

LANGUAGE AND IDENTITY: AN APPROACH TO POST-STRUCTURALISM FOR ENHANCEMENT OF FOREIGN LANGUAGE TEACHING IN DIGITAL CONTEXTS

DỰA TRÊN QUAN ĐIỂM HẬU CẤU TRÚC LUẬN VỀ NGÔN NGỮ VÀ DANH TÍNH NHẪM ĐỀ XUẤT GIẢI PHÁP NÂNG CAO CHẤT LƯỢNG DẠY NGOẠI NGỮ TRONG THỜI KỲ CHUYỂN ĐỔI SỐ

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Abstract - Thanks to the advent of the Internet, language learners nowadays manifest themselves differently across multiple online spaces. This has presented a challenge for language teachers in monitoring the learning outcomes of their learners on digital platforms. With an attempt to solve this problem, we need to clarify the term “identity” to gain a better understanding of the behaviors and attitudes of learners, from which we then suggest measures for enhancing language teaching practices in the digital age. To achieve this aim, the paper looks at how language and identity were defined by Norton and other post-structuralists. It then reviews some current debates on digital identity. Drawing on sociocultural line of inquiry, I then conclude the paper by highlighting some implications for foreign language teaching and a promising agenda for further research into this field in the digital age.

Key words - Foreign language learning; identity; digital media; post-structuralist

Tóm tắt - Do Internet và phương tiện truyền thông ngày càng trở nên phổ biến, người học ngôn ngữ ngày nay thể hiện bản thân mình theo nhiều cách khác nhau trên không gian mạng. Điều này đặt ra thách thức lớn đối với giảng viên trong việc theo dõi và nâng cao chất lượng dạy ngoại ngữ trong bối cảnh kỹ thuật số. Nhằm giải quyết vấn đề trên, chúng ta cần làm rõ thuật ngữ “danh tính” để hiểu rõ hơn về hành vi và thái độ của người học, từ đó đề xuất các biện pháp nâng cao hiệu quả giáo dục. Để đạt được mục tiêu này, bài viết phân tích luận điểm của Norton và các nhà hậu cấu trúc luận khác về ngôn ngữ và “danh tính” cũng như xem xét một số tranh luận gần đây về “danh tính” trong thời đại kỹ thuật số. Dựa trên mối quan hệ giữa xã hội và ngôn ngữ, bài viết nhấn mạnh vào ý nghĩa trong việc dạy ngoại ngữ và đề xuất các nghiên cứu sâu hơn về lĩnh vực này.

Từ khóa - Học ngoại ngữ; danh tính; truyền thông số; hậu cấu trúc luận

1. Introduction

1.1. Motivation for the paper

In today’s online learning contexts due to globalization and technological advancement, learners present themselves differently on online platforms, thereby affecting their identity construction. For this reason, to help today’s language teachers better situate their teaching methods in digital settings and consequently improve the learning outcomes of their learners, it is urgent to analyze the relationship between language and identity based on the views of Norton and other post-structuralists.

1.2. Aim of the paper

The paper investigates the roles of languages as a tool for individual learners to express their voices and reaffirm their *identity* on online platforms. From this point of departure, some measures are then suggested with the purpose of helping teachers and educators maximize the learning outcomes of their learners in the digital age. To obtain this objective, I look at Norton’s views together with those of other post-structuralists on language and identity.

According to these aims, there are two research questions that need to be addressed in this paper:

1. *Should language learners be assessed solely based on their language abilities (SLA theorists) or based on both their linguistic competence and construction of their identities (post-structuralists)?*

2. *What are some important implications for foreign*

language learning and teaching based on the analysis of learner identity in both general and digital contexts?

It should also be noted that this is a discussion or review paper only based on some prominent works of Norton and other post-structuralists. Specifically, it contradicts their views with those of SLA theorists, from which some implications for language teaching and learning in digital contexts can then be considered. Therefore, no research methods and procedures are specified in this paper and all the suggested measures (or implications) presented at the end can be subject to different interpretations.

