Article

Implementation of a Thematic Analysis Method to Develop a Qualitative Model on the Authentic Foreign Language Learning Perspective: A Case Study in the University of Northern Cyprus

Mohsen Mortazavi [1,*] and Afshin Davarpanah [2,*]

1   Department of Computer Education and Instructional Technologies, Eastern Mediterranean University, Famagusta 99628, Cyprus
2   Young Elite Researchers, Science and Research Branch, Islamic Azad University, Tehran 1584743311, Iran
*   Correspondence: mohsen.mortazavi.edu@gmail.com (M.M.); afshindpe@gmail.com (A.D.)

Abstract: Environmentally friendly occasions allow foreign language learners to further concentrate on realizing their extensive knowledge of the English language. Exercises and activities performed in foreign language classes have been criticized for a lack of authenticity, which prevents language learners from learning the real-life usage of language. In this paper, we developed a qualitative model based on the thematic analysis method (TAM) to distinguish the efficacy of research strategies. The number of participants was defined based on theoretical saturation. To collect the data, 18 participants were selected from the Eastern Mediterranean University (EMU) in Cyprus. The selection of participants was according to their involvement in research-based projects. Theoretical saturation occurred after 15 semi-structured interview forms from participants; however, we selected three extra participants to obtain more reliable results. The reliability of the qualitative model was explicitly illustrated by colleagues who were experts in this field by reviewing and analyzing the proposed model with previous models. It was concluded that the two principles of motivation (principle 11) and provision of collaborative opportunities (principle 4) had the highest frequencies, of 22.47% and 19.66%.

Keywords: foreign language learning; e-learning; authentic environment; principles; English

1. Introduction

Learning a foreign language has always been considered one of the primary and essential ways for communication and globalization to reach similar systematic performances [1,2]. Therefore, to address the learners' challenges in obtaining authentic language utilization, especially in higher education settings, it is essential to provide realistic and practical assignments. It is of significance to explicitly consider the relevant and non-relevant issues during lecture hours and classrooms to virtually eliminate the less-used methods, in order for learners to improve their efficiency [3,4]. Consequently, foreign language learners might justify relevant factors and reasons as to how their knowledge and technological advancements would help improve their communication skills. For example, new technologies offer enormous opportunities for people to enhance their foreign language knowledge and find novel solutions to nurture their learning, by utilizing better patterns of understanding [5,6]. Among these observational studies, it has been shown that non-relevant materials affect the learning processes, and they should be ignored. Furthermore, having a comprehensive knowledge of additional languages from numerous cultures helps them to manage the challenges of being different from ordinary or monolingual people [7–9]. There are underlying causes for the complexity of language as an entity of cultural and social practices in the initial speeches [10–12]. To gain a comprehensive knowledge of the environmental impact on the efficiency of language classes, a stunning range of questionnaires and investigations have been performed [13–15].

Most activities have been restricted to classroom settings without any novel application because these activities are typically de-contextualized and have no real-world relevance. Therefore, they improve the learning of structural knowledge that cannot be used for coherent and accurate communication outside of the classroom. Many researchers called for a paradigm shift in the 1970s, and as a result, the communicative approach with a focus on acquiring communicative competence came to the fore [16–18]. Accordingly, researchers started criticizing the traditional approaches to language teaching and learning. Powell and Larsen-Freeman [19] questioned the three-step presentation–practice–production teaching method. They argued that while addressing the first two steps is easy, the production stage can be challenging, since it requires transferring the acquired knowledge by the language learners.

Similarly, Harmer [20] criticized the form-focused language teaching method, since it did not provide necessary materials for language learners. Thus, form-focused language teaching methods result in the development of grammatical competence, but fail to enable language learners to communicate effectively. Therefore, the simultaneous use of grammatical and communicative competencies should be prominent in language learning. Despite the move from teacher-centered approaches to learner-centered ones, scholars argue that the activities and practices of the learner-centered classes may not necessarily be communicative [21–23]. The communicative approaches were mechanical because honest communication is informative, unpredictable, and unexpected. However, Nunan [24] argued that even enthusiastic teachers cannot recreate real-life communication, which could improve communication skills. Without a doubt, meaningful communication requires the active participation of language learners in authentic tasks relevant to their needs [24]. Since communication purposes are authentic and context/situation specific, language learning approaches should contain authentic activities. For example, Reeves et al., [25] proposed a schedule for appropriate activities that provides adequate circumstances for beneficial and essential learning through three components. It includes tasks, resources, and supports. Some authentic principles underlie these activities [25–28]:

- Have real-world relevance and complexity.
- Provide opportunities to include different perspectives.
- Provide collaborative opportunities.
- Have integration across different subject areas and involve integrated assessment.
- Yield possible products and allow for competing answers or solutions.

