Original scientific paper

Received: February 25, 2025.
Revised: April 11, 2025.
Accepted: April 13, 2025.

UDC:
37.091.12:005.962.131(574)
005.963.5:378-051
10.23947/2334-8496-2025-13-1-217-222

Examining Multimodal Literacy Skills Among EMI Teachers in Kazakhstan

Madina Bekturova[1], Davronzhon Gaipov[1], Gergana Hristova Dyankova[2], Saule Tulepova[1]*

[1]SDU University, Faculty of Education and Humanities, Language Education Department, Kaskelen, Kazakhstan, e-mail: mb.bekturova@gmail.com, davronzhon.gaipov@sdu.edu.kz, saule.tulepova@sdu.edu.kz
[2]South-West University "Neofit Rilski", Faculty of Pedagogy, Department of Preschool and Primary School Education, Blagoevgrad, Bulgaria, e-mail: diankova_g@swu.bg

Abstract: The integration of English as a Medium of Instruction (EMI) in Kazakhstani universities necessitates effective multimodal communication in teaching. However, limited research has explored EMI instructors' multimodal literacy—their ability to utilize verbal, visual, and textual elements to enhance instruction. This study investigates the relationship between EMI instructors' ability to express and interpret multimodal content and their preference for multimodal communication in teaching at a Kazakhstani university. A quantitative research design was employed, utilizing a validated survey instrument to assess 120 teachers' multimodal literacy levels in one Kazakhstani university. The collected data underwent reliability analysis, descriptive statistics, and Pearson correlation analysis to examine the relationships among multimodal expression, interpretation, and preference. The results indicate that while teachers acknowledge the value of multimodal approaches, they encounter significant challenges in integrating them effectively. Variations in internal consistency suggest that certain aspects of multimodal communication remain difficult to master. Additionally, the findings reveal that teachers who demonstrate strong multimodal interpretation skills do not necessarily prefer using such methods in teaching. These findings suggest a gap between EMI instructors' multimodal literacy and their instructional preferences, highlighting the need for targeted faculty development programs that enhance multimodal teaching strategies.

Keywords: *English as a medium of instruction, Multimodal Literacy Scale, higher education, multimodal training, university teachers.*

Introduction

In recent years, English as a Medium of Instruction (EMI) has gained significant traction in higher education institutions worldwide, particularly in non-Anglophone countries (Dearden, 2015). Kazakhstan, as part of its educational reform initiatives, has increasingly adopted EMI to enhance global competitiveness and academic integration (Kaiypova and Kim, 2024). Since the adoption of the EMI format for delivering courses in non-linguistic majors, Kazakhstani higher education institutions have begun formulating relevant policies, creating and introducing numerous English-taught academic programs, and developing diverse methodologies to ensure effective implementation (Tulepova et al., 2024:434). However, ensuring effective communication and knowledge transfer in multilingual and multicultural classrooms still requires educators to develop multimodal literacy skills.

Multimodal literacy refers to the ability to interpret, express, and engage with meaning through multiple modes of communication, such as visual, auditory, gestural, and textual elements (Walsh, 2010). Given the diverse nature of modern classrooms and the increasing reliance on digital technologies in teaching and learning, EMI teachers must be adept at utilizing multimodal resources to enhance student engagement and comprehension (Morell, 2018). According to Custodio-Espinar and López-Hernández, "multimodality can be useful in EMI contexts to measure and evaluate different ways of meaning-making produced by students" (2023, p.7). Despite its importance, there is limited empirical research on EMI teachers' multimodal literacy skills, particularly in Kazakhstan. Understanding their competencies and

*Corresponding author: mb.bekturova@gmail.com

preferences regarding multimodal communication is crucial for addressing potential challenges, for mastering "behavioral strategies that form a concrete benefit related to good organization, control, and responsibility of participants in the educational process" (Tasevska and Ivanov, 2022:47) and for informing professional development programs (Sutrisno et al., 2023). Thus, this study seeks to bridge this gap by examining the multimodal literacy skills of EMI teachers at a private university in Kazakhstan. Specifically, it investigates teachers' ability to express themselves using multimodal structures, their interpretation of multimodal content, and their preferences for multimodal communication in the classroom using a validated survey instrument developed by Bulut et al. (2015). Therefore, the research question was formulated as follows: ***How do EMI teachers in Kazakhstan demonstrate multimodal literacy skills, and what is the relationship between their ability to express and interpret multimodal content and their preference for multimodal communication in the classroom***

