Effectiveness Assessment Portfolio in Science Subject Based on Google Form for Students Tanjung Harapan Elementary School

Yosua William Triutama[1,] Lukman[2*,] Hasdin[3]
Tadulako University, Indonesia[1]
Tadulako University, Indonesia[2]
Tadulako University, Indonesia[3]
Corresponding Email: lukman230796@gmail.com*

Abstract

One of the implementations of the right technology in education is the development of digital assessment, such as utilizing Google Forms to support the learning process. Assessment is an integral part of learning and functioning as a tool For measuring and assessing students' understanding and development. Many assessment methods used are portfolios, namely gathering work or documents that reflect the participants' abilities, knowledge, and achievements during the learning process. Formulation problem in study Why assessment portfolio Google form based must conducted on students class V SDN Tanjung Harapan, how implications or impact from implementation assessment portfolio based on Google form. Research purposes: To describe the implications or impact of the implementation assessment portfolio based on Google Forms. The research method used by the researcher is descriptive qualitative research. The descriptive method examines the status of a group of human, an object, a set of conditions, a system of thinking or a class of events in the present. Research results Based on Interviews with the science subject teacher, head school, and students Grade V SDN Tanjung Harapan results study This At the time carry out observation, shows that power educators, especially eye teachers lesson Knowledge Natural and Social Sciences (IPAS), experienced obstacle to participant students who have not to understand about How use of google form. Research conclusion An assessment portfolio is a procedure for collecting information regarding the development and capabilities of participant education through its portfolio, where information collection is done formally using specific criteria for objective decision-making regarding participant status.

Keywords: Assessment Portfolio, Science Lessons, Google Form

Introduction

Progress information and communication technology (ICT) has bring change significant in various aspect life, including education. Integration technology to in the learning

process Already become need urge For increase effectiveness and efficiency education, in particular face challenge 21st century (Salim, 2024) . One implementation of the right technology in education is developing digital assessmen, such as Utilization of Google Forms for support the learning process. Assessment is an integral part of learning and functioning as tool For measure and assess understanding and development students. Many assessment methods used is portfolio, namely gathering work or document that reflects abilities, knowledge, and achievements participant educate during the learning process (Karenga et al., 2025) .

Based on results observation while by the researcher on duty as a teacher or guardian class on class study here, we conclude that student 5th grade at SDN Tanjung Harapan partly big Not yet capable in describe A object in a way written. Most students still experience difficulty when asked to explain an object with words. For describing flower roses, for example, they only write some simple words without explaining shape, color, or characteristics typical other (Hermawati & Yulianto, 2025) . Although capable of observing objects well, many students still struggle to pour what they look to in coherent and clear writing form. Difficulty This make them often feel not enough to believe themselves moment do task write, so that need approach more learning support development skills they in a way gradually (Aulia et al., 2024) .

Through implementation assessment portfolio, teachers can help student increase ability they with a better way structured and sustainable. With gather various results task from time to time, good in written form, images, or reflection, teachers can see development ability student in describe object. Bait return given in a way periodic in portfolio also allows students to understand the lack of them and learn For repair skills gradually. In addition, the assessment portfolio give room for student For evaluate Alone progress them and increase their sense of trust self in write more description Good along time (Ariani et al., 2024) .

Evaluation portfolio can also used by teachers for track development students, based on results test and the learning process. However, doing assessment portfolio with traditional methods often faces constraints like time required For review, difficulty in arranging documents, and inefficiencies in giving bait come back (Triwibowo et al., 2024) . There are several benefit using Google form in assessment portfolio. Google form can increase efficiency review with reduce time required for manual review. In addition, students become more enthusiastic because of the convenience of access and flexibility in completing assignments. Google form allows student upload document, answer question reflection, and acceptance input direct from the teacher in one integrated platform (Riasri et al., 2025) . Features This help make evaluation more organized and provide interactive experience for students.

Evaluation digital portfolios enable teachers to provide bait back more structured, so that student can more understand its weaknesses. In addition, Google forms also provide ability For analyze the collected data automatically, making it easier for teachers to identify trends and patterns activity student. Integrating technology to the evaluation portfolio increases efficiency administration and provides more outlook for teachers in the assessment process portfolio student (Marisa, 2025) .

Use of Google forms in evaluation based on project increase involvement students. Thanks friendly interface users, students feel more motivated For participate in portfolio. Teachers also reported that The flexibility of Google Forms allows them to personalize tool evaluation based on need for every student, creating more personal learning (Adhistyananda, 2025) .

