracy skill delivered by [22] namely: (1) using various kinds of numbers and symbols related to basic mathematics to solve problems in various contexts of everyday life, (2) analyzing information presented in various forms (graphs, tables, charts, diagrams and so on), (3) interpret the results of the analysis to predict and make decisions. The OECD (Organization for Economic Cooperation and Development) states that indicators of numeracy skills include: (1) communication skills; (2) mathematical ability; (3) representation ability; (4) reasoning and argumentation skills; (5) the ability to choose strategies to solve problems; (6) the ability to use language and symbolic, formal and technical operations; (7) the ability to use mathematical tools [34].

Other than that, [21] revealed indicators of numeracy literacy skills including the following: (1) work effectively with models in concrete and complex situations, (2) select and represent information, including symbols, and relate them to real situations, (3) use skills and reason with some knowledge in a direct context, and (4) provide explanations and communicate them with reasons and arguments based on their interpretations and actions.

3.3 Integrating Indicators of Numeracy Skill in the Probing Prompting Learning Model

The integration of numeracy skills in probing prompting learning can be done by inserting numeracy skills indicators into the probing prompting learning syntax. Indicators of numeracy skills that are integrated into the probing prompting learning model in this article are (1) using various numbers and symbols related to basic mathematics to solve problems in various contexts of everyday life, (2) analyzing information displayed in various forms (graphs, tables, charts, diagrams and so on), (3) interpret the results of the analysis to predict and make decisions [22]. Meanwhile, the syntax of the probing prompting learning model includes: (1) knowing students' initial abilities, (2) introducing situations, (3) presenting knowledge, (4) providing feedback, and (5) strengthening understanding [35]. This integration is presented together with teacher and student activities in the classroom in Table 3.

Table 1. Teacher and Student Activities in Probing Prompting Syntax

No	Phase	Teacher's Activity	Student's Activity
1	Knowing students' initial abilities	Giving questions to students about the material that has been studied previously related to the material to be taught.	Answering the questions given by the teacher by using numbers and symbols to explore the knowledge they already have and relate it to the material to be taught.
2	Situation introduction	Facing students in new situations, for example by giving pictures, formulas, or other situations that contain problems and waiting for a while to allow students to think or formulate answers.	Students pay attention to situations and solve problems in various contexts by analyzing information presented in various forms.
3	Knowledge presentation	Asking questions that match the indicators to all students. Then wait a few moments to allow students to formulate answers or have a small discussion to answer the question.	Discuss with friends to analyze to answer the questions given.
4	Giving feedback	If the student's answer is correct, then the teacher asks other students to respond to the answer to ensure that all students are involved in the ongoing activity. However, if the student's answer is irrelevant, the teacher asks several follow-up questions related to the first response. Questions start from observational ones, then are asked with questions that require students to think at a higher level until students can answer the question.	Other students respond to the questions given, and those students also respond to feedback given by the teacher. In this phase, students try to understand the results of the existing analysis to make decisions.
5	Strengthening understanding	Asking final questions to different students to further emphasize that the learning objectives are truly understood by all students.	Students together conclude the material that has been taught during the learning process.

4. CONCLUSION

Based on the results and discussion described above, it can be concluded that the application of the probing prompting learning model can be used as an alternative to improve students' numeracy skills. Besides that, it also showed that the indicators of numeracy skill are (1) using various numbers and symbols related to basic mathematics to solve problems in various contexts of everyday life, (2) analyzing information displayed in various forms (graphs, tables, charts, diagrams and so on), (3) interpret the results of the analysis to predict and make decisions, can be integrated with probing prompting learning model. It is hoped that in future research, researchers

and other researchers can apply this study to improve students' numeracy skills by utilizing the probing prompting learning model.

5. REFERENCES

[1]   Kemdikbud, "Desain Pengembangan Soal Asesmen Kompetensi Minimum," in *Desain Pengembangan AKM*, 2020, pp. 1–125.