Theoretical framework

This study adopts Multimodal Social Semiotics (Kress, 2009) as its theoretical lens to explore EMI teachers' multimodal literacy skills. Multimodal Social Semiotics posits that meaning-making occurs through multiple modes - such as speech, writing, images, and gestures - each with distinct affordances that contribute to communication and knowledge construction. This presupposes a "meaning-centered management of the educational environment that provides conditions for maximum personalization of the learning process by transforming the traditional process of transmitting educational communication into an organic and authentic dialogue" (Dermendjieva et al, 2020:77). In the context of EMI, where linguistic barriers may exist, effective teaching relies not only on verbal proficiency but also on the strategic integration of multimodal resources to facilitate understanding (Morell, 2020). This may be due to the fact that since content specialists are not always fully proficient in the language, they often rely on a combination of written text, visual aids, body language, and speech to convey and elicit meaning (Morell, 2018).

Within EMI classrooms, multimodal literacy enables teachers to scaffold content, clarify complex concepts, and engage students through diverse semiotic modes (Tai and Wei, 2024). This study focuses on three key dimensions of multimodal literacy: expression, referring to teachers' ability to convey meaning using multimodal strategies; interpretation, involving their ability to decode and analyze multimodal content; and preference, reflecting their inclination towards using multimodal communication in instructional settings, defined by Bulut et al. (2015). By applying Multimodal Literacy Scale, this research aims to uncover how EMI teachers navigate and utilize multimodal resources to enhance teaching effectiveness in a multilingual academic environment.

Materials and Methods

This study employed a quantitative research design employing a validated survey instrument designed by Bulut, Ulu and Kan (2015). Data collection was conducted via an online Google Forms survey platform. Participants completed the questionnaire anonymously. Data were screened for missing responses and outliers before proceeding to analysis via SPSS version 30.

The survey was conducted among 120 EMI teachers at one private Kazakhstani university. The respondents were recruited using a convenience sampling approach. Participants provided informed consent before completing the questionnaire. The gender distribution of the participants was 75% female (n = 90) and 25% male (n = 30). The participants' ages ranged from 21 to 35, with the largest group being 22-year-olds (70.9%). A smaller proportion of respondents were aged between 23 - 35, each making up between 4.2% and 8.3% of the total sample. Regarding teaching experience, the majority (58.3%) had been teaching for about a year or less, while 25% had between two and five years of experience. The remaining 16.7% reported having between six and ten years of teaching experience. These demographics suggest that the sample primarily consists of young and relatively inexperienced EMI teachers, which may have implications for their familiarity with multimodal literacy practices and the challenges they face in EMI instruction.

Results

This section presents the findings of the study, focusing on the reliability of the multimodal literacy scale, descriptive statistics of teachers' responses, and the relationships among the three multimodal literacy factors. First, the internal consistency of the scale was assessed using Cronbach's alpha coefficients, revealing varying levels of reliability across the three subscales. Next, descriptive statistics illustrate teachers' levels of agreement with statements related to expressing themselves using multimodal structures, interpreting multimodal content, and their preference for multimodal communication. Finally, Pearson correlation analysis was conducted to explore relationships between these dimensions, shedding light on how teachers' ability to express and interpret multimodal content relates to their preferences for using such methods in the classroom.