Design principles helped to create a web-based learning environment that provided the learners with real-life contexts to acquire the English language more quickly and implicitly. The design principles adopted from Ozverir et al. [28], can be a powerful technique for improving pedagogical approaches in language learning classrooms. However, their adaptation in different contexts may require some modifications. It is noteworthy that the use of the same principles in this study was due to the similarities between this investigation's context and Ozverir et al. [28]. It was justified that there was no inquiry into modifying the original principles when applied to this study, because the environment of foreign language learning classes has profoundly impacted the enhancement of learning procedures [28].

1.1. The Implementation of the Efficient Learning Framework

The occurrence of handy gadgets such as the iPod, iPad, and smartphones offers enormous opportunities for individuals regarding learning foreign languages. They are listed as follows according to their importance in learning a foreign language:

- Convenient use of several information packages to access a wide range of English learning packages.
- The flexibility of handy gadgets that enables individuals to choose their learning environment.
- Cost-effectiveness features to save on outrageous expenses and manage them appropriately.

- Immediate accessibility provides constructive feedback to the audiences [29,30].

From this perspective, virtual environments for learning English enable individuals to surpass their perceptions by pressing only one keyboard and obtaining a wide range of topics [31,32]. Technology-based materials in educational courses play a significant role in web-based structures. These roles are listed as the following steps:

- Individuals can cooperate in group activities and play substantial roles.
- They are enabled to lead structural courses owing to their routine activities and updated resources.
- They have an assessment for the vast majority of scheduled plans.
- They can control the current participation [33,34].

The principles of requirements for the virtual learning environment or the central performances of online education are categorized as below:

- It is required to have a specific allowance for virtual learning environments.
- Accessible variations and how to use learning sources should be managed fundamentally.
- Timetable scheduling for learning and how to plan and personalize the experiences.

A "cross-case" data analysis was proposed by Miles and Huberman [35] to study the data sources, including the replication of the interviews, observations of the students, and the teacher journals.

1.2. Principles

1.2.1. Real-World Relevance

According to the findings, having a real-world bearing is a central constituent of a learning activity in order for students to establish a relationship between what they foster in their mind at school and its application in real settings. Participants took their roles as journalists to propose real solutions for genuine difficulties. Moreover, students believed that this virtual environment allowed them to use the target language for authentic purposes. Thus, this form of learning was stimulating and helped them to develop pertinent knowledge and skills. For instance, one student confirmed the effectiveness of this approach by expressing that: "We are given a chance to discover the consequences of alcohol use on different aspects of our life here, even its negative effect on our studies . . . "I am not going to drink alcohol during my studies anymore".

1.2.2. Complexity and Ill-Definition

The tasks given to the students were not properly defined and challenging. It means that they were complex and could not be solved by a pre-defined sequence. To solve such complex problems, students needed to exert more mental effort over a continuous period to find the right direction adequately. To support this principle, the teacher mentioned that: "The challenging nature of the task promoted students' creativity as they tried to use their peculiar knowledge and skills to solve the problem rather than following a path already given to them".

1.2.3. Provision of Opportunities to Include Different Perspectives

Students had the opportunity to manipulate the task from different angles and share their knowledge and ideas. Among other things, these perspectives focused on the audiences' understanding, content, and learning environment. It was evident that students can contribute in a diverse range of issues, as pointed out by one of the students: "Including diverse opinions which led to a single outcome. It might be an advantageous feature".

1.2.4. Provision of Collaboration Opportunities

Collaboration among the members of a virtual environment is an important matter. Given the complexity of tasks, it was less likely that each student could accomplish the task unless she/he had the opportunity to work with others. Joint problem solving is a critical feature in completing authentic tasks because they contain different aspects, and

attending to all of them may not be possible by a single person. In this regard, one student appreciated the chance to work with other students: "I was not able to complete the task individually. For example, how youth access to the drug, was so limited".

