

A Multimodal Based-Instruction in an EFL Classroom Context: Possibilities and Constraints

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Abstract: The aim of this paper is to present the results of an analytical review of recent and relevant literatures on multimodal pedagogy to elicit information regarding the possibilities and constraints of its implementation in ESL/EFL classroom contexts. A number of research articles published from online reputable journals were carefully selected and thoroughly analysed to attain the set research objective. The selection of the reviewed papers was based on the following criteria: (1) studies published within the last 5 years; (2) studies concerned with multimodal pedagogy; and (2) studies on multimodal pedagogy in ESL/EFL classrooms. The results of this study suggest that multimodal-based instruction had potential benefits to develop learners' language skills, to improve learners' motivation and engagement in learning, and also to enhance learners' critical awareness capacity. Regardless the benefits of this pedagogy, there remain limitations that prevent this approach from being implemented particularly dealt with teachers' knowledge on multimodality, multimodal pedagogy, and technology, and also other significant aspects such as students' unequal access to technology, time constraint and assessment issues. To some extent the findings of this study were in line with the previous research findings conducted within similar framework.

1 INTRODUCTION

The dramatic expansions and the dynamic nature of Information and Communication Technologies (ICTs) in today's era inevitably have huge impacts on people's lives and accordingly have altered the patterns of their learning, working, socializing, and interacting (Walsh, 2003)(Walsh and Durrant, 2013). These substantial changes have undoubtedly also affected the nature of students' learning and thinking as they are quickly able to access various information and acquire knowledge from their digital networked devices in just one short touch. In addition, students of today, labelled as "Millennials" or "Digital Natives" (Prensky, 2001) possess excellent ability to learn the range of technology in a very short period of time that enable them to get involved into different kinds of activities one at a time using digital media and mobile technology, such as web surfing, text messaging, digital gaming, social networking while

listening to music, or designing multimedia texts in hybrid forms (Walsh, 2009). Under such a changing climate, it is indispensable that today's education should bring new dimensions ensuring that it is relevant to the learners' needs and characteristics. Teachers and other education practitioners should facilitate learners with multiple skills and knowledge enabling them to survive in the complex and modern world. Therefore, an appropriate pedagogical practice which integrates various technological aspects of learning need to be adopted.

In the field of English language teaching, the digital communication technology is becoming more prevalent and frequently used among English language learners (ELLs). Many ELLs present their works at school using PowerPoint presentation application; maintain social networking sites by using texts, photos, and videos; and design and upload multimodal videos on websites such as YouTube (Yi and Angay-Crowder, 2016). In addition, (Thorne and

Black, 2008) observe that “for many individuals, performing competent identities in second and additional language(s) now involves internet mediation as more often than face-to-face and non-digital forms of communication.” As more and more ELLs engage in a wide range of multimodal practices, there is an urgency for English curriculum to design the pedagogic discourse emphasizing on the production of multimodal texts without neglecting the traditional verbal texts (Hafner, 2014). This requires English teachers to teach ELLs to read, analyse and produce diverse materials, including multimodal, interactive, nonlinear and linear texts, printed-based texts and texts being delivered on screen or live (Anstey and Bull, 2006). The need to adopt multimodal pedagogies in the language classroom has been advocated by a number of literacy scholars including (Stein, 2000), (Royce, 2007), and (Ajayi, 2009). In his research paper, (Ajayi, 2009) contends that “multimodal/multiliteracies pedagogy has the potential to provide opportunities for ESL students to learn about different text types in ways that enhance the expansion of interpretation of texts.”

A growing body of researchers has put significant attention on teachers implementing multimodal practices in the English language classroom practices. For example, a qualitative case study conducted by Ganapathy (2016) suggests the use of multimodal texts in ESL pedagogical practices as these texts were considered potential in improving learners’ performance and promote positive learning outcomes. This study took place in a private school in Penang, Malaysia involving 15 students as the participants.

