ABSTRACT
In response to curriculum changes at Banyuwangi High School incorporating Geopark Ijen into educational content, this study investigates the impact of Immersive Virtual Field (IVF) media on students' learning interests. Employing a quantitative survey and a sample of 50 students selected through simple random sampling, the study examines the correlation between students' perceptions of IVF at Ijen Geosite Geopark and their learning interest. Data were gathered via questionnaires and analyzed using simple linear regression, supplemented by qualitative interviews. Findings indicate a significant positive relationship between students' perceptions of IVF media and their learning interest, with an average perception rating of 93.2%. The study highlights that positive emotions elicited by engaging with IVF media, such as happiness and enthusiasm, significantly enhance learning experiences by boosting motivation, engagement, cognitive functions, and ultimately, educational content retention. This research underscores the potential of immersive technologies to transform traditional learning environments by fostering more engaging and effective educational experiences.

KEYWORDS
Student Perception; Immersive Virtual Fields; Student Interests

INTRODUCTION
In the context of evolving geography education curricula, educators are compelled to adopt more innovative teaching methodologies. As primary implementers of curriculum changes, teachers must acquire technological skills relevant to these advancements (Lubis, 2015). However, the transition is often hampered by significant obstacles, notably the insufficient support in terms of facilities and infrastructure, which complicates the implementation of new curricular demands (Kristiantari, 2015). This situation underscores a critical gap in educational research: the exploration of specific challenges associated with
integrating immersive virtual field technologies into geography education. The present study aims to address this gap by examining the complexities of adopting immersive virtual field technologies within the context of recent curriculum changes, highlighting the need for enhanced support systems and teacher training in leveraging these innovative tools for effective geography teaching.

Virtual Field Development become solution learning interactive geography especially on change curriculum. Virtual Fields what used as substitute learning media contextual without reduce knowledge student to content material learning Geography (Putra et al., 2022). Based on paradigm learning 21st century, students demanded For own four skills: (1) thinking critical and solving problem, (2) work team and collaboration, (3) professionalism and ethos strong work, and (4) skills communication oral and written, are directly enhanced by the application of Virtual Field technologies. Virtual Field has superiority in increase think critical and solving exploration problem learning (Faisal & Choerunisa, 2021). The Virtual Field emerges as a solution, providing an immersive environment where students can work together as if in the field. This approach significantly enhances teamwork and experiential learning, as supported by Wati et al., (2019), demonstrating the Virtual Field’s ability to bridge the gap between theoretical knowledge and practical application in geography education (Nuryuliani et al, 2024). Students can too embed value character professionalism and ethos strong work past the environment it is made of place apply Virtual Fields.

The existence of Virtual Field media can help students to understand the study of the Ijen Geosite Geopark, especially on lithosphere material (Afdal, 2012). Conventional methods struggle to effectively teach lithospheric material, as they cannot fully represent its dynamic and three-dimensional nature. In contrast, Virtual Field technology offers an immersive experience, allowing students to explore geological features in depth (Putra et al, 2023). This approach overcomes the limitations of traditional education by enabling interactive learning, which leads to a more comprehensive understanding of the lithosphere (Revlinasari et al., 2021). This consideration is motivated by the fact that lithospheric material (1) is not only in the form of memorization, so there is a need for practicum in learning, (2) lithosphere materials have concepts and approaches that are difficult to explain verbally, (3) The deepening of the material is still very limited because learning activities are still in the classroom rather than outside the classroom, (4) reducing the risk of misconceptions due to the delivery of material by teachers that is difficult to understand (Wijayanto et al., 2018). The use of Virtual Field media as a support for learning activities in class has advantages in its use, namely helping students obtain more information about the outside world without having to visit the place, reducing large costs while in the field, reducing risks while in the field, accommodating based learning technology, and provide immersive experiences using Virtual Field Learning (Rosidi & Fitroh, 2021). Virtual fields can provide experiences based on how close spatially, temporally or socially students are to other individuals (Markowitz et al., 2018). However, the use of Virtual Field Learning is only limited to being used and not studied more deeply on how students perceive it.

