



A Profile of primary school students' literacy through EMI in CLIL contexts

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For several years, the competence of students in Indonesia has always been recorded as very low. In PISA, Indonesia ranks at the 3rd or 4th lowest position, especially in Reading, Mathematics, and Science. This condition has, of course, raised the concerns of educators in Indonesia, and some schools then decided to implement an international curriculum along with the 2013 Curriculum. With the international curriculum, students are required to have very good literacy, to comprehend the texts and questions they work on. This also entails teaching them with teaching strategies which, besides developing their language competence, also enhance their critical thinking skills. This paper reports some ways in which EMI and CLIL can develop primary school students' English proficiency, literacy, and critical thinking skills. Data were taken from some Primary Schools which implement the synergy of national and international standard curricula, particularly from the scores of the students on two tests. Focus of the learning is given to the students' English proficiency and literacy. The total numbers are 248 students from 14 primary schools located in most cities in East Java and some in South Celebes. The results show that the program equips the student with higher proficiency, literacy, and critical thinking skills. This study implies that EMI in CLIL context can accommodate primary school students' literacy learning.

Keywords: EMI, CLIL, critical thinking, literacy

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INTRODUCTION

Due to the engagement of Indonesia as one of the member countries of the Association of Southeast Asian Nations (ASEAN) and a global participant, the status of English is prominent for communication. English is the sole contact language for trade, commerce, diplomacy, and education (Kirkpatrick, 2010). This notion is in line with Bruyel-Omedo & Juan-Garau's (2009) claims that cooperation and unified decision-making take place in English as a lingua franca. Therefore, according to Kirkpatrick (2014), such high-level policy initiatives consolidate the push to employ English as a medium of instruction (abbreviated as EMI) in the domain of education. This is in congruence with what Doiz & Lasagabaster (2020), Vu & Burns (2014), and Dearden & Macaro (2016) opine, that new English-knowing policies in the outer and expanding circle contexts are increasingly moving towards EMI - a growing global phenomenon in all phases of education and educational settings. EMI has also been growing steadily in the past 15 years and might boost the impact of EMI on language and content learning (familiarily called 'Content-Language Integrated') in that cross-curricular links are embedded within the other curricular framework.

The notion of CLIL was first put into practice in 1994 by Marsh, Maljers & Hartiala (2001) in the diverse European types of school environments where teaching and learning

occur in the additional language. This sort of educational approach shows a twofold aim, that is, instructional process focuses on the language used and the content being learned. Therefore, according to [Coyle, Hood, & Marsh \(2010\)](#), as the language and the content are of equal prominence, the role of the teacher should be seriously taken into consideration. For instance, if a Math teacher (while her or his native language is not English) is supposed to teach math in English, s/he should have a good English proficiency to transfer math to students in a correct mathematical concept. Still, of Coyle et al.'s statement, due to globalization and the drives of economic and social convergence, the interest in adopting CLIL has been growing, and lots of studies have been conducted.

There have been massive studies dealing with the implementation of CLIL in primary school context. [Mehisto & Ting \(2017\)](#) mention some benefits of CLIL. Children are still exposed with a rich range of language covering a variety of topics and vocabularies. Primary students have meaningful and motivating learning. They have opportunities to learn content subjects and to explore the subject concepts in English. These make them motivated to deepen and consolidate their understanding of the subjects through experience learning ([Coyle, Hood & Marsh, 2010](#)). Learning content subjects in English allow the pupils to 'think about the content'; to 'think beyond what they see in experiments'; to 'think' about what they learned and 'keep' that knowledge. In these stages, they are developing their critical and creative thinking processes. [Garcia \(2009\)](#) defined such kinds of learners as creative and critical thinkers since the function their cognitive not only to understand the language knowledge but also describe the world. Some other studies concerned with teachers' and students' perspectives of EMI implementation, the pedagogical strategies deployed in the EMI classroom, or even myriad problems and deficiencies encountered ([Dearden & Macaro, 2016](#); [Macaro, Curle, Pun, Jiangshan, & Dearden, 2018](#)). The latest study at the teacher training tertiary level practicing CLIL by [Cañado \(2020\)](#) evidenced (among others) that the participants lack the familiarity with the theoretical insights of EMI in terms of the diverse models, variants, legislative frameworks, and results of empirical studies; language competence; types of group work for students, and the design of diverse materials for the students of various types. Therefore, some improvements to the program have to be made. Another study in Uzbek by [Riskhulova \(2021\)](#) on school teachers displayed that the teachers are pessimistic about the effectiveness of applying CLIL at primary and secondary schools due to the low motivation to learn a foreign language. They claimed that it might be adapted only in higher education since the students realize its necessity in the labor market. Anyhow, most of the respondents feel enthusiastic about teaching CLIL, provided that special teacher training courses are organized.