[2]   D. J. Purpura, A. R. Napoli, and Y. King, "Development of Mathematical Language in Preschool and Its Role in Learning Numeracy Skills," in *Cognitive Foundations for Improving Mathematical Learning*, 1st ed., vol. 5, Elsevier Inc., 2019, pp. 175–193. doi: 10.1016/b978-0-12-815952-1.00007-4.

[3]   T. Tasyanti, Wardono, and Rochmad, "Analisis Kemampuan Literasi Matematika Berdasarkan Kecerdasan Emosional Siswa Melalui Model Pembelajaran Kooperatif Tipe Group Investigation," in *PRISMA, Prosiding Seminar Nasional Matematika*, 2018, pp. 334–346.

[4]   S. Hadi and Novaliyosi, "TIMSS Indonesia (Trends in International Mathematics and Science Study)," in *Prosiding Seminar Nasional & Call For Papers Program Studi Magister Pendidikan Matematika Universitas Siliwangi*, 2019, pp. 562–569.

[5]   D. Harefa *et al.*, "Penerapan Model Pembelajaran Cooperative Script untuk Meningkatkan Hasil Belajar Matematika," *JKPM (Jurnal Kaji. Pendidik. Mat.*, vol. 6, no. 1, p. 13, 2020, doi: 10.30998/jkpm.v6i1.6602.

[6]   N. H. zain; I. C. S. R. Eryani, "Pengaruh Model Pembelajaran Open Ended terhadap Hasil Belajar Siswa pada Pembelajaran Tematik Lisenia," *J. Basicedu*, vol. 5, no. 3, pp. 1683–1688, 2021.

[7]   D. N. Marceillina, I. Wiryokusumo, and D. A. Walujo, "The Use of Probing Prompting Learning (PPL) and Inside Outside Circle (IOC) Model to Learning Outcome of Plane Figure Material," *Int. J. Educ. Technol. Learn.*, vol. 5, no. 1, pp. 9–14, 2019, doi: 10.20448/2003.51.9.14.

[8]   E. Istiana, "Eksperimentasi Model Pembelajaran Probing-Prompting dan Knisley Terhadap Kemampuan Komunikasi Matematis Siswa," UIN Raden Intan Lampung, 2020.

[9]   R. Amalia *et al.*, "How Is the Students' Concept Mastery in Terms of Gender Differences? the Effectiveness of Probing Prompting Learning Model," in *Journal of Physics: Conference Series*, 2020, pp. 1–9. doi: 10.1088/1742-6596/1467/1/012020.

[10]   E. Triandini, S. Jayanatha, A. Indrawan, G. Werla Putra, and B. Iswara, "Metode Systematic Literature Review untuk Identifikasi Platform dan Metode Pengembangan Sistem Informasi di Indonesia," *Indones. J. Inf. Syst.*, vol. 1, no. 2, p. 63, 2019.

[11]   H. Ulya and R. Rahayu, "Efektivitas Pembelajaran Probing-Prompting Berbasis Etnomatematika Terhadap Kemampuan Literasi Matematika," *Teknodika*, vol. 16, no. 2, p. 53, 2018, doi: 10.20961/teknodika.v16i2.34779.

[12]   S. Hartinah *et al.*, "Probing-prompting based on ethnomathematics learning model: The effect on

mathematical communication skills," *J. Educ. Gift. Young Sci.*, vol. 7, no. 4, pp. 799–814, 2019, doi: 10.17478/jegys.574275.

[13]   S. Nelwati and Y. Yeni, "Kemampuan Komunikasi Matematis Peserta Didik yang Diajar dengan Metode Probing-Prompting Learning Pada Kelas Vii Mtsn Bungus Teluk Kabung Padang Tahun Ajaran 2017/2018," *Math Educ. J.*, vol. 3, no. 1, pp. 44–56, 2019, doi: 10.15548/mej.v3i1.268.