Taking students of English Language V of the degree English Studies (English Language and Literature) as participants of the study, (Lirola, 2016) investigates the development of the five language skills (listening, speaking, reading, writing, and interacting) in the multimodal environments and resources in the instructional process. This study also highlights the use of multimodal materials (texts, videos, etc.) on social topics to enhance students’ awareness of the cultural aspects through a language subject and to foster their social competences through interaction and collaboration during the classroom activities. The study reveals that multimodality is useful for developing critical thinking, for promoting cultural aspects into the classroom and for working on social competences.

Other studies on the implementation of multimodal approach in language education were among others done by Hafner (2014) and Dzekoe (2017). Hafner (2014) studies the integration of

digital literacy elements for undergraduate students in English for Science course at a university in Hong Kong. The students were required to carry out multimodal science projects paying special attention to the audiences of their multimodal production. The findings reveal that the students faced difficulties in producing multimodal artefacts intended for specific audiences.

Involving 22 advanced-low proficiency ESL participants, (Dzekoe, 2017) explores the effectiveness of computer-based multimodal composing activities in enhancing English academic writing skill through self-revision in the USA. The results suggest that computer-based multimodal composing activities were beneficial for students not only in improving students’ self-revision skill but also in developing written language for articulating opinions which they found difficult when expressed through verbal modes.

Of the studies conducted, however, limited attention is given to investigate the potential benefits that multimodal practices offer and teachers’ awareness of implementing this approach in the teaching process (Yi, 2014). This article attempts to uncover the possibilities and constraints of applying multimodal approach in English language teaching through literature review analysis that the results might be beneficial for teachers and other educational practitioners, and could provide valuable insights on the practical aspects of this approach.

2 THEORETICAL FRAMEWORK

The term multimodal-based instruction in this article refers to multimodal pedagogy - a comprehensive term that encompasses “curriculum, pedagogy, and assessment practices which focus on mode as a defining feature of communication in learning environments” (Yi and Angay-Crowder, 2016). The conceptualization and enactment of this pedagogy is primarily based on two theoretical constructs, multimodality and multiliteracies (Yi and Angay-Crowder, 2016).

Multimodality is concerned with the orchestration of multiple modes (e.g. writing, verbal, image, audio, gesture, spatial) for meaning making. Modes are “organized sets of semiotic resources for making meaning” (Jewitt, 2008). The key tenet of multimodal perspectives is that meanings are constructed and interpreted not only through language but also through other representational and communication resources. The multimodality term emerges due to the changing landscape of digital

communication and media. The media developments are “leading to a paradigm shift in forms of representation, moving from *the logic of the page* to *the logic of the screen*” (Kress, 2003). The theoretical concept of multimodality incorporates the use of functional semiotics and also takes into account the wider cultural contexts, audience purposes, and the organizational patterns of a range of texts. As informed in the research that multimodal texts are socially and culturally constructed over a period of time, and are intentionally orchestrated using multiple modes for meaning making (Yi and Angay-Crowder, 2016).

For the last two decades, multimodal texts are in the students’ lives through digital technology media. It is believed that multimodal texts are more complex than written language texts so that it is necessary for teachers to foster students’ knowledge on these current texts. In English language teaching, the need to help learners to develop awareness of multimodality and multimodal competence has been advocated among other by (Royce, 2007). He introduces the term “multimodal communicative competence” to refer to the ability to understand and produce multimodal texts in a variety of genres. Teachers are advocated to use images or other visual modes in the classroom not only for stimulating discussion or building vocabulary or making prediction about the content of written texts, but also for clarifying the potential meaning of visuals, aural, gestural or any other forms of semiotic resources to students. It is contended that modes are culturally and socially constructed products which possess their own distinctive grammar. Thus, developing competence beyond linguistic monomodal aspect is strongly suggested.