1.3. Overview of the paper

My argument is first developed by looking at how previous research viewed the construction of identity through the prominent works of Norton’s [1], [2], [3] and other post-structuralists in comparison with those from second language acquisition theorists. Then, I review some current debates on ‘identity’ in the digital age to problematize and re-situate it on online learning spaces. Then, the paper highlights some implications for pedagogical practices and a promising research agenda into this field.

2. Issues in previous research

2.1. How previous studies looked at language learner identity

Researchers who favored Early Second Language Acquisition (hereafter SLA) often examined learners’ language abilities without considering their socio-lingual factors [4]. For instance, Schmidt [5], [6] has claimed that,

second language acquisition can happen if learners attentively notice the language used by native speakers. On the contrary, through examining the breakdown when Grail interacted with Eva, Norton [1] posited that this failure was owing to Eva's "inferior social status" as "a foreigner" rather than her lack of language input. Her views on the construction of identity were quite similar to those of other post-structuralists [7], [8], [9], [10], [11]. Specifically, a language is acquired through the formation of "selves" and accumulation of social powers in multifaceted discourses. That is, these socio-lingual elements should be closely examined in tandem with linguistic abilities to determine learners' success or failure in language learning.

Many years later, SLA theorists still posited that whether the learning process succeeded or failed was determined by some inherent factors, such as genes (the Universal Grammar) [12], [13], governed by age (Critical Period Hypothesis) [14], resembled first language acquisition [15], or simply that learners had no 'voices' [16]. In fact, looking at the term *identity* and its connection with language learning in more detail, it is certain that the views presented by Norton and other post-structuralists serve as a strong theoretical framework on which research into this matter can be based. In sharp contrast to Norton [2] and Norton and Pavlenko [3], the arguments put forward by SLA theorists did not call into question the relationship between language learners and sociocultural elements. To put it simply, the identity of learners is fixed and revealed through examining their language abilities [4].

On the other hand, Bonny Norton and other post-structuralists stress on social changes brought about by language education instead of solely concentrating on linguistic elements [1], [2], [3]. Specifically, *identity* is defined in her own words as "how a person understands his or her relationship to the world, how that relationship is structured across time and space, and how the person understands possibilities for the future" (Norton 45). Her interest in the relationship between language and identity has encouraged her to collaborate with other authors to continue research in this field [17]. Noticeably, she proposed a Model of Investment [18] based on the earlier concept suggested by Pierre Bourdieu [19] and fundamental theories of post-structuralism [20], with an emphasis on the accumulation of symbolic elements such as personal values, beliefs and perceptions that position language users in today's increasingly globalized world (see Figure 1). As can be seen in her model, investment is located at the intersection of the three key elements, namely *identity*, *ideology* and *capital*. *Ideology* is defined by Blommaert [21] as "materially mediated ideational phenomena" (p. 164) or a set of ideas reflecting the ethnicity, social class, gender and race of speakers, which either empower or discourage them in communicative events in different settings [22]. Meanwhile, *capital* refers to symbolic possessions of language speakers such as linguistic, social and cultural resources, which are used or transformed to facilitate their entry into new environments.

From this point of departure, she argues that if learners make an investment in language learning, they will claim the right to speak in a world where sociocultural powers are unequally distributed. Although many previous studies had focused extensively on the construct of language

investment [23], [24], [25], [26] prior to her works, they hardly proposed any model for further investigation of it. For this reason, so far Norton's model has still remained dominant as it provides a comprehensive theoretical framework for analysis and interpretation of symbolic elements associated with the co-construction of personal identities and language learning.