1.2.5. Provision of Reflection Opportunities

Reflection is one of the fundamental characteristics of authentic activities that sets the ground for meaningful discussion, enhancing learning and experience. Through authentic activities, students reflected on their learning resources (e.g., interactive content), problem-solving techniques (e.g., while writing and producing their newsletter), and learning strategies (e.g., reflection was one of the essential learning strategies explicitly taught to the students, by asking them whether they perceived the impact of nurturing methodologies and whatever they had done throughout these processes). One student expressed that: "It was through reflection that I could understand what I had learned, what weaknesses I had, and what skills I already had".

1.2.6. Integration across Different Subject Areas

This characteristic of authentic activities points to the multidisciplinary nature of real-life tasks. It provides authentic communication products that require several skills to accomplish the tasks. Creating a newsletter containing stories dealing with daily social issues required the use of reading, writing, speaking, and listening skills and grammar in an integrative manner. In this regard, one of the students believed that: "This task helped me develop different communication skills that apply to my future job in firms where I need to communicate in English as a foreign language and engage in some problem-solving activities".

1.2.7. Integration with Assessment

Like all learning activities, authentic activities also need to be assessed; however, in the latter case, assessment is integrated into the activities. It means that completing the tasks requires frequent assessment of what is being performed. Therefore, students can keep continuing along the right path until it is completed. The assessment was carried out by students to identify their communication skills' strengths instead of focusing on their linguistic competence. To support the significance of this assessment form in this authentic environment, the teacher mentioned that: "Since students performed a real-world task with real products, they realize the importance of the assessment. They understood that the task had a real purpose and the products were in use by the audience, so they could not deal with it only as a class project".

1.2.8. Yielding Polished Products

Creating a valuable product was another characteristic of authentic tasks. Writing stories allowed the students to communicate with the actual audience outside the school, whose purpose was not merely academic. One of the students highlighted that: "Since the task had real purposes and audiences, I needed to be more careful about the products we created because the stories were to be published in a newsletter". The above quotation signifies the importance of focus on meaning, rather than only on form. Like any other real-life activity, tasks should yield the polished products which are used by real audiences. Additionally, a polished product can be obtained that requires attention to be paid to the form and meaning of the language.

1.2.9. Allowing Competing Solutions and Diverse Outcomes

The tasks given to the students in this study were not close-ended and they required specific and restricted answers. Conversely, they were open-ended and allowed a wide range of competing solutions and outcomes. When students are enabled to solve the problems by reflecting on their repertoire, the products will differ even in similar tasks. This freedom is also a motivating factor that helps students produce genuinely diverse and

attractive stories. In this line, one of the students pointed out: "We were free to select the topic of our own choice and whatever procedure and method we find useful in performing the tasks. For example, I like to research the lack of cinema and theatres in the city. I was not forced to research a topic that I did not like or did not find important. I enjoyed the freedom I had in performing these tasks".

1.2.10. Conducive Activities to Both Learning and Communicating

The characteristic that connects theory (learning) and exercises in an actual situation, suggesting that authentic activities can enhance communication skills. However, as indicated later in this study, when learning occurs in real or real-like contexts, communicative tasks and activities provide opportunities to practice the existing knowledge that students already have and facilitate learning new structures in context. One student believed that the virtual environment stimulated them to use the language for communication, using its newly acquired aspects. As he put it: "I interviewed some students and some people. Sometimes they understood me, but sometimes they did not. . . . but, in fact, from their feedback, I could understand what I had learned and used correctly and what I had not". Comments like the one mentioned above highlight that the students appreciated these activities and could understand their effectiveness as a tool to convey a message to their audience.

1.2.11. Motivation

A key factor observed during the study was motivation. Unlike traditional classes, this virtual environment allowed the students to use various technological tools to perform the tasks appropriately. It was quite stimulating and caused an increase in the students' participation. It was also a suitable way to learn about the subject matter, as one of the students confirmed that: "The tasks increased not only our knowledge of specific areas but also our general knowledge because we were encouraged to select a variety of topics based on our preferences from daily life topics. We also shared our knowledge with those of our friends, and it helped us develop our knowledge".

In this comprehensive approach, we emphasized activities that the instructor employed to promote the learning efficiency of foreign languages among students. The instructor answers students' questions about language and evaluates student's learning by using various topics. Additionally, this paper was aimed at teaching-based learning collaboration and problem-solving issues to decide how the best learning principles can influence them. Therefore, these factors might be controversial, which may be discussed analytically and statistically in further research.

