



## Multimodal Learning Practices in Psychology of Literature Courses in Higher Education

(Praktik Pembelajaran Multimodal pada Matakuliah Psikologi Sastra di Perguruan Tinggi)

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**Abstract:** Teaching Literary Psychology in higher education often faces challenges due to a lack of pedagogical strategies to bridge literary texts' complexity with the psychological dynamics embedded within them. Students frequently struggle to grasp the emotional and cognitive depth of narrative meaning because the dominant teaching approach remains monomodal. This study aims to explore students' perceptions of the application of multimodal learning in Literary Psychology courses and to examine the extent to which multimodal resources can promote the development of data, technology, and human literacy in the classroom. The research method used is a descriptive qualitative approach with data collection techniques through in-depth interviews, direct observation of the teaching and learning process, and documentation of student learning outcomes. The research subjects were students and faculty members from the literature program at one of Indonesia's state universities. The research findings indicate that integrating multimodal resources—such as infographics, character analysis videos, and digital forums—significantly enhances active participation, psychological understanding of literary texts, and students' reflective sensitivity. Furthermore, these findings show that multimodal learning impacts material comprehension and shapes an inclusive and transformative learning ecosystem. The conclusion of this study confirms that the multimodal approach is an adaptive and effective pedagogical strategy for developing the interpretive, critical, and literary abilities of literature students in the digital age.

**Keywords** Multimodal learning, Literary psychology, Higher education

**Abstrak:** Praktik pembelajaran Psikologi Sastra di perguruan tinggi sering kali terbentur pada minimnya strategi pedagogis yang mampu menjembatani kompleksitas teks sastra dengan dinamika psikologis yang terkandung di dalamnya. Mahasiswa kerap mengalami kesulitan dalam memahami kedalaman makna naratif secara emosional maupun kognitif karena pendekatan pengajaran yang masih dominan bersifat monomodal. Penelitian ini bertujuan untuk mengeksplorasi bagaimana persepsi mahasiswa terhadap penerapan pembelajaran multimodal dalam matakuliah Psikologi Sastra serta menelaah sejauh mana sumber daya multimodal dapat mendorong pengembangan literasi data, teknologi, dan manusia di ruang kelas. Metode penelitian yang digunakan adalah pendekatan kualitatif deskriptif dengan teknik pengumpulan data melalui wawancara mendalam, observasi langsung terhadap proses belajar mengajar, serta dokumentasi hasil pembelajaran mahasiswa. Subjek penelitian adalah mahasiswa dan dosen dari program studi sastra di salah satu perguruan tinggi negeri di Indonesia. Hasil penelitian menunjukkan bahwa integrasi sumber daya multimodal—seperti infografik, video analisis tokoh, dan forum digital—secara signifikan meningkatkan partisipasi aktif, pemahaman psikologis terhadap teks sastra, serta kepekaan reflektif mahasiswa. Lebih lanjut, temuan ini memperlihatkan bahwa pembelajaran multimodal tidak hanya berdampak pada pemahaman materi, tetapi juga membentuk ekosistem belajar yang inklusif dan transformatif. Kesimpulan dari penelitian ini menegaskan bahwa pendekatan multimodal merupakan strategi pedagogis yang adaptif dan efektif dalam mengembangkan kemampuan interpretatif, kritis, dan literatif mahasiswa sastra di era digital.

**Kata Kunci** Pembelajaran multimodal, Psikologi sastra, Perguruan Tinggi

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## INTRODUCTION

In the practice of lectures in universities, especially in the Psychology of Literature course, the learning approach is still dominated by monomodal conventional strategies, emphasizing more verbal aspects and written texts only (Anisah & Amreta, 2024). As a result, students' interpretive potential for psychological meanings in literary works has not been explored to the maximum (Hargita & Nurhadi, 2023; Beauty et al., 2023). In fact, the current generation of students lives in a digital ecosystem complete with visual, audio, and interactive digital media, so they have different learning preferences from previous generations (Walsh, 2017). In initial observations of several Literary Psychology classes at public and private universities in Indonesia, it was found that students showed low interest in learning and difficulties in integrating psychological and literary aspects in depth. This indicates the need for learning innovations to bridge the gap between students' learning styles and complex and abstract study materials such as Literary Psychology (Waraihan & Anggraini, 2021). This phenomenon is exacerbated by the lack of pedagogic training for lecturers in managing multimodal resources optimally. In this context, the multimodal learning approach emerges as a relevant alternative offering (Cheng & Liu, 2014), given its ability to accommodate the diversity of student learning styles and enrich the learning experience through the use of visual Text, video, voice, and digital interaction (Kalantzis & Cope, 2016). Therefore, it is important to investigate how multimodal learning can be applied contextually in the Psychology of Literature course and how this approach can answer the problem of low student participation and understanding of the material.

Several previous studies have shown the effectiveness of multimodal learning in improving the quality of classroom interaction and students' conceptual understanding (Ajayi, 2020; Serafini, 2015; Coccetta, 2018; Emerson et al., 2020). However, most of the research is still limited to primary and secondary education and in the context of language teaching or visual literacy, not to teaching Literary Psychology in higher education. The literature review found that the multimodal approach has not been systematically explored in courses combining psychological and literary analysis, even though both require a high cognitive ability and emotional sensitivity (Kress, 2020). In addition, educational theories such as constructivist theory and multilayer literacy theory (multiliteracies), which are often used as the basis for multimodal learning, are still not widely adopted into the teaching design of Literary Psychology (Cope & Kalantzis, 2019). The incompatibility between the learning needs of the Literary Psychology course and the learning approach used so far is one of the reasons for the failure to achieve the overall learning objectives. Therefore, there is an urgent need to expand the discourse and practice of multimodality in the context of complex literary learning and to evaluate the extent to which such approaches can accommodate pedagogic challenges in this subject (Firmansyah, 2018). Thus, this research aims to bridge the gap between the potential theory and application in the field that has been critically underpaid by researchers and educators.

This research aims to provide a deeper understanding of implementing multimodal learning practices in university Literary Psychology courses (Firmansyah, 2021c). In particular, this study wants to reveal two important things. First, how do students perceive multimodal learning applied in the Literary Psychology class? Understanding this perception is important because students are the main subjects in the learning process, and the approach's effectiveness depends heavily on their level of acceptance and involvement in learning (Zhou & Wei, 2021). Second, this study wants to examine how multimodal resources in learning can encourage the development of three primary literacies in the digital era: data literacy, technological literacy, and human literacy. This literacy is not only required by the Independent Learning – Independent Campus (MBKM) curriculum. However, it is also part of the 21st-century competencies that students must possess in order to be able to compete in the global world of work (Trilling & Fadel, 2018). By making the Literary Psychology class a pedagogical experiment space, this research hopes to show the concrete contribution of the multimodal approach in creating an inclusive, relevant, and transformative learning ecosystem for higher education in Indonesia.