Another theory influential to the development of multimodal pedagogy is multiliteracies. The term “multiliteracies” was firstly introduced by the (New London Group, 1996) to encompass a variety of representational modes as communication channels (Mills, 2006) and “to expand the traditional language-based approach to literacy, which failed to capture the complexity and multifaceted nature of emerging communication practices” (Lee et al., 2016a). Multiliteracies attempts to view literacy beyond linguistics alone. Literacy, in multiliteracies sense, involves the ability to read, interpret, and construct multimodal texts as well as the ability to understand the diversity of textual, contextual, social and cultural conventions that influence the use of these modes for different people in different situation (New London Group, 1996); (Cope and Kalantzis, 2015). In this regard, the New London Group (1996) provided a

pedagogical framework that can be used as guideline in literacy teaching. The framework integrates four interrelated components consisting of *Situated Practice*; *Overt Instruction*; *Critical Framing*; and *Transformed Practice* (New London Group, 1996). Situated practice enables teachers to draw students’ background knowledge and experiences in an attempt to provide meaningful practices within classroom community. Overt instruction suggests the explicit teaching in which learners are extensively scaffolded in such a way that they are able to grab and gain deep insights and comprehensive understanding on the subjects being discussed. Critical framing is the stage in which learners are directed to reflect and frame their learning practices “in relation to the historical, social, cultural, political, ideological, and value-centred relations of particular systems of knowledge and social practice” (New London Group, 1996). Transformed practice allows students to apply the skills, knowledge, and behaviours they have learned to their real-world contexts. The sequence proposed is not a “lock-step” teaching procedures; teachers could commence their instructional process from any sequence depending on their contextual learning environments (Cope and Kalantzis, 2000).

3 RESEARCH PROCEDURE

This paper reviews several recent research articles regarding the implementation multimodal-based instruction in order to gain information of its potential benefits and challenges. The analytical review in this study follows Clark and Cresswell’s (2010) definition of literature review study referring as “a written synthesis of journal articles, books, and other documents that summarizes and critiques the past and current state of information about a topic, organizes the literature into subtopics, and documents the background for a study”.

A systematic search through *Google Scholar*, *Proquest* and *Eric (Educational Research Informational Center)* database is conducted to find journals relevant to this research. A number of studies were then selected based on the following criteria: (1) studies published within the last 5 years; (2) studies concerned with the implementation of multimodal pedagogy; and (3) studies conducted in an English language classroom setting. The articles reviewed were among others taken from *TESOL Journal*, *Journals of Literacy Research*, *Journal of Learning, Media, and Technology*, *Journal of Pedagogies: An International Journal* and so on. Through a detailed review and analysis of these studies, the possibilities

and challenges of the implementation of multimodal-based pedagogy were identified.

This paper presents the key findings that the results could provide readers with wider and deeper perspectives of how this pedagogy can be best adopted and adapted in the EFL classroom.

4 FINDINGS AND DISCUSSION

Through a detailed review and analysis of research articles, some emerging themes regarding the possibilities and constraints of implementing multimodal pedagogy are identified. The findings of this study to some extent similar to the ones conducted by Yi (2014) in several aspects. Yi's (2014) study is also concerned with this issue. In her study, Yi mentions several potential benefits of applying multimodal literacies in teaching process, including "developing multimodal communicative competence, exploring identities, improving academic literacies, and developing critical perspectives". Despite the possibilities exposed, there were several constraints reported in her study, such as the unequal access to digital technologies, the limited knowledge to construct of multimodal texts, focusing only on one type of genre in the instructional practice, the prescribed curriculum, and the high-stakes language dominant testing. This study, then, supports the findings of Yi's (2014) research that eventually could corroborate the research results. The main difference between Yi's (2014) study and this research lies on the research articles reviewed. This study analyses current paper works; thus, it provides current information regarding the issue discussed.

4.1 Pedagogical Possibilities

Regarding the potential benefits, the analytical review results reveal three prominent themes including language skill development, level of students' motivation and engagement, and students' critical awareness.

4.1.1 Language Skill Development

The research results from several studies have indicated that multimodal-based instruction practices could help ELLs develop and improve their language skills. As one of the few of empirical studies, (Ruan, 2015) examined how multimodal instruction help EFL learners to become autonomous in listening comprehension and multiliteracies. The subjects of the study were 102 Chinese sophomores in which

they were divided into two groups: experimental and control group. This experimental study tried to explore the effectiveness of multimodal instruction compared to that of traditional one and also to find out participants' perceptions on the new design. The results indicated that multimodal approach was significantly able to improve students' autonomous learning and listening ability, as well as multiliteracies skills. Furthermore, the participants showed positive perceptions towards the proposed design. (Kim, 2016) investigated the effects of movie clips presented in different modes using multimodal approach in teaching. The participants of this study were 90 university Korean English learners taking academic English course. The results of the study revealed that movie clips with sound effects and dialogues had positive impacts on improving learners' listening and speaking ability.