Table 1. Reliability results

Factors	Number of items	Cronbach's alpha coefficient values
Expressing Oneself Using Multimodal Structure	5	.648
Interpretation of the Contents Presented in Multimodal Structure	7	.731
Preferring Multimodal Structure	5	.815

In Table 1 above, the reliability of the scale used to measure multimodal literacy was assessed using Cronbach's alpha coefficients. The internal consistency of the three subscales varied, with "Preferring Multimodal Structure" showing the highest reliability (α = 0.815), indicating strong internal consistency among the five items measuring teachers' preferences for multimodal content. The "Interpretation of the Contents Presented in Multimodal Structure" subscale demonstrated acceptable reliability (α = 0.731), suggesting that the seven items in this factor are relatively consistent in measuring how well teachers interpret multimodal content. However, the "Expressing Oneself Using Multimodal Structure" subscale had a lower reliability score (α = 0.648), which suggests that the five items in this factor may not be fully cohesive or may require revision to enhance their consistency. Nevertheless, following Hair et al. (2009) on the development of new scales, we also kept the construct despite its' Cronbach's (1951) alpha of 0.648.

The descriptive statistics presented in Table 2 below indicate varying levels of agreement across the three categories. In the Expressing Oneself Using Multimodal Structure category, teachers generally showed moderate agreement, with mean scores ranging from 3.46 to 3.63, suggesting that they somewhat integrate visuals, music, and interactive elements into their presentations and writing. The Interpretation of the Contents Presented in the Multimodal Structure category displayed a similar trend, with most items scoring between 3.04 and 4.04. Notably, participants reported the highest agreement with recognizing how visual, auditory, and written elements influence individuals (M = 4.04, SD = 0.679) and using body language effectively (M = 3.96, SD = 0.679), while their ability to assess media content credibility scored the lowest (M = 3.04, SD = 0.938). In contrast, the Preferring Multimodal Structure category showed overall disagreement, as all mean scores were below 3.00. The lowest agreement was with the statement that multimodal elements lead to laziness (M = 2.21, SD = 1.044) and that multimodal communication is boring (M = 2.00, SD = 1.045), indicating that teachers generally do not find multimodal elements disengaging. However, a relatively higher score for being distracted in electronic multimodal environments (M = 2.92, SD = 1.157) suggests that some teachers may struggle with digital multimodal formats. Overall, the results imply that while EMI teachers recognise the value of multimodal communication and incorporate it into their teaching, they may still face challenges in fully embracing and effectively evaluating multimodal content.

Table 2. Descriptive statistics

Category	Items*	Mean	Standard Deviation
Expressing Oneself Using Multimodal Structure	I organize my thoughts systematically in my presentations thanks to various visual elements (such as tables and graphics).	3.58	1.081
	I prepare an interactive presentation making use of music, visuals, and animations	3.50	1.004
	Using various elements (such as music and images) in my presentations makes it easier to make my point.	3.46	1.229
	I use visuals such as graphics, tables, pictures, and photographs in my writings.	3.63	.908
	I express myself more explicitly in environments in which writing, sound, and images exist together	3.54	1.044
Interpretation of the Contents Presented in Multimodal Structure	I relate various visual and verbal information on various media tools to each other.	3.50	.820
	I interpret the information that I gather from numerous resources	3.42	1.001
	I can decide whether or not content presented on various media (newspaper, TV, social media, etc.) is true	3.04	.938
	I relate the information to which I have access using visual and auditory elements.	3.29	.844
	I pay attention to the body language of the individuals I am listening to	3.67	.947
	I use body language that is in harmony with the words I choose when speaking.	3.96	.679
	I can realize how visual, auditory, and written elements influence individuals.	4.04	.679
Preferring Multimodal Structure	I get bored in communication in which written, auditory, and visual elements are used together	2.00	1.045
	I get distracted in electronic environments in which visual, auditory, and written elements are used together.	2.92	1.157
	The use of visual, auditory, and written elements together leads to laziness of the mind.	2.21	1.044
	I do not like trying to interpret images, sounds, graphics, and writings simultaneously	2.50	1.195
	I only believe in the power of verbal expression when sharing my thoughts.	2.71	1.141

**Multimodal Literacy Scale items designed by Bulut et al. (2015)*

Further, in Table 3 below, we attempted to calculate the Pearson correlation in order to examine relationships between the three multimodal literacy factors. A moderate positive correlation was found between “Interpretation of the Contents Presented in Multimodal Structure” and “Expressing Oneself Using Multimodal Structure” (r = 0.439, p < 0.001). This suggests that teachers who are skilled at interpreting multimodal content are also more likely to express themselves effectively using multimodal formats. The strong statistical significance of this relationship (p < 0.001) indicates that this is a meaningful connection and not a random occurrence.

