

# Multimodal Immersion towards Learners' Behaviours Intention to Use E-learning in EFL Classroom

1<sup>st</sup> I Nyoman Rajin Aryana Tourism Department Politeknik Negeri Bali Badung, Bali, Indonesia nyomanrajinaryana@pnb.ac.id

2<sup>nd</sup> I Wayan Eka Dian Rahmanu Business Department Politeknik Negeri Bali Badung, Bali, Indonesia rahmanu.eka@pnb.ac.id 3<sup>rd</sup> Anak Agung Raka Sitawati Business Department Politeknik Negeri Bali Badung, Bali, Indonesia agungrakasitawati@pnb.ac.id 4<sup>th</sup> I Putu Yoga Laksana Business Department Politeknik Negeri Bali Badung, Bali, Indonesia yoga.laksana@pnb.ac.id

5<sup>th</sup> Nyoman Yuliantini technic Department Politeknik Negeri Bali Badung, Bali, Indonesia nyomanyuliantini@pnb.ac.id

Abstract - The objective of this report is to examine upper students' perceptions of multi-mode immersion toward Behaviours Intention (BI) when using E-learning in an EFL classroom. This study was a survey with a descriptive quantitative technique, and the sample consisted of only upper level students studying EFL in Bali, Indonesia. The investigation concentrated on a multimodal approach to students' BI that included text, music, images, and video, partially and concurrently. Furthermore, this study wanted to look into how E-learning is used to improve learners' EFL learning materials. The findings demonstrated that only images, text, images, and videos have a slightly favourable influence on the learners' BI. Music, on the other hand, was disliked by EFL students at higher education levels. Surprisingly, the results revealed that using many modes such as text, music, picture, and video at the same time had a substantial influence on students' willingness in the EFL classroom. The prototype for bringing the multimodal approach to the EFL classroom was built and may be found at www.duweg.com. The E-learning used a multimodal method that included voice, text, images, and video.

Keyword: EFL (English as a Foreign Language), Multimodal, E-Learning, Behaviours Intention

## I. INTRODUCTION

Multimodality offers resources and possibilities that challenge established educational methods. Digital storytelling, virtual gaming, kinetic typography, hyperlinked texts/stories, merging visual and print media, audio recordings, and writing and editing are all examples of multimodal instruction [1]. Furthermore, multimodal digital technologies (for example, vodcasts) may aid in the process of audio-visual understanding when learning a foreign language [2]. The use of multimodal digital assets (e.g., vodcasts) in language learning situations may help students with what they perceive to be a difficult task: learning a

foreign language [3]. Engaging and motivating content learning, retaining and deepening information, requiring higher cognitive abilities, facilitating reciprocal learning, boosting digital learning, reflecting on one's teaching, and generating enthusiasm to apply multimodal pedagogy were among the advantages [4]. The benefits of multimodal used to improve learners' foreign language proficiency, including as speaking and writing skills. Multimodal presentation exercises including technology were designed to address learners' presenting skills deficiencies in an EFL classroom [5]. The use of innovative approaches such as multimodality into writing training, in combination with continuous exposure and practise throughout time, can result in greater advances in writing skill [6]. To some extent, multimodal composing boosted EFL learners' English entire writing performance as well as lexical and syntactic complexity [7]. Similarly, the multimodal method may benefit students' reading skills owing to the utilisation of diverse media such as texts, images, sounds, and video clips [8]. In terms of multimodal use in vocational education, digital multimodal allowed students to be creative with technology in their assignments, which opened up new learning opportunities and increased students' social awareness [9].

Although most prior studies have indicated the influence of multimodality usage in the classroom, none of the study has examined the learners' impression of the use of multimodality in the EFL classroom. The perspectives of students on the usage of multimodality inspire lecturers to enhance the E-learning prototype. With these considerations in mind, the research investigates the possibility of multimodality to learn EFL by using text, voice, picture, music, and video individually and concurrently.

