Jurnal Pendidikan Generasi Nusantara (JPGenus)
Vol. 3, No. 2, pp. 205-210
E-ISSN: 3025-3055
DOI: https://doi.org/10.61787/xxtj3181

The Use of Chromebooks to Support Flipped Classroom Learning in English Lessons: A Descriptive Qualitative Study

Sri Sulis Kurniawati
Universitas Muhammadiyah Surakarta
***Correspondence Author Email**: *s400230026@student.ums.ac.id*

Abstrak: Perkembangan teknologi informasi telah mendorong munculnya berbagai inovasi pembelajaran di bidang pendidikan. Salah satu upaya pemerintah untuk meningkatkan mutu layanan pendidikan adalah dengan memberikan bantuan peralatan teknologi informasi dan komunikasi (TIK) kepada setiap sekolah berupa perangkat pendukung pendidikan. Oleh karena itu, pemerintah kota Madiun memberikan fasilitas berupa chromebook kepada siswa sekolah dasar dan sekolah menengah pertama di seluruh Kota Madiun. Hal ini sejalan dengan program Dinas Pendidikan dan Kebudayaan Madiun, yaitu Mewujudkan seluruh sekolah di Madiun menjadi sekolah rujukan Google dan tidak ada lagi sekolah yang tertinggal dalam rangka mewujudkan pendidikan berbasis teknologi, dalam hal ini pemanfaatan Chromebook. SMP Negeri 9 Madiun menggunakan media pembelajaran berupa Chromebook untuk merangsang motivasi belajar siswa Bahasa Inggris. Penelitian ini bertujuan untuk mengetahui sejauh mana pengaruh penggunaan media pembelajaran Chromebook terhadap motivasi belajar siswa di SMP Negeri 9 Madiun.

Kata kunci: Chromebook, flipped classroom, Google Classroom, pembelajaran Bahasa Inggris

Abstract**:** *The integration of technology in education has become essential in the digital era, including the use of Chromebooks in English learning. This study aims to describe the implementation of a flipped classroom model supported by Google Classroom using Chromebooks at SMPN 9 Madiun. This research employed a descriptive qualitative approach with data collected through documentation, observation, and questionnaires. The findings indicate that Chromebooks facilitate learning accessibility, support student participation, and encourage independent learning before classroom activities. In addition, Google Classroom enables teachers to manage assignments and learning interactions more effectively. Overall, the integration of Chromebooks within the flipped classroom model enhances students' motivation and engagement in English learning.*

Keywords*: Chromebook, flipped classroom, Google Classroom, English learning*

Submission History:
Submitted: November 22, 2025
Revised: November 28, 2025
Accepted: November 29, 2025

INTRODUCTION

Technological developments impact human life, including social and economic aspects, the speed and ease of accessing and disseminating information, and changes in how work is streamlined. Both now and in the future, the Indonesian nation must be able to face fierce global competition. Therefore, a generation of Indonesian children with high competitiveness and strong skills is needed. Many things can be done to meet these needs. One of the things that must be prepared is strong intellectual abilities and adeptness in using technology (Ghufron, 2018).

In the educational sector, particularly in schools, learning systems need to be updated to reflect current needs. Learning methods, encompassing various formulations ranging from organizing teaching materials and delivering strategies to managing

Jurnal Pendidikan Generasi Nusantara (JPGenus)
Vol. 3, No. 2, pp. 205-210
E-ISSN: 3025-3055
DOI: https://doi.org/10.61787/xxtj3181

activities, taking into account student objectives, challenges, and characteristics to achieve effective, efficient, and engaging learning outcomes, must be improved and adapted (Syamsuar & Reflyanto, 2019).

Especially in terms of learning effectiveness, many learning media are offered by education experts. One such medium is the Chromebook. Chromebooks are a type of hardware technology that can be integrated to support effective learning. The Chromebook operating system (OS) uses Chrome-OS, developed directly by Google Education. There is no local storage on the Chromebook; everything is linked to the Google account. This allows for smooth and controlled operation within a single master account, in this case the school's master account, which is systemized and connected to all student devices. This combination of Google services and Chromebooks is what gives them their added value over other types of technology and devices (Bonheur, 2018).

