Utilising of Instagram Application as a Learning Platform to Enhance Teaching and Learning Process among Vocational College Students

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ABSTRACT

Learning via social media platforms like Instagram is a preferred e-learning approach in modern education, aligning with 21st-century learning. Traditional methods often limit access to resources, reduce motivation, and hinder cognitive and creative growth. Integrating Instagram into technical and vocational courses can enhance learning engagement and effectiveness. *This study aims to assess the level of knowledge, identify perceptions, and evaluate students' literacy in using the Instagram application for educational purposes. The study also employed the ADDIE model for research design in developing video products and was conducted in a survey format. A total of 100 respondents were selected through random sampling, and the study findings were analysed using the Statistical Package for the Social Sciences (SPSS) version 25. In this study, the research instrument developed was in the form of a questionnaire, and both face and content validity were assessed implemented. Additionally, the study obtained a reliability value of 0.956, indicating a high level of reliability. The results of the analysis conducted on three aspects- namely, knowledge (min=0.82), perception (min=0.74), and literacy (min=0.75)- showed positive and high minimum values. Therefore, the study findings suggest that using the Instagram application can facilitate the teaching and learning process in technical and vocational courses regarding knowledge, perception, and literacy. In conclusion, the results demonstrate that Instagram can enhance teaching and learning processes in technical and vocational courses by increasing engagement, creativity, and cognitive skills. Integrating social media platforms such as Instagram into vocational education can revolutionize teaching strategies and support 21st-century learning goals.*

Keywords: Instagram, knowledge, literacy, teaching, 21st-century learning.

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Penggunaan Aplikasi Instagram sebagai Medium Pembelajaran bagi Memudahkan Proses Pengajaran dan Pembelajaran dalam Kalangan Pelajar Kolej Vokasional

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ABSTRAK

Pembelajaran melalui platform media sosial seperti Instagram adalah pendekatan e-pembelajaran yang semakin digemari dalam pendidikan moden, selari dengan pembelajaran abad ke-21. Kaedah tradisional sering membatasi akses kepada sumber, mengurangkan motivasi, dan menghalang perkembangan kognitif serta kreativiti. Integrasi Instagram dalam kursus teknikal dan vokasional dapat meningkatkan penglibatan dan keberkesanan pembelajaran. *Dalam pada itu, pembelajaran abad ke-21 berasaskan media sosial seperti Instagram seharusnya diterapkan dalam proses pengajaran dan pembelajaran bagi kursus teknikal dan vokasional. Kajian ini dijalankan bagi mengkaji tahap pengetahuan, mengenalpasti persepsi dan mengkaji literasi pelajar dalam penggunaan aplikasi Instagram dalam pembelajaran. Kajian ini turut menggunakan model ADDIE bagi reka bentuk kajian dalam pembangunan produk video dan kajian ini berbentuk tinjauan. Jumlah responden adalah seramai 100 orang dengan menggunakan kaedah persampelan secara rawak dan dapatan kajian dianalisis menggunakan perisian Statistical Package for The Social Sciences (SPSS) versi 25. Dalam kajian ini, instrumen kajian yang telah dibangunkan adalah berbentuk soal selidik dimana kesahan antara muka dan juga kesahan kandungan turut dilaksanakan. Selain daripada itu, kajian ini juga memperolehi nilai kebolehpercayaan sebanyak 0.956 dan berada pada tahap yang tinggi. Hasil analisis yang dilakukan terhadap tiga (3) aspek iaitu pengetahuan (min=0.82), persepsi (min=0.74) dan literasi (min=0.75) menunjukkan nilai min yang positif dan tinggi. Oleh itu, dapatan kajian menunjukkan bahawa dengan menggunakan aplikasi Instagram ini mampu memudahkan proses pengajaran dan pembelajaran berdasarkan kursus teknikal dan vokasional menerusi aspek pengetahuan, persepsi dan literasi. Kesimpulannya, aplikasi Instagram boleh meningkatkan proses pengajaran dan pembelajaran dalam kursus teknikal dan vokasional dengan meningkatkan penglibatan, kreativiti, dan kemahiran kognitif. Mengintegrasikan platform media sosial seperti Instagram ke dalam pendidikan vokasional dapat merevolusikan strategi pengajaran dan menyokong matlamat pembelajaran abad ke-21.*