Implementation assessment portfolio based on Google form instead without challenges. In some case, obstacle technical like availability digital devices and internet connectivity become obstacle main, especially in environments where access is limited to technology limited. In addition, training is required to help teachers improve their skills in using Google forms effectively (Hapsan & Muthahharah, 2024) . Teachers also need to understand principles evaluation portfolio so that can to design appropriate tools with need Study students. Digital transformation through platforms such as Google forms can change method learning become more adaptive, effective and enjoyable for student (Hudaidah et al., 2024) . Student more enthusiastic in finish task portfolio Because have freedom For access and complete task the through digital devices. In addition, teachers said the assessment process has become more efficient and that they have more time To teach students. However, several obstacles need to be overcome, such as low level digital literacy among students and teachers, as well as the need for adequate infrastructure (Prasetyo, 2025) .

Phenomenon This show importance study more carry on about development and implementation evaluation portfolio Google form based in school base (Zain, 2024) . Research This aiming For identify necessary steps. To develop an effective portfolio, analyse obstacles faced during implementation, and assess the impact on motivation and results Study students. Therefore, the result of this study is expected to contribute positively to the development of assessment models based on technology in the environment education base (Wangi & Haryani, 2025) .

Literature Review

Assessment Portfolio

A portfolio assessment is an approach in assessing student performance or used to assess performance. The advantages of portfolio assessment are that it provides opportunities for students to be more actively involved, and students themselves can easily control the extent to which they have achieved progress in their abilities. Thus, students will be able to conduct self-assessments. The ability to find their own strengths and weaknesses and use these strengths to overcome weaknesses is an important asset in the teaching and learning process. (Azizah & Hidayat, 2024) .

Portfolio assessment indicators are criteria or benchmarks used to assess students' work collected in the form of a portfolio. Portfolios can include assignments, projects, written works, reports, reflections, and other forms of learning evidence. Here are some commonly used portfolio assessment indicators:

1. The completeness of document

   All requested assignments/works have been included in the portfolio. There is a clear sequence or systematic presentation.

2. Quality of Work

   The work shows a deep understanding of the concept, the work has originality (not plagiarized), the presentation is neat and in accordance with academic standards.

3. Relevance to Learning Objectives

   Each work supports the achievement of basic competencies. There is a relationship between portfolio content and learning indicators.

4. Consistency and Development

   There is a visible development in skills or understanding from time to time, Reflections or notes of improvement indicate continuous learning.

5. Self Reflection

   Students are able to evaluate the strengths and weaknesses of their work. Reflection reflects learning awareness and improvement plans.

6. Originality and Creativity

   The work shows a creative approach or solution. There is no indication of plagiarism.

7. Format and Language Compliance

   Using an appropriate writing or presentation format, the language used is clear, communicative, and in accordance with the rules. (Ladyawati et al., 2025)

Science Lessons

IPS examines a set of events, facts, concepts, and generalizations related to social issues. At the elementary school/MI level, the IPS subject includes geography, history, sociology, and economics. Through the IPS subject, students are directed to become democratic and responsible Indonesian citizens and world citizens who love peace (Pangestu & Fahruddin, 2024) . Learning Natural and Social Sciences (IPAS) IPS is one of the sciences that studies the collection of human life in society.

Shaver in (Nursiani et al., 2025) stated that there are at least 3 (three) views or assumptions regarding the meaning of social studies education, namely:

1) Assuming that social science lessons implemented in the teaching and learning process such as geography, history, economics, and sociology must be taught according to the structure and method of social scientific thinking. This assumption or view is a combination of several social science disciplines with civic values that will only confuse because good civic values are a by-product and will emerge by themselves from the experience of learning social sciences.

2) Assuming that social science lessons in schools should not be similar to the organization of disciplines in universities. It is not the understanding of social scientists' concepts and methods of thinking that is important. Therefore, this group emphasizes that social science lessons in schools should be integrated and contain selected materials from various disciplines and from society to be presented in class.

3) Assuming that the sciences in schools are a simplification of the social sciences for educational purposes.

Google Form

Google form is one of the component *google docs.* Application this is a perfect fit For students, teachers, lecturers, employees happy office and professional make quizzes, forms and online surveys. Functions Google *forms* for education is as following :

1) Give task exercise or online exam via page *online website,*

2) Gather other people's opinions through *website,*

3) Collecting student data or teacher through page *website,*

4) Make form online registration for school,

5) Share questionnaire to people in general *on line.*

That matter almost similar with opinion Tusyantari in Febriyanti (2022) There are several function Google *forms* for education is as following :

1) Give task online practice / test via website page,

2) Gather other people's opinions through website page,

3) Gather various student / lecturer data through page website e

4) Make form online registration for school,

5) Share questionnaire to people online.