On the other side, a model that can be used is the flipped classroom. A flipped classroom is a learning model in which students first study the material at home before attending class, following assignments given by the teacher. This method is also used by teachers when students are absent from class for some reason. Teachers can create videos of their lessons and share them with those who are absent. This model is suitable for optimizing limited classroom time and also trains students to manage their time effectively. This model fosters students' critical thinking, collaborative skills, communication skills, and creative/innovative thinking.

Meanwhile, Google Classroom can be an alternative to face-to-face virtual classes, which is popular due to its relative ease of use and its connection with other Google Apps for Education. Therefore, virtual classes in Google Classroom can be a solution to increase learning effectiveness (Nainggolan & Manalu, 2021). Google Classroom is an application created by Google that aims to help teachers and students organize classes and communicate with students when they are unable to meet without being tied to a classroom schedule. Furthermore, teachers can assign assignments and grade students directly. E-learning is a method of learning that utilizes internet technology to enhance the learning environment, offering a wealth of content and a broad scope. E-learning is the use of internet-based learning media to deliver a series of solutions that can improve knowledge and skills.

METHOD

The conceptual framework in this study aligns with the research method used. This research method uses a qualitative descriptive approach. Learning is considered effective if it achieves the desired targets, both in terms of learning objectives and optimal student learning achievement. Several indicators of learning effectiveness exist, namely: (1) achieving learning mastery, (2) achieving student activity effectiveness, namely achieving the ideal time students use to carry out each activity contained in the learning implementation plan, (3) achieving the effectiveness of the teacher's ability to manage learning, and (4) positive student responses to learning (Sinambela, 2008).

Data Collection Techniques

Jurnal Pendidikan Generasi Nusantara (JPGenus)
Vol. 3, No. 2, pp. 205-210
E-ISSN: 3025-3055
DOI: https://doi.org/10.61787/xxtj3181

The instruments used in this study are designed to meet all indicators of learning effectiveness. The first indicator is the achievement of learning completion, which is measured through documentation. The documentation consists of student learning outcome data, particularly assignment grades obtained during the learning process. This information serves as the primary basis for evaluating whether students have met the expected competency standards.

The second indicator relates to the effectiveness of student activities, which is assessed through the extent to which students achieve the ideal time allocation for each activity listed in the lesson plan. The instruments used include documentation, observation sheets, and questionnaires. Documentation is obtained from the teacher's lesson plan prior to instruction. Observation sheets are completed during classroom activities and later compared with the prepared lesson plan and syllabus to analyze student engagement. Questionnaire items are compiled to gather additional insights into students' participation and activity patterns.

The third indicator concerns the effectiveness of teachers' learning management skills, complemented by an assessment of student responses to learning using Chromebooks. Teacher effectiveness is measured through documentation, observation sheets, and questionnaires, with documentation taken from the lesson plan and observations focusing on how classroom practices align with the planned activities. Student responses are collected using a questionnaire adapted from Lenora Ann Bostic's (2017) study, *Chromebooks as Learning Tools in the Science Classroom*, to capture learners' perceptions of the use of Chromebooks as learning tools.

RESULT AND DISCUSSION

Chromebook

In short, a Chromebook refers to a laptop running Google's Chrome OS (John, 2016). To clearly differentiate between Chromebooks and traditional laptops, two facts need to be examined. The first is that Chromebooks use a unique operating system—Chrome OS. Chrome OS is a Google product derived from modifying Chromium OS, an open-source project available for anyone to access, modify, and build upon. Both operating systems share the same code base; however, Chrome OS has more additional features and is supported by Google through its automatic update program. It only runs on hardware specifically optimized for improved performance and security.

Chrome OS is not available for purchase on a disc to install or download from the internet, although developers working in the technology field have created alternative methods for doing so (Chromium, 2020). The only way for the general public to use the operating system is to purchase a Chromebook with Chrome OS preinstalled by an original equipment manufacturer (OEM). Saran defines the uniqueness of Chromebooks in another way in his paper, stating that the operating system, Chrome OS, "is a Linux-based operating system that relies on cloud-based applications with the Chrome browser as its primary user interface" (Saran, 2018).