The multimodal approach to teaching English is also potential in improving students' communicative competence. Taking twenty-three Korean students and twenty-two Iranian students as participants of the study, (Lee et al., 2016b) introduced an alternative pedagogical approach EFL education called computer-assisted multiliteracies program (CaMP) to facilitate the acquisition of English communication skills through authentic English communication practices. The results of this design-based research suggest that CaMP was pedagogically potential in developing not only students' communicative competence but also improving their cultural and media literacies as this program offered opportunities for students to naturally engage in diverse cultural and linguistic environments along with multimodal practices.

Another empirical evidence of multimodal instruction benefiting language skill improvement is (Dzekoe, 2017) study on how "computer-based multimodal composing activities (CBMCAs)" facilitate learners to conduct self-revision in their academic writing and help them improve their English learning. This study took place in USA involving 22 advanced-low proficiency ESL students as participants in which they were exposed extensively to writing, listening, visual analysis, and speaking activities during the learning process. The overarching theoretical framework used in the study were multimodality, the noticing hypothesis, and the multidimensional model of revision. The results indicated that CBMCAs was beneficial for students for several reasons. Firstly, CBMCAs facilitated students to revise their written drafts particularly related to the use of rhetorical and linguistics aspects.

Secondly, CMBCAs helped them develop their language competence. Lastly, this approach helps them articulate their thoughts in that they were struggling to express using the written mode alone.

In an attempt to develop multimodal communicative competence for university EFL students, (Cocchetta, 2018) conducted a study concerning with the integration of multimodal theory developed within Halliday's systemic functional framework into a university syllabus for text studies in English. Two examples of classroom applications were provided to show how this approach were conducted in the classroom. The learning materials was developed in such a way to facilitate students to become competent users of two foreign languages and active users of multimodal texts. The results indicated that pedagogical framework proposed in this study had the potential to develop learners' awareness on the meaning potential of different semiotic resources within the context of situation and context of culture; and to help learners improve their multimodal communicative skills.

4.1.2 Students' Motivation and Engagement in Learning

The failure of ELLs in learning English is mostly associated with learners' low motivation. Research suggests that applying multimodal approach in the instructional practices increase learners' motivation.

Of a few studies that explored how multimodal practices help improve motivation is the work done by (Darrington and Dousay, 2015). Their study tried to examine how multimodal works increased the motivation of struggling students to write. This research was framed within the theoretical construct of "change theory" to guide the analysis. Using this theory, the strong points of multimodal writing projects compared to paper-based monomodal ones were evaluated. The results indicated that multimodal writing projects were found to be motivating to students as compared to traditional paper-based writing.

In (Yi and Choi, 2015) study on teachers' perspectives of multimodal practices in K-12 classes confirmed that teachers had positive opinions on the implementation of multimodal instruction in the classrooms and were aware of the affordances of multimodal practices. The teacher participants highlighted the possibilities of adopting multimodal instruction as it significantly increased learners' motivation and engagement. They articulated that multimodal teaching had significant impacts to stimulate, motivate, arouse interest, and to call

students' attention in the teaching and learning process.

(Ganapathy, 2016) study shares similar results regarding the significant benefit of multimodal pedagogy in assisting learners' motivational aspects. Drawing on the qualitative case study, the study investigated the implementation of multimodal approaches in ESL teaching. The participants of this study were 15 students in a private school in Penang, Malaysia. The results of the study indicated that multimodal pedagogy was powerful in improving students' English competence, boosting their motivation in learning and facilitating various learning styles. It is advocated in this study that teachers need to consider applying multimodal pedagogy in their classrooms due to its potential benefits towards student learning.