#### II. THEORETICAL FRAMEWORK

English as a Foreign Language

All sectors and students continue to see the need for more advanced genre studies [10]. With its broad and wide human sciences study, each kind is concerned with a certain field of scientific knowledge such as technology, business and economy, or social domains in general. Each of them is broken further into two sub-branches: English for Academic Purposes (EAP) and English for Occupational Purposes (EOP) (EOP). EOP for the ESS branch is 'English for Psychology,' whereas EAP for the ESS branch is 'English for Teaching.' Hutchinson and Water's classification of EAP and EOP, on the other hand, is somewhat unclear and requires additional detail to distinguish between them.

Nevertheless, the distinction may be established in terms of convenience. English for Occupational Purposes (EOP) courses equip students to work in an English-speaking environment. Of course, this type would be ideal for teaching attorneys and administrative professionals who wish to further their careers [11]. Academic Purposes (EAP) is a word used to identify shared core traits, which are sometimes referred to as "study skills" at times. They comprise producing academic papers, taking notes and observations, listening to formal academic dialogues, and presenting. It is obvious from this remark that teaching ESP involves both academic and professional areas [11].

# Multimodality

Multimodality has evolved as a major concept in communication and language education research, and second language (L2) classroom pedagogical discourse is intrinsically multimodal [12]. Multimodality pedagogy incorporates several kinds of representation such as texts, visuals, audio, and so on. The immersion of specific digital technology in the multimodal has enhanced to meet the learning goals. Over the last decade, there has been an increase in the interest in digital multimodal composing (DMMC) in the context of language learning.

When the subject was controlled, students produced more syntactically complex writing output than DMMC, but there was no difference in accuracy. This consistency in correctness demonstrates that employing several channels of communication does not impair attention to language. This was our first attempt to assess the quality of students' writing in DMMC, and our future research agenda will continue to study how DMMC can assist learners in their target language writing progression [13]. The compositional mode had the highest proportion of illustrative images, suggesting that they can help students interact successfully with the exercises and provide empathy for the arguments presented in the text's verbal sections [14].

# E-Learning

E-learning has been planned to use networked information and communications technologies in education [15]. E-learning may also be characterised in the use of electronic systems such as the internet, computers, and

multi-media with the goal of reducing expenditures and goings and comings. E-Learning is now thought to include a wide variety of multimedia technologies such as the internet, interactive television, and all types of electronic support, among others, all of which promote learning and make it more adaptable and friendly [16]. Furthermore, it assists pupils in gaining information, practise, and experience [17], [18], [19]. E-learning or distant education is a style of learning in which students do not usually attend school in person. In other words, people may still study without having to attend class or visit a university campus [20]. Distance learning may be advantageous for increasing access to higher education. Furthermore, distant education may broaden the student population since modern technology allow people to study from anybody, anywhere, at any time. It implies that students from different countries can virtually attend some universities' online classrooms [21]. The literature acknowledges five types of e-learning. The five categories are e-learning that is learner-led, instructor-led, embedded, facilitated, and telementored [22], [23], [24]. When teachers integrate videos and online pages to increase students' learning, this is referred to as integrated e-learning. This is distinct from instructor-led e-learning, which includes of instructors delivering lectures using realtime webcast technology, which may include both audio and video conferencing, speaking, screen sharing, and whiteboard applications. Students can participate directly here by sending voice, video, or instant messaging. As a paradigm, e-learning encompasses a wide range of applications, learning techniques, and procedures. The use of apps, new multimedia technologies, and the internet in online learning is critical since it facilitates the adoption of e-learning by allowing students to readily access the offered information or participate the virtual meeting [25], [26], [27]. E - learning, web - based learning, and ICT (Information and Communication Technology) integrated learning are all examples of e-learning. All explanations highlight the importance of both computers and technology [28].

# III. METHOD

524 undergraduates from Bali's Polytechnic and University provided data for this study. Students in higher education were selected because they study English for specific goals. The students were given six questions via a computerized questionnaire, which they were asked to complete at their leisure. The study intends to assess participants' arguments using a Likert scale ranging from 1 to 5. Words (text), sound (audio), picture, and visual multimodality (video) [29] and behavioural intension (BI) from UTAUT theory [30] were involved in this research. This research analysed the effect of the multimodality based on Jewitt on higher education students' behavioural intention (BI). The SPSS statistical platform is also used to analyse descriptive statistics, model summary, coefficients, and residuals statistics.

