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Education in the Era of Social Media Trends: Development of Instagram Feed Learning Media Using Canva on Biology Material

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Abstract

Social media has become an important part that cannot be separated from the education system, not only in Indonesia but throughout the world. This is a change in mindset in learning and sharing knowledge, including Biology. Biology requires students to be able to think at a high level, understand all concepts, and must be able to relate them to natural events or happenings or to other biological concepts. Learning media that can utilize social media is one of the supports for an optimal learning process. Using Canva-based Instagram Feed learning media will make it easier for students to understand and make decisions. This research aims to develop Instagram Feed media via Canva on valid Biology material. The method used in this research is Research and Development (R&D) with the ADDIE model. Stages include Analysis, Design, Development, Implementation, and Evaluation. However, this research only reached the development stage. The products that have been developed are then validated by media experts and material experts. The results show that the learning media developed has an average of 87.00, which means that the Canva-based Instagram Feed media developed is feasible or suitable for use in the learning process.

Keywords: Education, Learning Media, Social Media, Instagram, Instagram Feed, Canva

INTRODUCTION

Global changes directly impact education. As jobs become more complex and technology advances, expectations for workforce capabilities are evolving. To cope with these changes, students must possess the critical thinking skills to examine information and make informed, logical decisions. The application of Biological science in everyday life is crucial for responding to the changes and new challenges that arise in the 5.0 era.(Solihin, et al., 2025) The demands of learning in the 5.0 era for the world of education are to enable students to have the potential to become useful individuals in their living environment (Harahap et al, 2020).

One science that is very useful in the environment is Biology (Harahap et al., 2020). Biology is a science taught at the higher education level that is very closely related to everyday life, namely studying all living things and their problems. Biology is a branch of natural science that provides various learning experiences to conceptual ones in understanding and how to manage learning activities on something. Biology has different characteristics from other sciences. Biology material is not only related to scientific facts about a concrete phenomenon but also about abstract objects, such as various types of living creatures that are rarely seen in the surrounding environment or small living creatures that are not visible, as well as the processes that occur in the body of the living creature. Therefore, visualization is needed to illustrate the concepts in the material (Inayah & Harahap, 2024). Apart from time constraints, several problems in carrying out scientific (science) processes which usually occur during practical activities are caused by inadequate laboratory conditions, limited tools and materials, and limited costs (Harahap et al., 2022), Problems found in the learning process can certainly be minimized. One way is through the help of appropriate learning media.

Learning media are tools used by teachers to help students learn, namely by using pictures, graphs, posters, cartoons, comics, and charts or diagrams (Lijina et al., 2018; Iman et al., 2019; Obeso et al., 2023). Learning media will become a tool in teaching and learning activities, making it easier to deliver learning, especially if there are obstacles in delivering material that is difficult to understand, if it is only explained like material in a book (Solihin, Bae, et al., 2025)**.** Media is considered to be able to better represent what is less understandable than just listening to an explanation in the form of words from the teacher in class. Learning media can also help in overcoming limitations of space, time, and sensory abilities (Huda, 2025; Ndung'u et al., 2023).

The presence of media in teaching and learning activities is felt to be quite important. Apart from making it easier to deliver material, the use of learning media also aims to encourage students' interest in learning more deeply, because the process of delivering learning material can be equalized, the learning process becomes clearer and more interesting, the learning process becomes more interactive, time and energy becomes more efficient, the quality of student learning outcomes can be better, students can carry out the learning process flexibly, namely being able to learn anytime and anywhere, helping students to form a positive attitude towards the material and learning process, making teachers more positive and productive role. Thus, students will find it easier to understand learning through the use of media (Iman et al., 2019).