Although the issue of the importance of innovation in literary learning has long been a concern of academics, the approach used so far still dwells on the method of lectures and discussions of written

texts without making full use of the potential of digital and multimodal technology (Leu et al., 2017). This is where the research gap lies, where there have not been many studies that specifically explore how multimodality can be used in learning Literary Psychology and how it impacts student literacy development. The novelty of this research lies in integrating three literacy domains—data, technology, and people—into a multimodal study of learning practices, focusing on student perceptions as a benchmark for the success of the approach used. The urgency of this research is increasingly emerging in the midst of the demands of digitization of higher education and pedagogic transformation due to the industrial revolution 4.0 and learning disruptions during the Covid-19 pandemic, which forced lecturers and students to adapt to learning technology (Manca & Ranieri, 2016). This research will enrich the treasures of theory in multimodal learning practices and provide a new direction for developing literary pedagogy at the university level, which has received less attention in digital learning innovation.

The main contribution of this research is to develop theoretical and practical insights on how multimodal learning can be applied in Literary Psychology courses in universities. Theoretically, this study expands the scope of the multiliteracy approach (Cazden et al., 1996; Yelland, 2018) by linking it directly to literature-based learning and psychology to bridge the gap between contemporary educational theory and specific learning contexts. Practically, this study presents multimodal learning models and strategies that apply to lecturers in designing learning experiences that are interesting, meaningful, and relevant for 21st-century students (Firmansyah et al., 2022; Pinar, 2019). In addition, the findings of this study are expected to be a reference for the development of curriculum and learning policies in higher education, especially those oriented towards strengthening digital literacy and technology-based learning. This research can also serve as a basis for lecturers' pedagogic training in integrating technology and multimodality into their learning design more systematically and critically (Jewitt et al., 2016). Therefore, this study makes a substantive contribution to developing contemporary pedagogic practices that are contextual, collaborative, and based on the real needs of students in the digital age.

## METHOD

This study uses an exploratory case study perspective conducted at a university in East Java, Indonesia. Multimodal learning was chosen as a learning innovation in the psychology of literature course. Multimodal learning provides a relevant, though underrepresented, context for exploring higher-order thinking skills from a multimodality perspective. This privately managed university was chosen because it is highly committed to superior educational programs implemented in the university environment and in Indonesia.

This study uses a phenomenological case study research basis that examines how students view multimodality as a learning innovation in Indonesian universities using interpretive phenomenological analysis (IPA). Multimodal interpretive phenomenological analysis examines research participants' lived experiences and perceptions (Jewitt, 2008, 2016; Simaniburuk et al., 2022). IPA aims to design a data collection method that elicits participants' detailed stories, thoughts, and feelings. The total number of participants was 39 students, consisting of 35 female students and four male students from the Indonesian Language and Literature Education Study Program (PBSI) as subjects.

This research was conducted through three main stages: participant selection, data collection, and analysis. The first stage of the research was participant selection, which was conducted purposively by involving 39 students from the Indonesian Language and Literature Education Study Program (PBSI), consisting of 35 female and four male students. The next stage was data collection, which was conducted through in-depth interviews, observations, and reflective analysis of student and lecturer journals. Interviews were conducted semi-structured to explore participants' perceptions of multimodal learning with the integration of data literacy, technological literacy and human literacy. Observations were conducted to see how students and lecturers interact with data, technological and human literacy in multimodal learning. In addition, reflective journals were collected to understand students' learning experiences and the integration of data literacy, technological literacy and human literacy used in improving critical thinking.

The collected data were then analyzed using thematic analysis in the IPA approach. The stages of analysis include interview transcription, data coding, identification of central themes, and in-depth interpretation of participant experiences. Data triangulation was applied to increase the validity of the research results by comparing data from various sources, such as interviews and observations. The results of this study are expected to provide an in-depth understanding of the role of multimodality in improving students' learning experiences and supporting the development of critical thinking skills, data literacy, technology literacy and human literacy in higher education.

**Table 1**  
**List of interview questions**

No	Theme	Question
1	Perception of Multimodal Learning	What do you think about multimodal learning in learning the Psychology of Literature course? Explain.
2	Experience of Using Multimodal Learning	Do you feel helped in multimodal learning
3	Impact of Multimodal Learning on Increasing Data Literacy, Technology Literacy and Human Literacy	Does multimodal learning help you in understanding learning content and improving data literacy, technology literacy and human literacy

**Table 2**  
**Observation Guide**

No	Theme	Engagement Indicators	Active	Not active
1	Perceptions of Multimodal Learning	Students listen to the discussion carefully		
		Students ask questions related to the material.		
		Students give opinions or arguments.		
		Students respond to friends' opinions relevantly.		
2	Multimodal Learning Experience with Integration of Data Literacy, Technology Literacy and Human Literacy	Students connect discussions with data literacy, technology literacy and human literacy.		
		Students are active in group discussions and integrate knowledge through data, technology, and human literacy.		
3	The Impact of Multimodal Learning on Increasing Data Literacy, Technology Literacy and Human Literacy	Students show enthusiasm during the discussion.		

## RESULTS AND DISCUSSION

### Results

Based on interviews and observations, this study explores students' perceptions of multimodal learning practices in university literary psychology courses. Specifically, this study explains how students view multimodal learning in the following themes: perceptions, experiences and impacts in multimodal learning. The results of observations during multimodal learning are presented in the following graph. The findings of this study are presented and arranged thematically based on data collected from interviews and observations simultaneously and systematically. This study has two findings: students' perceptions and experiences of multimodal learning in literary psychology courses, especially in improving data, technology, and human literacy.