Kata Kunci: aplikasi, fotografi udara, Malaysia, teknologi

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1.0 Introduction

The development of teaching and learning strategies utilised by educators is currently of great importance in Malaysian education. As a result, the Malaysian Ministry of Education has introduced a variety of initiatives to support the advancement of education in Malaysia. As we already know, the development of human capital that is comparable to the success of the country is an essential strategy for the education system to advance the country rapidly. As a result, the Ministry has employed a variety of methods and strategies to raise the requirements for education.

As we are aware, students should also be exposed to 21st-century learning (PAK21) based on social media platforms such as the Instagram application. PAK21 is a student-centred learning process that emphasises collaborative elements, creativity, communication, critical thinking, as well as moral values and ethics. If students are equipped with PAK21 based on the Instagram application, it can facilitate the teaching and learning process among vocational college students.

Based on the background of the study and previous research, several issues have been identified with traditional learning methods for students. One of them is that students take quite some time to complete assignments given by teachers (Saad 2018). This is because they lack knowledge in exploring additional information, making it challenging for students to think creatively to complete the given tasks (Rowan, 2010). Additionally, Fook (2013) stated that the limited use of technology in the learning process by schools also somewhat diminishes students' interest in enhancing their knowledge for technical and vocational courses.

1.1 Research Background

In our country, teaching and learning should incorporate 21st Century Education. We all know traditional education has weaknesses, such as inactive students who lose interest easily. This education may also be connected to the nation's rapid advancement. As a result, we should consider 21st Century Education to be today's society education. Social media-based education, such as Instagram applications, can be utilised to simplify the teaching and learning process. Therefore, it can be seen from the knowledge of the use of the Instagram application among students the perception of vocational college students towards the use of the Instagram application in learning and the literacy of vocational college students in the use of the Instagram application based on learning.

According to Rowan (2010), it can be a challenge for students to find knowledge about how to learn to handle technological jobs easily and creatively. Giving the impression that students lack the ability to use social media features actively since they are unaware of them (Zakaria, 2020). Hassan (2020), who states that low academic achievement will result from the continued use of not enough learning techniques in teaching and learning, is another source of support. In conclusion, what was found from the background research show that the researcher wants to explain that the social media-based learning medium, Instagram, by tying with three (3) variables that will be constructed to ensure the

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success of this study. Based on research, these three elements are crucial for learning and teaching based on the Instagram application.

1.2 Research Objective

The objectives of this study are as follows:

i. To evaluate vocational college students' knowledge of Instagram features used in learning contexts.

ii. To assess students' perceptions of Instagram's effectiveness in fostering engagement and creativity.

iii. To assess the level of digital literacy among vocational college students in using the Instagram application for educational purposes.

2.0 Methodology

This study adopts the methodology of product design and development research (DDR), where the researcher has concentrated on the creation of multimedia apps for the teaching and learning process using a quantitative approach through the use of a checklist form to get input from experts (Van Aken, 2004). The researcher selected the ADDIE model as the primary reference for the design and development process of this teaching and learning application product since each phase in this model is easy to apply and suitable with the planning of this application. Analysis, design, development, implementation, and evaluation are the five phases of this model.

2.1 Research Design

The ADDIE model was established in 1987 by Rossett and serves as a guideline in software and instructional material development based on Instagram. This model was chosen to make teaching and learning design more efficient and effective. Therefore, the model consists of five phases: analysis, design, development, implementation, and evaluation (Nasohah, 2015). To successfully conduct this study, the researcher referred to the ADDIE model as a development model for learning through the Instagram application because it offers systematic phases for developing learning products.