2. Research Objectives

In this study, we aimed to comprehensively address and discuss the following questions (based on an interview with academic staff and experts). These are based on the proposed principles:

- What are your opinions about the mentioned principles of the learning of foreign languages and how they influence your daily routine activities?
- What is the importance of each principle based on your previous experiences regarding learning materials and tools?
- What are the advantages and disadvantages of each principle?
- Which suggestions, amendments, and improvements do you think would be more appropriate for these principles?

3. Research Methodology

3.1. Research Method

Due to the importance of this research and its application on the accurate contribution to learning performances, we developed a qualitative model by collecting data from 18 participants at various academic levels. In the proposed model, the thematic analysis method

(TAM) was implemented to distinguish the efficacy of the research strategies. This method allows the authors to qualitatively illustrate the hidden and apparent themes used as a comprehensive tool. To collect the data, 18 participants were selected from the University of Northern Cyprus. The selection of participants was according to their involvement in research-based projects. In qualitative research projects, the number of participants was not defined before performing the research The interview process continued until no new data were generated. This is called theoretical saturation, where there are no new findings in the interview process. In this paper, theoretical saturation occurred after 15 interviews; however, we selected three more extra participants to produce more reliable results. The demographic features of the participants are shown in Table 1.

Table 1. Demographic features of the participants.

Variables		n	%
Gender	Male	10	55.5
	Female	8	44.5
Age	28–34	7	38.9
	35–40	6	33.4
	41–45	5	27.7
University Position	Assistant Professor	9	50
	Associate Professor	6	33.4
	Professor	3	16.6

In order to collect the data, semi-structured, in-person interviews were used. Before interview commencement, a summary of the research schedule and goals was clarified in more detail. To record the qualitative data, participants' satisfaction and their permission were authorized. Then, the interview process was carried out, and to complete the forms, their voices were recorded. The average interview time was about 45–60 min for each participant individually. Perceptions of the sampling of each principle are explained in Table 2.

Table 2. Perceptions of the sampling of each principle.

Principles	n	%	Sampling
Real-World Relevance	18	10.11	Real-world concepts as the main constituent in learning environments.
Complexity and Ill-Definition	4	2.25	The challenging nature of the task is to promote students' skills.
Provision of Opportunities to Include Different Perspectives	19	10.67	To manipulate the task from different angles and share their knowledge and ideas.
Provision of Collaboration Opportunities	35	19.66	Joint problem solving is a critical feature in completing authentic tasks.
Provision of Reflection Opportunities	11	6.18	Set the ground for meaningful discussion, enhancing learning and experience.
Integration across Different Subject Areas	10	5.62	Points to the multidisciplinary nature of real-life tasks, requiring several skills to be accomplished.
Integration with Assessment	14	7.87	Successful completion of the tasks requires frequent assessment.
Yielding Polished Products	11	6.18	Creating a valuable product that was of use by itself.
Allowing Competing Solutions and Diverse Outcomes	6	3.37	They were given a chance to solve problems by reflecting on their repertoire.
Conducive Activities to Both Learning and Communicating	10	5.62	Authentic activities foster and enhance communication.
Motivation	40	22.47	Use various technological tools to perform the tasks appeared to be quite stimulating.

3.2. Reliability

MAXQDA is a software program designed for computer-assisted qualitative and mixed-methods data, text, and multimedia analysis in academic, scientific, and business institutions. To evaluate the reliability of the qualitative analysis, acceptable and confidential results should be included in the analysis. Therefore, the Cohen kappa coefficient was implemented to obtain accurate agreement between the interviewees and external supervisors. This was achieved by MAXQDA software, and according to the obtained results, the Cohen kappa coefficient was about 0.85. It indicates that the qualitative results have a high level of confidentiality, as it is close to 1.