### Student Perceptions of Multimodal Learning

The data shows that 28 students were actively involved in the discussion, while 11 students were not active in the discussion. Twenty-six students actively asked questions, while 13 students were not active in asking questions. 29 students actively expressed their opinions, while 10 students were not active in expressing their opinions. Thirty-one students actively responded, while eight students were not active in responding. Thirty-three students actively integrated data literacy, technology and

human literacy, while six students were not active in integrating data literacy, technology and human literacy. Thirty-seven students actively showed enthusiasm during the discussion, while two students were not active during the discussion. In other words, most students are actively involved in multimodal learning in the psychology of literature course and integrate it with data literacy, technology and human literacy as a multimodal learning innovation, as shown in Figure 1.

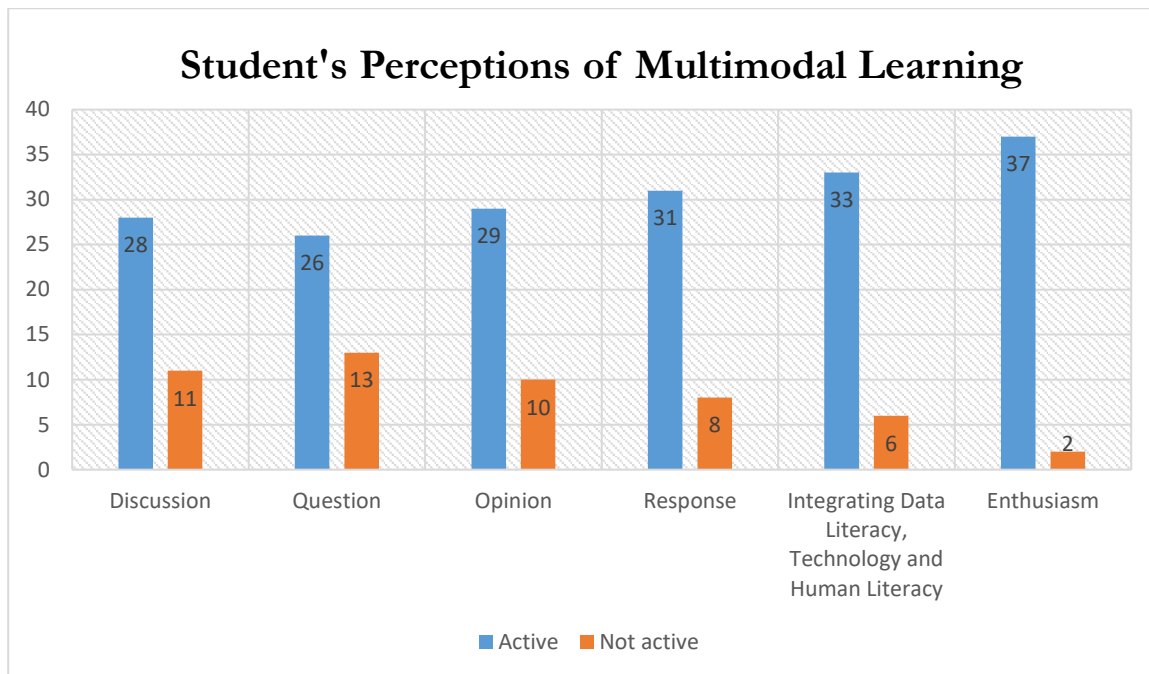


Figure 1. Students' Perceptions of Multimodal Learning

The following interview data complements the observation data to explore further students' perceptions of multimodal learning in the psychology of literature course as expressed in observation responses.

College Student 2:

Very good, because it is very effective in multimodal learning

College Student 5:

In multimodal learning, the development of data literacy, technological literacy and human literacy is very inspiring, especially in elaborating the literature that will be studied, adding various information that we consume every day and can motivate friends among students

College Student 6:

Multimodal learning will attract more attention from students and foster learning motivation. Learning materials will have more precise meanings, allowing students to understand them better and master and achieve learning goals.

The above data shows a strong interest from students in multimodal learning after participating in the learning. This strengthens the awareness of the important role of modality in improving data literacy, technological literacy and human literacy in multimodal learning. Students argue that multimodal learning is effectively used in learning literary psychology. This can inspire students to elaborate on relevant literary psychology studies and motivate their peers in class during learning. In addition, multimodal learning also clarifies literary psychology studies and helps students understand learning objectives. Thus, there is significant interest among students in multimodal

learning. This helps prepare students to play a role in society to solve life's problems using data modality and literacy, technological literacy and human literacy.

This study provides strong evidence to support the argument that data modality and literacy, technology literacy and human literacy have revolutionized the way knowledge is communicated and represented. In addition, this finding also supports the view (Beneke et al., 2010; Firmansyah & Rokhmawan, 2019; Firmansyah, 2021c; Madureira & Fontes, 2023) that states that multimodality in learning takes place multimodally and simultaneously to improve and develop student competence and literacy in higher education. In the context of learning in higher education, multimodal learning as an approach and at the same time as a learning medium can strengthen the understanding of multimodal literature/discourse by providing new semiotic resources outside of conventional literature. Research findings show how students interpret and construct knowledge has shifted from monomodal to multimodal media. Technology now offers access to various forms of representation, such as audio, images, and video, which are increasingly used in multimodal learning.

Multimodal learning is an alternative approach that provides flexibility, allowing students to learn by integrating data, technology, and human literacy. On the other hand, multimodal learning as a medium is more effective in building connections between theory and practice. In addition to being consumers of content, students also actively participate in producing digital materials, such as audio recordings, videos, or images, to support their learning. This activity shows a shift from passive learning to active and creative learning. Multimodal learning provides greater opportunities for students to explore learning methods that suit their preferences. In this process, laptop and mobile technology play an important role by providing greater accessibility to create and consume digital content, in this case, multimodal literature. Research (Cheng & Liu, 2014; Mayer, 2020) confirms that multimodality accelerates the transformation of learning practices to be more dynamic and adaptive per the latest technological and information developments. Therefore, multimodal learning can be considered necessary in student learning in the digital era, whether placed as an approach or media.

In the context of learning in higher education, students are now increasingly building and consuming learning materials multimodally. Multimodal learning presents diverse meanings in making meaning, so students utilize modalities such as audio, video, and images, which provide better support in building knowledge than if they only rely on conventional literature.

In the context of multimodality as a multimodal learning medium, students can access materials with flexibility that is not limited by time or place. Audio media allows them to digest the material at an appropriate pace, as also found in research (Götzfried et al., 2024), which shows that audio-based media allows for pauses and repetitions, providing space for deeper reflection. Research (Jewitt, 2016) shows that visual modes, including video, enrich the learning experience by providing access to various alternative perspectives. This is also relevant for multimodal learning if accompanied by supporting visuals. Multimodal learning, with the flexibility of audio and visual integration, and the potential for sharing, supports independent and collaborative learning. This medium offers opportunities to increase the individualization of learning and build deeper meaning from learning content, per the demands of higher education in the digital era.