Jurnal Pendidikan Generasi Nusantara (JPGenus)
Vol. 3, No. 2, pp. 205-210
E-ISSN: 3025-3055
DOI: https://doi.org/10.61787/xxtj3181

Additionally, Chromebooks typically lack a large number of local applications or software, as well as local storage, as they are designed to be accessed via the internet (Saran, 2018). Initially not designed for recreational use, Google later developed Google Apps for Education (GAFE), a suite of web-based software for Chromebook users.

Using this type of operating system has many benefits. The first advantage is that Chromebooks require minimal hardware specifications due to their lightweight operating system, which also means they have fast system upgrade speeds. Chromebooks don't need the latest processors to function (Bonheur, 2018; Demski, 2002). Furthermore, Chrome OS doesn't have local storage. Therefore, it's free from large software programs, which in turn helps improve the overall performance of Chromebooks (Bonheur, 2018). One student simply opens the lid and logs into their Google account, while another student from another class can log in on the same Chromebook without missing a beat because everything is cloud-based and downloadable while connected.

The low cost of hardware has limited Chromebooks' ability to run resource-intensive software programs. In other words, professional users such as animators or graphic designers may struggle to use Chromebooks for their work because they are not powerful enough for heavy-duty workloads, such as 3D modeling and high-definition film production (Bonheur, 2018). However, Chromebooks are suitable for light-duty educational tasks.

Chromebooks have become their educational technology of choice because their need for integration with Google Apps for Education is met by using Chromebooks in the classroom. Students are automatically authenticated to all GAFE applications, such as Google Docs for word processing; Google Slides for giving presentations; and Google Forms for students to create quizzes with each other. Furthermore, all of these applications. Web-based, which is completely different from traditional software programs. First, user data is stored over time; thus, there is no need to worry about losing progress. For example, a student can click the Google Docs icon if their assignment is to write a short essay, and the next second a new browser window will appear on their screen because Google Docs is not a locally stored program; rather, it is more like a website where students can perform word processing (Demski, 2002).

Flipped Classroom Learning

The flipped classroom is an educational technique consisting of two parts: interactive group learning activities inside the classroom and direct computer-based individual instruction outside the classroom.

Kathleen Fulton (Fulton, 2012) lists the following among the advantages of the flipped classroom: (1) students move at their own pace; (2) doing homework in class gives teachers better insight into students' learning difficulties and styles; (3) teachers can more easily update and adapt the curriculum and deliver it to students 24/7; (4) class time can be used more effectively and creatively; (5) teachers use the method to report on improvements in student achievement, interest, and engagement; and (6)

Jurnal Pendidikan Generasi Nusantara (JPGenus)
Vol. 3, No. 2, pp. 205-210
E-ISSN: 3025-3055
DOI: https://doi.org/10.61787/xxtj3181

learning theory supports the new approach. Not surprisingly, this teaching model also raises concerns among higher education professionals in China.

A flipped classroom is a student-centered learning model designed to improve learning effectiveness. In the past, educators generally used a lecture-based learning model, reflecting teacher-centered learning. Learning has since shifted to an alternative model called the flipped classroom. The flipped classroom is a learning model that minimizes direct instruction while maximizing one-on-one interaction. This strategy utilizes technology to support additional learning materials for students, accessible online and offline, anytime and anywhere.

The flipped classroom model reverses or interchanges what is typically done in class and what is typically done as homework. Previously, students came to class to listen to the teacher's explanation, then went home to work on practice problems. Now, students read the material and watch instructional videos before coming to class, then begin discussing, exchanging knowledge, and solving problems with the help of other students and the teacher. This helps students develop procedural fluency when needed, inspires them, and helps them with challenging projects by providing greater control over their learning (Johnson, 2013).