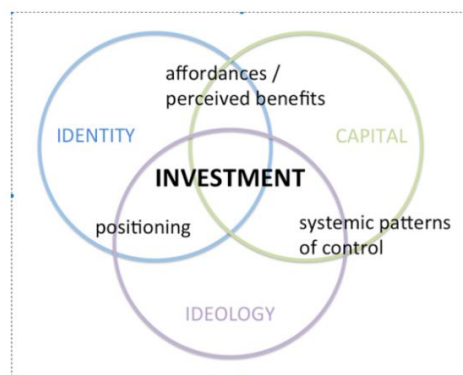


Figure 1. Model of Investment proposed by Darwin and Norton [18]

2.2. Current debates: The emergence of digital identity of language learners

The increased popularity of online learning and technological devices has revolutionized how identity is enacted by language learners [27], [28], [29], [30], [31], [32]. This has prompted the need to define the notion of digital identity.

In fact, in recent years, there have been many researchers attempting to define or redefine the term "digital identity" both in language learning contexts and outside this domain. While Sullivan and Stalla-Bourdillon [33] viewed it simply as a digital source of transmitted and stored information with little regard to the presence and direct contribution of online participants, Robson [34] related it to a set of personal values co-constructed in today's modern digital media-governed society. With an effort to establish a connection between online resources and users, Masiero and Savita Bailur [35] stressed on the importance of acknowledging human presence in digital contexts. In other words, digital identity is defined as the coding of human values, behaviors, experiences and beliefs into a set of readable data on digital platforms. In this way, the identity in digital contexts can also be referred to as technology-mediated human identities.

Norton [36] viewed this term in a similar way but with an emphasis on the process of language learning. Specifically, in her study, she revealed the construction of *imagined* identities of 19 schoolgirls in Uganda. When taking part in a photography-based learning project in English, they realized that they would have a chance to receive quality education if their English proficiency increased. That is, throughout the process, the affordances of educational technologies provided for these learners have revolutionized their views towards English learning, thereby enabling them to resituate their future *selves* within an *imagined* (online) community of language learners. Nevertheless, in the study conducted by Melanie and Yueh-ching [37], while some Chinese students refused to adopt a

new kind of identity when socializing with their foreign peers during online English lessons despite countless encouragement from their teachers, others chose to alter their views. In this way, English learners of different ideologies and values can choose to either maintain their cultural identities or reconstruct them thanks to the affordance of online learning tools. Rebecca [27] carried out a case study to shed light on the detrimental effects of online English lessons on Chinese, Taiwanese and Philippine students. In more detail, she pointed out that digital spaces may even discourage language learners from adopting cultural sensitivity due to the absence of real-life communicative events and their uncritical views of materials which are available online. If this continues to happen, their investment in language learning may be greatly disrupted.

Acknowledging the challenges facing worldwide researchers with regard to how digital identity is clearly defined, several contributing factors are also carefully considered. Duchêne teamed up with Roberts and Moyer [38] to conduct a thorough analysis of learners' ideologies to better clarify their process of privatizing and legitimizing digital discourses and learning resources. Similarly, Norton collaborated with Darwin [18] to design a framework outlining the causal relationships between personal capitals, identity and ideologies.

Apart from the prominent views of Norton and other post-structuralists on language and identity, one key argument I would like to put forward is that the identity of learners is also influenced by their language repertoires, which refer to a set of language variations such as dialects and accents possessed by a person over time in a given speech community [39]. In the context of digital language learning, it should be noted that this linguistic knowledge is subject to varying levels of comprehension of multi-modal and culturally governed materials for learning which are made available online by language teachers and institutions. For this reason, it is necessary to take into consideration such repertoires when examining the language behaviors of online learners.

3. Discussion

Research question 1

Should language learners be assessed solely based on their language abilities (SLA theorists) or based on both their linguistic competence and construction of their identities (post-structuralists)?

On the one hand, the author posits that it is hard to establish a clear stance with regard to whether it is better to situate language learners in a much broader social context with their ever-changing identities and personal dynamics in the digital age or embrace the native-nonnative dichotomy and emphasize the importance of solely assessing their language abilities. This is especially true when the purpose of this paper is to highlight the need to acknowledge more advanced views of language learning put forward by Norton and other post-structuralists instead of obtaining empirical evidence by recruiting research participants and present findings, which are considered as conventional research protocols.