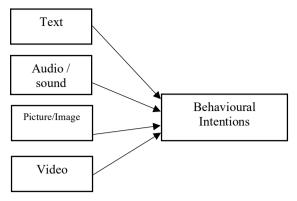


Figure 1. Multimodal towards behavioural intentions

The survey item elaborated primarily on table 1, with five questions on the independent item and just one on the dependent. There are two questions on the usage of text on the multimodality element examined in this study, compared to one question about audio, picture/image, and video.

**Table 1**. The item of questionnaire

Multimodal		Item
Text	X1	In learning English in college, learning basic new vocabulary is very important.
	X2	In learning English in college, learning sentence structure is very important.
Audio	Х3	The use of music as a back sound in the presentation of images or videos has a positive influence on the learning process in higher education.
Picture/Image	X4	The use of images in the teaching and learning process is still very relevant for use in universities.
Video	X5	The use of video in the teaching and learning process is still very relevant for use in universities.
UTAUT		Item
Behavioral Intensions	Y	I want to learn and practice my English skills using virtual technology before entering the industrial world.

## IV. RESULT

# Data Statistic Result

This study's findings include descriptive statistics, a model summary, ANOVA, and data coefficients. Each table discusses the relationship between multimodality and behavior intentions while utilizing E-learning in EFL classes. The tables demonstrate the major results that led to the discovery of an important technique to teaching EFL in this study.

Table 2. Model Summary

- *****				
		R	Adjusted R	Std. Error of
Model	R	Square	Square	the Estimate
1	.954ª	.911	.910	.20173

a. Predictors: (Constant), X5, X1, X3, X2, X4

Table 3 describes the data model overview. The R square score was 0.911, which was somewhat higher than the corrected R square value of 0.910. The estimate's total number of standard errors was 0.20, which was less than the R square value.

Table 3. ANOVA<sup>a</sup>

		Sum of		Mean		
Model		Squares	df	Square	F	Sig.
1	Regressio n	215.552	5	43.110	1059.3 92	.000b
	Residual	21.079	518	.041		
	Total	236.632	523			

a. Dependent Variable: Y

In table 4, the sum of squares was 215.5, but the mean square was little more than 43. The overall F score was more than 200 percent of the mean square score. Furthermore, the ANOVA test had a significance of 0.05. The residual data showed that the sum of squares score was 21, whereas the mean square was just 0.041.

Table 4. Coefficients<sup>a</sup>

	Unstandardized Coefficients		Standardi Coefficie		
Model	В	Std. Error	Beta	t	Sig.
1 (Const ant)	.153	.069		2.207	.028
X1	111	.027	104	4.110	.000
X2	.136	.030	.123	4.578	.000
X3	.017	.018	.018	.905	.366
X4	.469	.029	.488	16.32 3	.000
X5	.458	.027	.469	17.07 3	.000

a. Dependent Variable: Y

Table 5 details the coefficients of 5 independent factors in this study toward 1 dependent item. The outcome shows that the sig. for items X1, X2, X4, and X5 is 0.05 This implies that students in higher education, such as polytechnics and universities, may still benefit from learning fundamental new vocabulary, sentence structure, and the usage of visuals and video in the teaching and learning process. On the other hand, the results on item X3 indicated 0.366 > 0.05, indicating that back sound use had no substantial affect on the teaching and learning process in the classroom. In terms of the t score, the lowest score on the independent item was X3, which accounted for 0.905, while the greatest score was on X5, which accounted for 17.07. Despite the fact that X1's t score was -4.1, this result demonstrated a substantial influence on the dependent item.

b. Predictors: (Constant), X5, X1, X3, X2, X4

In addition, the t scores for X2 and X4 were 4.5 and 16.3, respectively.