Selecting appropriate media for learning activities is not very easy because it requires good analysis by taking into account several aspects and certain principles in selecting learning media. There are three main principles that can be applied by teachers when determining appropriate learning media, including (1) the principle of effectiveness and efficiency, (2) the principle of relevance, and (3) the principle of productivity. In this 5.0 era, students cannot be separated from gadgets or smartphones, so the use of learning media that is integrated with technology can make learning effective in helping students understand the material and their interest in the learning material (Wu & Tai, 2016). Biology learning makes major contributions and changes to the development of knowledge and technology. The role of the development of integrated digital media in the learning process is a substantial one. Technology will influence the way of education, teaching, and learning. Digital learning media is a favorite of students with the advantage that it can be opened anytime and anywhere, especially in this era where everything is digital-based, so educators or scientists also upload learning materials on digital media. The digital media that is the favorite in learning today is social media. Statistics show over 4.8 billion people use social media (Conog, 2025; Gabrielli, Landy, & Bernstein, 2025). . Students spend a lot of free time on social media.

Social media is a digital platform that facilitates users to interact with each other or share information, activities, knowledge, buying and selling, and others using the internet and web technology. Social media is owned by many users and its users use social media for a long time to spend their free time. One of the social media that is popular with students is Instagram. Instagram is a social network that aims to help its users share photos and videos with other users. In the current era of social media, Instagram is very relevant in sharing and gaining knowledge. Instagram is a type of visual media, graphic media that can be used as a learning medium that is both entertaining and educational (Pothitou, Perifanou, & Economides, 2025; Sari, Prameswari, & Anshori, 2025) which can help students to know the knowledge that will be conveyed and make students understand related information or knowledge. Instagram allows students to learn on their own because it allows students to find their own ideas.

Instagram has several types of content such as feeds, stories, reels, live, etc. Instagram Feed is a type of content that can be viewed at any time. Instagram Feed requires an attractive design to attract potential readers, including the use of colors, images, and layout. The use of Instagram Feed media in the learning process will certainly attract students' interest and improve problem-solving abilities (Naeem, Ozuem, Ranfagni, & Howell, 2025; Yang & Jiang, 2021), make it easier for students to understand complex concepts, and be able to inspire

students to create the same learning media in other materials (Hu, Manikonda, & Kambhampati, 2014), Samson, Fielding, & Collie, 2025). Another advantage of Instagram Feed is that it can be easily accessed via social networks and is also easy to use, cost-efficient, and fast distribution.

Along with advances in technology, Instagram Feed has adapted to become a Canva-based Instagram Feed, namely feeds that are designed or edited in the Canva application. Canva is an online design and visual communication platform or application that can empower people to design anything and publish it anywhere (Afifa et al., 2025). Content or inspiration for Biology material can be designed using Canva as desired so that the Instagram feed becomes more interesting, unique, and neatly arranged which can attract the interest of students or the general public to view it.

Canva-based Instagram Feed is a media that will be developed to help students with problems in carrying out Biology learning activities. Canva-based Instagram Feed is an online learning media. It is hoped that the existence of material content in the Canva-based Instagram Feed being developed can also facilitate students in searching for relevant theories regarding Biology material, making students active and more quickly understanding or capturing material in the learning process to achieve specified learning outcomes.

Biology teacher candidates must be competent and skilled, as well as professional in using and developing digital media Canva and social media such as Instagram Feed as learning media, so that students can easily access and receive material information quickly and accurately. Therefore, valid Canva-based Instagram Feed learning media needs to be developed so that it can be used as an alternative to optimizing students' Biology knowledge.

RESEARCH METHODS

The development of Canva-based Instagram Feed learning media on Biology material is a type of Research and Development (R&D) research using the ADDIE development model in Figure 1. However, this research only reached the Develop stage.

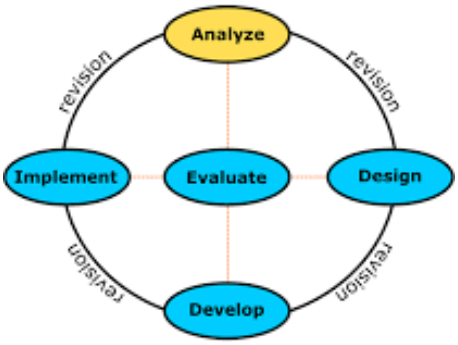


Figure 1. ADDIE development model

RESULTS AND DISCUSSION

Instagram Feed learning media is used as a tool to convey lesson messages. In this learning, it shows the process of communication between students and learning resources. The following are the results of instrument development for each phase.