However, if we look back at how language learner identity was restrained by previous SLA theorists and how this has

posed a challenge for researchers to better understand the behavior of learners in today's digital contexts, we may come to consider the need to problematize, resituate and broaden this concept through the lens of poststructuralism, including the views of Norton with much more freedom and varying interpretations as mentioned in section 2 of this paper.

Research question 2

What are some important implications for foreign language learning and teaching based on the analysis of learner identity in both general and digital contexts?

It is true that online foreign language education has become increasingly popular since the outbreak of the Covid-19 [40]. However, such pedagogical shift has put language teachers at a disadvantage due to the lack of digital support [41], minimal assistance from their institutions and the difficulty concerning how this new mode of language education is best adapted and implemented [42]. Another thing to consider is that communicating with online language learners on digital platforms may present quite a challenge to teachers [43] due to some issues such as technological breakdown [44] or students' lack of motivation [45], [46]. At the meso-level, it is also obvious that language institutions have demonstrated their inexperience and lack of preparation with regards to technological infrastructure, teacher training and implementation of computer-based curriculum [47], [48].

While these aforementioned obstacles and challenges may need long-term solutions, what can be done now at a micro level is how teachers can take measures to better understand their language learners in digital spaces and maximize their online learning outcomes. Darwin agreed with Norton [36] that it is of great significance to both acknowledge the increased popularity of online language learning and confirm the very existence of ever-changing digital identities of foreign language students. That is, language students should be viewed as individuals with conflicting emotions, varying levels of motivation, different backgrounds and attitudes towards foreign language learning [32] rather than consider them as learners with limited language abilities. Drawing from these views, I then suggest some measures for enhancement of language-related pedagogical practices to better resituate sociolinguistic factors influencing language learners in digital contexts.

First, student-centeredness should be emphasized with the acknowledgement of individual differences in terms of personal beliefs, perceptions and experience, among others. There are several ways to achieve this. For example, during the delivery of online lessons, teachers can encourage their students to design English-mediated electronic posters displaying different cultural values or participate in digital storytelling sessions to promote a sense of inclusiveness and mutual understanding. Thanks to such culture-rich linguistic exposures, individuals "are given an opportunity to become agents of their learning and authors of their own representation" [17] and consequently, make more effective investment in language learning.

Second, educators should discontinue the evaluation of language learners' skills solely through testing by emphasizing the crucial part that identity plays in fostering language acquisition. This change in educational methods is vital as

formative evaluation frequently forces institutional views on students who learn languages with the purpose of aligning their learning experiences with desired outcomes, thereby resulting in them being given fewer opportunities to express their identities freely. Therefore, instead of utilizing standardized tests, stakeholders in education should allow students to evaluate their own linguistic skills so they can project their views, selves and perceptions on what they accomplish or fail to accomplish as respectable users of the intended language. In other words, by placing a high value on self-evaluation, teachers may instill in language learners a sense of linguistic engagement, which enables them to enrich and reconstruct their multiple selves. In digital settings, this can be done by giving learners an opportunity to freely discuss their linguistic knowledge on online forums designed by language teachers so that they're able to reflect on comments provided by both their teachers and peers in a timely manner. Additionally, it is important for students to interact with language users from other nations on a shared digital learning platform. The reason is that this helps to foster digital discourses globally and facilitate the evolvment of language learner identities through frequent linguistic and cultural exchanges using the affordances of the target language.

Third, when observing language students' online activity, it is recommended that teachers should demonstrate a high level of flexibility. Specifically, language learners are allowed to utilize para-linguistics and neologism to express their personal stands within a given online discourse community as opposed to adhering to standard linguistic conventions. A common instance of digital para-linguistics includes emoticons, which enable online users to express their feelings and beliefs more efficiently when reacting to a particular communicative event during a language lesson. This can be easily observed among members of social networks such as Facebook users or those in Twitter. On a different note, neologism is defined as new vocabulary items that are reinvented by language users over time. This can be explained by the fact that the Web has enabled the establishment of a common ground where online language speakers can reconstruct words to serve their specific communicative needs with more flexibility. As a result, besides standard language codes, educators are advised to give their students enough freedom and autonomy to project their sense of identity when studying online through the utilization of para-linguistics and neologism. This, in turn, helps teachers and institutions better monitor learning behaviors of their students in digital spaces while at the same time, ensuring that they are given sufficient language input and opportunities to improve their overall communitive effectiveness.