[14]   A. S. Sadiah, E. Komala, and R. Sugiarni, "Peningkatan Kemampuan Pemahaman Konsep Matematika Siswa Melalui Model Pembelajaran Probing Prompting," *Pi Math. Educ. J.*, vol. 2, no. 2, pp. 69–73, 2019, doi: 10.21067/pmej.v2i2.3367.

[15]   D. A. O. Setiawati, I. G. P. Sudiarta, and I. M. Ardana, "Pengaruh Model Pembelajaran Probing Prompting Berbantuan Index Card Match Terhadap Prestasi Belajar Matematika Siswa Kelas X SMA Negeri 1 Sukasada," *J. Pendidik. dan Pembelajaran Mat. Indones.*, vol. 8, no. 1, pp. 71–81, 2019, doi: 10.23887/jppm.v8i1.2845.

[16]   F. Lestari, R. Marta, and V. Indah, "Penerapan Model Pembelajaran Probing Prompting untuk Meningkatkan Kemampuan Pemecahan Masalah Matematis," *J. Teach. Educ.*, vol. 2, no. 1, pp. 247–255, 2020, doi: 10.31004/jote.v2i1.1225.

[17]   S. Nuraeni and A. B. Kusuma, "Peningkatan Kemampuan Berpikir Kreatif Dan Disposisi Matematis Siswa Melalui Ctl Dengan Teknik Probing-Prompting Smp Negeri 1 Kembaran," *J. SILOGISME Kaji. Ilmu Mat. dan Pembelajarannya*, vol. 5, no. 1, p. 44, 2020, doi: 10.24269/silogisme.v5i1.1920.

[18]   J. A. Sahensolar and N. Susilowaty, "Meningkatkan Kemampuan Koneksi Matematis Siswa Smp Melalui Model Pembelajaran Accelerated Learning Cycle (ALC) Dan Probing Prompting," *J. Padegogik*, vol. 3, no. 2, pp. 118–127, 2020, [Online]. Available: https://jurnal.unai.edu/index.php/jpd/article/view/2368

[19]   E. S. Praja, S. Setiyani, N. Aminah, M. Mudrika, and L. Sagita, "Penerapan Model Pembelajaran Probing Prompting untuk Meningkatkan Kemampuan Eksplorasi Matematika dan Kepercayaan Diri Siswa," *Fakt. J. Ilm. Kependidikan*, vol. 8, no. 1, pp. 50–59, 2021, [Online]. Available: https://doi.org/10.30998/fjik.v8i1.8604

[20]   I. U. Machromah, N. S. Utami, R. Setyaningsih, D. Mardhiyana, and L. W. S. Fatmawati, "Minimum competency assessment: Designing tasks to support students' numeracy," *Turkish J. Comput. Math. Educ.*, vol. 12, no. 14, pp. 3268–3277, 2021.

[21]   D. Ambarwati and M. D. Kurniasih, "Pengaruh Problem Based Learning Berbantuan Media Youtube Terhadap Kemampuan Literasi Numerasi Siswa," *J. Cendekia J. Pendidik. Mat.*, vol. 5, no. 3, pp. 2857–2868, 2021, doi: 10.31004/cendekia.v5i3.829.

[22]   M. R. Baharuddin, S. Sukmawati, and ..., "Deskripsi Kemampuan Numerasi Siswa Dalam Menyelesaikan Operasi Pecahan," *Pedagog. J. Pendidik. Mat.*, vol. 6, no. 2, pp. 90–101, 2021, [Online]. Available: https://e-journal.my.id/pedagogy/article/view/1607%0Ahttps://e-journal.my.id/pedagogy/article/download/1607/1258

[23] R. Kamsurya and M. Masnia, "Desain Pembelajaran Dengan Pendekatan Matematika Realistik Menggunakan Konteks Permainan Tradisional Dengklaq Untuk Meningkatkan Keterampilan Numerasi Siswa Sekolah Dasar," *J. Ilm. Mandala Educ.*, vol. 7, no. 4, pp. 67–73, 2021, doi: 10.36312/jime.v7i4.2368.