1. Analyze

Analysis in Instagram Feed is the process of analyzing the elements in Instagram Feed to understand the message, structure, art style, characters, and themes contained therein. Instagram Feed analysis helps readers understand the work more deeply, explore hidden meanings, and appreciate its complexity. This analysis was carried out on Biology lecturers in the form of unstructured interviews regarding student learning activities on Biology material. The teacher said that students were less enthusiastic about some Biology material. Based on interviews conducted with lecturers, student interest in several Biology materials is relatively low, with an average of 78.00. Therefore, a platform is provided to accommodate students' needs in learning Biology in the form of a questionnaire. The results can be seen in Figure 2 below:

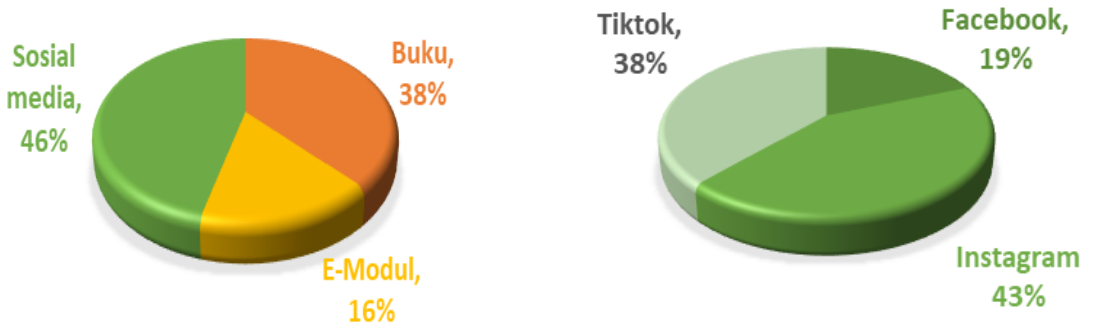


Figure 2. Average student answers

Based on the analysis results, 46% of students chose social media as the most popular learning media. It cannot be denied that generation Z students were born in the era of technology, so it is not surprising that students prefer to study using digital media, where from year to year the development of social media applications is also increasing. A lot of information is obtained from social media so that students increasingly cannot be separated from social media and in the end choose social media as a learning medium because it can be done simultaneously, that is, they can continue to communicate with friends while studying, in other words, it can be done at any time. the same time. The type of social media that is most popular with students is Instagram, namely 43%. This is because Instagram contains interesting images and looks more real. Apart from that, the image descriptions or material knowledge are packaged simply and up to date.

2. Design

The type of content used on Instagram is Instagram Feed. To make Instafeed look more attractive, the Canva application is used to support it in Figure 3 below:

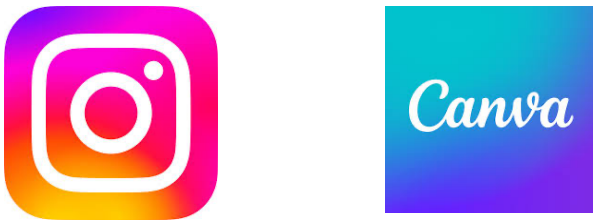
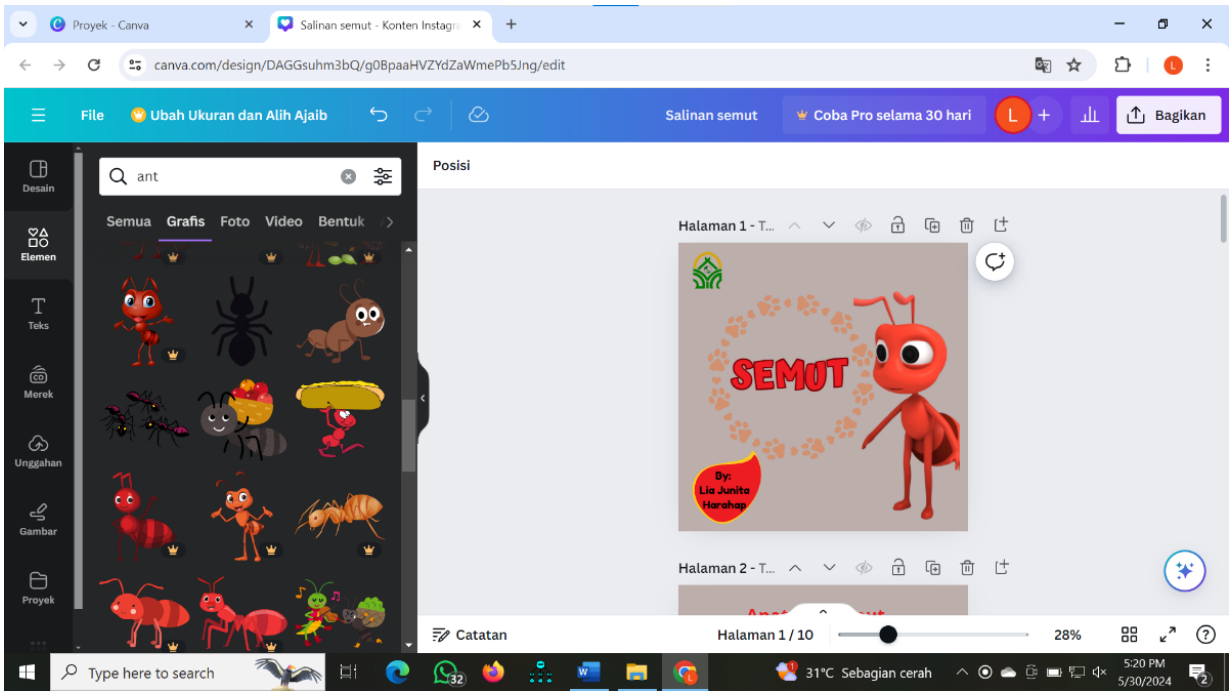


Figure 3. Applications Used

Design includes aspects such as choosing a visual style, character design and other elements that help create an Instagram Feed that is effective in conveying the message or learning objectives that have been set. Design the Canva design creation process in Figures 4 and 5 below:



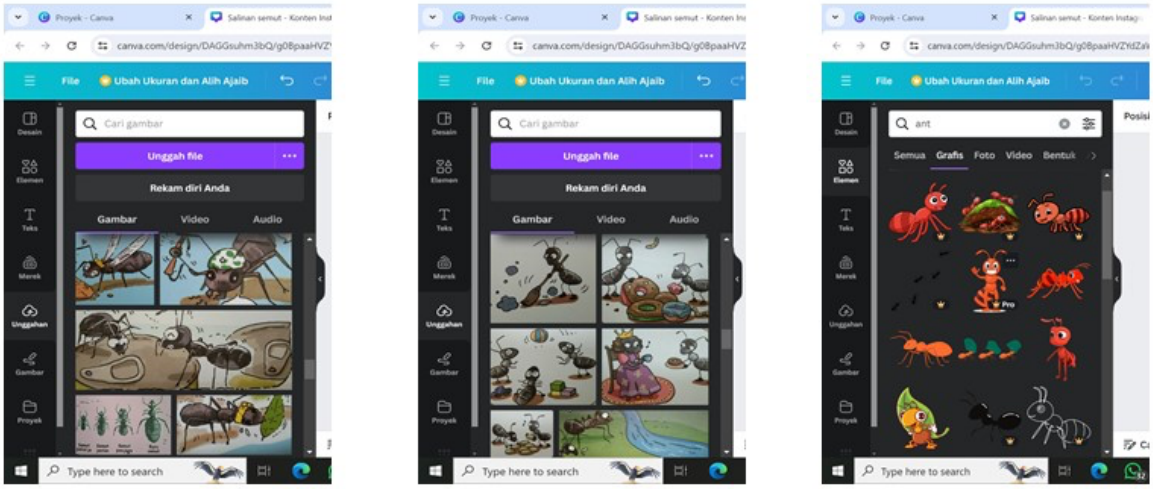


Figure 4. Design Process on Canva

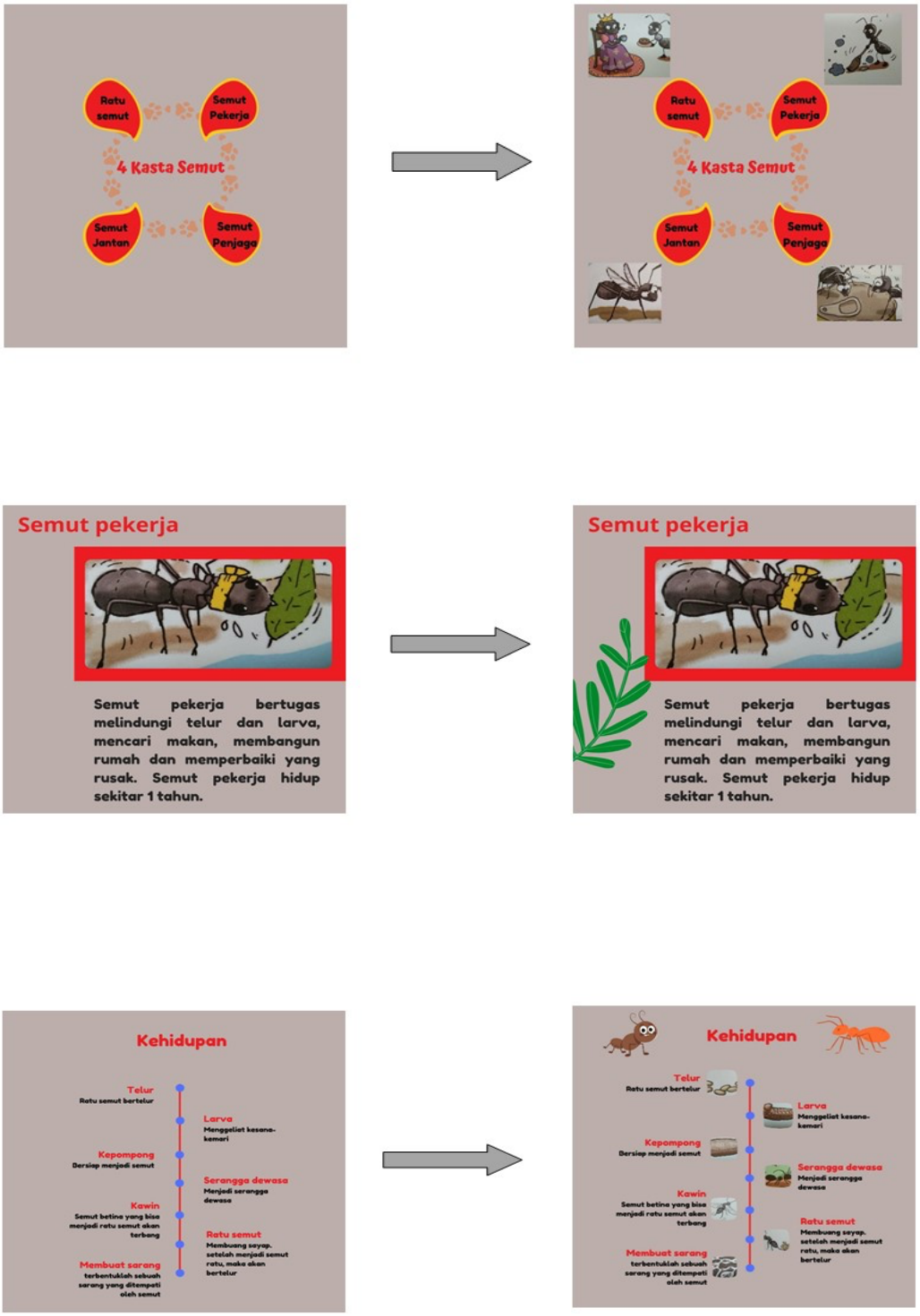


Figure 5. Initial and Final Design

In the Canva design above, the design process in the image on the left is still in the improvement stage because there are still many errors in the Canva design, such as letters that are difficult to read, lack of accuracy in layout design, and adding elements, so evaluation is needed to produce a good design. easy for students to understand, like the revised figure on the right.