Referring to from various opinion on can explained that function from *Google forms* include:

1) Give task or assessment *online* via *website.*

2) Collecting other people's opinions through page *website.*

3) Gather some student /teacher data through page *website*

4) Make form registration *online* for school.

5) Share questionnaire to people in general *on line.*(Assa'diy et al., 2024)

Research Method

Research methods used by researchers, namely, descriptive qualitative research methods. Descriptive method is a method in examine the status of a group human, a object, a set of conditions, a system thinking or a class events in the present (Sugiyono:2022:22). Mentioning that as for objective from study descriptive qualitative This that is For get overview, description from a the phenomenon being studied so that can be withdrawn accurate conclusion. Research is implemented to interact with the place to be observed directly. Researchers do observation, searching, recording, and digging related sources with research that will be done in the environment school to get results. This can require a true research method that will allow the researcher to answer.

Result

Assessment portfolio based on google form done on students class V in the learning process will walk Good if component system learning will function optimally. As for the components from system learning is objectives, materials, methods, media, assessment participant students and teachers. Assessment is one of the components that impact the learning process. Assessment is component main in the learning process that becomes part strategic For know accuracy in the learning process and aiming For know level achievement in objective learning and seeing effectiveness of the learning process. Assessment in an educational program own important position besides curriculum and learning process. Efforts that can increase quality education can be seen from quality learning and systems evaluation.

Learning process the longer it changes follow development of the times, remembering that the times are getting better proceed Likewise the learning process. Learning media is also increasingly updated and contemporary, rated more effective and easily used. Media such as Google Form is one of them. used as tool alternative For see results Study students at school. Assessment authentic is activity evaluate participant education that emphasizes process and results with various instrument customized assessment with demands competencies in the standard competence or competence this and competence basis.Assessment authentic is gathering tasks meaningful and interesting, rich in context, in which students apply knowledge and skills, and display tasks the in new situation. Tasks authentic help students finish the problems they will face in the future.

Implications impact from implementation assessment portfolio based on google form which is implemented in class V SDN Tanjung hope Assessment portfolio is evaluation based on class to a bunch work participant structured education in a way systematic and organized approach taken during the learning process in period time specific, used by teachers and participants educate For monitor development knowledge, skills and attitudes student in eye lesson certain. Assessment portfolio is gathering work participant education that is arranged in a way systematic and organized as results from business learning that has been he did in term time certain.

Use portfolio in see interest Study offer a number of advantages. First, the method This gives chance for student For in a way active involved in the learning process, encourage critical thinking, and develop skills at a high level. Second, the assessment portfolio allows students to reflect and evaluate works alone, deepen their understanding of materials, and develop metacognitive ability. Third, teachers can see development student from time to time, giving bait back more specific, and design appropriate intervention For increase achievement students. Curriculum independence in design For optimize results Study according to students' needs. Curriculum independence matters for students and teachers. So that in its implementation there is one of the obstacles in implementation evaluation portfolio.

Based on results Interview with the Head school, science teachers, and students Class V Assessment portfolio is evaluation based on class to a bunch work participant structured education in a way systematic and organized approach taken during the learning process in period time specific, used by teachers and participants educate For monitor development knowledge, skills and attitudes participant educate in eye lesson certain. A gathering work participant will be educated with Meaning selected specific and integrated according to specified guidelines. Guides That diverse depends on the eyes lessons and objectives evaluation portfolio. Learning model This every portfolio containing work selected from One class participant educate in a way the whole thing works in a way cooperative selecting, discussing, searching for data, processing, analyzing and searching breakdown to a the problem being studied.

Discussion

Portfolio is gathering results Work participant meaningful education that showsefforts, progress and achievements participant educate in one field or more. Where is the collection the must load participation participant educate in choose materials, criteria selection, criteria For determine values and evidence from reflection self-participant Educate. Assessment portfolio different with approach other assessments. Approach assessment portfolio is a approach purposeful assessment measure how far is the ability participant educate in build and reflect a job / task or work through collection of relevant materials with goals and desires built by participants educate, so that results development the can assessed and commented on by the teacher in period certain (Nuryanto et al., 2024) .

Many sources means with existence portfolio allow For evaluate various type proof that is What only one will assessed (can be in the form of images, designs, journals, audio and video recordings), in addition to it also includes statements and observations participant students, teachers, parents, and members society. Every evidence collected must be original that is reviewed from context and also fact must each other related One each other, of course If rated must related with teaching programs, standards competence, competence the basis and indicators you want achieved. Portfolio nature dynamic It means portfolio related with development and change, where matter This seen from evidence collected participant educate consists of from various stages, not only the best evidence only, besides it is a collection process

proof in progress during the learning process in progress No only gather at the end when the teacher will do evaluation (Setiawati & Susanti, 2025) .