Another empirical evidence that adopting multimodal approach in an English instruction can promote high learning engagement is reported by (Hepple et al., 2014) in their short article. Presenting the reflections of two English instructors who jointly teaching in the post-beginner class at Milpera High, this article attempts to points out the potential benefits of implementing the multimodal pedagogy in diverse culture classrooms. The multimodal project assigned for the students was the production of claymation texts for the purpose of developing their language along with their synaesthetic abilities. This study highlighted two dimensions of multiliteracies projects including student agency and design. The student agency consisted of two aspects; student ownership and student engagement and collaboration.

In terms of student engagement and collaboration, it is reported that the assigned project had led to student higher level of engagement and longer attentive period provided by students in the task completion.

4.1.3 Students' Critical Awareness

Developing students' critical awareness capacity is becoming more essential in English language teaching to enable them to process, synthesize and evaluate information and to facilitate them to be successful in their education, career and civic life.

Research suggests that multimodal-based instruction helps English language learners enhance their critical awareness and thinking skill in that they were able to think, discuss, and analyse issues critically.

Studies on multimodal practices from a critical perspective have been extensively examined among others by Lasisi Ajayi. Ajayi's latest work is

concerned with the teaching of critical multimodal literacy to three female Nigerian high school students. The instruction focused on the way to question texts and reconstruct unequal social structures (Ajayi, 2015). In his study, Ajayi asserted that Nigerian English teachers were supposed to set up instruction that prepares female students to fully participate in today's socially and linguistically diverse and technologically developing Nigerian society. Teachers were required to teach them to read diverse materials, including "multimodal, interactive, nonlinear and linear texts, texts in multiple languages, print-based texts, and texts being delivered on screen or live" (Anstey and Bull, 2006). The findings suggest that multimodal literacy instruction opened up possibilities for teachers and students to work together to help learners convey critiques on socio-political issues and challenge the structural practices that hinder learners to voice their opinion and literacy learning. Further, the results also indicated that English teachers in Nigeria were suggested to integrate critical multimodal literacy pedagogy in their instructional practices and relate the instruction to female students' interests to promote agency and change. (Huang, 2017) study presents some evidence that supports the claim that multimodal practices could improve learners' critical literacy awareness. Using qualitative design as the baseline of her inquiry, this study examined language learners' critical skill on multimodal literacy practices presented in a moving-image text. The students were required to comprehend and interpret texts and take critical stance towards them. The results indicated that multimodal-based instruction taking focus on the orchestration of images, sounds, and words helped students improve their critical thinking skills. Students were able to take critical perspectives on the structural and ideological value from the moving-image texts presented.

4.2 Pedagogical Constraints

Regardless the benefits of multimodal-based pedagogy, there remain limitations that prevent this pedagogy from being implemented in the classroom practices. Research suggests that there are several fundamental challenges that English teachers face in incorporating multimodal practices including students' unequal access to technology, teachers' knowledge of multimodality, time constraints, and assessment.

As indicated in (Yi, 2014) study, students' unequal access to digital technology was one of prominent constraints that teachers face. Not all students were claimed to have access to digital technology and extensively do digital literacy practices outside their classroom walls, therefore they have limited skill and experience with multimodal literacies. Yet some students were excellent and have access for digital technology that they engaged in digital, multimodal literacy more often.

The other obstruction that discourages English language teachers from incorporating multimodal practices is concerned with teacher's knowledge on technology and multimodality. It is reported that teachers' resistance to multimodal instruction was due to lack of content knowledge and technological skills to effectively implement multimodal practices into instruction (Yi and Angay-Crowder, 2016). This study also indicated several psychological barriers that seem to hinder teachers to integrate multimodal practices into their lessons. First, some teachers claimed that they often experience tensions between the digitally and multimodally mediated practices and the print-based monomodal practice of assessment. Second, some teachers reported feeling doubtful about the significant impact of multimodal instruction on student academic achievement.