[24] D. R. Sari, E. N. Lukman, and M. R. W. Muharram, "Soal Geometri Pada Asesmen Kompetensi Minimum-Numerasi Sekolah Dasar," *Fondatia J. Pendidik. Dasar*, vol. 5, no. 2, pp. 153–162, 2021.

[25] Suriyani and M. S. Wahyuni, "Pengembangan Instrumen Penalaran Matematis Untuk Menstimulasi Kemampuan Numerasi Siswa Dengan Konteks 'Rumahku,'" *J. Educ. Dev.*, vol. 9, no. 1, pp. 26–29, 2021.

[26] E. R. Widiastuti and M. D. Kurniasih, "Pengaruh Model Problem Based Learning Berbantuan Software Cabri 3D V2 terhadap Kemampuan Literasi Numerasi Siswa," *J. Cendekia J. Pendidik. Mat.*, vol. 5, no. 2, pp. 1687–1699, 2021.

[27] S. Winarni, A. Kumalasari, M. Marlina, and R. Rohati, "Efektivitas Video Pembelajaran Matematika Untuk Mendukung Kemampuan Literasi Numerasi Dan Digital Siswa," *AKSIOMA J. Progr. Stud. Pendidik. Mat.*, vol. 10, no. 2, p. 574, 2021, doi: 10.24127/ajpm.v10i2.3345.

[28] D. Ate and Y. K. Lede, "Analisis Kemampuan Siswa Kelas VIII dalam Menyelesaikan Soal Literasi Numerasi," *J. Cendekia J. Pendidik. Mat.*, vol. 6, no. 1, pp. 472–483, 2022, doi: 10.31004/cendekia.v6i1.1041.

[29] R. Widyastuti, Suherman, B. S. Anggoro, H. S. Negara, M. D. Yuliani, and T. N. Utami, "Understanding Mathematical Concept: The Effect of Savi Learning Model with Probing-Prompting Techniques Viewed from Self-Concept," *J. Phys. Conf. Ser.*, vol. 1467, no. 1, 2020, doi: 10.1088/1742-6596/1467/1/012060.

[30] W. Jannah, Ellizar, I. Dewata, and Rahadian, "The Correlation Of A Scientific Approach Using The Probing Prompting Technique And A Problem-Based Learning Model On Learning Outcomes On Reaction Rate Material," *Int. J. Progress. Sci. Technol.*, vol. 27, no. 2, pp. 151–165, 2021.

[31] S. W. Han and F. Borgonovi, "Students' teaching career expectations by gender and ability levels in science and math: The role of salary and numeracy skills," *Eur. J. Educ.*, vol. 55, no. 3, pp. 405–427, 2020, doi: 10.1111/ejed.12407.

[32] D. W. Ekowati, Y. P. Astuti, I. W. P. Utami, I. Mukhlishina, and B. I. Suwandayani, "Literasi Numerasi di SD Muhammadiyah," *ELSE (Elementary Sch. Educ. Journal) J. Pendidik. dan Pembelajaran Sekol. Dasar*, vol. 3, no. 1, pp. 93–103, 2019, doi: 10.30651/else.v3i1.2541.

[33] A. D. Cahyanovianty and Wahidin, "Analisis Kemampan Numerasi Peserta Didik Kelas VIII dalam Menyelesaikan Soal Asesmen Kompetensi Minimum," *J. Cendekia J. Pendidik. Mat.*, vol. 5, no. 2, pp. 1439–1448, 2021.

[34] N. Anggrieni and R. I. Putri, "Analisis Kemampuan Literasi Matematika Siswa Kelompok Kecil Dalam Menyelesaikan Soal Matematika Tipe PISA," in *Prosiding Seminar Nasional Pendidikan*

Matematika Ahmad Dahlan, 2018, pp. 472–481.

[35]   S. Maryama, "Pengaruh Model Pembelajaran Probing-Prompting Terhadap Kemampuan Berpikir Kritis Matematis Siswa Kelas VIII SMP Negeri 27 Palembang," UIN Raden Fatah Palembang, 2020.

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