4. Results and Discussion

Based on the present study's findings, the eleven principles of the authentic activities were considered the fundamental aspects of meaningful learning issues. In other words, the participants were allowed to use English for a real purpose, examined the task and subtasks from different angles, and finally developed their knowledge and skills. Moreover, they recognized the value of reflecting on their learning process, rather than dealing with it as a subject of study. Participants also reported the challenging nature of the tasks that required an in-depth analysis, referring to a wide range of sources, and collaboration with peers. Thus, this study's results confirm the effectiveness of the framework of the 11 design principles of authentic activities in an EFL context developed by Ozverir et al. However, similar to Ozverir et al.'s study, this design affected the results. Since 11 principles are essential to foster a deeper understanding of new experiences, they should have had a marvelous sense of achievement to understand each principle properly. Although all the principles play a substantial role in learning languages, it was concluded that motivation and competing solutions significantly improve learning methodologies' efficiency. Motivation is also considered a significant function in learning languages, because it gives individuals the chance to surpass their intelligence. It can provide holistic and sustainable solutions in a cycle of events. On the other hand, competing solutions are concerned by two sub-categories: integration with assessment and collaboration opportunities. They enable individuals to manage the challenges of being different and let their ideas flow freely, leading to growing their collective creativity exponentially. The principles' role in the authentic learning perspective is schematically depicted in Figure 1.

