



UTILIZATION OF GOOGLE CLASSROOM AS SUPPORT FOR THE IMPLEMENTATION OF THE FLIPPED- CLASSROOM CONCEPT AT SIT NURUL FIKRI

1st Rahmat
BP5 Nurul Fikri Integrated Islamic
School
Depok, Indonesia
rahmatsyehani@csi-edu.id

2nd Dinn Wahyudin
Curriculum Development
Universitas Pendidikan Indonesia
dinn_wahyudin@upi.edu

3th Laksmi Dewi
Curriculum Development
Universitas Pendidikan Indonesia
laksmi@upi.edu

Abstract—In response to the implementation of the "Kurikulum Merdeka" (In the context of responding to the implementation of the Independent Curriculum and the need for future effectiveness, SIT Nurul Fikri has implemented a flipped classroom as the backbone of its learning process. Various strategies have been undertaken, from preparing facilities and infrastructure to training and parental involvement. One of the core strategies is using Google Classroom (GCR) as a medium for providing resources and learning materials before class (before the classroom). This study aims to find out (1) how students utilize GCR, (2) what challenges students face in using GCR, and (3) any class manager's notes regarding GCR. This research employed a survey method through Google Forms. The study found that 81% of elementary school students open and utilize GCR before the start of the lesson, 80% for junior high school students, and 82% for high school students. Students faced challenges in utilizing GCR due to the availability of teaching materials too close to the in-person learning time in the classroom, the accumulation of tasks simultaneously, and the absence of teaching materials in some subjects. Notes from class managers that need attention include task management and ensuring teachers upload teaching materials well before the learning day..

Keywords— *flipped-classroom concept, google classroom self-regulated learning, learning skills, learning tools*

I. INTRODUCTION

Following a two-year pandemic, the government, through the Ministry of National Education, has offered public and private schools the option to select one of three approaches to implementing the independent curriculum. In alignment with government programs, starting from the 2022-2023 academic year, the Integrated Islamic School (Sekolah et al.) Nurul Fikri decided to participate in the independent curriculum implementation. In the first year, 2022-2023, the units within SIT Nurul Fikri chose the first option, independent learning. Under this option, SIT Nurul Fikri adopts the principles and spirit of the independent curriculum to execute learning within its classrooms. Entering the 2023-2024 academic year, SIT Nurul Fikri began employing the third option, independent sharing. In this approach, SIT Nurul Fikri develops the government-mandated independent curriculum with adjustments that align with its vision and mission.

With the acknowledgment that one of education's primary objectives is to equip learners for future challenges. This aligns with Cheng's assertion regarding the third wave of education reform [1]. As a private institution requiring an attractive capability to appeal to the parents of students, SIT Nurul Fikri needs to align with the concept of future effectiveness. From this juncture, innovation becomes a necessity. For an educational institution, innovation is imperative [2]. One pivotal concept in preparing future generations is the enhancement of students' abilities to self-regulate their learning autonomously [3].

SIT Nurul Fikri has shifted its focus towards self-regulated learning (SRL). This pedagogical approach encourages students to autonomously manage their learning processes, thereby facilitating the attainment of their aspirational targets. A pivotal strategy to cultivate SRL is the adoption of the flipped classroom pedagogy.

The flipped classroom model, predicated on students engaging in pre-class learning activities, requires a robust learning management system (LMS). Given the faculty's acclimatization to Google Classroom (GCR) as an LMS during the pandemic, SIT Nurul Fikri has resolved to maintain GCR as the foundational platform for implementing the flipped classroom methodology. Nonetheless, with the current shift away from exclusive reliance on online learning, optimizing the use of GCR for educators and students has emerged as a unique challenge. Consequently, investigative research is imperative to evaluate the degree of GCR's utilization as the primary infrastructure for flipped classroom execution.

Future Effectiveness & Its Skills

Consistent with the myriad shifts and challenges in education, the notion of educational effectiveness has undergone significant development. Cheng delineates three primary stages in the evolution of educational reforms, distinguished by their respective focal areas.

