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LITERATURE REVIEW: IMPLEMENTATION OF A BIOLOGY PRACTICAL GUIDE IN THE FORM OF A FLIPBOOK INTEGRATED WITH GUIDED INQUIRY FOR MERDEKA CURRICULUM IN HIGH SCHOOL STUDENTS

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Abstract: A practical activity requires a guide that includes practical objectives, practical processes, tools and materials, and observation sheets for the practical activity. These guides are sometimes referred to as practical guidebooks. In particular, practicum instructors will need to be tech-savvy in the next wave of educational technology. The study's goal is to ascertain how biology flipbooks integrating guided inquiry and practical guidebooks are implemented for high school pupils. A literature review is one of the qualitative research strategies used in this kind of study. methods for choosing literature based on guided inquiry, Flipbooks, Practical Guidebooks, and Keywords. The literature is derived from research findings found on Google Scholar, with a 10-year publication window. A synthetic matrix based on reference sources, sample types, procedures, interventions, and findings is used in the literature study process. The implementation of the practical guidebook in the form of a flipbook for high school students pursuing an autonomous curriculum is found to be highly significant as a learning medium in practical activities due to its ability to support and facilitate the learning process.

Keywords: guidebook, biology, flipbook, guided inquiry

***Abstrak**: Suatu kegiatan praktek memerlukan suatu pedoman yang memuat tujuan praktek, proses praktek, alat dan bahan, serta lembar observasi kegiatan praktek. Panduan ini terkadang disebut sebagai buku panduan praktis. Secara khusus, instruktur praktikum harus paham teknologi dalam gelombang teknologi pendidikan berikutnya. Tujuan penelitian ini adalah untuk memastikan bagaimana flipbook biologi yang mengintegrasikan inkuiri terbimbing dan buku panduan praktis diterapkan untuk siswa sekolah menengah. Tinjauan pustaka adalah salah satu strategi penelitian kualitatif yang digunakan dalam penelitian semacam ini. metode pemilihan literatur berdasarkan inkuiri terbimbing, Flipbook, Buku Panduan Praktis, dan Kata Kunci. Literatur berasal dari temuan penelitian yang ditemukan di Google Cendekia, dengan jendela publikasi 10 tahun. Matriks sintetik berdasarkan sumber referensi, jenis sampel, prosedur, intervensi, dan temuan digunakan dalam proses studi literatur. Penerapan buku panduan praktik dalam bentuk flipbook bagi siswa SMA yang mengikuti kurikulum otonom ternyata sangat bermanfaat sebagai media pembelajaran dalam kegiatan praktik karena mampu menunjang dan memperlancar proses pembelajaran.*

***Kata Kunci:** buku petunjuk, biologi, flipbook, inkuiri terbimbing*

INTRODUCTION

Teachers are given flexibility to design lessons using the Independent Curriculum. This involves getting ready for real-world tasks. One of the key components of the learning process is the practicum. According to Budiarti (2013), practicum exercises are a type of educational presentation in which pupils apply what they have learnt through active experience. Hamidah (2014) asserts that practicum activities, on the other hand, are a teaching approach that can

stimulate students' interest in developing concepts by providing them with firsthand experience witnessing occurrences, which helps them comprehend the concepts being taught.

A handbook comprising practicum objectives, practicum procedures, observation sheets, equipment and resources, and practicum activity observation sheets is required for carrying out practicum activities. These guides are sometimes referred to as practicum guidebooks. According to research by Rizki (2019), practicum activities in schools are carried out with activities where the teacher provides quite specific instructions so that the teacher is involved in some of the planning. These kinds of methods impede students' ability to reach their full potential, including chances for inquiry. As a result, a useful handbook that can focus comprehension and maximize pupils' potential is required.

One way to address the issue of practicum implementation is by the creation of a guided inquiry-based practicum guide book. According to Sanjaya (2013), as all research is scientific in nature, it must be grounded in theory. As a result, students' proficiency in each experiment is essential to their ability to answer all of the problems that arise during the practicum. Hutahean (2019) argues that guided inquiry is used to provide students the freedom to develop the concepts they learn while the teacher serves as a resource and helper to help students avoid failing at addressing problems. In order to practice science process skills, students must create their own activity steps or method to be carried out with the use of accessible material, as the guided inquiry-based practicum guidebook does not give overall activity instructions.

Students will be interested in learning through activities or media that are distinct from what they have previously learnt. According to Daryanto (2014), the utilization of eye-catching visual aids and vibrant teaching materials will inspire students to learn, make it easier for them to comprehend the material being covered, and facilitate their learning. This is consistent with study by Devianti (2020), which suggests that teachers can help children learn by creating an engaging learning environment that offers recommendations and rewards. As a result, learning materials that feature eye-catching visuals and a background of color, as well as those that can easily explain the topics being taught, pique students' interest.