1. Develop

The validators in this research are each lecturer who is an expert in their field, namely a Biology lecturer and an Educational Technology lecturer. Then look for the average determining the suitability of the media and material in Table 1 below:

Table 1. Canva-based Instagram Feed Material and Media Assessment Instrument

Indicator	Amount
Formability and suitability of materials	85
Ease of language	90
Determination of images and terms	87
Cover view	85
Text View	85
Image Display	90

Based on the revised final design, the results obtained from the validator obtained an average value of 87%, which means it is suitable for use. The process of producing an Instagram Feed involves various creative and practical stages to create an effective Instagram Feed. The results of developing Canva-based Instagram Feed learning media are in Figure 6 below:

Figure 6. Revised Canva-based Instagram Feed

Instagram Feed learning media can make the learning process more effective and efficient because students can understand and learn independently and are interested in the many pictures or illustrations displayed. Instagram Feed media is able to channel energy so that it can add knowledge or imagination which makes students directly involved in their learning experience.

In product development, of course there are advantages and disadvantages, as is the Canva-based Instagram Feed learning media based on Biology material that researchers have developed. The advantages of the Instagram Feed learning media that have been developed are that the animals used in the Instagram Feed are cartoons that are made cute so that they attract students' interest and interest in reading them, use language that is simple and easy for students to understand, are environmentally based by students' life experiences. , and use attractive colors. The Instagram Feed presented is not too dense in 1 slide so that students will not feel bored continuing to read it, and can learn independently using the Instagram Feed media. Apart from having advantages, the media being developed also has disadvantages, such as making it quite time-consuming, and if students do not like media in visual form in the learning process, then a strategy for using other supporting learning media is needed (Khairunnisa et al., 2024). The integration of coding technology and artificial intelligence (AI) with social media, such as Instagram Feed, has opened up new horizons in the development of learning media, especially for biology materials. Canva, as a visual design platform, now offers a developer platform feature (in beta version), which enables educators to utilize template automation and batch design to create educational content on a massive scale. This step demonstrates the significant potential of using coding to streamline the process of creating learning media while also cultivating digital literacy skills among teachers and students. (Yusuf et al., 2024).

The role of AI in this process is very significant, both in terms of creation and personalization. Through technologies such as generative AI (for example, ChatGPT or Canva Magic Write), educators can create engaging educational captions. Meanwhile, image generators like DALL-E and Midjourney can present high-quality visual illustrations to explain abstract Biology concepts. Personalization of learning is also increasingly easy to achieve: AI allows the adjustment of Instagram Feed content to students' cognitive levels based on their quiz results or comments on the platform. Not only as a visual aid, AI also functions as an evaluative mechanism. With the Natural Language Toolkit (NLTK) and TextBlob, AI can analyze student comments on uploaded content to measure the level of understanding, interest,

and sentiment. These results form the basis for decision-making in developing further learning strategies. This shows that AI is not just a tool but also a reflective partner in the teaching and learning cycle. Furthermore, social media is not just a distribution channel but part of a curriculum that combines Biology, Coding, and AI subjects. In the context of the Pancasila Student Profile Strengthening Project (P5), students not only learn as consumers of information but are challenged to become creators of educational media that have an impact. They can create simple projects, such as Python programs that recognize images of human organs, which strengthen cross-field competencies (Gembong et al., 2024).

CONCLUSION

Based on the research results, it can be concluded that the Canva-based Instagram Feed learning media for Biology learning that has been developed is valid and appropriate to use as a very interesting media in helping the process of gaining knowledge more easily and interestingly. It is hoped that the learning media developed can help teachers direct students to be more sensitive to the impact of biology and the interconnectedness of living things in life.

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