2.2 Product Development Process

The ADDIE model was established in 1987 by Rossett and serves as a guideline in software and instructional material development based on Instagram. This model was chosen to make teaching and learning design more efficient and effective. Therefore, the model consists of five phases: analysis, design, development, implementation, and evaluation (Nasohah, 2015). To successfully conduct this study, the researcher referred to the ADDIE model as a development model for learning through the Instagram application because it offers systematic phases for developing learning products.

2.2.1 Analyse Phase

For the analysis phase, the researcher conducted an initial survey to identify the problems faced by vocational college students. Based on the survey regarding the identified issues, students at Miri Vocational College, Sg. Buloh Vocational College and Kuantan Vocational College were found to have several problems. One of the issues is that students take quite some time to complete assignments given by teachers. This is because they lack knowledge in exploring additional information, making it challenging for students to think creatively to complete the given tasks. As we are aware, vocational college students are more interested in hands-on learning; therefore, traditional learning methods can diminish their interest in learning as they are only exposed to memorising and understanding facts. Additionally, students tend to lack critical thinking during the learning process if traditional methods are used. It has been stated that one-sided learning occurs when social skills are not integrated during the learning process. Lastly, the limited use of technology in the learning process by schools also somewhat diminishes students' interest in enhancing their knowledge for technical and vocational courses.

2.2.2 Design Phase

The second phase is the design phase, where the researcher addresses the problems identified in the analysis phase. In this design phase, it consists of three parts, namely interaction design, information design, and interface design.

2.2.3 Develop Phase

Figure 1: Video Storyboard Learning 3G TIG Welding Open Root

The third phase is the development phase. In this stage, the researcher explained the appropriate methods and techniques to be used in a learning medium. To successfully develop this learning product, the researcher will utilise software applications such as "Reels" to showcase welding-related instructional videos and facilitate teaching and learning. Additionally, the teaching and learning process can also be conducted through various Instagram features, such as Instagram Stories, live sessions, direct messages,IGTV, and highlight stories. To accomplish this study, the researcher has developed a storyboard for the instructional videos to demonstrate the teaching and learning process using the Instagram application. Figure 1 shows a video storyboard learning 3G TIG welding open root & welding position.

2.2.4 Implement Phase

At this stage, the product that will be used or produced is tailored to the needs of vocational college students. The developed software medium will provide a web link to the vocational college students to be used as a learning medium.

2.2.5 Evaluate Phase

Finally, the evaluation phase is used to determine the assessment and quality of the developed learning medium.
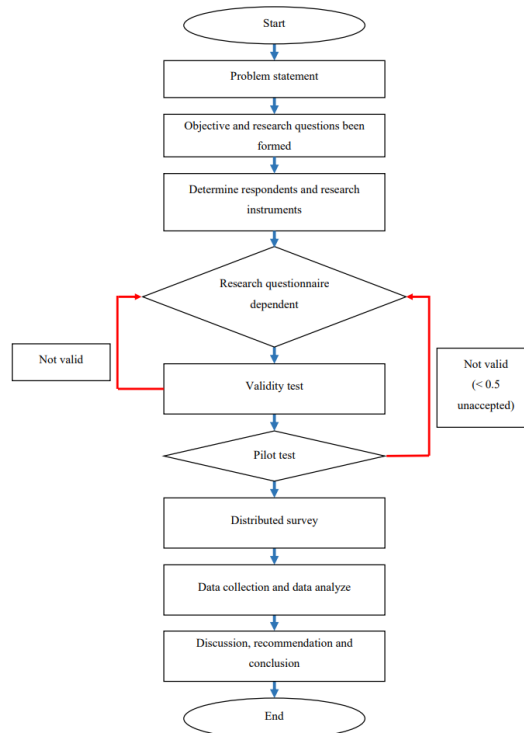
2.3 Research Procedure