On the other hand, a weak negative correlation was found between “Expressing Oneself Using Multimodal Structure” and “Preferring Multimodal Structure” (r = -0.234). This suggests that teachers who are proficient in using multimodal approaches to express themselves may not necessarily prefer multimodal teaching strategies. Although the correlation is not strong, it indicates that teachers’ ability to express ideas multimodally does not always align with their preference for using such methods in the classroom.

Similarly, a weak but statistically significant negative correlation was observed between “Interpretation of the Contents Presented in Multimodal Structure” and “Preferring Multimodal Structure” (r = -0.197, p = 0.031). This implies that teachers who are good at understanding multimodal content may not always prefer to use multimodal teaching methods. The statistical significance (p = 0.031) suggests that while the effect size is small, there is still a meaningful relationship worth exploring further.

Table 3. Pearson correlation analysis results

Pearson correlation	Expressing Oneself Using Multimodal Structure	Preferring Multimodal Structure
Preferring Multimodal Structure	-0.234478759326225	
Sig.(2-tailed)		
Interpretation of the Contents Presented in Multimodal Structure	0.43881599930589	-0.197132062504617
Sig.(2-tailed)	5.3489E-7	0.030920485150535

Discussion

The findings of this study highlight the crucial role of multimodal literacy in EMI instruction and the varying degrees to which teachers employ multimodal strategies in their teaching. The results indicate that EMI teachers in Kazakhstan demonstrate moderate competency in expressing themselves through multimodal structures and interpreting multimodal content. However, their preference for multimodal communication in the classroom remains relatively low, which may suggest limited pedagogical training in utilizing multimodal approaches effectively. These findings align with Morell (2018), who emphasized that while multimodal literacy is essential in EMI settings, teachers often lack the necessary skills and confidence to integrate various semiotic resources optimally.

Notably, our study found that while teachers acknowledge the importance of multimodal communication, they do not overwhelmingly prefer its use. This finding is consistent with Sutrisno et al. (2023), who argued that despite recognizing the benefits of multimodal literacy, EMI educators may be constrained by traditional teaching norms, limited institutional support, and a lack of formal training in multimodal pedagogy. Moreover, the lowest agreement scores were observed in statements related to evaluating media credibility, which suggests a need for enhanced critical multimodal literacy skills—an aspect also underscored by Walsh (2010).

These results have significant implications for EMI implementation in Kazakhstan. Given that the majority of respondents were young and relatively inexperienced, it is possible that their limited teaching experience may contribute to their underutilization of multimodal strategies. Similar to the findings by Morell (2020), our study underscores the necessity of equipping EMI teachers with structured training that fosters multimodal literacy development. Professional development programs should incorporate hands-on training in designing and implementing multimodal instructional strategies to enhance both comprehension and engagement in multilingual classrooms.

Conclusions

In conclusion, this study contributes to the growing body of research on multimodal literacy in EMI by providing empirical evidence from the Kazakhstani context. While EMI teachers demonstrate moderate competence in multimodal literacy, their limited preference for multimodal communication and challenges in digital environments suggest that further pedagogical training is necessary. Future research should explore the impact of targeted multimodal literacy interventions on EMI teaching effectiveness and investigate how institutional policies can support multimodal integration in higher education.

Additionally, we believe that the findings underscore the need for systematic faculty development initiatives that equip instructors with practical strategies for integrating multimodal resources into their teaching. Universities should consider implementing structured training programs that focus on enhancing both theoretical knowledge and hands-on application of multimodal techniques. Furthermore, given the observed discrepancies between instructors' multimodal interpretation skills and their teaching preferences, future studies should examine the underlying factors influencing teachers' reluctance to adopt multimodal strategies. This study provides valuable insights for policymakers, educators, and researchers interested in advancing EMI pedagogy through multimodal approaches. Addressing the identified challenges can contribute to the development of more inclusive and effective teaching strategies in multilingual higher education contexts.

Acknowledgements

Not applicable.