Important student perceptions are used to develop learning competencies. Perception can be influenced by two factors, cultural background and personal qualities of students. Students’ personal qualities refer to learning styles and learning experiences (Irawati & Santaria, 2020). Learning styles are formed from the character of each individual in the learning process (Yulianti, 2024). The three primary learning styles, there are visual, auditory, and kinesthetic, each interact
distinctively with Virtual Field Learning (Putra et al, 2023). Visual learners benefit from the immersive visual representations, enhancing comprehension and retention (Putra et al, 2023). Auditory learners gain from integrated auditory cues and narrations, which supplement the visual content. Kinesthetic learners are supported by the interactive nature of Virtual Field Learning, enabling hands-on exploration within a virtual space. Studies suggest that virtual environments can significantly cater to these diverse learning preferences by offering adaptable experiences that improve engagement and understanding across all types of learners (Wijayanti et al, 2024). Thus, Virtual Field Learning emerges as a versatile tool that aligns with various learning styles, enhancing educational outcomes in geography by providing a multi-sensory learning environment (Fahmi et al, 2022).

Teachers can see the current condition of students using more visual learning styles and auditory learning styles which are considered to have a good effect on student learning outcomes (Aldiyah, 2021). The virtual field trip method can stimulate students to develop cognitive and psychomotor skills through observing direct objects rather than pictures shown by the teacher (andarukmi et al, 2024). There is a special need for a survey related to the relationship between student perceptions of the study of the Ijen geosite geopark and immersive virtual field learning in learning geography at Banyuwangi High School.

Building on the challenges identified, including the integration of technology in geography education and the alignment with diverse learning styles, this study aims to address a critical gap: understanding how immersive virtual field learning, specifically within the Ijen Geopark geosite, impacts student perceptions and interest in geography at Banyuwangi High School. By investigating students’ responses to immersive media, this research seeks to elucidate the potential of virtual field learning to enhance engagement and educational outcomes in geography (Salsabila et al, 2022). This study not only aims to shed light on the efficacy of immersive virtual environments in addressing the needs of various learner types but also to contribute to the broader discourse on innovative educational practices in geography. Through this, it aims to provide actionable insights into how virtual field learning can be optimized to overcome current educational challenges and enrich the geography curriculum.

**METHOD**

Method used is survey with approach quantitative. This study carried out at SMA Negeri 1, SMA 1 Giri, and MAN 1 Banyuwangi. This study held in the even semester month January until February year teaching 2022/2023 and done as much three meetings. The survey aimed to explore students' perceptions of immersive virtual field learning at Ijen Geopark Geosite and their interest in geography lessons at Banyuwangi High School. To enhance clarity, it's noteworthy that the questionnaire included both open and closed questions. Open questions sought detailed feedback on students' experiences and suggestions for improvement, while closed questions, rated on a Likert scale, quantified their levels of interest and engagement with the virtual field learning media. Data from this study form value obtained from charging questionnaire and analyzed use simple linear regression. Data collection is also equipped with the resulting qualitative data from interview to 12 students who have using media virtual fields.

Taking sample use Simple Random Sampling with a total population of 102 scattered 36 students of SMA 1 Giri, 32 students of MAN 1 Banyuwangi and 34 students of SMA 1 Banyuwangi and counted use formula slovin:
This approach ensures that the sample size is statistically representative of the population, allowing for generalizable and reliable results while efficiently managing resources and effort in data collection. Using the Slovin formula, the calculated sample size was 50 students, ensuring that the study was statistically robust while remaining feasible in terms of the breadth of data collection and analysis.

From calculations formula slovin obtained sample study 50 students spread across 3 schools namely 17 students of SMAN 1 Giri, 16 students of SMAN 1 Banyuwangi, and 17 students of MAN 1 Banyuwangi. Instrument in this study use created questionnaire in google forms for make it easy student access. Following indicator interest student

**Table 1. Indicators Interest student**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Basic Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Student</td>
<td>Feeling like</td>
<td>Slameto (2010)</td>
</tr>
<tr>
<td></td>
<td>Attention</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interest</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Involvement</td>
<td></td>
</tr>
</tbody>
</table>

Questionnaire be measured use scale likert and each statement item given score that has customized. Giving score on each grain statement presented in the table following this:

**Table 2. Likert Scale**

<table>
<thead>
<tr>
<th>Score Criteria</th>
<th>Scoring Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>5</td>
</tr>
<tr>
<td>Agree</td>
<td>4</td>
</tr>
<tr>
<td>Doubtful</td>
<td>3</td>
</tr>
<tr>
<td>Don’t agree</td>
<td>2</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
</tr>
</tbody>
</table>

Before being tested on the sample, the statement items will be carried out in the instrument trial stage. In this study using a questionnaire item validity test and construct validity test using the product moment correlation technique formula Pearsons. The results of the validity test calculation are 0.910 - 0.987 > r table 0.456, it can be seen that all questions for the student interest variable have valid criteria. The results of the reliability test calculations use the Cronbach’s Alpha formula that is of 0.992> 0.60, those results state that all statement in questionnaire interest student consistent and accurate for measure the variable of interest student.

The data analysis technique in this study used a simple linear regression test with the help of SPSS version 26 for windows software. The test was conducted to determine the relationship between the independent variable and the dependent variable. The prerequisite test needs to be carried out before the regression test, this aims to find out the data to be calculated is feasible for analysis. The prerequisite test uses normality and linearity tests. The significance value of the normality test using the Kolmogrov-Smirnov is 0.044 > 0.05, which
means that the distribution of student perception variables (X) with student interest variables (Y) is normally distributed.

The linearity test using the Test for linearity is known to have a significance value of 0.016 > 0.05 which indicates that these two variables have a linear relationship. After the prerequisite test is fulfilled, the data is feasible to be analyzed using a simple linear regression test. Next, a percentage calculation will be carried out which aims to find out the distribution of scores on student interest.

\[
\text{Indeks} \% = \frac{T \times P_n}{Y} \times 100
\]

Description:
Q : The total number of students who voted
Pn : Likert score
Y : Ideal score

The results obtained are then presented and interpreted according to the following interval table.

**Table 3. Score criteria**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% - 19.99%</td>
<td>Not very good</td>
</tr>
<tr>
<td>20% - 39.99%</td>
<td>Not good</td>
</tr>
<tr>
<td>40% - 59.99%</td>
<td>Enough</td>
</tr>
<tr>
<td>60% - 79.99%</td>
<td>Good</td>
</tr>
<tr>
<td>80% - 100%</td>
<td>Very good</td>
</tr>
</tbody>
</table>

**RESULT AND DISCUSSION**

**Result**

The formulation of the problem in this study is to reveal the relationship between students' perceptions of the use of immersive virtual field learning media in the study of the Ijen geosite geopark and student learning interest in Geography lessons at Banyuwangi High School. The results of the analysis of the problem formulation can be seen in the following table.

**Table 4. Simple Linear Regression Test Results: Variable Student Interest in feelings of pleasure Indicators**

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standardized coefficients</th>
<th>Standardized coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>B</td>
<td>Std. Error</td>
<td>Betas</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>3.302</td>
<td>2.361</td>
<td>.34</td>
<td>1.399</td>
</tr>
<tr>
<td>Perception</td>
<td>.221</td>
<td>0.34</td>
<td>.687</td>
<td>6.545</td>
</tr>
</tbody>
</table>

**Summary models**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted Square</th>
<th>R.Std. Error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.687</td>
<td>.472</td>
<td>.461</td>
<td>1.11077</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Perception  
b. Dependent Variable: Feelings of pleasure

Based on table 4, the results of the simple linear regression equation test by measuring the independent variable, namely students' perceptions of the dependent variable feeling happy, get a significance value of 0.000 <0.005. It can be concluded that student perceptions have a significant effect on feelings of
pleasure after using virtual field media. While the summary table explains that by using virtual field media students have a perception that influences feelings of pleasure by 47.2% which is obtained from the value of the coefficient of determination. The novelty of using virtual field media as a learning tool generates pleasure among students, a sentiment echoed in existing research on similar technologies in geographic education. By comparing these findings, we can see how virtual reality enriches the learning experience across different studies, underscoring its value in enhancing student engagement and understanding in geography. As said by Dimas, Lia, and Nur in interviews with researchers as follows:

“This is the first experience to see learning media that uses virtual reality. Starting from the shape of the VR glasses, trying to wear them, even to the objects displayed in the media, when trying virtual field media it doesn’t feel tense so it feels so fast to catch explanations, on the contrary using this media is more fun. This media is very satisfying in terms of appearance, audio and even content because usually in Geography lessons we discuss the process of forming mountains, seas, etc. only by telling stories, but with this media we are greatly helped in the visualization aspect of objects, especially in the Ijen Geopark.
When using this media the learning atmosphere is awakened again, like using VR goggles while talking, there are also laughs because trying is like walking without direction even though what is actually being entered is in the VR. Until now there has never been any learning using virtual field media. The use of virtual field media helps explore the Ijen Geopark without having to visit the place.”