Initiated in the 1970s, the earliest stage of educational reform was directed toward augmenting internal effectiveness. This stage was characterized by initiatives to enhance the caliber of learning, curricular content, and education administration to achieve intended learning results.

The second stage underscored the necessity for educational institutions to be accountable to the public. Here, the effectiveness of a school was assessed not just by its internal metrics but also by its capacity to fulfill the anticipations and necessities of students, their guardians, and the wider society. This era saw the advent of methodologies such as Total Quality Management, Quality Assurance, and the Satisfaction Model.

The concluding stage pivots towards a prospective educational paradigm. In this stage, the effectiveness of education is appraised by its ability to be responsive to the future exigencies of the learners. Cheng denotes the Future Effectiveness stage, accentuating the need for an education system attuned to the imminent challenges and requirements [1].

One of the most critical aspects in preparing future generations is enhancing basic skills and relevant vocational competencies [4]. Among the

skills that are crucial for the future are critical thinking and computational thinking abilities [5][6]

Flipped Classroom

The Flipped Classroom Concept (FCC) is a learning strategy first promoted by Bergman and Sams starting in 2007. FCC originates from the idea that traditional classroom instruction often starts with easy topics, followed by more challenging homework assignments. Bergman and Sams argue that teacher guidance should ideally be available for the more challenging parts, while the students themselves could cover more straightforward topics. This led to the inception of the flipped classroom [7].

The flipped classroom process is divided into two main parts: independent learning and classroom learning. Students learn independently by accessing instructional materials through YouTube channels or Learning Management Systems. This phase, often termed "pre-work," focuses on more accessible concepts and lower- to mid-level cognitive skills. In the classroom phase, teachers initiate provocative discussions and engage students in projects centered on higher-order thinking skills (HOTS).

To implement FCR effectively, schools should follow a series of steps: Inform parents about the FCR model Train students to participate in learning through FCC strategies Prepare provocative questions and answers. Give students opportunities for self-management in their learning

The FCR implementation process consists of three simple stages: 1) independent student learning, 2) classroom learning with teacher guidance, and 3) deepening understanding through group work or project-based learning..

Self-Regulated Learning

Self-Regulated Learning (SRL) refers to a student's ability to manage themselves in achieving set goals. Self-regulated learning has a significant impact on the success of educational processes [3]. Research suggests that students with good SRL have effective learning strategies, monitor their set goals, and maintain a supportive learning environment. Sustaining these activities in the long term relies heavily on internal student motivation [8].

The formation of SRL varies among students. One simplistic model was proposed by Vygotsky 1997, which divides SRL development into three key stages. The first stage involves external regulation by teachers or parents. The second stage sees the student internalizing taught patterns, and in the third stage, the student applies these patterns autonomously [9]. Implementation of the Independent Curriculum Circular (Surat Edaran/SE)

No. 2774/H.H1/KR.00.01/2022 from the Ministry of Education, Culture, Research, and Technology provides educational units the freedom to choose their implementation options for the Independent Curriculum.

Based on this SE, educational units can choose from three options. The first is independent learning, where schools apply the principles of the Independent Curriculum while still using the existing curriculum in a simplified form. The second option is independent change, where schools start using the Independent Curriculum for Grades 1, 4, 7, or 10 using government-provided materials. The third option is independent sharing, where schools fully implement the Independent Curriculum for Grades 1, 4, 7, or 10 and share their experiences with other educational units..

II. METHOD

This study employed a survey methodology utilizing Google Forms, incorporating open-ended and closed questions distributed generally to students and specifically to class managers for questions encompassing notes for future improvements of Google Classroom (GCR). The population of this study comprised all students and the particular students who serve as class managers. The sample that completed the Google Form consisted of 73 elementary school students, 152 junior high school students, and 247 senior high school students. Participating class managers included 19 from elementary, 57 from junior high and 102 from senior high schools.

III. RESULT & DISCUSSION

Reviewed from the perspective of educational effectiveness, Cheng states that educational effectiveness has now entered its third wave, also called "future effectiveness." In this wave of education, the educational process should be relevant to future students' needs (re-engineering education). Therefore, it is crucial to pay attention to what competencies students need to master for the future [1]

With the rapid advancement of digital technology, further accelerated by the emergence of generative AI like ChatGPT, the meaning and process of education need to undergo fundamental changes [10]. Educational processes that focus on information mastery are no longer relevant. Education should now aim to enhance students' learning abilities so they can learn independently through easy access to information.