Fourth, it is also advisable that language teachers should enhance their digital skills to better handle challenges and difficulties presented by a switch to online learning. These include dealing with occasional technological breakdowns, accessing multi-modal language resources and interacting with language learners in various communicative events on digital platforms. This is especially true because the lack of digital literacy among both language students and teachers is likely to prevent them from fully comprehending intended target language input [27] which may be presented differently on the

Internet, thereby causing disruption to the learning process. Furthermore, owing to the absence of face-to-face interactions, it is possible that digitalized language materials may also be underestimated or overestimated by online learners. In other words, learners may either invest more in their learning if they attend to digital resources critically or discontinue their online participation if they lose their motivation for learning as a result of failing to fully understand online language input provided by their teachers. For this reason, school authorities should take initiatives to provide digital training for language students and teachers to aid their interpretation of digital discourses and formation of digital identities.

Lastly, teachers should also be enrolled in technology-based professional training so that they can enhance their digital literacy and consequently embrace fundamental principles of designs for online language learning spaces. This will help language instructors and educators acquire necessary pedagogical skills to maximize the learning outcomes of learners in digital spaces, assist them in handling technology-related problems, and ultimately remove the educational barriers by bridging the digital divide gap between language learners.

In sum, instead of embracing limited concepts of second language theorists, I think our modern pedagogical practices should draw on the views by Norton and other post-structuralists to better understand learner identity and effectively enhance educational outcomes in increasingly networked spaces. In other words, it is necessary for students to be in control of their own learning process with the acknowledgement of their digital *selves* so that they will invest more in language learning. To fulfill this aim, we, as language teachers, should be more understanding, creative and flexible in our teaching methodologies to help students "with varying forms of capital not only to navigate these spaces but also to potentially transform them as well" [18].

4. Conclusion, future agenda for research and some limitations

Unfortunately, the need to re-conceptualize the identity of language students based on post-structuralism still receives little attention from researchers worldwide as they are more inclined towards the assessment of language abilities of learners such as the use of grammatical structures, lexical resources, and pronunciational features as well as their competencies across four macro skills (listening, speaking, reading and writing) proposed by SLA theorists. However, it should be acknowledged that the fluidity and multi-dimensional nature of learners' digital identities have set a future agenda for research into this emerging field. *Firstly*, more future research should be conducted to better analyze the casual relationship between the identity construction of learners and that of language teachers. Moreover, although we know that digital training provided for teachers can influence how technologies are used for language learning purposes, more research is needed to shed light on its impact on learners' construction of their digital identities. That is, how students enact their identities in networked spaces should be closely investigated in relation to how teachers develop their *selves* through the use of digital tools to enhance their pedagogical

practices. *Secondly*, we also need to take into consideration the need to socially acknowledge the existence of digital identities and the ways to protect their networked presence in language learning and teaching contexts, especially in developing nations like Vietnam. *Moreover*, it may also be necessary for us to closely monitor the behaviors of online participants and the outcomes of their learning process across digital platforms. As the study conducted by Schulze, Toohey & Dagenais [49] yielded positive results about the construction of identity of young learners taking part in a project which required the making of some language-related videos, it is urgent that more future data should be gathered from students in poor countries with limited availability of technological facilities for language learning purposes to broaden our scope of research.