Based on table 5, the results of the simple linear regression equation above by measuring the independent variable, namely students' perceptions of the dependent variable, namely attention, get a significant value of 0.000 <0.005. It can be concluded that student perceptions have a significant effect on attention after using virtual field media. In Summary it is explained that by using virtual field media students have a perception that influences attention by 47.1% which is obtained from the value of the coefficient of determination.

Most students can focus on learning using virtual media fields. The concentration of student attention is seen when students are using the media. Students can retell the learning activities carried out. As Dwi, Rosita, and Kevin said in interviews with researchers as follows:
"When using media, focus more on paying attention to explanations of media usage and material summaries. This media really supports learning geography as there is an explanation of lithosphere material, especially in the Ijen Geopark. The novelty of using virtual field media so that it triggers to have high curiosity. Try one by one to get that new experience. This material can be easily understood because there are many tools that can be explored such as video content, questions on the Google form and some of the information listed for learning resources."

"Besides that, usually learning feels so boring because there are still many teachers telling stories, but using new media reduces boredom. This learner feels sleepy and active to ask questions about lithospheric material, especially in Geopark. Apart from that, the learning activities varied, for example, there were those who tried to use VR, tried to fill out questions on the Google form, there were also those who viewed the media from their cell phones while waiting for their turn to use VR glasses."

Table 6. Simple Linear Regression Test Results: Variable Student Interest in Interest Indicators

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standardized coefficients</th>
<th>Standardized coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception</td>
<td>.214</td>
<td>.607</td>
<td>1,296</td>
<td>.201</td>
</tr>
<tr>
<td></td>
<td>3,657</td>
<td>2,823</td>
<td>5,299</td>
<td>.000</td>
</tr>
</tbody>
</table>

Summary models

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted Square</th>
<th>R.Std. Error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.607</td>
<td>.369</td>
<td>.356</td>
<td>1.32807</td>
</tr>
</tbody>
</table>

Based on table 6, results equality simple linear regression on with measure variable independent that is perception student to variable dependent that is interest with mark its significance is 0.000<0.005. Can pulled conclusion that perception student influential significant to interest after using media virtual fields. The summary table is explained that with use of student virtual media fields own influential perception to interest of 36.9% obtained from mark coefficient determination. Most student interested to learning using virtual field media. Students are very enthusiastic when learning using media virtual fields. As Pahlevi, Krisna, and Chalisa said as MAN 1 Banyuwangi students in interview with researcher as following:

"Moment use the media virtual field feel enthusiastic follow learning. Kindly alternate with another friend tried using assisted media virtual fields with VR glasses because want to feel experience use new technology. This medium is very interesting because feel like as if though be in the place. This media virtual field feels interesting for not yet once get before, when use VR glasses can observe existing object inside that is Geosites are spread over several Banyuwangi and Bondowoso areas. Besides it can too see in detail regarding existing object in that medium like color, photo plus audio."
Can see various place in one time in a manner at the same time, this medium is very suitable as means support learning Geography in chap lithosphere because material it is very difficult If student only imagine description just without know the real situation. With The existence of this media really helps the learning process."

**Table 7.** Simple Linear Regression Test Results: Variable Interest Student on Indicator Involvement student

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standardized coefficients</th>
<th>Standardized coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>B</td>
<td>Std. Error</td>
<td>Betas</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>6,669</td>
<td>.107</td>
<td>2072</td>
<td>.463</td>
</tr>
<tr>
<td>Perception</td>
<td>.107</td>
<td>0.30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Summary models*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted Square</th>
<th>R.Std. Error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.463</td>
<td>.214</td>
<td>.198</td>
<td>.97477</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Perception
b. Dependent Variable: Involvement student