Given this context, education that focuses on mastering learning skills becomes essential.

Designing students to be able to educate themselves is something that needs to be focused on [11]

The subsequent strategic decisions emerged to implement the Flipped-Classroom Concept (FCC) in the educational process starting from the academic year 2023/2024. Additionally, the Integrated Islamic School (SIT) Nurul Fikri revised the Learning Implementation Guide to include FCC as a vital component of the learning strategy, taking tangible steps to optimize Google Classroom (GCR) as the primary support mechanism.

The FCC learning process comprises three main stages:

Pre-class, where students are encouraged to access the GCR materials prepared by teachers

In-class sessions, wherein learning activities involve reviewing the work completed by students in the first stage

Post-class, providing opportunities for students to review and reflect on the learning activities, including collaborative project work with peers

This study focuses on the implementation of the first stage.

Surveys revealed that 81% of elementary school respondents accessed GCR before face-to-face instruction. Challenges encountered in using GCR include the readiness of teaching materials uploaded by teachers, often unprepared when students access them, thereby diminishing their enthusiasm to revisit the platform. Another barrier for elementary students is limited screen time imposed by parents, preventing some from reviewing all the materials on GCR. Additionally, some students feel fatigued by online learning, as experienced during the pandemic. At the elementary level, class managers noted that materials are often uploaded too close to the class time, leading to demotivation. This aligns with findings from open-ended questionnaires to students. The congruence of materials uploaded to GCR with reference books, especially for mathematics, is also a point of student feedback.

For junior high school students, 80% of respondents indicated accessing GCR before lessons began. Challenges for these students include inconsistent availability of teaching materials. Another area for improvement is the simultaneous opening of multiple GCRs, forcing students to choose and potentially neglect some before instruction begins. The quality and comprehensibility of teaching materials on GCR also require enhancement. Notes from class managers relate to several teachers who still need to initiate their GCR lessons.

At the high school level, 82% of students review materials beforehand. Those who accessed GCR before lessons found that the resources provided by teachers facilitated better preparedness. However,

some teachers do not upload teaching materials even three days before the lesson, hindering students' ability to manage their learning independently, as it forces them to study materials from more than two subjects in one evening. High school class managers suggest improvements, including ensuring teachers upload materials well before the day of instruction and avoiding simultaneous assignment deadlines, implying the need for the school to ensure good task management.

Common challenges identified across elementary, junior high, and high school levels include smooth internet access, occasional assignment congestion, and lack of parental support. Considering student engagement in accessing and studying GCR before instruction, a culture of managing learning independently among students begins to form. Nevertheless, further research is needed to determine whether students' ability to self-regulate their learning has improved. Open feedback from some students indicates a growing awareness of their learning needs and the independent selection of better personal learning strategies.

A salient aspect that necessitates advancement is the individualized feedback provided to students. Personalized and immediate feedback is instrumental in aiding students to discern specific areas necessitating improvement and in fostering their capacity for reflection [12][13][14] [15][16][17][18]. This aspect also represents a unique challenge for SIT Nurul Fikri in terms of enhancing the faculty's proficiency in offering constructive feedback and verifying its consistent application.

V. CONCLUSION

Implementing the Flipped-Classroom Concept (FCC) as a foundation for developing Self-Regulated Learning (SRL) and learning skills represents SIT's strategic initiative in response to future effectiveness and the advancements in the digital era. This research has yielded data indicating the emergence of a culture of independent learning management among students, evidenced by their engagement with and study of materials on Google Classroom (GCR) prior to instructional sessions. The data shows that 81% of elementary, 80% of junior high, and 82% of high school students open and study teaching materials through GCR before classroom instruction begins. Common challenges include the unavailability of teaching materials well before learning days, concurrent assignment overload, and the absence of materials for certain subjects, all of which can potentially demotivate students. Noteworthy observations from class managers that warrant policymakers' attention include teachers' need to prepare materials well ahead of lessons, the

institution's task management to prevent assignment accumulation, and ensuring that all educators upload their teaching materials well before instruction commences.