### **Multimodal Learning Experience with Integration of Data Literacy, Technology Literacy and Human Literacy**

The data shows that 31 students actively responded, while eight students did not actively respond. Thirty-three students actively integrated data, technology and human literacy, while six students did not actively integrate them. The following interview data complements the observation data to dig deeper into students' learning experiences in multimodal learning as expressed in the observation.

College Student 9:

I often use smartphones as flexible learning tools in multimodal learning, depending on the needs and situations. Smartphones are beneficial when I want to review the material. After class, I usually look

for learning materials discussing the same concept. Listening again from a different perspective strengthens my understanding of the material.

College Student 13:

I previously studied the material on literary psychology that would be presented, then listened while multimodal learning was taking place. If there were something I didn't understand, I would ask the group. Then, if it were for learning, I would repeat the material with perhaps additional relevant multimodal learning media/materials.

The data above shows students' learning experiences towards multimodal learning. This further emphasizes the awareness of the importance of modality in helping students during the learning process when discussing and responding to questions during discussions. This is reinforced by the fact that on campus, students have more time to study under the guidance and assistance of lecturers to carry out multimodal learning practices in the psychology of literature course. Regarding multimodal media, the study's results showed significant benefits for students in understanding the learning material. In the Psychology of Literature course context, multimodal learning becomes very relevant and significant because this field emphasizes the reader's inner experience, personal interpretation of literary works, and the relationship between language, emotion, and meaning.

From the results of student reflections on multimodal learning, several enjoyable learning experiences emerged for study. Two data excerpts deepen and explore student learning experiences in multimodal learning. Students stated that smartphones are flexible learning tools for learning needs and situations. Students use them to review material after class by looking for teaching materials that discuss similar concepts from different perspectives. The student stated that listening to material from various perspectives made his understanding of the concept stronger. Another student said that he prepared himself by studying literary psychology before class. During the multimodal learning session, he listened to the explanation, noted parts that were not understood, and then discussed them with the group. After that, he reviewed the learning material with additional media or relevant multimodal learning materials.

This learning experience illustrates that students actively manage their learning process reflectively and strategically within a multimodal learning framework and style (Firmansyah et al., 2020; Firmansyah & Suwadi, 2021b; Ramadhani et al., 2023). At the most basic level, this shows that multimodal learning provides students with high flexibility in selecting, accessing, and processing information according to individual needs. Smartphones as the primary learning tool are used to access materials provided by lecturers and become a bridge to broaden understanding by exploring other perspectives, whether from articles, videos, podcasts, or open discussions on digital media. In learning Literary Psychology, where many concepts are abstract and interpretive - such as the relationship between characters and psychological trauma, theories of reader personality, or inner symbolism in stories - the use of diverse sources and media can open up opportunities to gain more profound and more diverse meanings. Furthermore, the second student's experience showed high learning awareness and metacognitive learning strategies (Isti'annah & Puri, 2022; Madureira & Fontes, 2023). Students not only followed the learning passively, but first did pre-learning or preliminary learning, which was then continued with active participation during the learning process, and closed with reflection and repetition of the material independently. This indicates that multimodal learning encourages students to have a sense of personal responsibility for their learning process and opens up space for asking questions, discussing, and exploring understanding in a collaborative atmosphere. When students stated that they would ask the group if there was material they did not understand, this shows the important function of multimodality as a bridge between individuals and learning communities.

Learning Literary Psychology greatly benefits from multimodal learning (Firmansyah, 2021a). First, this study focuses on the content of literary works and how readers react emotionally and cognitively to multimodal literature. Therefore, students' interpretations are greatly influenced by the social and cultural context, personal experiences, and the mode of presenting the material. For

example, students can understand the concept of "reader identification" in literary psychology theory by watching a literary adaptation film, then comparing the influence of visuals and narratives on emotional engagement. Students can also listen to a literacy podcast that discusses the experience of reading a particular character from the perspective of psychological trauma, then note the similarities or differences with their reading of the Text. Second, the use of diverse media — such as infographics to summarize Freud or Carl Jung's theories, animations to explain the emotional structure of characters, or interactive quizzes to evaluate readers' perceptions of multimodal literature — provides a variety of forms of cognitive and affective stimulation, which makes learning more interesting, less monotonous, and easier to understand. This is important because the analytical approach cannot be done with just one way of thinking in literary psychology. It requires a combination of logic, empathy, and imagination, all of which can be facilitated through multimodal presentation. In addition, multimodality allows for inclusiveness of learning styles. Students with visual tendencies will find it easier to understand material through diagrams or films, while students with an auditory style will be better helped through podcasts or discussion recordings. Kinesthetic students can also be involved through practical activities such as creating concept maps, designing learning media, or compiling reflections in the form of creative videos (Firmansyah, 2018; Firmansyah et al., 2020; Firmansyah & Suwadi, 2021b). In this way, learning literary psychology becomes more student-centered, and not merely on the delivery of material by lecturers. Both student reflections also reflect that multimodality opens up space for post-class learning reinforcement, an important aspect sometimes overlooked in traditional learning models. The learning process does not stop in the classroom, but continues independently through easily accessible digital media. When students choose to re-listen to material from other sources or gain insight through different platforms, this shows the independence of learning and curiosity that characterizes 21st-century learning.

### **The Impact of Multimodal Learning on Increasing Data Literacy, Technology Literacy and Human Literacy**

Thirty-seven students actively showed enthusiasm during the discussion, while two students were not active. The following interview data complements the observation data to further explore the impact of multimodal learning, as expressed in the observation.

College Student 7:

Multimodal learning can motivate students to be more active in class discussions. It can increase student engagement and understanding of literary psychology's learning material. Multimodal learning can make learning more interesting, relevant, and accessible for today's digital learner generation.

