

# A Study on Digital Competency Examining the Readiness of Junior High School Teachers in Dairi Regency to Implement the Independent Curriculum

Surya Darma Pardede, Aman Simare-Mare

Education Management, State University of Medan, Indonesia  
[1suryapardede@uhn.ac.id](mailto:suryapardede@uhn.ac.id), [2amansimaremare61@gmail.com](mailto:amansimaremare61@gmail.com)

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## Abstract

*This study aims to examine the readiness of teachers in implementing the independent curriculum in junior high schools in Dairi district assessed from digital competence. Where the independent curriculum is a program that gives freedom and autonomy to educational institutions and bureaucracies. And also the independent curriculum demands innovative learning which includes project-based learning, skills and character development and a flexible curriculum structure. This research is a qualitative field research with qualitative methods. Respondents in this study were teachers at SMP Negeri 3, SMP Negeri 1, and SMP Negeri 1 Pinem. Data were collected through observation, interviews, questionnaires. The results showed that the teacher's skills when assessed from digital competence from the aspect of data information literacy are ready with an average competency level of 73.05% and aspects of communication and collaboration are quite familiar with the presentation level of 85.79%, and aspects of digital content creation can be categorized as sufficient with a presentation of 55.25%. The conclusion is that the availability of teachers in implementing the independent curriculum in State Junior High Schools in Dairi Regency is quite good, but in the aspect of creating digital content, it still needs attention and training so that teachers can develop digital content tailored to learning and students.*

**Keywords—**Implementation of the Independent Curriculum, Teacher's Awareness, Digital Competence

## I. INTRODUCTION

Competence refers to the ability to perform tasks that integrate knowledge, skills, and attitudes (Rina Febrina, 2021). It is closely related to standards. Today's educators require a robust level of digital competence, especially with the intensive use of digital devices necessitated by the shift towards Education 4.0. The term "digital competence" in the context of Education 4.0 describes the capability to integrate technology, both in physical and non-physical forms, within the learning system. This integration aims to align human resources with technological systems, thereby facilitating innovative and creative opportunities in education (Jafar et al., 2020; Lase, 2019; Metha Lubis, 2019). The successful implementation of the curriculum and learning in Education 4.0 is critically dependent on teachers' competence in understanding, managing, developing, and evaluating digitalization in education

(Halili, 2019; Keser & Semerci, 2019; Singh, 2021; Xiao et al., 2019). According to the Program for International Student Assessment (PISA) survey, which assesses global education quality, Indonesia ranks among the lowest, positioned 72nd out of 78 countries (Alifah, 2021). The Ministry of Education and Culture (2023) reported that 70% of 15-year-old students fail to meet minimum competency levels in basic reading comprehension and mathematics. Furthermore, PISA scores have shown minimal improvement over the last 10-15 years. The Covid-19 pandemic has exacerbated this situation, leading to significant learning lags or "learning loss," which varies among students (Siahaan et al., 2023). Consequently, systematic changes are necessary, primarily through curriculum reform. To address the learning crisis, the Ministry of Education and Culture developed an independent curriculum. This curriculum, as described by Rahayu et al. (2022), is designed to provide students with a

peaceful, enjoyable, and pressure-free learning environment that fosters the expression of their natural talents. The rapid transition from the previous 2013 curriculum to the independent curriculum has presented various implementation challenges. Additionally, the independent learning curriculum emphasizes autonomy for educational institutions and freedom from bureaucratic constraints. Key to the independent learning curriculum is the premise that schools, teachers, and students have the freedom to innovate and learn independently and creatively. To facilitate creative learning, educators must possess the ability to adapt to new technologies and global challenges. Effective learning activities in the context of Education 4.0 require teachers to develop and use digital devices creatively (Akarawang et al., 2015). Interviews and observations conducted in junior high schools in Dairi reveal several challenges faced by teachers in creating differentiated learning. These include limited student understanding of the material, low problem-solving skills, minimal competitiveness among students, low interest in learning, difficulties in independent knowledge construction, and inadequate facilities and infrastructure. These issues contribute to the suboptimal implementation of the independent curriculum. Therefore, this study focuses on assessing the readiness of junior high school teachers in Dairi Regency from the perspective of digital competence.

## II. LITERATURE REVIEW

The Ministry of Education and Culture has implemented a policy to reform Indonesia's education system through the Merdeka Belajar curriculum. The goal is to explore the greatest potential of teachers and students and to improve the quality of learning by giving teachers the freedom to choose the method of delivering the curriculum or teaching that aligns with their students' competencies. The independent learning curriculum is a policy to restore the essence of assessment. (Ngalim Purwanto, 2019). The independent learning curriculum policy can be optimally realized through various steps, namely: (1) enhancing leadership competencies, collaboration among community elements, and culture; (2) improving infrastructure and utilizing educational information technology across all educational units; (3) refining policies, procedures, and educational funding; (4) and perfecting the curriculum, pedagogy, and assessment. Changes to the independent learning curriculum policy will occur in the categories of: (1) the education ecosystem; (2) teachers; (3) pedagogy; (4) curriculum; and (5) assessment systems. In the educational environment, the Ministry of Education and Culture (Kemendikbud) will change views and practices that hinder educational progress, such as an emphasis on rigid