Google classroom

According to Google's official website, there are several benefits of Google Classroom: 1) Easy setup. Teachers can organize classes and invite students and teaching assistants. On the Classwork page, they can share information—assignments, questions, and materials. 2) Save time and paper. Teachers can create classes, assign assignments, communicate, and manage them, all in one place. 3) Better management. Students can view assignments on the Assignments page, in the class stream, or in the class calendar. All class materials are automatically saved in a Google Drive folder. 4) Improved communication and feedback. Teachers can create assignments, send announcements, and start class discussions in real time. Students can share materials with each other and interact in the class stream or via email. Teachers can also quickly see who has and who hasn't completed assignments, and provide grades and feedback in the real time. 5) Works with the apps you use. Classroom works with Google Docs, Calendar, Gmail, Drive, and Google Forms. 6) Affordable and secure. Classroom is free for schools, nonprofits, and individuals. Classroom contains no ads and never uses your content or student data for advertising purposes (Google, 2020).

CONCLUSION

Based on the research results in the previous chapter, it can be concluded that learning mastery has been achieved with an average score of ≥ 75, and the effectiveness of student activities has also been met with a score of 75.2%. In addition, teachers' effectiveness in managing learning has been achieved, supported by positive student responses reflected in an effectiveness score of 77.6%. Furthermore, the use of Chromebooks at SMPN 9 Madiun as a media tool in implementing flipped classroom

learning based on Google Classroom e-learning in English lessons has proven to be effective.

REFERENCES

Abas, S., & Reflyanto. (2019). *Pendidikan dan tantangan pembelajaran berbasis teknologi informasi di era revolusi 4.0*. Kurikulum Teknologi Pendidikan Fakultas Ilmu Pendidikan Universitas Negeri Padang.

Abd. Syakur, Sugirin, & Widiarni. (2020). The effectiveness of English learning media through Google Classroom in higher education. *Britain International of Linguistics Arts and Education (BIoLAE) Journal, 2*(1), 475–483.

Akçayır, G., & Akçayır, M. (2018). The flipped classroom: A review of its advantages and challenges. *Computers and Education, 126*, 334–345. https://doi.org/10.1016/j.compedu.2018.07.022 *(jika ada DOI—opsional, jika tidak, tetap boleh tanpa)*

Alfageh, D., & Alkarzon, A. (2020). Elementary teacher perceptions about Chromebook technology use in the classroom. *International Journal of Arts Humanities and Social Sciences Studies, 5*(6), 9–17.

Amka. (2020). *Efektivitas guru pendidikan khusus (GPK) sekolah inklusif*. CV Penerbit Anugrah Jaya.

Bonheur, K. (2018). *Advantages and disadvantages of Chrome OS | Version Daily*. https://www.versiondaily.com/advantages-disadvantages-chrome-os/

Bostic, L. A. (2017). *Chromebooks as learning tools in the science classroom* (Master's thesis). Montana State University.

Carney, A. (2015). *Differentiation in the classroom using Chromebooks and Google applications* (Honors thesis No. 192). University archive.

Demski, J. (2002). The hard(ware) choice: Chromebooks? Android tablets? Chromebooks? Netbooks? Laptops? Technological Horizons in Education, *39*, 28.

Departemen Pendidikan Nasional. (2008). *Kamus Besar Bahasa Indonesia*. Pusat Bahasa.

Fathoni, A. (2011). *Metodologi penelitian dan teknik penyusunan skripsi*. PT Rineka Cipta.

Fulton, K. (2012). Upside down and inside out: Flip your classroom to improve student learning. *Learning & Leading with Technology, 39*(8), 12–17.

Google. (2020). *Tentang Classroom — Bantuan Classroom*. https://support.google.com/edu/classroom/answer/6020279?hl=id

Johnson, G. B. (2013). *Student perceptions of the flipped classroom* (Master's thesis). The University of British Columbia.

Kemdikbud. (2020). *Flipped classroom model: Solusi bagi pembelajaran darurat Covid-19*. https://www.kemdikbud.go.id/main/blog/2020/07/flipped-classroom-modelsolusi-bagi-pembelajaran-darurat-covid19

Nainggolan, A. P., & Manalu, R. B. B. (2021). Pengaruh penggunaan Google Classroom terhadap efektivitas pembelajaran. *Journal Coaching Education Sports, 2*(1), 17–30.

Saran, C. (2018). Chrome OS: Why it may be time to approach desktop IT in a different way. *Computer Weekly*. https://www.computerweekly.com/feature/Chrome-OS-Why-it-may-be-time-to-approach-desktop-IT-in-a-different-way