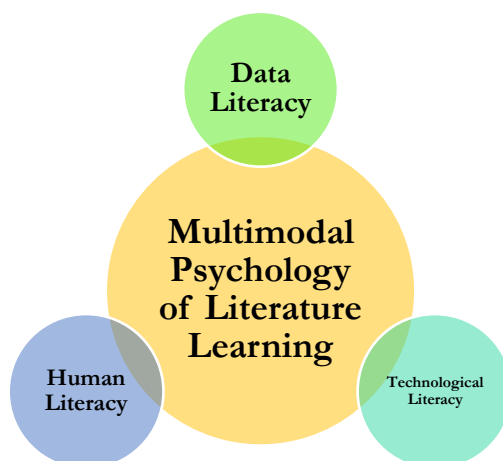
College Student 11:

Multimodal learning often motivates me to participate more actively in class discussions, especially when I feel inspired or have new insights after listening to the material in multimodal learning. For example, when multimodal learning discusses the topic of reader psychology, which is very relevant to what is being studied, I feel more confident in expressing opinions or ideas that come to mind. Multimodal learning provides a different perspective or introduces concepts I have not considered before, opening space for deeper discussions.

The data above shows that multimodal learning has a motivational impact on students during the learning process. In the 21st-century learning era, demands on student competency are not only limited to mastery of academic material alone, but also to the development of three primary forms of literacy: data literacy, technological literacy, and human literacy (Firmansyah et al., 2022; Firmansyah, 2021a; Firmansyah & Suwadi, 2021b; Sabaruddin, 2022). The three are interrelated and are the primary foundation in preparing graduates who can think critically, are adaptive to technology, and can collaborate and understand social contexts. One learning approach that can answer this challenge is multimodal learning. Multimodal learning is an approach that integrates various modes of communication and learning media - language, music, sound, movement and images- to interactive digital media to convey information and build understanding more

comprehensively. This approach is efficient in various course contexts, including the Psychology of Literature course, which demands students' imagination, emotional sensitivity, and interpretive skills.

Two reflective student data serve as the basis for discussing how multimodal learning impacts the improvement of the three main literacies. First, students stated that multimodal learning increases motivation to actively participate in discussions because engagement and understanding of the material are better. Material presented multimodally makes learning more interesting, relevant, and easily accessible to the digital generation. Second, students said that multimodal learning gave them new insights and perspectives. When the material discussed relates to their experiences, they feel more confident conveying ideas in class discussions. Here is the mapping of the improvements.



**Figure 2. The Impact of Multimodal Learning on Increasing Data Literacy, Technology Literacy and Human Literacy**

Data literacy means reading numbers or graphs and includes skills in accessing, understanding, evaluating, and using data-based information wisely. In multimodal learning, students often interact with various forms of information presentation: graphics in videos, character visualizations in film adaptations, audio narration, and infographics explaining literary psychology theory (Cocchetta, 2018; Firmansyah, 2021a). When exposed to various complex inputs, students are encouraged to analyze and filter information critically, compare one form of data to another, and decide which information is relevant to answering questions or building arguments in class discussions. In a lesson on reader psychology, students were presented with videos of poetry readings, interpretive essays, and reader response survey data—all multimodal data that needed to be examined integratively. Student data showed that they were more motivated to engage in discussions when they gained new insights from multimodal materials. This suggests that multimodal learning can enable data literacy indirectly, through the experience of absorbing, critiquing, and responding to information from various forms. These skills are crucial in a workplace and social life filled with digital data flows.

Technological literacy refers to the ability to use, understand, and adapt to technological devices and platforms for learning, work, and daily life. In multimodal learning, students are required not only to be consumers of information, but also to be users and even producers of digital content. The first and second data show that multimodal learning encourages students to actively explore material using digital devices, such as smartphones, laptops, and access to online learning platforms. They access videos, read digital articles, listen to podcasts, and even participate in online discussion forums. In this way, multimodal learning becomes a medium that increases students' sensitivity to technology as an adaptive and productive learning tool (Firmansyah, 2018; Firmansyah et al., 2022; Wildgen, 2024). In addition, the use of technology in multimodal is not only limited to consuming media, but also opens up space for students to contribute. For example, students can convey ideas through digital presentations, create reflective videos, or participate in class blogs. This process trains skills such as digital navigation, selecting appropriate media, managing information sources, and online

collaboration — all components of technological literacy. Students' statements that multimodal learning makes them more confident in conveying ideas because they get new perspectives show that technology not only acts as a tool, but also as an opener of thinking horizons that help students find new ways to understand and convey material.

Human literacy is understanding oneself and others, building empathy, and establishing healthy communication and collaboration. In multimodal learning, human literacy is built through interactions between students, exchanging ideas in discussion forums, and experiential learning activities that enable students to understand various perspectives. Both students' data show they are encouraged to participate in class discussions when multimodal learning presents relevant material and opens new perspectives. This indicates that multimodality allows students to be more involved in the learning process as active subjects who are aware of their understanding. Discussions sparked by multimodal learning are more meaningful because they are rooted in personal experiences, emotional understanding, and deep reflection. In addition, when students feel "inspired" by the material presented through a multimodal approach, they are encouraged to learn more and to share their thoughts and listen to others. This reinforces human literacy values such as openness, interpersonal communication, and empathy. This becomes especially relevant in a Psychology of Literature course because learning focuses on analyzing the emotions, motivations, and inner experiences of readers and fictional characters. With multimodal learning, students also learn that interpretation is not singular; each reader brings a unique social, psychological, and cultural background. This awareness fosters mutual respect and the ability to see differences as sources of learning — core values of human literacy.

## Discussion

The results of this study show that most students positively respond to the application of multimodal learning in Literary Psychology courses, characterized by increased interest in learning, understanding of psychological concepts in literary texts, and active involvement in the classroom (Firmansyah, 2021a). Interview data reflect that using narrative videos, infographics, and online discussion forums facilitates the interpretation of psychological meaning in literary texts that were previously difficult to reach with conventional methods. Observations showed that students were more enthusiastic and engaged when the material was presented visually and interactively, which was then followed up with a written reflection or verbal discussion. The documentation of students' final projects shows an improvement in compiling literary interpretations that deeply touch on the affective and cognitive dimensions. These findings confirm that integrating multimodality in teaching not only adds media elements but also changes the mindset and way students work in understanding and constructing meaning (Mills & Unsworth, 2018). Therefore, multimodal learning in the Literary Psychology course has excellent potential in optimizing the role of students as active subjects in the learning process involving various types of literacy.