Based on table 7, results equality simple linear regression on with measure variable independent that is perception student to variable dependent that is involvement student get mark significant of 0.001 <0.005, can pulled conclusion that perception student influential significant to involvement student after using media virtual fields. The summary table is explained that with use of student virtual media fields own influential perception to involvement student of 21.4% obtained from mark coefficient determination. Whole student engage and participate active in the learning process that uses virtual field media. As Azwa, Wahyu, and Amanda said in interview with researcher is as following:

“When using the media virtual field in learning, students make group small and discuss about one _ point that has been specified in each group. After that shown the media that can accessed via cellphone. Discuss use question already listed on the sheet discussion, each group ask origin start formation until like this now. After groups, student chance see with help VR goggles. After participate in virtual use of VR media alternate with friend another friend, feel walking on Watudodol Beach, Crater Wurung, Kalipait and still Lots again. However, this medium not enough effective when used for students who have history minus eye because will feel Dizzy If use VR goggles.

**Table 8.** Distribution Results Frequency Percentage Interest Student

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Percentage</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling happy</td>
<td>93.60%</td>
<td>Very good</td>
</tr>
<tr>
<td>Attention</td>
<td>92%</td>
<td>Very good</td>
</tr>
<tr>
<td>Interest</td>
<td>92.90%</td>
<td>Very good</td>
</tr>
<tr>
<td>Student engagement</td>
<td>94.30%</td>
<td>Very good</td>
</tr>
</tbody>
</table>

Based on table 8, the results of the percentage distribution show that for each indicator, student interest is in the good category. This shows that most students have an interest in learning using virtual field media. Good student interest does not only arise from within, but there are external factors that encourage students to have a very good interest in learning.
Discussion

1. Perception Student about Media Immersive Virtual Field

In this study student feel benefits of immersive virtual field media. It in accordance with research conducted previously that student feel method for overcome limitations time, place, and efficiency budget as profit from use of immersive virtual field media (Patterson & Han, 2019; Stojšić et al., 2016). The images displayed on the media virtual field are made very real so that presenting environment artificial to student. They can feel sensation real like is at in environment the (Zhou, 2021). However If want to own immersive experience, students recommended must use VR glasses (Yildirim et al., 2018). The media virtual field is viewed potentially for expand chance Study student with bring student visit place yet once visited, besides it's this medium can minimize risk If student come direct to place the (Rosidi & Fitroh, 2021; Wang et al., 2016). The use of media virtual fields allows student interact with virtual environment through participation, exploration and analysis (Adedokun et al., 2012). Besides that, this medium can used as expansion chance Study for student with diverse possible needs they visit place virtually.

There is a number of constraint when use of immersive virtual field media in learning like, usage too much, problem technical and lacking support facility school. School and system education often no flexible and possible for own large spac in use of immersive virtual field media (Southgate et al., 2019). Besides That problem technical like the internet does stable will hinder use (Bower et al., 2020; Southgate et al., 2019). Researcher designing use of assisted media virtual fields less VR glasses than 10 minutes however, there is reporting student complaint in using immersive virtual field media. Most acknowledged complaint that is concern to health moment using media virtual fields. Study previously report that Immersive Virtual Field can cause dizzy, and more often (Porcino et al., 2017).

2. Perception Student about Media Immersive Virtual Field Against Interest Study

a. Perception Student about Media Immersive Virtual Field On Indicators Feeling Like

Analysis results show that perception student about the use of media virtual fields is one influencing factors interest study student. Feeling interpreted as something conditions that exist in the soul in each individual at time certain (Hakim & Amir, 2018). Example somebody feel sad, scared, angry, happy, or other symptoms (Al-Baqi, 2015). As has been disclosed researchers in the results moment using virtual media field students say “when tried media virtual field not feel nerve-wracking so we feel so fast For catch explanation, even on the contrary use of this medium more fun”. Moment using immersive virtual field student media can see inside there are two types the caldera in the complex Ijen that is edge caldera and caldera in volcano.

In the Ijen area, the presence of Mount Ijen, an active volcano with a complex lithology of tuff, breccia, sulfur lava, and sand mixtures, represents a challenging but rich educational opportunity. The inaccessibility of this terrain in traditional field studies limits direct student engagement sand (Afandi et al., 2021). However, the use of immersive virtual field media enables a deeper exploration of the Ijen Geopark Geosite's geological features (Revanza et al., 2023). This virtual approach not only overcomes
geographical barriers but also enriches the learning experience by providing detailed, interactive visualizations of these complex geological structures, making the study of Ijen's unique geology both accessible and engaging.