As a matter of fact, the implementation of this dual-focused educational approach is still being applied and evaluated in many countries to suit their different conditions, for the driving forces for language learning,

particularly English as a lingua franca in this global world, are rising. For this, [Coyle et al. \(2010\)](#) opine that people share the same goal to accomplish both content and language with the best probable results in the shortest time.

Pertinent to this, as proof, the young Indonesian generation, particularly the lower secondary students, regularly join the annual Program for International Student Assessment (PISA) for English, Mathematics, and Science. It turned out that based on the results of the survey conducted in 2018 by the Organization for Economic Cooperation and Development (OECD), it was verified that the students scored lower than the OECD average in Reading, Mathematics, and Science ([OECD, 2019](#)). This was also empirically supported by the evidence that most students taking the international standard reading test (Checkpoint) could only reach level 4 out of the maximum level 6. In other words, there is a necessity to improve Indonesian students' literacy, particularly their reading skills ([Rachmajanti & Sulistyono, 2020](#)). Seemingly the government's literacy program, the so-called 'National Literacy Movement' (Gerakan Literasi Nasional or GLN) launched in 2016, has not satisfactorily been put into practice, especially for those schools implementing EMI.

A study by [Puspitasari, Anugerahwati & Rachmajanti \(2016\)](#) stated that the emergence of EMI at some schools had been associated with learning English across the curriculum in some non-English subjects like Mathematics and Science are taught in English. Even there are schools offering it as early as the primary level of education by synergizing national as well as international standard curriculum frameworks. Some related studies show that implementing EMI in the CLIL context at an early age (as early as the primary level of education) may lead to bringing students to a certain stage of L2 acquisition, both at comprehension and production competencies. At the comprehension level, both explicit and implicit written instructions satisfyingly enabled them to perform the required tasks accurately, whereas, at the level of production, they have reached the complete acquisition of word spelling and word order system of both phrasal and sentential structures with some morpho-syntactic inaccuracies. Other than that, the acquisition of scientific and mathematical knowledge has also been substantiated challenging for them. Further, the two most significant predictors of the students' English achievement in secondary school are the students' interest and the school facilities whenever they attend primary school with EMI for English Math and Science ([Rachmajanti, Zen & Apriana, 2013](#); [Rachmajanti & Anugerahwati, 2018](#)).

A recent study by [Zulfa, Rahmah, & Sofyan \(2020\)](#) shows that the teaching of Physics and Biology in English should be carried out gradually, starting from pre- to post-activities, with various instructional strategies and graded materials in cascaded language use. Thus, EMI is employed throughout the instructional process, from simple language and content to more complicated ones. Still, another study conducted at the primary level of education by [Waluyo, Khoiriyah, & Farah \(2021\)](#) revealed that the teachers with a positive perception of CLIL were recommended to adopt

web-based materials for their classes. On the other hand, most of them felt unconfident in applying the approach due to their low English proficiency (such as lack of English vocabulary and insufficient speaking skills). Therefore, they suggested mixing English and Indonesian to minimize their anxiety, and the success of CLIL implementation inevitably should be empowered by an intensive collaboration of teachers, principals, and parents.

If some results of the aforementioned studies are still doubtful about the positive impact of implementing CLIL in the non-tertiary level of education on the students' proficiency and content, this study is intended to describe qualitatively how the primary students have gained benefits from acquiring their language proficiency, literacy, and content simultaneously for the English subject.

METHODS

This study was qualitative-descriptive in nature, with findings drawn from the participants' summative assessments in English. It was categorized as a case study since the participants belonged to the schools having synergized two curricula- national and international standard frameworks. As [Creswell \(2008\)](#) postulated that a qualitative-descriptive case study relies on the views of participants, and the collected data consists largely of words from the participants, which are described and analyzed for themes. In other words, the inquiry is conducted in a subjective, biased manner and has characteristics of its own that are not generalizable. Also, it was a case study, as the findings were not supposed to be generalized.