## V. DISCUSSION

The findings of this study shed light on the beneficial influence of multimodality on the behavioural intentions of higher education students. The relevance of multimodality has the ability to inspire lecturers, specialists, and academics to create multimodal learning media in order to increase learners' desire to study in the EFL classroom. In general, learning components in EFL, such as vocabulary or structure, have the ability to increase learners' motivation to study. In accordance with this, the usage of pictures or videos in the EFL classroom has the potential to increase students' eagerness to study. However, there is no desire to employ music as a background sound throughout the teaching and learning process. According to the research, students in higher education feel that language plays an important part in their studies the English language. For English language learning, teaching, and testing, a more fundamental aspect to vocabulary is essential [31]. Improving students' vocabulary helps them create phrases in the EFL classroom. This stage allows pupils to practise writing simple phrases, dependent and independent clauses, and paragraphs. According to the respondent, sentence form is important in EFL lessons. The students thought that organisation helps with English language abilities. The framework is important in English for business studies since it allows students to strengthen their abilities. Listening, reading, speaking, and writing skills must be learned by learners in order to face the industry, since these four skills are important components for users to improve their performance in the workplace. Similarly, respondents agree that pictures should be used in traditional ways in higher education. Students' engagement and understanding of academic topics are increased when appropriate visuals are mixed with less text [32]. This suggests that visuals support users' cognition in the classroom teaching and learning process. The utilisation of the image will benefit both instructors and students since visualisation supports the academic process. Users are eager to enhance their lexical knowledge by observing the images. An picture may both illustrate and inspire the creation of a text. A image shot by a student serves as inspiration for writing. A written text, in turn, sharpens their ability to observe and helps them to catch other pictures of occurrences, related or not, which might later inspire new texts [33]. The statistics show the impact of video in the EFL classroom; this learning tool is indistinguishable from image and word use. Learners believe that photography helps to a student's willingness to study English. However, the evidence on the employment of music as a background sound during the proved contradictory. Music has no discernible effect on pupils' willingness to learn English. This demonstrates that music may not be the most effective strategy for increasing learners' motivation to study in the EFL classroom. In terms of fun, music has the capacity to serve merely as

entertainment rather than as a learning media tool. Before delivering teaching and learning resources, music may be used as a supplement. Music may be employed to shape the environment of the English classroom, stimulate students' attention and enthusiasm while they study, and be the main learning content in listening exercises [34]. This exercise has the potential to create a comfortable and enjoyable atmosphere for learning and teaching in the EFL classroom. Texts with vocabulary and structure, visuals, music, and video all have a good influence on students' motivation to study EFL. This demonstrates that multi-modes have the potential to help learners improve their English language skills. By involving students in video creation and providing the option for civic involvement, the possibility arises to incorporate social topics that students are concerned about or are interested in as part of a language course [35].

The use of modern media to further the multimodality approach may be realized through the usage of spherical video-based immersion virtual reality (SV-IVR). It is a spherical video VR technique that allows spectators to continually pan and tilt within a circle. Viewers of immersive films may freely explore in 360 degrees and control the material and perspective they wish[36]. The application of multi-mode must be included into learners' Elearning in higher education. The website's technology significantly aids experts in expanding learning and teaching resources in the EFL classroom. Setting graphics, video, text, and audio is a frequent method for lecturers when giving topics in EFL. Recently, internet innovation is used not only to enhance the combination of traditional media but also as equipment to operate more appropriate learning media for students in EFL classrooms, such as SV-IVR.

#### VI. CONCLUSION

The immersion of multimodality including texts, images, audio, and videos is favoured by the learners in EFL. The combination of several media obviously escalates learners' motivation to learn EFL. This proves that integrating various media as a learning tool is demanded in the EFL curriculum. Expertise, lecturers, or teachers have a massive chance to establish suitable teaching and learning materials using a multimodality approach. The opportunity to develop the learning media in EFL can be implemented through the use of a website. In line with that, the implementation of using a multimodal approach can be specifically applied through E-learning. The employing of images, videos, audio, and text simultaneously has a possibility to elevate learners' desire to learn EFL through E-learning. The prototype of E-learning that part of this study can be accessed at www.duweg.com which provides tasks and exercises. However, the E-learning development ought to be improved further as it doesn't have specific images which can lead learners in improving their ability in EFL. The tendency of using SV-IVR is a possible consideration in further study. The SV-IVR technology accommodates lecturers in teaching EFL in higher education. Likewise, the

immersion of SV-IVR can be developed as its technology represents a multimodality approach in the EFL classroom.