This study utilized design-based research based on principles initially adapted from Herrington, Oliver, and Reeves's model of authentic tasks, and the further modifications made to Ozverir et al. Indeed, as explained by Ozverir et al., this procedure identifies the use of previously developed design principles in varied contexts as the foundation of further contextualized and modified applications in research studies. Original principles are often practical guidelines for implementing activity-based language learning in the study. Following Ozverir et al., the principles used in this research included six initial principles, four modified and extended principles, and an additional principle resulting from data analysis, which signaled a specific aspect of the language learning environment in the context of the present study. The findings of this study are discussed below in light of the proposed principles (see Table 2). The majority of the participants mentioned that principle 11 was efficient in learning a foreign language, as they stated "Use various technological tools to perform the tasks appeared to be quite stimulating". The frequency of each principle is depicted in Figure 2. However, principle two is depicted as the least critical principle, which has the lowest percentage with regard to the following statement: "The challenging nature of the task is to promote students' skills".
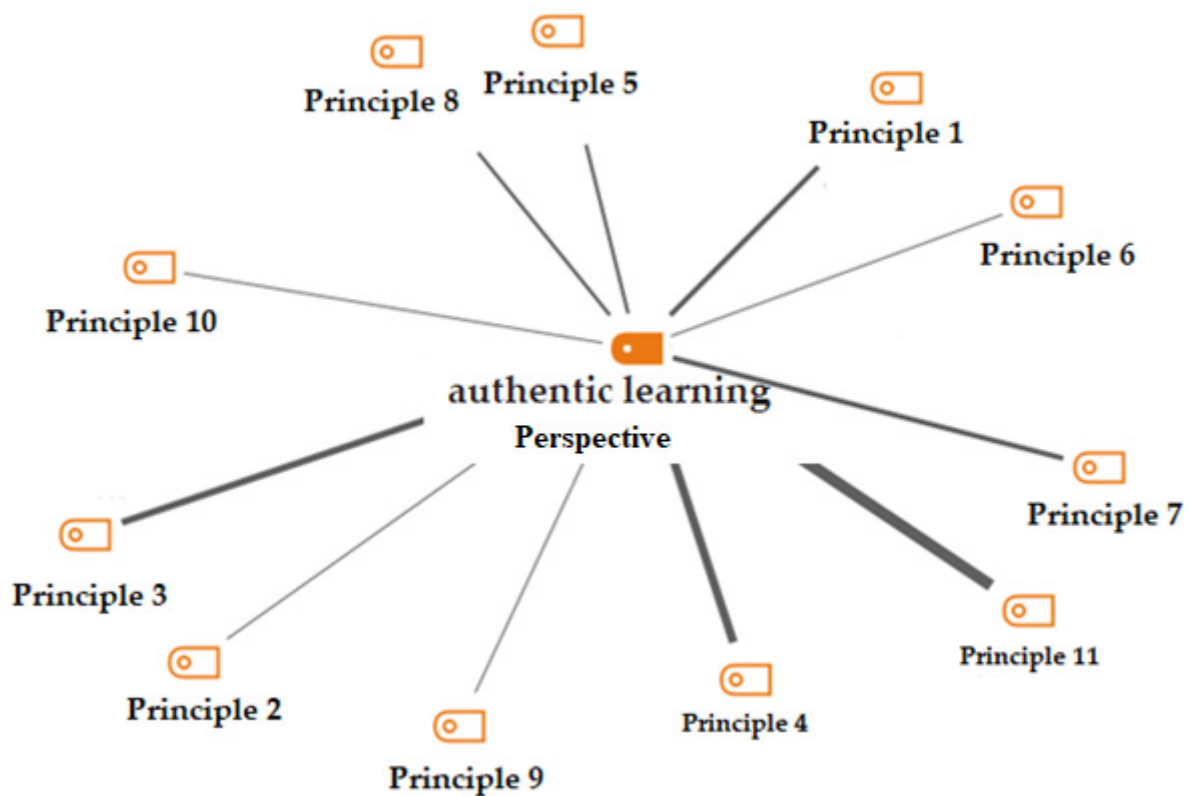
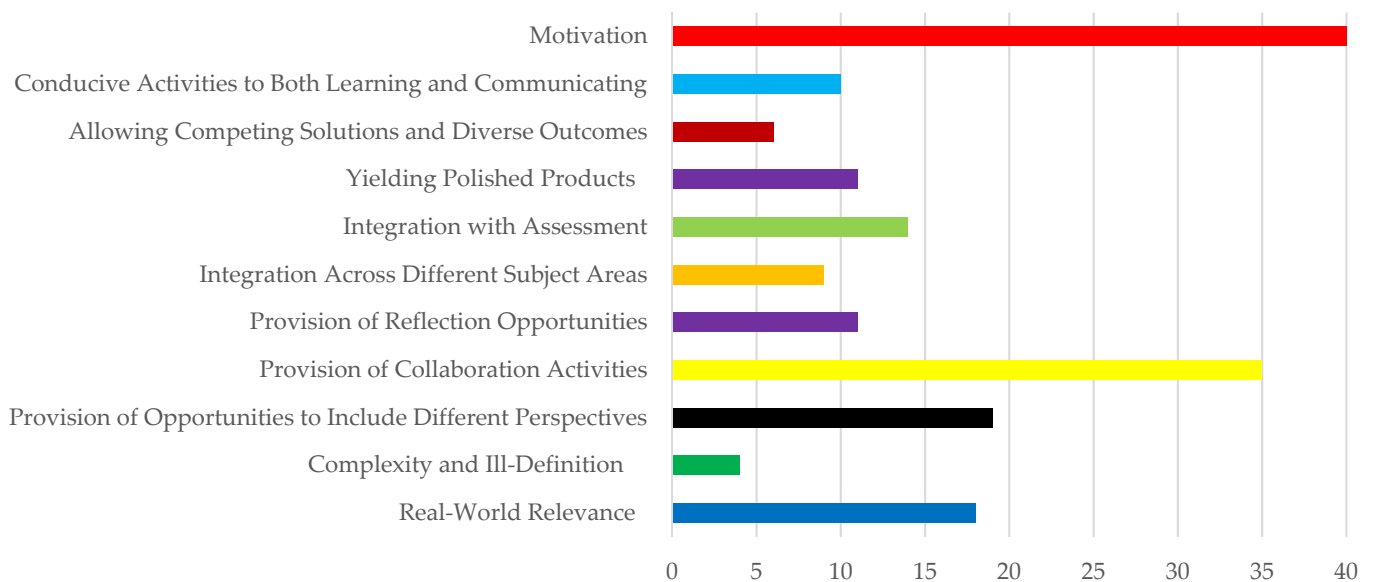**Figure 1.** Principles' role in authentic learning perspective.

Figure 2. Frequency of each principle.

5. Conclusions

This study explored how authentic activities were incorporated into a qualitative model based on the thematic analysis method (TAM) to distinguish the efficacy of the research strategies. Hence, it provides evidence that authentic learning principles are worthwhile, and teachers are encouraged to implement them in foreign language classes to motivate students and foster learning in real-life environments. Learners had autonomy in finding a problem that made them concerned and thus encouraged them to develop their solution, using whatever skills they had at their disposal to complete the task. Consequently,

the two principles of motivation (principle 11) and provision of collaboration opportunities (principle 4) had the highest frequencies, of 22.47% and 19.66%.