Evaluation portfolio that will applied its nature must clear, namely all objective learning in the form of competence basis and indicators must stated with clear and also necessary put forward how is the process can ongoing. The implemented portfolio should can connecting the programs that are running participant educate in class with life real, so that participant educate own ability connect between the knowledge they have have with everyday reality they meet in life. Use portfolio No only assess and compare participant educate with others, but also must can to hook between the evidence they have collect with standard competence, competence basic, and indicators achievement results learn, so that can create a sense of belonging to evidence collected and can be give optimal results and more good. Applied portfolio refers not only to the standard competence, competence basic, and indicators achievement results learn, but also to various purposes, for example, a number of indicator achievement results Study.

Google form is a feature from google for send form registration ". Another opinion from Tusyantari Google form is one of the services from google for making online form and for collecting data, comments that can be arranged using spreadsheets. From the opinion on so can explained that Google form is one of the application provided by Google for need like survey create a list of questions, quizzes online based content can in the form of question choice double or essay with excess interesting features and can shared via web or social media like whatssapp, facebook besides matter the method making a Google form is quite easy easy with own Google account or register at https://account.Google.com/login (Nasihah, 2024) .

Conclusion

Assessment portfolio a procedure collection of information regarding development and capabilities participant educate through its portfolio, where the collection of information is done formally with use criteria certain, for objective taking decision regarding participant status educate. Google Form is a web -based site with thus everyone can give response or answer to quiz or questionnaire in a way fast anywhere He is at with use computer /laptop or mobile phone internet applications. Therefore, with using this website so a teacher or profession other related with internet no need use paper Again For print quiz or the questionnaire. save time Good inshare, collect back and analyze results quizzes and questionnaires.

References

Adhistyananda, IKR (nd). Problem *Based Learning Civics Learning Module Freedom Subject Matter Get Organized Student.*

Ariani, D., Susongko, P., Kusuma, M., & Fatkhomi, F. (2024). Implementation Assessment in Differentiated Science Learning : Inquiry Study Narrative. *JPMP (Pancasakti Mathematics and Natural Sciences Education Journal), 8* (1), 23–32. https://doi.org/10.24905/jpmp.v8i1.47

Assa'diy, AA, Nahdah, PA, Arzaqi, AF, & Adlan, NM (nd). *Development Strategy Creativity through Learning Based on Project.*

Aulia, SR, Bariyah, C., & Suprobo, H. (nd). *Development of Psychomotor Assessment Strategies and Instruments: A Comprehensive Approach to Improving Learning Quality.*

Azizah, NN, & Hidayat, R. (2024). Development Educational Game -Based Digital Assessment Quizizz on Marketing Subjects. *Journal of Innovation and Teacher Professionalism, 2* (2), 195–209. https://doi.org/10.17977/um084v2i22024p195-209

Dahliani, L. (2023). Learning media growth plant hydroponics use demonstration and discovery learning based Canva App : A Case Study in the Digital Age. *Journal Classroom Action Research, 1* (3), 144–151. https://doi.org/10.61650/jptk.v1i3.295

Hapsan, A., & Muthahharah, I. (2024). *Utilization of Microsoft Sway in Making Presence Interesting.*

Hermawati, V., & Yulianto, S. (2025). Development of Google Sites Website Based Learning Media to Improve IPAS Learning Outcomes on the Material of Sound and Its Properties. *Journal Science Education Research, 11* (2), 654–662. https://doi.org/10.29303/jppipa.v11i2.10277

Hudaidah, H., Safitri, S., Syarifuddin, S., & Pratama, Y. (2024). Mentoring Making Assessment Instruments Independent Curriculum for High School Teachers in Lubuk Linggau City. *AKM: Action to the Community, 4* (2), 601–612. https://doi.org/10.36908/akm.v4i2.969

Karenga, FI, Rizko, U., & Bashith, A. (2025). Analysis Problematics Implementation Evaluation Science learning in Achieving Educational Goals in the Independent Curriculum for Elementary Schools/Islamic Elementary Schools. *Al-Madrasah Journal of Elementary School Education, 9* (2), 533. https://doi.org/10.35931/am.v9i2.4401