REFERENCES

- [1] B. N. Peirce, "Social identity, investment, and language learning", *TESOL quarterly*, vol. 29, no. 1, pp. 9-31, 1995.
- [2] B. Norton, *Identity and language learning: Gender, ethnicity and educational change*. Longman Publishing Group, 2000.
- [3] A Pavlenko and B. Norton. "Imagined communities, identity, and English language learning", *International handbook of English language teaching*, 2007, pp. 669-680.
- [4] White, Lydia. "Linguistic theory, universal grammar, and second language acquisition", *Theories in second language acquisition*. Routledge, 2014, pp. 46-65.
- [5] R. W. Schmidt, "The role of consciousness in second language learning", *Applied linguistics*, vol. 11, no. 2, pp. 129-158, 1990.
- [6] R. Schmidt, "Awareness and second language acquisition", *Annual review of applied linguistics*, vol. 13, pp. 206-226, 1993.
- [7] A. Pennycook, "Towards a Critical Applied Linguistics for the 1990s", *Issues in applied linguistics*, vol. 1, no. 1, pp. 8-28, 1990.
- [8] P. Bourdieu, *Language and symbolic power*. Harvard University Press, 1991.
- [9] J. Lave and E. Wenger. *Situated learning: Legitimate peripheral participation*. Cambridge university press, 1991.
- [10] J. M. Miller, "Language use, identity, and social interaction: Migrant students in Australia", *Research on language and social interaction*, vol. 33, no. 1, pp. 69-100, 2000.
- [11] K. Frewin, "Theorizing self": *poststructuralist interpretations of self-construction and psychotherapy: a thesis presented in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Psychology at Massey University*. Diss. Massey University, 2002.
- [12] N. Chomsky, *New horizons in the study of language and mind*. Cambridge University Press, 2000.
- [13] N. Chomsky, *Language and mind*. Cambridge University Press, 2006.
- [14] B. C. Lust, *Child language: Acquisition and growth*. Cambridge University Press, 2006.
- [15] G. M. White, *Identity through history: living stories in a Solomon Islands society*. No. 83. Cambridge University Press, 2003.
- [16] J. Inozu, "Developing learner autonomy in the language class in Turkey: Voices from the classroom", *Asia Pacific Education Review*, vol. 12, 2011, pp. 523-531.
- [17] R. Darvin and B. Norton. "Transnational identity and migrant language learners: The promise of digital storytelling", *Education Matters: The Journal of Teaching and Learning*, vol. 2, no. 1, pp. 55-66, 2014.
- [18] R. Darvin and B. Norton. "Identity and a Model of Investment in applied linguistics", *Annual review of applied linguistics*, vol. 35, pp. 36-56, 2015.
- [19] P. Bourdieu, "The forms of capital., (1986)", *Cultural theory: An anthology*, vol. 1, pp. 81-93, 2011.
- [20] C. Kramsch, "Culture in foreign language teaching", *Iranian Journal of Language Teaching Research*, vol. 1, no. 1, 57-78, 2013.
- [21] J. Blommaert, "Key topics in sociolinguistics", *Reino Unido: Cambridge*, 2005.
- [22] P. Bourdieu, "What makes a social class? On the theoretical and practical existence of groups", *Berkeley journal of sociology*, vol. 32, pp. 1-17, 1987.
- [23] D. S. Pittaway, "Investment and second language acquisition", *Critical inquiry in language studies: An international journal*, vol. 1, no. 4, pp. 203-218, 2004.
- [24] M. Haneda, "Investing in foreign-language writing: A study of two multicultural learners", *Journal of Language, Identity, and Education*, vol. 4, no. 4, pp. 269-290, 2005.
- [25] J. Cummins, "Identity texts: The imaginative construction of self through multiliteracies pedagogy", *Imagining multilingual schools*. Multilingual Matters, 2006. pp. 51-68.
- [26] S. Arkoudis and C. Davison. "Chinese students: Perspectives on their social, cognitive, and linguistic investment in English medium interaction", *Journal of Asian Pacific Communication*, vol. 18, no. 1, pp. 3-8, 2008.
- [27] R. W. Black, "Online fan fiction, global identities, and imagination", *Research in the Teaching of English*, vol. 43, pp. 397-425, 2009.