Compared to previous studies, this study shows a particular advantage in the integrative approach between multimodality and the development of psychological literacy in literature. For example, research by Zhou & Wei (2021) shows that multimodal learning positively impacts the understanding of abstract concepts in higher education, but does not explicitly examine the relationship between multimodality and psychologically complex literary interpretations. On the other hand, a study by Ajayi (2020) highlights the role of visual capital in increasing student creativity. However, it is still limited to visual literacy without considering technological and human aspects. This research adds a new perspective by showing how the three dimensions of literacy—data, technology, and people—interact in one complex but productive learning ecosystem. The excellence of this research lies in its success in bridging the realms of cognition (psychology), aesthetics (literature), and pedagogy (multimodality), which have not been explored simultaneously in one classroom. With a strong field evidence-based approach, this study confirms previous findings and expands the understanding of multimodal practices in higher education to be more specific and contextual (Serafini, 2015).

The findings of this study imply a transformation of the learning paradigm at the higher education level, especially in the context of the Literary Psychology course, which has been perceived as a theoretical and difficult-to-understand course. When students are given access to various forms of information representation, such as character analysis videos, digital concept maps, and interactive simulations, they show a deeper and more personal understanding of the material (Firmansyah & Julia, 2024; Firmansyah & Rokhmawan, 2019). This reflection shows that a multimodal approach improves cognitive understanding and expands students' ability to respond emotionally and ethically to complex literary narratives (Walsh, 2017). This indicates that the learning goals in Literary Psychology can be achieved more effectively if learning media is adjusted to students' current digital and social context. Reflections obtained from student interviews also show that they feel more "connected" to the material and experience a more "lively" learning experience. This proves that the multimodal approach is technical and touches on humanistic and existential aspects in literary education (Wildgen, 2024; Yanwei & Hassan, 2023). Thus, multimodal learning is valuable in shaping students' psychological sensitivity, empathy, and affective literacy in the post-digital era.

The implications of the results of this research are vast, both pedagogically and institutionally. Pedagogically, these findings emphasize the importance of a shift from traditional teaching methods to a more collaborative, multimodal, and technology-based approach in higher education, especially in courses that combine humanities and social sciences, such as Literary Psychology. This requires lecturers to not only be material presenters, but also facilitators who can design learning experiences that are diverse in modalities (Bezemer & Kress, 2016). Institutionally, these findings can be used to develop more adaptive and contextual curriculum policies, in line with the Independent Campus policy that encourages experiential and technology-based learning (Devianty et al., 2023; Saputra et al., 2022). The Literary Psychology class can be a model for other courses in integrating learning technology meaningfully, not just as a complement. These findings are also relevant in developing lecturer training and procuring digital infrastructure on campus, which is still minimal. Another implication is the urgent need to develop a curriculum that integrates digital literacy and multimodality as basic competencies that students must have in facing the challenges of the 21st century (Trilling & Fadel, 2018).

The positive results of applying multimodal learning in the Literary Psychology course did not appear by chance, but were influenced by several main interrelated factors (Mondada, 2016; Madureira & Fontes, 2023). First, the readiness of technology in the learning environment, both in the form of devices and digital platforms, is the main prerequisite for the success of this learning. Observations in the field show that students with good access to the internet and digital devices are more adaptable and actively participate in multimodal learning activities. Second, the pedagogic capacity of lecturers also plays an important role, especially in designing context-based and multimodal learning. Third, the characteristics of the generation of students accustomed to the digital environment make them more responsive to interactive and visual media (Manca & Ranieri, 2016). Fourth, the material of Literary Psychology, which is inherently reflective and open to interpretation, provides a vast space for various representational capitals. Therefore, the success of this learning is determined not only by the approach used but also by the synergy between technology, pedagogical design, student characteristics, and content flexibility. If one of these components is not met, then the effectiveness of multimodal learning will be reduced.

Based on the results of this research, the strategic step that needs to be taken is to develop a multimodal learning model designed explicitly for interpretation-based and analysis-based courses such as Literary Psychology. This model should include practical guidance for lecturers in selecting, combining, and evaluating learning media appropriate to learning outcomes. In addition, higher education institutions need to provide ongoing training for lecturers in technology-based and multimodal learning design. Strengthening digital infrastructure and support policies is also important so that implementation is not hampered technically and administratively. At the student level, digital literacy programs should be expanded so that they are not only passive users, but also active producers of reflective and contextual learning content (Leu et al., 2017). In the context of higher education

policy, the results of this research can be used as a reference in formulating a curriculum that is responsive to digital challenges and the psychosocial needs of students. Thus, the follow-up of this research has an impact on classroom practice and has the potential to influence the direction of higher education policies that are more humanistic, innovative, and adaptive.

## CONCLUSION

Surprisingly, this study found that the application of multimodal learning in Literary Psychology courses improves students' conceptual understanding and shapes their way of thinking and feeling literary texts in a more reflective and humanistic manner. Unlike the assumption that literary learning is a subjective realm that is difficult to reach with a technology-based approach, the results of this study actually show that the integration of visual, audio, and interactive digital texts creates an "emotional learning space" previously unavailable in conventional approaches. These findings reveal that multimodality is not just a variety of media but transforms into a transformative learning strategy that allows students to build a deep personal meaning to characters and events in literary works. Through interviews and documentation, it was seen that students could articulate the relationship between characters' emotional experiences and real psychological conditions, showing the ability to analyze literary psychology, which is much more complex than that of non-multimodal classes. This fact reverses previous assumptions that doubted the effectiveness of technological approaches in humanities learning. Thus, multimodal learning is relevant for the digital age and has proven effective in building the depth of students' cognition and affection, making it a potential pedagogical approach for higher education today.

This research makes a meaningful contribution to scientific development, theoretically and practically. Theoretically, these findings expand the application of multiliteracy and multimodality theories in the context of higher education, which has been more widely applied to primary and secondary education. Integrating three important literacies—data, technology, and humans—into the realm of literary and psychological studies presents a new perspective on how multimodality can link previously separate scientific domains. Practically, this research produces a multimodal learning model that can be adopted and modified by teachers of Literary Psychology and similar courses in various higher education institutions. The model provides strategic guidance for lecturers to design learning activities that are collaborative, interactive, and based on student experience. Another contribution lies in providing empirical evidence demonstrating the importance of pedagogical reform in technology-based literary curricula. This research also encourages universities to develop inclusive learning policies for multimodality, including procuring digital infrastructure, lecturer training, and developing a 21st-century competency-based curriculum. Thus, the added value of this research lies not only in methodological innovation but also in its ability to bridge the needs of the academic world and the reality of today's digital students.