Ladyawati, E., Retnosari, IE, Hanindita, AW, Azmy, B., & Susilohadi. (2025). IMPROVING ASSESSMENT FOR LEARNING DESIGN COMPETENCIES FOR ELEMENTARY SCHOOL TEACHERS IN GUNUNG ANYAR DISTRICT, SURABAYA. *PANCASONA, 4* (1), 41–58. https://doi.org/10.36456/pancasona.v4i1.9853

Marisa, DA (nd). *IMPROVING STUDENTS' ACTIVITY, CREATIVITY, AND LEARNING OUTCOMES IN SCIENCE LEARNING ON THE MATERIAL OF EXPLORING OUTER SPACE USING THE PANTING MODEL FOR GRADE VI ELEMENTARY SCHOOL STUDENTS. 01* (01).

Nasihah, SA (2024). *VALIDITY AND PRACTICALITY OF THE RESULTS OF THE DEVELOPMENT OF GOOGLE SITES LEARNING MEDIA BASED ON TEM-PJBL ON INVERTEBRATE MATERIAL IN CLASS X HIGH SCHOOL WITH AN INDEPENDENT CURRICULUM.*

Nursiani, A., Yuline, Y., & Putri, A. (2025). CAREER INFORMATION REVOLUTION: USING YOUTUBE AS INFORMATION MEDIA IN CAREER PLANNING OF GRADE X STUDENTS AT SMA ISLAM BAWARI PONTIANAK. *Journal of Vision of Educational Sciences, 16* (3), 263–273. https://doi.org/10.26418/jvip.v16i3.85421

Nuryanto, N., Nahadi, N., & Yuliani, G. (2024). The Implementation of Electronic Portfolio Assessment in Learning Chemistry through Google Classroom to Increase Students'

Critical Thinking Skills. *AL-ISHLAH: Journal of Education, 16* (2). https://doi.org/10.35445/alishlah.v16i2.4744

Pangestu, RS, & Fahruddin, F. (2024). QUIZZZ MEDIA AS AN ASSESSMENT FOR HISTORY LEARNING IN THE DIGITAL ERA. *PROGRESS OF EDUCATION, 5* (1), 39–43. https://doi.org/10.29303/prospek.v5i1.434

Prasetiyo, E. (2025). *INFORMATION TECHNOLOGY BASED LEARNING DURING THE COVID-19 EMERGENCY: A CASE STUDY AT MUHAMMADIYAH ELEMENTARY SCHOOL, KARANGKAJEN, YOGYAKARTA. 6* (1).

Riasri, NP, Desak Putu Parmiti, & Basilius Redan Werang. (2025). Interactive Project-Based Learning Videos to Improve Student Independence in Economic Activity Material for Grade IV Elementary School. *Indonesian Gender and Society Journal, 5* (2). https://doi.org/10.23887/igsj.v5i2.93237

Salim, M. (2024). *Analysis Utilization Application Online Learning in the Learning Process (Literature Review Study).*

Setiawati, M., & Susanti, L. (nd). *Educational Transformation : An Analysis Implementation Curriculum New Paradigm.*

Siti Zayyana Ulfah, Agus Setiawan, & Rama Wijaya Abdul Rozak. (2025). Utilization of ICT for 21st Century Learning Assessment. *Buana Pendidikan Journal Faculty Teacher Training and Education, 21* (1), 1–13. https://doi.org/10.36456/bp.vol21.no1.a10002

Situmorang, LK, Ayuningsih, P., & Hilaliyah, T. (2025). Evaluation Implementation Independent Curriculum : Challenges and Opportunities. *Indo- MathEdu Intellectuals Journal, 6* (1), 361–372. https://doi.org/10.54373/imeij.v6i1.2366

Sugiyono. 2019. *Research Methods Quantitative, Qualitative and R&D.* Bandung: Publisher Alphabet

Triwibowo, R., Sumardi, L., & Fauzan, A. (2024). Implementation Learning PPKn Based on Independent Curriculum at SMAN 4 Mataram. *ISLAMIKA, 6* (2), 647–680. https://doi.org/10.36088/islamika.v6i2.4620

Wangi, RS, & Haryani, E. (2025). APPLICATION OF DIGITAL STRATEGY MODEL IN STRATEGIC PLANNING OF INFORMATION SYSTEMS IN HIGH SCHOOL. *JIPI (Journal Scientific Research and Learning Informatics), 10* (2), 1232–1243. https://doi.org/10.29100/jipi.v10i2.6186

Zain, MWK (nd). *APPLICATION OF GEOMEDIA TO IMPROVE STUDENTS' SPATIAL THINKING ABILITIES AT SMAN 1 GONDANGLEGI.*