Time constraint becomes the most impeding factor that prevents teachers from implementing multimodal pedagogy in the classroom. This claim is confirmed in (Yi and Choi, 2015) study reporting that a majority of teachers in their study expressed concerns related to time they had to spend on planning, implementing and assessing multimodal lessons. Further, it is reported that time constraint emerged due to the inflexible curriculum and standardized testing that the teachers had to follow. Lack of appropriate assessment is another crucial issue in multimodal-based instruction. The study conducted by (Yi and Angay-Crowder, 2016) report that teachers had difficulty in deciding which element or component of multimodal should be considered to evaluate multimodal projects in the courses. However, in a promising sense, some researchers have recently addressed the issue of assessment for multimodal products. For instance, (Hung et al., 2013) developed a "theory-driven design rubric" in order to evaluate Taiwanese college students' English presentations on particular topics, but this rubric did not consider content knowledge that students possess. Similar concern is voiced by (Yi, 2014) claiming that standard-based assessment for traditional print-based literacy are not adequate

enough for assessing the digital and multimodal artefacts.

5 CONCLUSIONS

Multimodal has been a buzzword in English language education for the last few decades and has been regarded as a current textual and literacy practice. The fact that English language learners nowadays are frequently engaged with digital technologies and multimodal texts in their social and school lives and the information that they receive are highly complex combinations of multiple modes has called English practitioners attention to integrate multimodal approach in their teaching practice. The aim this paper has been to highlight the possibilities and constraints of implementing the multimodal practices in the English classrooms. An analytical review of several research articles is conducted to gain the reliable data. The findings suggest that multimodal-based instruction has potential impacts on students' language skill development, motivation, engagement, and critical awareness capacity. The results also indicate that teachers implemented this pedagogy face several challenges among others related to the instructional aspects and their practical knowledge and understanding of the multimodal pedagogy and assessment issue. The assessment for multimodal products has been one of the salient barriers for teachers to implement this approach. Teachers voiced concern over this issue due to their difficulties in assessing student multimodal skills.

REFERENCES

- Ajayi, L., 2015. Critical Multimodal Literacy: How Nigerian Female Students Critique Texts and Reconstruct Unequal Social Structures. *J. Lit. Res.* 47, 216–244. <https://doi.org/10.1177/1086296X15618478>
- Ajayi, L., 2009. English as a Second Language Learners' Exploration of Multimodal Texts in a Junior High School. *J. Adolesc. Adult Lit.* 52, 585–595. <https://doi.org/10.1598/JA>
- Anstey, M., Bull, G., 2006. Defining multiliteracies, in: *Teaching and Learning Multiliteracies: Changing Times, Changing Literacies*. The International Reading Association, pp. 19–55.
- Cocetta, F., 2018. Developing university students' multimodal communicative competence: Field research into multimodal text studies in English. *System* xxx, 1–9.
- Cope, B., Kalantzis, M., 2015. *A pedagogy of multiliteracies: Learning by design*. Palgrave Macmillan, United Kingdom.
- Cope, B., Kalantzis, M., 2000. *Multiliteracies: Literacy learning and the design of social futures*, Routledge, London.
- Darrington, B., Dousay, T., 2015. Using Multimodal Writing to Motivate Struggling Students. *TechTrends* 59, 29–34.
- Dzekoe, R., 2017. Computer-based multimodal composing activities, self-revision, and L2 acquisition through writing. *Lang. Learn. Technol.* 21, 73–95.
- Ganapathy, M., 2016. The Effects of Using Multimodal Approaches in Meaning- Making of 21st Century Literacy Texts Among ESL Students in a Private School in Malaysia. *Adv. Lang. Lit. Stud.* 7, 143–155. <https://doi.org/10.7575/aiac.all.v.7n.2p.143>
- Hafner, C.A., 2014. Embedding Digital Literacies in English Language Teaching: Students' Digital Video Projects as Multimodal Ensembles 48, 655–685. <https://doi.org/10.1002/tesq.138>
- Hepple, E., Sockhill, M., Tan, A., Alford, J., 2014. Multiliteracies pedagogy: Creating claymations with adolescent, post-beginner english language learners. *J. Adolesc. Adult Lit.* 58, 219–229. <https://doi.org/10.1002/jaal.339>
- Huang, S., 2017. Critical multimodal literacy with moving-image texts. *Engl. Teach. Pract. Crit.* 16, 194–206. <https://doi.org/10.1108/ETPC-02-2017-0018>
- Hung, H.T., Chiu, Y.C.J., Yeh, H.C., 2013. Multimodal assessment of and for learning: A theory-driven design rubric. *Br. J. Educ. Technol.* 44, 400–409. <https://doi.org/10.1111/j.14678535.2012.01337.x>
- Jewitt, C., 2008. Multimodality and Literacy in School Classrooms. *Rev. Res. Educ.* 32, 241–267. <https://doi.org/10.3102/0091732X07310586>
- Kim, S., 2016. The effects of multimodality through storytelling using various movie clips, in: *Salomi Papadima-Sophocleous, Linda Bradley, S.T. (Ed.), CALL Communities and Culture – Short Papers from EUROCALL 2016*. Research-publishing.net, pp. 221–224. <https://doi.org/10.14705/rpnet.2016.eurocall2016.565>
- Kress, G., 2003. *Literacy in the New Media Age* (review), Routledge, London. <https://doi.org/10.1353/lan.2006.0242>
- Lee, K., Ardeshiri, M., Cummins, J., 2016a. A computer-assisted multiliteracies programme as an alternative approach to EFL instruction 5139. <https://doi.org/10.1080/1475939X.2015.1118403>
- Lee, K., Ardeshiri, M., Cummins, J., 2016b. A computer-assisted multiliteracies programme as an alternative approach to EFL instruction. *Technol. Pedagogy Educ.* 5139, 1–17. <https://doi.org/10.1080/1475939X.2015.1118403>
- Lirola, M.M., 2016. The Importance of Promoting Multimodal Teaching in the Foreign Language Classroom for the Acquisition of Social