regulations, schooling as a burdensome task, and school management focused on internal affairs, into an educational ecosystem characterized by a pleasant school atmosphere and openness to cross-stakeholder collaboration in education. The implementation of independent learning in education uses a differentiated learning and assessment system. Differentiated learning is a series of common-sense decisions made by teachers that are oriented towards the needs of students. Differentiated learning is modified and developed through a learning system that can stimulate and accommodate the integration of spiritual, logical, ethical, aesthetic values, and can develop holistic, systemic, linear, and convergent abilities to meet the demands of the present and the future. (Rosadi, 2020). In this case, the meaning of literacy is grouped into three concepts: basic ability, possessing some or part of competence, and as an element of competence. (Ala-Mukta, 2011). Whereas digital competence is a more complex ability than just knowing, with skills that extend to determining, creating, and having the authority to decide. In other words, competence is more than just literacy; even Ferrari et al. (2012) explain in their article that digital competence consists of several literacies: internet literacy, information literacy, information and communication technology (ICT) literacy, and media literacy. In simple terms, the analogy in the article distinguishes that digital literacy is understanding the idea of choosing a button, while digital competence is the ability to press that button. With the more complex meaning of competence in that analogy, digital competence becomes one of the eight key competences for lifelong learning, known as key competences for lifelong learning (Tretnjak & Andelic, 2016), along with the other seven competences: communication in the mother tongue, communication in foreign languages, mathematical and scientific competence, social and civic competences, learning to learn, cultural awareness, and sense of initiative and entrepreneurship. There are several formulations of digital competence indicators for teachers, and more specifically, the European Commission has also established digital competence indicators for teachers in the document European Framework for the Digital Competence of Educators (DigCompEdu) with six areas of competence, namely; Professional Engagement, Digital Resources, Teaching and Learning, Assessment, Empowering Learners, and Facilitating Learners' Digital Competence (Redecker, 2017). In these six areas of the DigCompEdu framework, they are further detailed into 22 basic competences, making it easier to identify teachers' abilities regarding their digital competence. Basic competencies within the DigCompEdu framework can also serve as a model for developing teachers' abilities to enhance their digital competencies, divided into six stages: the Newcomer (A1) and Explorer

(A2) stages are aimed at developing teachers' abilities to assimilate new information and develop basic digital practices. Next are the Integrator (B1) and Expert (B2) stages, where teachers expand their understanding and practice their digital skills. Finally, the highest stages are Leader (C1) and Pioneer (C2), where teachers can convey their knowledge, critique existing practices, and develop new practices. (Aah Ahmad Syahid, 2024).

### III. RESEARCH METHODOLOGY

The type of research used by the author is field qualitative research. Qualitative research is research aimed at understanding phenomena about what the research subjects experience, such as behavior, perception, motivation, actions, and others, holistically, and in a descriptive manner using words and language (Jhon W. Creswell 2015). The method used in this research is the qualitative method. This research aims to describe and analyze existing phenomena,

*Descriptive analysis of digital competence aspects*

particularly regarding the readiness of junior high school teachers in Sidikalang District to implement the Independent Learning Curriculum in the study of digital competence.

### IV. RESULT AND DISCUSSION

The results of the survey research found that the majority of teachers at the State Junior High School in Sidikalang District are women (65%). The education level of the 66 respondents is already at the bachelor's degree level. Based on teaching experience of 1-5 years, it is 29.60%, teachers with 6-10 years of teaching experience 20.63%. Teachers who responded with 16-20 years of teaching experience were 17.94%, while respondents with 11-16 years of teaching experience were 17.04%, and senior teachers with more than 16 years of teaching experience were 29.60%.  
 Tabel 4.1

Aspect of Competence	Sub-competence	%	Mean	Competency Category
Information and data literacy	1.1 Understanding Policies and Educational Needs Regarding the Implementation of Technology in Learning	80,20%	73,05%	Good
	1.2 Exploring, searching, and filtering data, information, and digital content for learning	70,56%		
	1.3 Evaluating data, information, and digital content	71,25%		
	1.4 Managing and retrieving data, information, and digital content	70,20%		
Communication and collaboration	2.1 Interacting through digital technology	87,53%	85,79%	Very Good
	2.2 Sharing information and digital content	85,10%		
	2.3 Participation as an online educator	82,92%		
	2.4 Collaborating through digital technology	82,1%		
	2.5 Managing digital identity	87,62%		
Digital content creation	3.1 Developing digital content	52,13%	55,25%	Good
	3.2 integrating and re-elaborating digital content	60,42%		
	3.3 Selection of programs for digital content development Selection of programs for digital content development	53,20%		

Based on table 4.1 regarding the analysis of teachers' digital competence aspects, it is evident that the category of digital content creation has an average of 73.05%. (Good) The ability of junior high school teachers in the aspects of literacy and communication was also obtained based on the identification of answers in the interview recordings, which generally conveyed that the teachers had received training on the understanding of the importance of implementing technology in learning. Observation of several teaching materials, educational videos, and teacher-made test questions found on the internet has already enabled the ability to sort and filter information and data that can be used for learning. In the second aspect, related to communication and collaboration, the average competency possessed by junior high school teachers is 85.79%. (Very good). Related to the second competency aspect, teachers' abilities in this area include: interacting through digital technology, sharing information and digital content, participating as online educators, and collaborating through digital technology. Based on the interview results, most teachers are social media users and actively use social media. According to the respondents, the social media platforms most frequently used are Facebook, WhatsApp, and TikTok. In the third competency aspect, which is digital content creation, it is the aspect with the lowest competency score, with an average of only 55.25%. (Good). Competence in creating digital content for learning is actually the most needed in the digital competence of teachers, especially in education. From the interview results, it was found that teachers already understand the role and content of digital media; however, the teachers are not yet adaptive, so training on the development of learning media or digital content that can be accepted by students is needed.

## V. CONCLUSION

In conclusion, the readiness of teachers in implementing the independent curriculum in public junior high schools in Dairi Regency is quite good, but in the aspect of creating digital content, it still needs attention and training so that teachers can develop digital content that is tailored to the learning and students.

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