Although this study provides significant findings, limitations still need to be observed for further research development. These limitations are not a methodological weakness but a reflection of the space that is still open to further exploration. This research is focused on one course in a specific university environment, so its scope does not yet represent the diversity of the context of higher education institutions in Indonesia as a whole. In addition, the form of multimodal resources used in this study is still limited to visual, audio, and specific digital platforms, so it has not accommodated the exploration of other modalities such as virtual reality or gamification of learning, which is now starting to develop. Therefore, further research is recommended to expand the population and context of the study, including exploration of other humanities and social sciences courses and the development of a more holistic evaluative approach to student literacy achievement. In addition, a longitudinal study is needed that evaluates the impact of multimodal learning on the long-term development of students' critical thinking, empathy, and 21st-century skills. Thus, the limitations in this research are not obstacles, but a solid foothold for the direction of future, more progressive, inclusive, and cross-disciplinary multimodal education research.

## DECLARATIONS

<b>Author contribution</b>	: In this study, Dr. Mochamad Bayu Firmansyah, M.Pd, is responsible for all stages of the study, from problem analysis, planning, data collection, and analysis to article preparation. Dr. M. Ridwan, M. Pd., is a co-researcher in terms of making research instruments, problem analysis, data collection and analysis. Thanks to their support and joint contributions, this study can run smoothly, and this journal article can be compiled properly.
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## REFERENCE

- Ajayi, L. (2020). Multimodal composition and meaning-making in a teacher education program. *Journal of Literacy and Technology*, 21(2), 1–22. [https://www.literacyandtechnology.org/uploads/1/3/6/8/136889/jltv21\\_2\\_ajayi](https://www.literacyandtechnology.org/uploads/1/3/6/8/136889/jltv21_2_ajayi).
- Anisah, G., & Amreta, Y. M. (2024). Cognitive diagnostic assessment instrument with individual feedback for language receptive learning on multimodal Text. *KEMBARA: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya*, 10(1), 366–387. <https://doi.org/10.22219/kembara.v10i1.32974>
- Beauty, M., Rahmawati, L. E., Markhamah, M., & Tawandorloh, K.-A. (2023). Evaluasi cipp pembelajaran keterampilan membaca di program studi pendidikan bahasa dan sastra Indonesia: Analisis proses dan produk. *KEMBARA: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya*, 9(1), 1–14. <https://doi.org/10.22219/kembara.v9i1.23516>
- Beneke, J. H., & B. BusSc, M. BusSc, C. T. (2010). Using ICT to enhance knowledge management in higher education: A conceptual framework and research agenda Walter Omona and Theo van der Weide Radboud University Nijmegen, the Netherlands. *International Journal of Business and Management*, 6(4), 83–101.
- Bezemer, J., & Kress, G. (2016). *Multimodality, learning and communication: A social semiotic frame*. Routledge. <https://doi.org/10.4324/9781315638020>
- Cazden, C., Cope, B., Fairclough, N., Gee, J., Kalantzis, M., Kress, G., & Nakata, M. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard educational review*, 66(1), 60–92.
- Cheng, Y., & Liu, W. (2014). A multimodal discourse analysis of the relationship between Pi and Richard the Tiger in the Movie Life of Pi. *International Journal of Language and Literature*, 2(4), 191–219. <https://doi.org/10.15640/ijll.v2n4a11>
- Cocchetta, F. (2018). Developing university students' multimodal communicative competence : Field research into multimodal text studies in English. *System*, 1–9. <https://doi.org/10.1016/j.system.2018.01.004>
- Cope, B., & Kalantzis, M. (2019). Multiliteracies: New literacies, new learning. *Pedagogies: An International Journal*, 14(3), 195–216. <https://doi.org/10.1080/1554480X.2019.1616874>
- Devianty, R., Wahyuni, S., Maisarah, & Sakulpimolrat, S. (2023). Kurikulum berparadigma Wahdatul 'Ulum pada Prodi Tadris Bahasa Indonesia Universitas Islam Negeri Sumatera Utara. *KEMBARA: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya*, 9(1), 213–222. <https://doi.org/10.22219/kembara.v9i1.23708>