#### REFERENCES

- [1] A. L. Freyn and S. Gross, "An empirical study of Ecuadorian university EFL learners' comprehension of English idioms using a multimodal teaching approach," *Theory Pract. Lang. Stud.*, vol. 7, no. 11, pp. 984–989, 2017.
- [2] N. N. Fernández-Pacheco, "The impact of multimodal ensembles on audio-visual comprehension: Implementing vodcasts in EFL contexts," *Multimodal Commun.*, vol. 7, no. 2, 2018.
- [3] N. Norte Fernández-Pacheco, "Multimodal digital tools and EFL audio-visual comprehension: Student's attitudes towards vodcasts," 2016.
- [4] M. Li, "Multimodal pedagogy in TESOL teacher education: students' perspectives," System, vol. 94, p. 102337, 2020.
- [5] Y. Lee, "Integrating Multimodal Technologies with VARK Strategies for Learning and Teaching EFL Presentation: An Investigation into Learners' Achievements and Perceptions of the Learning Process.," Aust. J. Appl. Linguist., vol. 2, no. 1, pp. 17– 31, 2019.
- [6] M. Najmeh, G. Mohammad, and N. Amin, "INTEGRATING DIGITAL MULTIMODAL COMPOSITION INTO EFL WRITING INSTRUCTION," J. Lang. Educ., vol. 8, no. 1 (29), pp. 84–99, 2022.
- [7] Q. Xie, X. Liu, N. Zhang, Q. Zhang, X. Jiang, and L. Wen, "Vlog-Based Multimodal Composing: Enhancing EFL Learners' Writing Performance," Appl. Sci., vol. 11, no. 20, p. 9655, 2021.
- [8] P. Phengsuai, "Students and teacher's views on a multimodal approach to English reading skill development of Thai EFL students in a university context," 2019.
- [9] D. R. Wulan, N. A. Drajati, and S. Supriyadi, "Exploring EFL Students' Digital Multimodal Composing (DMC) Affordance: Stories from Vocational School," AL-ISHLAH J. Pendidik., vol. 14, no. 2, pp. 2007–2018, 2022.
- [10] A. M. Johns and S. Nodoushan, "English for Specific Purposes: The State of the Art (An Online Interview with Ann M. Johns).," Online Submiss., vol. 9, no. 2, pp. 113–120, 2015.
- [11] C. E. Lamri, "An introduction to English for specific purposes (ESP)," Univ. Abou Bekr Belkaid Tlemcen, Fac. Arts Lang. Dep. English. Retrieved Febr., vol. 7, p. 2018, 2016.
- [12] J.-E. Peng, "The roles of multimodal pedagogic effects and classroom environment in willingness to communicate in English," *System*, vol. 82, pp. 161–173, 2019.
- [13] Y. Kim and D. Belcher, "Multimodal composing and traditional essays: Linguistic performance and learner perceptions," *RELC J.*, vol. 51, no. 1, pp. 86–100, 2020.
- [14] D. S. Elmiana, "Pedagogical representation of visual images in EFL textbooks: a multimodal perspective," *Pedagog. Cult. Soc.*, vol. 27, no. 4, pp. 613–628, 2019.
- [15] S. Naidu, E-learning: A guidebook of principles, procedures and practices. Commonwealth Educational Media Centre for Asia (CEMCA), 2006.
- [16] S. Kakoty, M. Lal, and S. K. Sarma, "E-learning as a research area: an analytical approach," *E-learning*, vol. 2, no. 9, 2011.
- [17] M. Burkle, "El aprendizaje on-line: oportunidades y retos en instituciones politécnicas= Apprenticeship Students Learning On-line: Opportunities and Challenges for Polytechnic Institutions," El Aprendiz. on-line oportunidades y retos en Inst. politécnicas= Apprenticesh. Students Learn. On-line Oppor. Challenges Polytech. Institutions, pp. 1–18, 2011.
- [18] J. Liu, "E-learning in English classroom: Investigating factors impacting on ESL (English as Second Language) college students' acceptance and use of the Modular Object-Oriented Dynamic Learning Environment (Moodle)." Iowa State University, 2013.
- [19] D. Tavangarian, "Is e-Learning the Solution for Individual Learning?," *Electron. J. E-learning*, vol. 2, no. 2, pp. pp265-272, 2004
- [20] M. Sadeghi, "A shift from classroom to distance learning: Advantages and limitations," Int. J. Res. English Educ., vol. 4,