It in accordance with research conducted previously thought that time needed for introduction will media virtual field not need a long time for explore so that the use of media virtual field to be pleasant (Bracq et al., 2019). After using the virtual field media, students overwhelmingly perceived it positively; however, exploring a range of experiences, including any negative or neutral feedback, would offer a more balanced view of student reactions to this educational tool.

This media virtual field succeed create memorable atmosphere while in class. Memorable atmosphere means atmosphere positive learning, good students and teachers with good mutual relationship (Alles et al., 2019). As has been mentioned by researchers in interview “This media we find it very satisfying”. It in accordance with research conducted previously thought that Satisfaction student see media virtual field visible from method student expression. Student see images contained in any possible media student For connect situation original and the visualization process presented in virtual media (Kustandi et al., 2019). With thus, the findings on indicators feeling like show need for provide environment study innovative students be marked with use technology.

b. Perception Student about Media Immersive Virtual Field Indicators

Attention

Basically every human being has psychological factors that encourage their learning activities, namely the feeling of curiosity to investigate something new. This curiosity is obtained through concentration where one's concentration of psychic energy is fixed on an object. When learning students give good responses, students are more focused on paying attention to the explanations presented. Some of the things that make students focus are by selecting interesting content such as pictures, raised objects, vocabulary, videos, 3D objects and sound (Tai et al., 2022). The use of sophisticated technology such as illustrating material can also provide a good response for students to pay more attention (Awalia et al., 2019).

As stated by researchers in the results when using virtual field media students said "When using this media many of us focus on paying attention to explanations of media usage and material summaries". This attention focuses students on focusing on each Geosite such as in the Plalangan Lava Flow this area was formed by the eruption of Mount Raung where the eruption was dominated by andesitic lava, lava, pyroclastic flows and pyroclastic falls (Maryanto, 2018). The observation in the virtual media that
rocks in the Plalangan lava flow lack cavities, indicating no trapped gas and a dominant black color suggestive of basaltic eruptions, exemplifies the educational benefits of using virtual reality. This specific example highlights how virtual field media can enhance geological understanding by providing detailed visual evidence that supports learning outcomes in geography education (Van Hinsberg et al., 2017). Students focus when giving directions so that they can follow the direction of the arrow to be aimed at in the virtual media field. This is in accordance with previous research which argued that virtual field media has an important role in learning, students will find it easier to remember information by seeing, listening to and even exploring indirectly (Calvert & Abadia, 2020).

![Figure 2. Students focus on delivery, students pay attention to directions](image)

Learning that carries advanced technology in it brings students more enthusiasm in learning this matter as the researcher mentioned in interviews with students, that "Using new media reduces our boredom, we don't feel sleepy during class hours and we are active to ask questions". Feeling bored with learning is common for students, but when learning uses interesting media, students don't get bored easily, students are more active in participating in class (Calvert & Abadia, 2020). Virtual fields can make students feel a more in-depth and real learning experience. The environment created by VR technology can create a feeling as if students are in a real place, so that students feel more emotionally involved and more focused on learning (Suryani et al., 2018). Thus it can be interpreted that the use of virtual field media can arouse students' interest and increase their curiosity to want to know more about the virtual environment they observe.

**c. Perception Student about Media Immersive Virtual Field of Interest**

Enthusiastic students in learning using virtual field media can be seen in Figure 3. Students see objects in VR glasses by looking up, down and sideways. Because each student can freely enlarge, reduce, rotate and change the size of the objects and phenomena presented (Fardani, 2020; Kim, 2006). As stated by researchers in the results when using virtual field media students say "We see various places at one time simultaneously". Virtual field media presented using VR glasses provides an immersive experience for users, this media is presented so that users can explore spatial visuals and illusions spatially which is done through looking at the camera and movement (Hilliges et al., 2012; Nash, 2018). The use of this media is that the image that is visualized has a navigation button that aims to direct to the next point by aiming at the direction of the arrow that is visible on the VR glasses.
"This virtual media field feels interesting to us who have never had it before". This is in accordance with previous research which argues that learning using VR is something new that cannot be found other than at school, the use of VR can trigger students' interest in new media interests (Hussein & Natterdal, 2015). The use of immersive virtual field media can see several geosites, one of which is Kalipait acid flowing from the upstream of the Ijen crater continuously over andesite lava rocks (Hinsberg et al., 2010). There is some important information in the media virtual field that is presented on the information board inside. The high sulfur content makes the Kalipait river flow green and there is no living ecosystem around it (Rotterdam-los et al., 2008). This makes the immersive virtual field media an alternative media for students to reduce the risk of visiting the place.