This study involved a total of 248 students from 14 primary schools located in most cities in East Java and some in South Celebes implementing a double curriculum framework- the synergy of national and international standard contents for English, Math, and Science. The subjects of the study were selected under some considerations. First, they were recruited on the basis of predetermined requirements, at least 70 for their English proficiency and up to their interest. Secondly, the students had practiced EMI since they were in the first grade for the three subjects, so they were exposed to English every day from seven o'clock in the morning until three in the afternoon. Lastly, the contents of the three subjects were graded from simple to more complicated ones with mostly critical-thinking-based tasks.

The data were collected through the students' scores on the international standard assessment for English as a Second Language (ESL) at the end of the sixth grade. The English test consisted of 3 (three) strands: Listening (20 multiple-choice and completion items with texts and pictures), Reading (30 multiple-choice and completion items with fiction and non-fiction texts), and Writing (answering three questions, question 1 deals with words about food and drink, question 2 about responding an email, and question 3 about writing an 80–100-word story with a prompt as the provocation).

The results of the three tests were then analyzed in two ways (mixed methods). The quantitative analysis was conducted to find out the average score of the students' tests as their learning achievement. The qualitative one was done through content analysis of the students' writing work to display what linguistic input they have benefited from and what non-linguistic input they have acquired. The linguistic input was categorized into the acquisition of vocabulary, and grammatical nuances, while the non-linguistic one with the accomplishment of other competencies like critical thinking skills (drawing conclusions, making inferences, and so forth). In writing section, the students were required to develop their review on painting exhibition.

RESULTS AND DISCUSSION

From the analysis of the data, the following findings are revealed. The quantitative results show that out of the maximum score of 6, the average score of Indonesian students taking the final test was 3.5. In accordance with the scoring scale of Cambridge Primary Checkpoint, the overall average score obtained by the students shows their advanced understanding of the curriculum content given in Cambridge Curriculum. The qualitative results reveal that the students found problems on both the linguistic and non-linguistic aspects. The linguistic aspects cover problems in grammar and vocabulary especially. In addition, the non-linguistic aspect mostly covers the making of conclusions based on a mind-map or charts, getting the main ideas of a text, outlining ideas to write a paragraph, as well as practicing critical thinking skills. The following is the example of students' writing and their error.

Today is Sunday. I was happy because I will go to the painting exhibition which is hold by Art Museum Malang. It is the day I am waiting for because I am so curious to see and enjoy the beautiful of paintings from the artists. I like enjoying the arts because they use colorful painting and good drawing. They give me ..."

From the piece of writing above, the student missed some grammatical features. For instance, in the second sentence of the paragraph, the student put the wrong to be "was" instead of "is" since the context of the story is present tense. The passive verb used in the third sentences is not correct. It should be "held" not hold as it is verb 3. The last error of the example is the choice of word "beautiful" as an adjective. It is not appropriate because the word must be a noun.

Another example of students' writing is as follows, *Last weekend I went painting exhibition close to my school location. The exhibition was great. A lot of painting are not bad. Some of them tell about natural view and some them tell about caricatures. The paintings*

Some grammatical errors are found in the paragraph. It is found in the third sentence. To be "are" should be past tense "were". The word "painting" must be in the plural form "paintings." The choice of word "tell" is not appropriate.

It should be “represented” instead of “tell”. The findings of the students' writing are quiet good since the ideas they express are understandable although some grammatical errors and inappropriate vocabulary are still found. In general, the students are able to convey their ideas into writing.

The findings also revealed that the English proficiency of the students helped them in doing the Mathematics and Science tests, which contain some items which would be very hard to do, had they not had good English proficiency. As stated in the analysis of the “hard” items of the test, some strands in the Mathematics test require students to “be literately proficient in English in order to solve a mathematical problem.” An example of a question in Mathematics is as follows:

A number is divisible by 8 if the number formed by the last three digits is divisible by 8. Use this rule to show that 82 306 is not divisible by 8.

The item above is clearly very hard to solve if the student does not have good English proficiency.

In Science, the same case happens; the test items require students to have good English proficiency in understanding and doing the questions. An example is as follows:

Lily wants to separate a mixture of copper sulfate and iron sulfate.

She adds water to the mixture and stirs it thoroughly.

She then filters the mixture.

Explain why this mixture is not separated.

Clearly, this item shows that students really have to understand the question, then think of the answer, and write down the answer in good, acceptable English. According to the qualitative analysis, the English proficiency they achieved was obtained from the ESL materials in the English lessons.