Funding

This research project is funded by the Ministry of Higher Education and Science of the Republic of Kazakhstan under “IRN AP 19676131” state funding grant.

Conflict of interests

The authors declare no conflict of interest.

Author Contributions

G.D.: conceptualization, revision, supervision, writing – review and editing; B.M: methodology, writing - original draft preparation, data analysis; T.S.: conceptualization, data collection, writing – review and editing; D.G.: writing – review and editing, supervision.

All authors have read and agreed to the published version of the manuscript.

References

Bulut, B., Ulu, H. & Kan, A. (2015). Multimodal literacy scale: A study of validity and reliability. *Eurasian Journal of Educational Research*, 61, 45-60. http://dx.doi.org/10.14689/ejer.2015.61.3

Dearden, J. (2015). English as a Medium of Instuction: A growing global phenomenon. *British Council Report*. https://www.britishcouncil.org/education/ihe/knowledge-centre/english-language-higher-education/report-english-medium-instruction

Dermendjieva, S., Stošić, L., Dyankova, G. (2020) Meaning-centered management of the virtual educational environment in the academic training of pedagogical specialists. *Yearbook of Pedagogy*, (1) 73-80. Niš: Faculty of Philosophy. https://doi.org/10.46630/gped.1.2020.05

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3):297-334.

Custodio-Espinar, M. & López-Hernández, A. (2023). Beyond Written-Linguistic Modes of Meanings: Multimodal Representations to Extend the Range of Literacy Learning in EMI Students. *Journal of Language Teaching and Research*, 14 (1), 6-19. https://doi.org/10.17507/jltr.1401.02

Hair, J. F., Black, W., Babin, B., & Anderson, R. E. (2009). Multivariate Data Analysis (7th ed.). *Upper Saddle River,* NJ: Pearson/Prentice Hall.

Kaiypova, F., & Kim, T.Y. (2024). Recent Advancements in English Education in the Multilingual Context of Kazakhstan. *Korea Journal of English Language and Linguistics,* 24, 934-952. https://doi.org/10.15738/kjell.24..202409.934

Kress, G. (2009). Multimodality: A Social Semiotic Approach to Contemporary Communication *(1st ed.). Routledge*. https://doi.org/10.4324/9780203970034

Morell, T. (2018). Multimodal competence and effective interactive EMI lecturing. *System*, 77, 70–79. http://dx.doi.org/10.1016/j.system.2017.12.006.

Morell, T. (2020). EMI teacher training with a multimodal and interactive approach: A new horizon for LSP specialists. *Language Value*, 12(1). https://doi.org/10.6035/LanguageV.2020.12.4

Sutrisno, D., Abidin N.A.Z., P., Pambudi. N., Adyawati., Sallu, S (2023). Exploring The Benefits of Multimodal Literacy in English Teaching: Engaging Students Through Visual, Auditory, And Digital Modes. *Global Synthesis in Education Journal,* (2), 1-10. https://doi.org/10.61667/xh184f41

Tai, K. W. H., & Wei, L. (2024). Mobilising multilingual and multimodal resources for facilitating knowledge construction: implications for researching translanguaging and multimodality in CLIL classroom context. *Journal of Multilingual and Multicultural Development*, 1–11. https://doi.org/10.1080/01434632.2024.2442525

Tasevska, D., Ivanov, I. (2022). Prouchvane na naglasite za obrazovatelno vzaimodeĭstvie v digitalna sreda v situatsiya na COVID-19. [Study of Attitudes for Educational Interaction in a Digital Environment in a COVID-19 Situation]. *Psychological Thought*, (15)1, 29-52. https://doi.org/10.37708/psyct.v15i1.610

Tulepova, S., Bekturova, M., Gaipov, D., Butt, S. (2024) Investigating English medium instruction provision in a Kazakhstani university: the ideals and realities of EMI learning. *Journal of Teaching English for Specific and Academic Purposes*, *12*(2), pp. 433-444. https://doi.org/10.22190/JTESAP240428035T

Walsh, M. (2010). Multimodal literacy: What does it mean for classroom practice? *Australian Journal of Language and Literacy*, *33*(3), 211-239.