- [28] B. Norton, "Identity, literacy, and English language teaching", *Iranian Journal of Language Teaching Research*, vol. 1, no. 2, pp. 85-98, 2013.
- [29] R. Darvin and B. Norton. "Investment and motivation in language learning: What's the difference?" *Language teaching*, vol. 56, no. 1, pp. 29-40, 2023.
- [30] B. Norton, S. Jones, and D. Ahimbisibwe. "Learning about HIV/AIDS in Uganda: Digital resources and language learner identities", *Canadian modern language review*, vol. 67, no. 4, pp. 568-589, 2011.
- [31] B. Norton, "Identity in Language Learning and Teaching", *Research Questions in Language Education and Applied Linguistics: A Reference Guide*, 2021, pp. 81-85.
- [32] C. R. i Solé, *The personal world of the language learner*. Springer, 2016.
- [33] C. Sullivan and S. Stalla-Bourdillon. "Digital identity and French personality rights—A way forward in recognizing and protecting an individual's rights in his/her digital identity", *Computer Law and Security Review*, vol. 31, no. 2, pp. 268-279, 2015.
- [34] J. Robson, "Performance, structure and ideal identity: Reconceptualizing teachers' engagement in online social spaces", *British Journal of Educational Technology*, vol. 49, no. 3, pp. 439-450, 2018.
- [35] S. Masiero and S. Bailur. "Digital identity for development: The quest for justice and a research agenda". *Information Technology for Development*, vol. 27, no. 1, pp. 1-12, 2021.
- [36] R. Darvin and B. Norton. "Language, identity, and investment in the twenty-first century", *Language policy and political issues in education*, vol. 3, pp. 227-240, 2017.
- [37] Y. Chang and M. Sperling. "Discourse and identity among ESL learners: A case study of a community college ESL classroom", *Research in the Teaching of English*, vol. 49, no. 1, pp. 31-51, 2014.
- [38] A. Duchêne, M. Moyer, and C. Roberts, *Language, migration and social inequalities: A critical sociolinguistic perspective on institutions and work*. Vol. 2. Multilingual Matters, 2013.
- [39] E. Finegan and J. R. Rickford, *Language in the USA: Themes for the Twenty-first Century*. Cambridge University Press, 2004.
- [40] H. H. Pham and T.-T.-H. Ho. "Toward a 'new normal' with e-learning in Vietnamese higher education during the post COVID-19 pandemics", *Higher Education Research & Development*, vol. 39, no. 7, 1327-1331, 2020.
- [41] C. B. Hodges *et al.*, "The difference between emergency remote teaching and online learning", *Educause Review*. 2020, [Online]. Available: <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning> 2020. [Accessed: January 15, 2023]
- [42] B. Eickelmann and J. Gerick. "Learning with digital media: Objectives in times of Corona and under special consideration of social Inequities", *Die Deutsche Schule*, vol. 16, pp. 153-162, 2020.
- [43] National Research Council. *STEM integration in K-12 education: Status, prospects, and an agenda for research*. National Academies Press, 2014.
- [44] L. Fishbane and A. Tomer. "As classes move online during COVID-19, what are disconnected students to do", *Brookings Institute*, 2020.
- [45] S. Carr, "As distance education comes of age, the challenge is keeping the students", *Chronicle of higher education*, vol. 46, no. 23, pp. A39-A41, 2000.
- [46] D. Serhan, "Transitioning from Face-to-Face to Remote Learning: Students' Attitudes and Perceptions of Using Zoom during COVID-19 Pandemic", *International Journal of Technology in Education and Science*, vol. 4, no. 4, pp. 335-342, 2020.
- [47] C. H. Aydın and D. Tasci. "Measuring readiness for e-learning: Reflections from an emerging country", *Journal of Educational Technology & Society*, vol. 8, no. 4, pp. 244-257, 2005.
- [48] R. Ribeiro, "How university faculty embraced the remote learning shift", *EdTech Magazine*, vol. 14, 2020.
- [49] K. Toohey, D. Dagenais, and E. Schulze. "Second language learners making video in three contexts", *Language and Literacy*, vol. 14, no. 2, pp. 75-96, 2012.