As stated in the findings, ESL lessons in the Primary schools implement the synergy of the National Curriculum and international framework do enhance students' literacy, proficiency, and critical thinking skills. This, in particular, is achieved through CLIL and EMI, which is a part of it. As [Rodriguez & Chacon \(2021\)](#) found from their study on the use of CLIL in 2 schools in Ostrava, the CLIL approach provides better conditions for the development of communicative competence and the methods used in the schools. From the findings, it reveals that some strands, especially in the ESL test, do pose some problems for the students or test-takers, yet the number of problems is fewer than the items which do not pose difficulties. As [Rachmajanti, Zen, & Apriana \(2013\)](#) found from their study in the Laboratory Primary School of UM, Malang, ESL lessons helped students to comprehend both implicit and explicit written instructions satisfactorily, which then enabled them to do the tasks given to them successfully. The study was conducted on 3rd-grade students, and this current one was done with the 6th graders; however, it should be noted that the results of this study support the findings of Rachmajanti et al.'s study. Another piece of evidence that EMI in the CLIL program helps students to do the tasks and answer the questions in the Final tests satisfactorily as the fact that several students achieved a perfect score of 6, not

only in English but also in Mathematics and Science (data from the results of the test in 2019).

The implementation of CLIL and EMI in primary school evidently gives benefits to the students' language proficiency as it is in line with [Mehisto & Ting \(2017\)](#). They claim that students have opportunity to get language exposure covering various topics and vocabularies while learning content subjects in English. Furthermore, [Coyle, Hood & Marsh \(2010\)](#) state that such kind of learning experience encourages students to get in-depth understanding of the content subjects through learning by doing. To support this, Garcia claims that learning content subjects in English permits children to ‘think about the content concept’; to ‘think beyond what they see in experiments’; to ‘think’ about what they learned and ‘keep’ that knowledge. In these stages, they are developing their critical and creative thinking processes. She, further, emphasizes that such kinds of learners are considered as creative and critical thinkers since they function their cognitive not only to understand the language knowledge but to describe the world as well. In other words, the pupils, evidently, have a good literacy since they get exposure to have learning experiences to understand the concept of content subjects delivered in English.

CONCLUSION

In conclusion, it is confidently stated that EMI, which is implemented in the CLIL program, particularly in the primary schools which implement the synergy of dual curriculum (the 2013 Curriculum and the international framework), in fact, equips the student with higher proficiency, literacy, and critical thinking skills, especially in the English (ESL) subject. However, these benefits are apparent not only in the ESL subject but also in Mathematics and Science. Thus, it is our belief that the Primary School students' literacy can be improved and enhanced through the use of English as a Medium of Instruction in the CLIL context. Accordingly, the future researchers are recommended to explore more the implementation of EMI and CLIL connected with the current curriculum in Indonesia as one of the efforts to realize quality education.

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REFERENCES

- Bruyel-Omedo, A., & Juan-Garau, M. (2009). English as a lingua franca in the linguistic landscape of the multilingual resort of S'Arenal in Mallorca. *International Journal of Multilingualism*, 6(4), 1-4. <https://doi.org/10.1080/14790710903125010>