Figure 2: Research Procedure Flowchart

Figure 2 is the research procedure flowchart, starting with a problem statement. Next, the objective is formed, and after that, the research question. Furthermore, the researcher identified a responder and a method of study that could be used for this study. Besides, the development of the research questionnaire is followed by validity testing. This procedure will be repeated until it passes if the questionnaire's response rate succeeds the validity test. When the validity test is finished, it's time to conduct a pilot test. If the pilot test result is unsuccessful and comes in below 0.5, it must be repeated. After finishing the pilot test, the researcher distributes the survey and gathers information for the analysis. Finally, the researcher includes a discussion, a suggestion, and a conclusion for the research after all the data are analysed.

3.0   Results

A total of 100 respondents, consisting of first year (1) and second-year (2) welding students from Miri Vocational College, Sg. Buloh Vocational College and Kuantan Vocational Collegewere surveyed. The data obtained from the questionnaire will be analysed using the Statistical Package for Social Sciences (SPSS) version 25 and descriptive methods.

3.1   Respondent Demographic

This research was carried out at three different vocational schools: Miri Vocational College, Kuantan Vocational College, and Sungai Buloh Vocational College. There were 80 male and 20 female students among the 100 respondents in the survey. 1 and 2 SVM students from the Welding Technology programmes represented most responders. Most respondents were found to have Instagram accounts and used the application around 4 – 6 years ago.

3.2   Interpretation of Mean Score

Table 1: Interpretation value of the mean score

Score Mean	Interpretation	
	Product Testing	**Question Item**
3.26 – 4.00	Very Acceptable	Very Acceptable
2.51 – 3.25	Acceptable	Acceptable
1.76 – 2.50	Doubted	Doubted
1.00 – 1.75	Rejected	Rejected

To determine the suitability of the items (Table 1), this study referred to the minimum score from theLikert scale and consulted the table of interpretation of minimum average scores by (Saldana 2013) to assess whether the items were appropriate or not for the success of this study.

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3.3 Descriptive Analysis on Students' Knowledge Toward Instagram Learning Application

Table 2: Mean Value and Standard Deviation Obtained Based on Students' Knowledge Toward Instagram Learning Application

No	Item	Mean	Standard Deviation	Criteria
A1	I am looking for information related to difficult-to understand learning content through the Instagram application.	3.03	0.858	Accepted
A2	I am exploring information related to the learning process compared to other matters.	3.32	0.764	Very accepted
A3	I often participate in live sessions conducted by teachers to deliver learning content.	3.25	0.903	Accepted
A4	I use the comment section on the Instagram application to communicate with teachers regarding learning matters	3.25	0.869	Accepted
A5	I often view stories related to learning through the Instagram application.	3.39	0.777	Very accepted
A6	I often watch and explore reels related to learning content to increase my knowledge	3.56	0.729	Very accepted

For descriptive statistics (standard deviation) and central tendency (mean) outlined in Table 2, the researcher has also conducted an analysis to confirm that the developed items are suitable for the study. The highest mean value among all the items is for item six (6), with a value of 3.56. This value indicates that most respondents are satisfied with this item. Based on Table 5, the interpretation of the minimum average score shows that all the items in the questionnaire were accepted and highly accepted by the respondents.