It is imperative that practicum teachers be abreast of technological advancements, particularly in the field of education, particularly in the upcoming era of education. Flipbook's use as a learning tool is one of the technological advancements in education, according to Seamardi (2016). Students that use technology can learn content more thoroughly. Flipbooks are digital books that can be opened and read like regular books or magazines. They are made up of pages with graphics, animation, video, and audio (Humairah, 2022). In particular, Flipbook is an application that may be used to create practice-based tutorials. Without the need to download an application, Flipbook is a web-based program that can transform PDF files into books, brochures, catalogues, magazines, and digital brochures. It can be accessible for free or for a cost (Khomaria, 2022).

Within the Flipbook app Features like adding links, photos, videos, audio, and web content can be utilized to create a Flipbook with the program Flipbook. This can be accessed via a PC or smartphone and has more material from a wider range of sources than printed practicum guides (Saraswati, 2021). The application has a number of features and conveniences that can be used in high school biology classes, among other disciplines.

It is anticipated that students will gain firsthand experience through practical activities in the classroom, which will help the learning materials and activities become more cohesive. The reality on the ground is that the practicum program is still not operating at peak efficiency in schools. A number of factors contribute to this, such as a lack of complete practicum materials, inadequate time allotted for the practicum, and a lack of practicum guides—particularly the Flipbook integrated valid and practical guided inquiry practicum guides—that become barriers to the practicum program's implementation. Thus, the researcher studied the use of a formed Biology Practical Guidebook Flipbook Integrated Guided Inquiry for Independent Curriculum High School Students based on the issues mentioned above.

METHOD

A review of the literature is the method adopted. This study examines how a flipbook integrated guided inquiry biology practicum guidebook is used with high school students. When conducting library research, one must gather data or references on subjects that have been narrowed down through newspaper and bibliography research. Several pertinent keywords are included in a synthetic matrix that is based on reference sources, sample kinds, techniques, interventions, and conclusions in the library study procedure. Using Google Scholar, which limits publications to the last ten years, secondary information is gathered as a reference source for the information collection approach. After then, the data or information is gathered with the intention of preparing it till it can be reported. This paper's information analysis is divided into two sections: the presentation of information and the reduction of information. The goal of information reduction is to facilitate authors' task of organizing data from multiple pertinent sources. The analysis of numerous scientific sources that are pertinent for discussion produced the review's findings and the article's conclusions.

RESULT AND DISCUSSION

The first step in creating a research plan that will be utilized to investigate ideas or professional opinions relevant to the subject under investigation is literature review research. Books, journals, and other publications pertaining to the subject under discussion are good sources for these theories. In addition to serving as a theoretical foundation, this literature evaluation can also be utilized as a guide to conduct fresh research that yields findings distinct from those of earlier studies. Based on reference sources, sample types, study techniques, interventions offered, and conclusions, a total of six research outcomes have been analyzed. Finding and analyzing learning models to enhance reading and writing literacy is the goal of the review process, which is based on data from pertinent prior studies.

Table 1. Journal review

No.	Reference source	Research Title	Research Result
1.	Dinda(2022)	Practical Guide Based on Science Process Skills Using Applications Flipbook Maker	product criteria reach the very category good with an average overall score for material of 3.73 and media of 3.46. This practical guide can be used according to its function.
2.	Andi(2022)	Development of a Guided Inquiry-Based Biology Practicum Guide for Class XI SMA	The success of guided inquiry-based biology practicum supervision is determined by test outcomes learning; 86 students who succeeded receive a complete category score, meaning the completion percentage is 81.13%. This conclusion is based on the research results and discussion.
3.	Eka(2018)	Development of Biology Practical Guide with Guided Inquiry Assisted by Crosswords Vertebrate Animals Material for Class X Sman-2 Kuala Pembuang	Based on the validation percentage value of 77.54% and the practicality value of 92.5%, it can be said that the crossword puzzle-assisted guided inquiry biology practicum guide is appropriate for use as a teaching tool for biology courses.

No.	Reference source	Research Title	Research Result
4.	Yesi (2022)	Development of a Biology Guidebook on Diffusion and Osmosis Material for Class XI High School Students	According to the study's findings, the biology practicum guidebook that was created received an average score of 87.86% in the extremely valid category throughout its validation. Teachers in the very practical group scored an average of 92.67% on the Biology practicum guidebook's practicality test, whereas students in the same area scored 82.53% on average. Thus, it can be said that the biology practical guidebook that was created is highly reliable and useful for assisting in the learning process.
5.	Seri (2017)	Development of Guided-Based Practical Instructions Inquiry into the Interaction of Living Things with Their Environment	Data from the questionnaire analysis were analyzed by calculating the percentage of practical instructions completed, the percentage of eligibility criteria met (88.3% for material experts, 85% for design experts, and 88.3% for language experts), and the percentage of teacher responses, which fell into the very feasible category at 85%. Ten kids were given the student response test, and they scored between 80% and 91% in the extremely appropriate group.
6.	Rizki (2019)	Development of a Guided Inquiry-Based Practical Guide on the Subject of Plant Structure to Improve the Science Process Skills of High School/MA Level Students	Results of the evaluation of material expert eligibility validation (89%), media expert validation (86%), and language expert validation (97%). This percentage is included in the "Very Appropriate" criteria to be used as an inquiry-based practicum guide book to improve the science process skills of high school/MA students in the area of plant structure. Additionally, response results from small-scale students yielded an assessment of 85%, and the results of the scale assessment area of 87% are stipulated with the "Very Eligible" criteria.