- Cañado, M. L., (2018). Addressing the research gap in teacher training for EMI: An evidence-based teacher education proposal in monolingual contexts. *Journal of English for Academic Purposes*, 48. <https://doi.org/10.1016/j.jeap.2020.100927>
- Coyle, D., Hood, P., & Marsh, D. (2010). *CLIL Content and Language Integrated Learning*. Cambridge: Cambridge University Press. https://assets.cambridge.org/9780521130219/excerpt/9780521130219_excerpt.pdf
- Creswell, J.W. (2008). *Educational Research. Third Edition*. Upper Saddle River, New Jersey: Pearson Education, Inc.
- Dearden, J., & Macaro, E. (2016). Higher education teachers' attitudes towards English medium instruction: A three-country comparison. *Studies in Second Language Learning and Teaching*, 6(3), 455-486. <https://doi.org/10.14746/ssl.2016.6.3.5>
- Doiz, A. & Lasagabaster, D. (2020): Dealing with language issues in English-medium instruction at university: a comprehensive approach. *International Journal of Bilingual Education and Bilingualism*. <http://dx.doi.org/10.1080/13670050.2020.1727409>
- García, O. (2009). Emergent Bilinguals and TESOL: What's in a Name?. *Tesol Quarterly*, 43(2), 322-326.
- Kirkpatrick, A. (2010). *English as a Lingua Franca in ASEAN: A Multilingual Model*. Hong Kong: Hong Kong University Press. <https://doi.org/10.5790/hongkong/9789888028795.001.0001>
- Macaro, E., Curle, S., Pun, J., Jiangshan, A., & Dearden, J. (2018). A systematic review of English medium instruction in higher education. *Language Teaching*, 51(1), 36-76. <https://doi.org/10.1017/S0261444817000350>
- Marsh, D., Maljers, A. & Hartiala, A-K. (2001). *Profiling European CLIL Classrooms*. Jyväskylä: University of Jyväskylä.
- Mehisto P. & Ting, Y.L.T. (2017). *CLIL Essentials for Secondary School Teachers*. Cambridge: Cambridge University Press.
- OECD. (2019). *PISA 2018 results: Combined executive summaries* (Volume I, II, & III). (https://www.oecd.org/pisa/Combined_Executive_Summaries_PISA_2018)
- Pun, J. K. H., & Thomas, N. (2020). English medium instruction: teachers' challenges and coping strategies. *ELT Journal*, 74(3), 247-257. <https://doi.org/10.1093/elt/ccaa024>
- Puspitasari, A., Anugerahwati, M., & Rachmajanti, S. (2016). Teachers' Pedagogical and Professional Competences in CLIL-Based Primary Schools in Indonesian Context. A paper presented at International Conference on Education (ICE). Malang: Universitas Negeri Malang.
- Rachmajanti, S & McClure, M.W. (2011). University-affiliated lab schools: a collaborative partnership between the University of Pittsburgh's Falk School and the State University of Malang Lab Schools. *Excellence in Higher Education*, 2(1), 11-20. <http://dx.doi.org/10.5195/ehe.2011.40>
- Rachmajanti, S & Sulistyono, G.H. (2020) (in press). EYL Teachers' View on Literature Circle Strategy (LCS): Strengths, Challenges, Opportunities, and Threats. In N. Nurhayati, Suharyadi, S. Andreani, & U. Praba Astuti (Eds.). *The changing face of ELT: A festschrift for Prof. Ali saukah and Prof. M. Adnan Latief* (pp. 92-106). Malang: UM Press.
- Rachmajanti, S., & Anugerahwati, M. (2018). Predictors of the students' English achievement at lower secondary school: CLIL context. *TEFLIN Journal* 30(1), 72-87. <https://doi.org/10.15639/teflinjournal.v30i1/72-87>
- Rachmajanti, S., Zen, E.L., & Apriana, A. (2013). Mapping the framework of immersion program at the Laboratory Primary School of Universitas Negeri Malang, Indonesia. *The New English Teacher*, 11(2), 19-19. <http://www.assumptionjournal.au.edu/index.php/newEnglishTeacher/article/view/2336>
- Results of the 2019 Checkpoint Test for the Primary Schools. CAIE ID 110.
- Riskhulova, D.A.Q. (2021). Uzbek teachers' attitude towards implementation of CLIL methodology in primary and secondary schools. *Academic Research in Educational Sciences*, 2(6), 403-405. <https://doi.org/10.24412/2181-1385-2021-6-405-408>
- Rodriguez, R.A. & Chacon, M.M.G. (2021) Communicative development-acquisition using the CLIL approach, Oviedo-Ostrava, a comparative study. *Journal of Language and Education Policy*, 2(2), 1-10. <http://dx.doi.org/10.48150/jlep.v2no2.2020.a1>
- University of Cambridge International Examinations. (2006). Primary English Curriculum Framework, Cambridge UK, www.cambridge.org
- Vu, N. T. T., & Burns, A. (2014). English as a medium of instruction: Challenges for Vietnamese tertiary lecturers. *The Journal of Asia TEFL*, 11(3), 1-31.
- Waluyo, A.A., Khoiriyah, & Farah, R.R. (2021). Teachers' Perception to CLIL and Web-Based Material Implementation in a Primary School. *Journal of English Education*, 9(2), 1-8. <https://doi.org/10.25134/erjee.v9i2.4347>
- Zulfa, W.D., Rahmah, M., & Sofyan, D. (2020). Teachers' way of communications with students in content and language integrated learning (CLIL) classes. *Journal of English Language Teaching and Linguistics Studies*, 3(1), 41-47. <https://doi.org/10.55215/jetli.v3i1.3417>

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