3.4 Descriptive Analysis on Students Perception Toward Instagram Learning Application

Table 3: Mean Value and Standard Deviation Obtained Based on Students Perception Toward Instagram Learning Application

No	Item	Mean	Standard Deviation	Criteria
B1	The use of the Instagram application in learning canenhance understanding of the learning material.	3.31	0.734	Very accepted
B2	The use of the Instagram application helps in sharingopinions or information in learning.	3.41	0.726	Very accepted
B3	The use of the Instagram application in learning can effectively capture students' interest in studying a particular course.	3.45	0.757	Very accepted

No	Item	Mean	Standard Deviation	Criteria
B4	The use of the Instagram application in learning can conduct various information searches without cyber misuse.	3.46	0.784	Very accepted
B5	The use of the Instagram application in learning helpsenhance creativity in the learning process.	3.46	0.702	Very accepted
B6	The use of the Instagram application in learning can increase the rate of exchanging course-relatedinformation with other peers.	3.38	0.763	Very accepted

The highest minimum score for the perception aspect is on items four (4) and five (5), which is 3.46 (Table 3). Respondents are satisfied that the Instagram application in learning can conduct various information searches without cyber misuse, and Instagram can help enhance creativity in learning. Overall, the average minimum score for the use of Instagram as a learning medium to facilitate the Teaching and Learning Process (PDP) among vocational college students in terms of perception is ata highly accepted level.

3.5 Descriptive Analysis on Students Digital Literacy Toward Instagram Learning Application

Table 4: Mean Value and Standard Deviation Obtained Based on Students Digital Literacy Toward Instagram Learning Application

No	Item	Mean	Standard Deviation	Criteria
C1	I am able to refer to various learning materials with other peers while using the Instagram application.	3.29	0.832	Very accepted
C2	I am able to improve my social skills with teachers and peers regarding learning through the Instagram application.	3.30	0.785	Very accepted
C3	I have the skill to use the Instagram application to access the latest information for my learning.	3.53	0.745	Very accepted
C4	I believe that the Instagram application can be used through various digital devices such as smartphones, tablets, or laptops during learning.	3.48	0.731	Very accepted
C5	I am capable of further enhancing my creative thinking skills in learning using the Instagram application.	3.56	0.715	Very accepted
C6	I am capable of using various new technologies suchas reels, comments, live, and stories for the learning process.	3.53	0.717	Very accepted

Table 4 indicates that the highest minimum score for the literacy aspect is on item five (5), which is 3.56. This itemindicates that respondents are satisfied that the Instagram application can further enhance creativethinking skills in learning using Instagram. Additionally, items three (3) and six (6) for the use of Instagram as a learning medium to facilitate the Teaching and Learning Process (PDP) among vocational college students are highly accepted in terms of perception.

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4.0   Discussions

According to the study's analysis, students at technical colleges have a good level of knowledge on how to use the Instagram program. This is important because the students are familiar with using the Instagram app to speed up the teaching and learning process when looking for information related to educational content, frequently following live related teaching and learning, related to educational stories, and investigating related reels with educational content. According to Alhajri (2017), compared to other media, the Instagram application is a more effective medium for the teaching and learning process while looking for material that is challenging to understand. According to Scribante (2021), the Instagram app greatly helps students' search for references on academic subjects that are challenging for them to comprehend throughout the teaching and learning process. Therefore, the benefit of studying using the Instagram app is that students are more concerned about seeking challenging material outside of class (Lubua, 2017).

Majority of students today are experts at using the Instagram app to research information on welding (Luci, 2018). According to Azzarkasyi (2019), students' motivation to learn the subject can be increased because of researching the subject on Instagram. Students can process in-depth knowledge as a result, and they can gain greater confidence for studying a welding course (Richmond, 2017). To improve learning collaboration between students and teachers where they can communicate easily, teaching and learning through social media, such as live, performs an importance (Hensley, 2020). Davis (2015) argues that students' self-confidence might increase while speaking with teachers while teaching and learning has become place. This is supported by features in the Instagram program, such as live. Indirectly, students who follow lessons live on Instagram have benefited since they are able to increase understanding easily and more systematically (Rusmawan, 2022).