The virtual field media also encourages students to actively participate in learning so that students appreciate and are more interested in explaining the material and media. As the researcher said in interviews with students that "When using the virtual field media, we feel enthusiastic about participating in learning". This is in accordance with previous research which argues that prioritizing students' situational interests in learning using virtual field media can help increase their enthusiasm and enthusiasm for learning (Fitria, 2023; Parong & Mayer, 2017). Students who are enthusiastic about participating in learning using virtual field media on the topic Ijen Geopark will seek additional information via the internet, articles, books or other sources. Students who have high enthusiasm will affect their interest in learning, using VR media places students in a virtual world (Makransky et al., 2017). This makes students study without distraction from the real world and students only focus on the virtual world that is seen through VR glasses.

d. Perception Student about Media Immersive Virtual Field Engagement

Student

The use of virtual field media is very appropriate for learning that is difficult to imagine. In using virtual field media assisted by VR glasses, students are involved in the learning process which presents a virtual environment into a real environment (Tsaaqib et al., 2022). Discussing with classmates during class promotes critical thinking and problem-solving skills (Nissa et al., 2021). This collaborative activity enhances students' understanding and ability to tackle complex issues, directly contributing to essential skill development in the 21st-century educational landscape. As the researcher said in interviews with students that "we made small groups and
discussed one of the points that had been determined in each group". Student involvement can be demonstrated by an active role during the learning process such as a willingness to participate in class activities, namely conducting discussions (Febrilia & Patahuddin, 2018). It can be seen in Figure 4 that students form small groups and are accompanied by researchers when conducting discussions about objects of lithosphere study in the Ijen Geopark.

![Figure 4. Students group and try virtual reality](image)

Learning that uses virtual field media presents a real picture that is packaged in virtual form so that students can be directly involved. Students who are involved in learning using virtual field media can observe objects that are in the media. Students will receive feedback from these observations and be actively involved in group discussions (Ikhsan et al., 2020). Students take virtual walks and move to several places in the same time and space (Firdiarahma, 2020). When using this media it produces unexpected student statements.

Reports of dizziness and 'fireflies' experienced by some students using VR highlight the sensory challenges of immersive learning. These symptoms emphasize the need to balance immersion with user comfort, suggesting measures like incorporating breaks and customizing VR settings to mitigate discomfort. Addressing these challenges can improve VR's educational application, making it more accessible and enhancing its practical value in learning environments. This is in line with previous research which argued that looking around using VR glasses that only focus on a small screen can cause symptoms of dizziness (Rodrigues & Cheiran, 2020). Despite some students experiencing sensory challenges with virtual reality, their enthusiasm for learning geography remained undiminished, sparking greater interest and engagement. Addressing these challenges with practical solutions like adjusting VR session lengths and offering sensory adaptation strategies could enhance virtual reality's effectiveness as an educational tool.

**CONCLUSION**

The findings from this study, derived through a quantitative survey approach and analysis of responses from students at Banyuwangi High Schools, demonstrate a significant relationship between student perceptions of immersive virtual field media and their interest in learning. This methodological foundation adds credibility to the conclusion that immersive virtual field media is a key factor influencing student learning interest. Student perceptions of immersive virtual
field media, identified as a crucial factor influencing their learning interest, include enthusiasm for the technology's novelty and appreciation for its ability to visualize complex geographical concepts. These perceptions underscore the media's effectiveness in enhancing student engagement and deepening their understanding of geography. Immersive virtual field media is seen as having the potential to expand student learning opportunities by visiting virtual places. Immersive virtual field media succeeded in creating a memorable atmosphere in class by showing an emotional response from within the students.

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