- Emerson, A., Cloude, E. B., Azevedo, R., & Lester, J. (2020). Multimodal learning analytics for game-based learning. *British Journal of Educational Technology*, 51(5), 12–25. <https://doi.org/10.1111/bjet.12992>
- Firmansyah, M. B. (2018). Multimodal conception in learning. *ISLLAC: Journal of Intensive Studies on Language, Literature, Art, and Culture*, 2(1), 40–44. Retrieved from <http://journal2.um.ac.id/index.php/jisllac/article/view/4140>
- Firmansyah, M. B. (2021a). *Multimodalitas: Model pembelajaran psikologi Sastra*. Delta Pijar Khatulistiwa.
- Firmansyah, M. B., & Suwadi, S. (2021b). Students' multimodal competency in digital learning in universities. *Erudio Journal of Educational Innovation*, 8(2), 120-136.
- Firmansyah, M. B. (2021c). The effectiveness of multimodal approaches in learning. *Journal of Education And Technology*, 4(3), 469–479. Retrieved from <https://ejournal.ijshs.org/index.php/edu/article/view/194/154>
- Firmansyah, M. B., & Julia, A. (2024). A multimodality in film (the perspective of multimodal discourse analysis). *RETORIKA: Jurnal Ilmu Bahasa*, 10(2), 544-555.
- Firmansyah, M. B., & Rokhmawan, T. (2019). Pengembangan kompetensi komunikasi multimodal mahasiswa STKIP PGRI Pasuruan. *Jurnal Ilmiah Edukasi & Sosial*, 9(2), 124-133. Retrieved from <http://www.jiesjournal.com/index.php/jies/issue/view/9>
- Firmansyah, M. B., Andriyani, A. A. A. D., & Asih, R. A. (2022). Bibliometric analysis of multimodality based on multimodal learning. *Heliyon*, 12(15), 15. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4298216](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4298216)
- Firmansyah, M. B., Siswanto, W., & Priyatni, E. T. (2020). Multimodal smartphone: Millennial student Learning style. *Test Engineering & Management*, 82, 9535-9545.
- Götzfried, J., Nemeth, L., Bleck, V., & Lipowsky, F. (2024). Learning styles unmasked: Conceptual change among pre-service teachers using podcasts and texts. *Learning and Instruction*, 94(August), 14-24. <https://doi.org/10.1016/j.learninstruc.2024.101991>
- Hargita, B. S., & Nurhadi. (2023). Refleksi cinderella complex pada diri tokoh perempuan dalam Novel Bumi Manusia karya Pramoedya Ananta Toer. *KEMBARA: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya*, 9(1), 24–39. <https://doi.org/10.22219/kembara.v9i1.23757>
- Isti'anah, A., & Puri, A. D. (2022). Nature in Indonesian tourism: A multimodal discourse analysis. *Widyaparwa*, 50(2), 319–331. <https://doi.org/10.26499/wdprw.v50i2.1159>
- Jewitt, C. (2008). Multimodality and literacy in school classrooms. *Review of Research in Education*, 32(1), 241–267. <https://doi.org/10.3102/0091732X07310586>
- Jewitt, C., Bezemer, J., & O'Halloran, K. (2016). *Introducing multimodality*. Routledge. <https://doi.org/10.4324/9781315638020>
- Kalantzis, M., & Cope, B. (2016). *Learning to learn: New literacies, learning and meaning*. Cambridge University Press. <https://doi.org/10.1017/CBO9781316092043>
- Kress, G. (2020). *Multimodality: A social semiotic approach to contemporary communication*. Routledge.
- Leu, D. J., Forzani, E., Rhoads, C., et al. (2017). The new literacies of online research and comprehension. *Reading Research Quarterly*, 52(3), 333–352. <https://doi.org/10.1002/rrq.165>
- Madureira, S., & Fontes, M. A. S. (2023). Multimodal impressions of voice quality settings: the role of vocal and visual symbolism. *Frontiers in Communication*, 8(Juli, 2023), 1–14. <https://doi.org/10.3389/fcomm.2023.1114447>
- Manca, S., & Ranieri, M. (2016). Facebook and the others: Potentials and obstacles of social media for teaching in higher education. *Computers & Education*, 95(2), 216–230. <https://doi.org/10.1016/j.compedu.2016.01.012>
- Mayer, R. E. (2020). Multimedia learning. In *Cambridge University Press*, 2020. [https://doi.org/10.1057/9780230800601\\_4](https://doi.org/10.1057/9780230800601_4)
- Mills, K. A., & Unsworth, L. (2018). *Multimodal literacy: From theories to practices*. The SAGE Handbook of Writing Development. <https://doi.org/10.4135/9781526433226.n24>
- Mondada, L. (2016). Challenges of multimodality: Language and the body in social interaction. *Journal of Sociolinguistics*, 20(3), 336–366. [https://doi.org/10.1111/josl.1\\_12177](https://doi.org/10.1111/josl.1_12177)

- Pinar, A. G. (2019). Multimodality – the driving force for engineering undergraduates in a course of technical English. *Universal Journal of Educational Research*, 7(7), 1580–1589. <https://doi.org/10.13189/ujer.2019.070712>
- Ramadhani, J. S., Firmansyah, M. B., Wilujeng, I. T., Putri, N. N., & Nafisah, D. (2023). Pemanfaatan podcast Spotify sebagai media pembelajaran bahasa Indonesia. *Jurnal Ilmu Pendidikan (JIP) STKIP Kusuma Negara*, 14(2), 135-143. <https://doi.org/10.37640/jip.v14i2.1588>
- Sabaruddin, S. (2022). Pendidikan Indonesia menghadapi era 4.0. *Jurnal Pembangunan Pendidikan: Fondasi Dan Aplikasi*, 10(1), 43–49. <https://doi.org/10.21831/jppfa.v10i1.29347>
- Saputra, A. D., Fauziah, F, N., & Suwandi, S. (2022). Pemanfaatan materi ajar bahasa Indonesia bermuatan kearifan lokal di SMA Negeri 1 Karanganyar. *KEMBARA: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya*, 8(2), 335–348. <https://doi.org/10.22219/kembara.v8i2.21726>
- Serafini, F. (2015). Reading multimodal texts: Perceptual, structural and ideological perspectives. *Journal of Literacy Research*, 47(1), 6–23. <https://doi.org/10.1177/1086296X15584904>
- Simanihুরু, B., Surbakti, A., Putra, I. N. D., & Setia, E. (2022). The role of toba dreams in the development of lake toba tourism destination: literary tourism approach (peran toba dreams dalam pengembangan destinasi wisata danau toba: pendekatan sastra pariwisata). *Jurnal Pendidikan, Bahasa Dan Sastra*, 10(2), 1–12.
- Trilling, B., & Fadel, C. (2018). *21st century skills: Learning for life in our times*. John Wiley & Sons. <https://www.wiley.com/en-us/21st+Century+Skills%3A+Learning+for+Life+in+Our+Times-p-9781118157060>
- Walsh, M. (2017). Multimodal literacy: New approaches to literacy learning. *The Australian Journal of Language and Literacy*, 40(1), 61–71. <https://doi.org/10.3316/informit.881408225017723>
- Waraihan, D. A., & Anggraini, P. (2021). Interaction and nationalism of the millennial generation in the novel How to Love Indonesia by Buma M. Sembiring (Interaksi dan sikap nasionalisme generasi milenial dalam novel How to Love Indonesia karya Buma M. Sembiring). *Jurnal Gramatika: Jurnal Penelitian Pendidikan Bahasa dan Sastra Indonesia*, 7(1), 117-130. <https://doi.org/10.22202/jg.2021.v7i1.3459>
- Wildgen, W. (2024). The cognitive roots of multimodal symbolic forms with an analysis of multimodality in movies. *Frontiers in Communication*, 9(May), 1–9. <https://doi.org/10.3389/fcomm.2024.1352252>
- Wildgen, W. (2024). The cognitive roots of multimodal symbolic forms with an analysis of multimodality in movies. *Frontiers in Communication*, 9(May), 1–9. <https://doi.org/10.3389/fcomm.2024.1352252>
- Yanwei, J., & Hassan, H. (2023). A Multimodal Discourse Analysis of Tourism Promotional Video Beijing. *International Journal of Academic Research in Business and Social Sciences*, 13(1), 430–442. <https://doi.org/10.6007/ijarbss/v13-i1/16190>
- Yelland, N. J. (2018). A pedagogy of multiliteracies: Young children and multimodal learning with tablets. *British Journal of Educational Technology*, 49(5), 847–858.
- Zhou, S., & Wei, L. (2021). Students' perception of multimodal learning: A case study in Chinese higher education. *Educational Technology Research and Development*, 69(1), 87–104. <https://doi.org/10.1007/s11423-020-09791-4>