According to Haythornthwaite (2020), teachers and students can communicate easily on technical subjects such welding by using the Instagram application's commenting system. The statement is further confirmed by Currie (2017), who shows how, to a certain extent, teachers and students can learn from one another about the technical subjects they are studying using the comment section on the Instagram programme. The cooperative aspect of social media learning will also assist students in gaining a deeper understanding of technical subjects taught through the comment area, which will enhance the teaching and learning process (Megahed, 2014). Based on the distribution of information using the Instagram application in multimedia, such as stories, can somewhat enhance students' comprehension of courses involving practical welding (Scribante, 2021). According to Haythornthwaite (2020), educators and students can communicate simply using the Instagram app's comment section. The argument is further supported by Taylor (2012), who claims that learning through the Instagram application, such as viewing a story, has a favourable influence that aids students in imagine and stimulates their interest in learning simply by viewing stories on practical welding courses. Students will have greater success in remembering information connected to learning learned if they look at stories related to practical welding courses through the Instagram application (Solberg, 2012).

Furthermore, according to Andreas (2016), today's students don't enjoy reading and would rather study through multimedia like short motion pictures. The Instagram app, for example, presents reels that can be used as a learning resource these days since students pay more attention to brief but clear animations, which Zufar (2020) also

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promotes. As a result, viewing and investigating these reels can even raise students' levels of knowledge, boost their interest in the course they are taking, and help them quickly understand something new (Balaman, 2016).Vocational college students demonstrate a very high level of understanding in the use of the Instagram application to facilitate the process of teaching and learning, which brings us to our final point. Most of them are aware of the value of watching stories and motion pictures that are relatedto educational material.

The response of students at vocational colleges towards the usage of Instagram applications for learning serves as the context for this perception. Where do they believe that using this Instagram app will effectively stimulate students' interest in learning a course. Additionally, using Instagram apps while learning can enhance learning creativity. In fact, students consider using the Instagram app as they learn how to do different informational searches without abusing the internet. Because they are familiar with learning using the Instagram app, it has been discovered that students who studied technical and vocational subjects are better able to accomplish the assigned assignment swiftly and imaginatively (Gillois, 2015). Furthermore, Wallis (2014) said the students are proficient and have knowledge in the skills to complete the assigned task. As a result, students can improve technical skills to complete the tasks given in an innovative way (Etikaningsih, 2018).

Nurdiansyah (2020) asserts that this Instagram application can assist students in sharing knowledge or engaging in teacher-student conversation to deepen their comprehension of the subject being studied. Sharing ideas or knowledge with friends or other people can help students, but not immediately (Munienge, 2014), improve their cognitive abilities and complete projects. This leads to the usage of applications in the teaching medium. According to Sari (2019), Instagram has an impact on students' motivation and engagement levels when it comes to sharing information about their studies with teachers or other peers. The next statement made by Devi (2019) is that Instagram has overtaken other social media platforms as the preferred one in modern society. The new generation can therefore use it as one alternative learning medium. Also featured is Erarslan (2019). As was previously stated, students utilize the Instagram application daily. Therefore, learning how to utilize the Instagram app can have the impact of allowing studentsto become more knowledgeable and interested in learning more about technical and vocational subjects (Stosic, 2020).

According to research by Benzert (2022), even while students are aware of the potential risk of information on Instagram being misused, it does not prevent them from using social media for learning and teaching. While Rosy (2018) also argues that learning materials based on the socialmedia platform Instagram can alter societal perceptions regarding the use of social media. Using the Instagram application, social media is an excellent and efficient approach for students to become more independent in their quest for information about welding courses (Giordano, 2011). According to Audina (2020), this Instagram app is one of the educational social media tools that can inspire students' creativity and innovation at any time or location. Even J. Essig (2020) agrees that media learning social based on the Instagram application can boost creativity for execute technical related activities such as procedures in welding and simple hands-on labor. As aresult, it will impact students in terms of improving creativity while creating project assignments utilizing the Instagram application (Elda, 2015).