- Competences : Practical Examples. *Int. J. 21st Century Educ.* 3, 77–88.
- Mills, K., 2006. Discovering design possibilities through a pedagogy of multiliteracies. *J. Learn. Des.* 1, 61–72.
- New London Group, 1996. A pedagogy of multiliteracies : Designing social futures. *Harv. Educ. Rev.* 66, 60–92.
- Prensky, B.M., 2001. Digital Natives , Digital Immigrants. *Horiz.* 9, 1–6.
- Royce, T.D., 2007. Multimodal Communicative Competence in Second Language Contexts, in: *New Directions in the Analysis of Multimodal Discourse.* Lawrence Erlbaum, Mahwah, NJ, pp. 361–390.
- Ruan, X., 2015. The Role of Multimodal in Chinese EFL Students' Autonomous Listening Comprehension 5, 549–554.
- Stein, P., 2000. Rethinking Resources in the ESL Classroom Rethinking Resources : Multimodal Pedagogies in the ESL Classroom 34, 333–336.
- Thorne, S.L., Black, R.W., 2008. Language and Literacy Development in Computer- Mediated and Communities. *Annu. Rev. Appl. Linguist.* Kalantzis 27, 133–160.
<https://doi.org/10.1017/S0267190508070074>
- Walsh, M., 2009. Pedagogic Potentials of Multimodal Literacy. *Handb. Res. New Media Lit. K-12 Level Issues Chall.* 32–47.
<https://doi.org/10.4018/978-1-60566-120-9.ch003>
- Walsh, M., 2003. Reading visual and multimodal texts : how is ' reading ' different ?
- Walsh, M., Durrant, C., 2013. Literacy Teacher Educators, Literacy Teacher Educators: Preparing Teachers for a Changing World. <https://doi.org/10.1007/978-94-6209-200-6>
- Yi, Y., 2014. Possibilities and Challenges of Multimodal Literacy Practices in Teaching and Learning English as an Additional Language. *Lang. Linguist. Compass* 8, 158– 169. <https://doi.org/10.1111/lnc3.12076>
- Yi, Y., Angay-Crowder, T., 2016. Multimodal Pedagogies for Teacher Education in. *TESOL Q.* 50, 988–998.
<https://doi.org/10.1002/tesq.326>
- Yi, Y., Choi, J., 2015. Teachers' Views of Multimodal Practices in K-12 Classrooms: Voices from Teachers in the United States. *TESOL Q.* 49, 838–847.
<https://doi.org/10.1002/tesq.219>