Table 1 makes clear how useful and appropriate the guided inquiry integrated filbook practical guide is for use in the learning process, particularly for practical activities. This is due to the fact that teachers and students may find it simpler to comprehend previously taught theory and apply it to practicum activities with the help of the guided inquiry integrated practicum guide book. A practicum guide book is required to facilitate practicum activities and help students better comprehend the tasks they will be performing. The following are just a few reasons why practicum guides are important: they can serve as a learning tool to enhance learning during experiments,

spark students' interest in practicum activities, and ensure that students understand how to conduct practica and how to prepare practicum reports in an organized manner.

The usage of educational media and the learning process are inextricably linked. If there is supporting media available, the teaching and learning process will function well. It is imperative to provide pupils with dynamic, accommodating, and dialogical media in order to maximize their potential. This is due to the fact that providing students with a variety of media, suggestions, and infrastructure to support the ongoing engagement process will help to maximize their potential. From the standpoint of education, media plays a very important role in determining how well the teaching and learning process goes. Additionally, the media used to teach biology must be diversified and tailored to the subject matter. As a result, while selecting media for the classroom, teachers ought to have some discretion over what is suitable. The capacity to incorporate educational material into lesson plans is a prerequisite for teachers. A medium that can motivate students to comprehend and solve problems and actively involve them is required for the learning process. This will enable students to solve problems on their own and promote student-centered learning, with teachers serving solely as facilitators. To ensure that the teaching and learning process aligns with expectations, educators need to exercise greater creativity in selecting and producing media that is appropriate for the subject matter being taught.

Learning biology is not limited to the classroom. One of the characteristics of biology education is the inclusion of hands-on activities in both natural and laboratory settings. Activities are necessary since many biological ideas are complicated, making it harder for pupils to understand them. Participants receive the chance to experience firsthand what they have learned in theory during their practicum by receiving an overview of the material in authentic settings. In addition, students participating in practical exercises have to do more than just watch; they also need to understand the material, take part in the activity, and take accountability for the outcome. Additionally, laboratory activities help pupils become more attractive or interested, clarify misconceptions, and cultivate critical and analytical thinking in them. They also help connect theory or concepts and practice.

Manuals for guided inquiry-based practica may be one way to solve this. Since every research is scientific, theory must be the foundation of all research. In this kind, the instructor only serves as a facilitator and offers questions through experimentation, research methods, or observation in order to gather information. As a result, the instructor serves as a resource and helper in an effort to prevent students from failing at addressing problems. The overall activity instructions are not presented in the guided inquiry-based practicum guidebook, so students are required to create their own activity steps or procedures based on the material found in the manual. In order to develop science process skills, students are instructed to comprehend the information that is now available.

Flipbooks can be extra features included in conventional books or magazines, typically in the corner of the page, rather than being standalone books. The flipbook creator application can be used to create flipbook media. Using the flipbook maker application, one can turn an e-book display of books or other educational resources into a flipbook-style digital book. Susilana (2008) lists a number of benefits of flipbooks, such as the following: 1) They can be used to communicate learning content in a clear, practical, and easy manner; 2) They can be used in any type of room, closed or open; 3) They are portable and easy to carry about; and 4) They can make learning more engaging and active for students. The researcher will go into further detail regarding flipbook learning media in online learning activities. There are numerous advantages and benefits of using flipbook learning media in this learning activity.

A type of instructional resource known as a flipbook is one that is displayed like an electronic book (e-book). Flipbook learning materials can be created by writing text on the subject, adding intriguing visuals and movies to go along with it, adding intriguing sound effects, and making concept maps, tests, material summaries, and practice questions.

In order to accomplish learning objectives, all learning activities are conducted as part of the interaction process between teachers and students. The activities discussed here actually place

a greater emphasis on the students, as Rochman Natawijaya states in (Depdiknas, 2005: 31) that when students participate in learning activities, an active learning environment is formed. Wahyuningsih and Murwani (2015) assert that a fundamental component essential to the accomplishment of the learning process is the engagement of students in their learning activities. Students will be able to improve their learning outcomes by using activities to help them understand lessons from their experiences. Kenan (2014) asserts that the reason learning activities are important is that they help students achieve good learning outcomes by helping them comprehend the material that is provided. This reasoning leads to the conclusion that all actions included in the learning process are those that students carry out.

CONCLUSION

Because they may support and facilitate the learning process, practical guidebooks in the form of flipbooks integrated with guided inquiry for high school students following an independent curriculum are crucial as one of the learning medium in practical activities. Teachers can implement the guided inquiry learning approach based on the needs and issues of their pupils, with the assistance of the school's infrastructure.

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