Additionally, Edison (2017) believes that application-based learning. After sharing their ideas about the welding course with a friend, this Instagram can assist students advance their knowledgeand cognitive skills. The statement is further supported by Azlan (2019), who shows how task- based learning activities, and the Instagram app are relevant to 21st Century Teaching and Learning, which can inspire students while also enhancing their co-musical skills with peers. As a result, it also has an impact on students' ability to foster helpful interactions with others and to usethe Instagram program to help them solve technical issues (Caron, 2015). In conclusion, the students demonstrated that they concur with the claim that using Instagram for studying allows them to conduct a range of information searches without engaging in online application and that doing so can help them learn a course more efficiently. Because of this, vocational college students' perceptions of the usage of the Instagram app for studying are quite positive when they are aware of its use. This helps to facilitate the process of teaching and learning.

According to the study's analysis, students at vocational colleges are particularly literate when it comes to using Instagram applications that are based on learning. This is since the students are adept at using Instagram to enhance education and learning. To make it simpler for college students to understand what they are learning, new technology like reels, comments, live, and stories is available to them. According to Zulfiqar (2019), using multiple learning resources through the Instagram application can help students develop their welding abilities and finish their assigned tasks. Further evidence that Instagram is an effective learning tool for enhancing students'academic achievement comes from Hindman (2017). As a result, learning through Instagram canimprove student participation and facilitate understanding of the welding subject (Elvira, 2019).

The Instagram app also allows students to develop their social skills with teachers and other other students, allowing them to discuss difficult-to-understand material while also exchanging ideas andknowledge (Jones, 2017). Indirectly, Arezoo (2022) also supports the idea that students can improve self-confidence in their ability to accomplish a task and will feel more at ease during the teaching process and when learning is done via the Instagram app. As a result, social skills betweenstudents and teachers or with other friends are improved by the medium of learning using this Instagram application (Anderson, 2020). According to Howell (2022), using the Instagram appto look up the most recent, confusing information on welding courses can help cognitive skills.

Prudencio (2020) encourages this approach, saying that students can learn more about complexwelding issues through looking up the most recent data on the Instagram app. As a result, students can become more motivated to learn because this Instagram program makes it simpler for them tolocate and comprehend the most recent knowledge (Froehlich, 2018). According to Lindsay's (2016) assertion, the learning medium is based This Instagram app canmake it easier for students to find locations where they can use various digital devices, such as phones, smartphones, tabs, or laptops, throughout the teaching and learning process. Even Salehudin (2020) stated that the Instagram application is a tool that is helpful for creative learning in graphic form when used through various digital devices like smartphones. As a result, students can simply complete the teaching and learning process whether utilizing digital devices at home or elsewhere, regardless of time (Selcan, 2016). Students with creative thinking skills can accomplish work or welding projects more quickly with the support of social media applications such Instagram (Roa, 2021). In addition, Poulsen (2018) endorses the inclusion of elements in the Instagram application like reels, which can assist students in completing chores or

welding projects quickly and indirectly and enhance creative thinking skills while they are studying.

According to the inference, social media platforms like Instagram can promote collaborative learning by motivating students to be more innovative and dynamic learners (Ansari, 2020). Then, Arsyad (2006) believes that through reels, live, comment sections, or photographs in the Instagram program, most students will easily learn things that technical learning issues are difficultto understand. Additionally, using hashtags on the Instagram application's features makes it simplefor students to find information about unfamiliar topical learning strategies (Douglas, 2019).Through the usage of elements present in the Instagram program, students can easily conduct learning activities and develop their interest, particularly in the technical field (Jayden, 2022). In conclusion, higher education who study vocational subjects believe that using the Instagram app for teaching and learning will increase the lesson's level of critical thinking.

5.0   Conclusions

As a result, the researcher was able to create a teaching strategy using the Instagram application that would be used to an upcoming educational platform to improve teaching and learning processes among welding students in vocational colleges. Interactive learning videos may change how students approach knowledge and motivate them to apply the Instagram application as one of their learning tools to improve their skills.

6.0   Acknowledgements

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