The implications of this research are the need for policy reforms to guide the implementation of GCR, ensuring communication with parents to assist students in at-home learning, and training students to learn independently.

The subsequent steps following this research include measuring whether the application of FCR using GCR can effectively stimulate students' abilities to regulate their learning independently..

REFERENCES

- [1] Y. C. Cheng, "New Paradigm for Re-engineering Education," *Springer*, vol. 6, 2005.
- [2] M. Fullan, *The New Meaning of Educational Change (5th ed.)*. Teacher College Press, 2016.
- [3] M. Boekaerts, "Self-regulated learning: Where we are today," *Int. J. Educ. Res.*, vol. 31, no. 6, pp. 445–457, 1999.
- [4] J. P. Allen and R. K. W. van der Velden, "Skills for the 21st century: implications for education. Researchcentrum voor Onderwijs en Arbeidsmarkt, Faculteit der Economische Wetenschappen," *ROA. Res. Memo.*, 2012, doi: <https://doi.org/10.26481/umaror>.
- [5] P. Curzon, M. Dorling, T. Ng, C. Selby, and J. Woollard, "No Title".
- [6] J. Nouri, L. Zhang, L. Manilla, and E. Noren, "Development of computational thinking, digital competence and 21st century skills when learning programming in K-9," *Educ. Inq.*, vol. 1, no. 1, 2020, doi: <https://doi.org/10.1080/20004508.2019.1627844>.
- [7] Bergman, J. and A. Sams, "Flip Your Classroom: Reach every student in every class every day," *ASCD*, 2012.
- [8] Zimmerman, B. J. and D. H. Schunk, "Motivation and Self-Regulated Learning (D. H. Schunk & B. J. Zimmerman, Eds.). Routledge," 2012, doi: <https://doi.org/10.4324/9780203831076>.
- [9] C. Germeroth and C. Da-Hess, "Self-regulated learning for academic success: how do I help students manage thoughts, behaviours, and emotions?," *ASCD*.
- [10] V. Dignum, "The role and challenges of education for responsible ai," *London Rev. Educ.*, vol. 19, no. 1, pp. 1–11, 2021.
- [11] Novak, J. D. and D. B. Gowin, "Learning How To Learn," 1984.
- [12] Coren, S. and B. A. Farber, "A qualitative investigation of the nature of 'informal supervision' among therapists in training," *Psychother. Res.*, vol. 29, no. 5, pp. 679–690, 2019, doi: <https://doi.org/10.1080/10503307.2017.1408974>.
- [13] I. A. James, D. Milne, and R. Morse, "Microskills of Clinical Supervision: Scaffolding Skills," *J. Cogn. Psychother.*, vol. 22, no. 1, pp. 29–36, 2008.
- [14] S. Garton, "Histories of Sexuality : Antiquity to Sexual Revolution," *Hist. Sex.*, Dec. 2014, doi: [10.4324/9781315710464](https://doi.org/10.4324/9781315710464).

- [15] M. D. Kasa, M. H. H. Mahmood, and M. F. M. Yaakob, "The morale of supervision: The impact of technical supervision skills of teaching and learning on teachers' self-efficacy. ... of Criminology and," 2020. [http://irep.iium.edu.my/88246/2/88246_The morale of supervision.pdf](http://irep.iium.edu.my/88246/2/88246_The%20morale%20of%20supervision.pdf)
- [16] R. J. Marzano, T. Frontier, and D. Livingston, "Effective Supervision: Supporting the Art and Science of Teaching," *ASCD*, 2011.
- [17] K. Russell, "The art of clinical supervision: Strategies to assist with the delivery of student feedback. Australian Journal of Advanced Nursing, The.," 2019, doi: <https://doi.org/10.3316/ielapa.308959001248800>.
- [18] I. Tewfik and S. Tewfik, "Research supervision: Training, process and experience. World Sustainable Development Outlook 2007," 2017, doi: <https://doi.org/10.4324/9781351280242-5>.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