- no. 1, pp. 80-88, 2019.
- [21] J. Traxler, "Distance learning—Predictions and possibilities," Educ. Sci., vol. 8, no. 1, p. 35, 2018.
- [22] W. Horton and K. Horton, E-learning Tools and Technologies: A consumer's guide for trainers, teachers, educators, and instructional designers. John Wiley & Sons, 2003.
- [23] S. M. Ilie and C. Pavel, "E-learning techniques to study dynamics of mechanism. Research Reflections and Innovations in Integrating ICT in Education." 2006.
- [24] Y. Gulbahar, "E-learning," *Turkey Pegem Acad. Publ.*, 2009.
- [25] D. G. Oblinger and B. L. Hawkins, "IT Myths The Myth about E-Learning," Educ. Rev., vol. 40, no. 4, p. 14, 2005.
- [26] P. G. Rossi, "Learning environment with artificial intelligence elements," J. e-learning Knowl. Soc., vol. 5, no. 1, pp. 67–75, 2009.
- [27] V. Arkorful and N. Abaidoo, "The role of e-learning, advantages and disadvantages of its adoption in higher education," *Int. J. Instr. Technol. distance Learn.*, vol. 12, no. 1, pp. 29–42, 2015.
- [28] A. Sangrà, D. Vlachopoulos, and N. Cabrera, "Building an inclusive definition of e-learning: An approach to the conceptual framework," *Int. Rev. Res. Open Distrib. Learn.*, vol. 13, no. 2, pp. 145–159, 2012.
- [29] C. Jewitt, *Technology, literacy, learning: A multimodal approach.* Routledge, 2012.
- [30] V. Venkatesh, J. Y. L. Thong, and X. Xu, "Unified theory of acceptance and use of technology: A synthesis and the road ahead," J. Assoc. Inf. Syst., vol. 17, no. 5, pp. 328–376, 2016.
- [31] D. Van Vu and E. Peters, "Vocabulary in English language learning, teaching, and testing in Vietnam: A review," *Educ. Sci.*, vol. 11, no. 9, p. 563, 2021.
- [32] D. Roberts, "The engagement agenda, multimedia learning and the use of images in higher education lecturing: or, how to end death by PowerPoint," *J. Furth. High. Educ.*, vol. 42, no. 7, pp. 969–985, 2018.
- [33] J.-D. R. Garrido, E. Hernández-León, B. Figueroa-Sandoval, and M. Aillon-Newman, "Learning and experience: Aesthetics of multimodal texts in higher education," *Digit. Educ. Rev.*, pp. 170–184, 2018.
- [34] E. Apriani, U. A. Azizah, R. Morgana, and S. Syafryadin, "Multimodal Resources to Enrich Meaning Construction by EFL Teacher," J. English Educ. Teach., vol. 5, no. 1, pp. 123–137, 2021.
- [35] Y.-F. Chen, Y.-Z. Luo, X. Fang, and C.-J. Shieh, "Effects of the application of computer multimedia teaching to automobile vocational education on students' learning satisfaction and learning outcome," EURASIA J. Math. Sci. Technol. Educ., vol. 14, no. 7, pp. 3293–3300, 2018.
- [36] S.-Y. Chien, G.-J. Hwang, and M. S.-Y. Jong, "Effects of peer assessment within the context of spherical video-based virtual reality on EFL students' English-Speaking performance and learning perceptions," *Comput. Educ.*, vol. 146, p. 103751, 2020.

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