References

1. Mortazavi, M.; Hocanın, F.T.; Davarpanah, A. Application of Quantitative Computer-Based Analysis for Student's Learning Tendency on the Efficient Utilization of Mobile Phones during Lecture Hours. *Sustainbility* **2020**, *12*, 8345. [CrossRef]
2. Galloway, N.; Numajiri, T. Global Englishes Language Teaching: Bottom-up Curriculum Implementation. *TESOL Q.* **2020**, *54*, 118–145. [CrossRef]
3. Abramova, I.E.; Shishmolina, E.P.; Ananyina, A.V. Advantages of authentic assessment over traditional assessment while teaching English to university students majoring in non-linguistic subjects. *Samara J. Sci.* **2018**, *7*, 287–293. [CrossRef]
4. Gibney, D.T. and Henry, G. Who teaches English learners? A study of the quality, experience, and credentials of teachers of English learners in a new immigrant destination. *Teach. Teach. Educ.* **2020**, *90*, 102967. [CrossRef]
5. Baytak, A.; Tarman, B.; Ayas, C. Experiencing technology integration in education: Children's perceptions. *Int. Electron. J. Elem. Educ.* **2011**, *3*, 139–151.
6. Gilakjani, A.P. A Review of the Literature on the Integration of Technology into the Learning and Teaching of English Language Skills. *Int. J. Engl. Linguist.* **2017**, *7*, 95. [CrossRef]
7. Ammon, U. David Graddol.English Next. Why global English may mean the end of 'English as a Foreign Language. *Lang. Probl. Lang. Plan.* **2008**, *32*, 203–207. [CrossRef]
8. Ushioda, E. The Impact of Global English on Motivation to Learn Other Languages: Toward an Ideal Multilingual Self. *Mod. Lang. J.* **2017**, *101*, 469–482. [CrossRef]
9. Mortazavi, M.; Nasution, M.; Abdolahzadeh, F.; Behroozi, M.; Davarpanah, A. Sustainable Learning Environment by Mo-bile-Assisted Language Learning Methods on the Improvement of Productive and Receptive Foreign Language Skills: A Comparative Study for Asian Universities. *Sustainability* **2021**, *13*, 6328. [CrossRef]
10. Dymond, S.; Roche, B.; Bennett, M.P. *Relational Frame Theory and Experimental Psychopathology*; New Harbinger: Oakland, CA, USA, 2013.
11. Wacewicz, S.; Zywiczynski, P.; Orzechowski, S. Visible movements of the orofacial area. *Gesture* **2016**, *15*, 250–282. [CrossRef]
12. Dediu, D.; Janssen, R.; Moisik, S. Language is not isolated from its wider environment: Vocal tract influences on the evolution of speech and language. *Lang. Commun.* **2017**, *54*, 9–20. [CrossRef]
13. Wu, H.; Zhang, L.J. Effects of different language environments on Chinese graduate students' perceptions of English writing and their writing performance. *System* **2017**, *65*, 164–173. [CrossRef]
14. Chen, J.C. The crossroads of English language learners, task-based instruction, and 3D multi-user virtual learning in Second Life. *Comput. Educ.* **2016**, *102*, 152–171. [CrossRef]
15. Kilickaya, F. Authentic Materials and Culture Content in EFL Classrooms. *I. TESL J.* **2004**, *38*, 20–23.
16. Canale, M.; Swain, M. Theoretical Bases of Communicative Approaches to Second Language Teaching and Testing. *Appl. Linguist.* **1980**, *1*, 1–47. [CrossRef]
17. Feez, S.; Quinn, F. Teaching the distinctive language of science: An integrated and scaffolded approach for pre-service teachers. *Teach. Teach. Educ.* **2017**, *65*, 192–204. [CrossRef]
18. Guise, M.; Habib, M.; Thiessen, K.; Robbins, A. Continuum of co-teaching implementation: Moving from traditional student teaching to co-teaching. Teach. *Teach. Educ.* **2017**, *66*, 370–382. [CrossRef]
19. Powell, H.; Larsen-Freeman, D. Teaching Language: From Grammar to Grammaring. *TESOL Q.* **2004**, *38*, 172–173. [CrossRef]
20. Harmer, J. *How to Teach English: An Introduction to the Practice of English Language Teaching*; Pius Lan Tapi: London, UK, 1998.
21. Pennycook, A. The Cultural Politics of English as an International Language. In *Cultural Politics English International Language*; Routledge: London, UK, 2017.
22. Kumaravadivelu, B. TESOL Methods: Changing Tracks, Challenging Trends. *TESOL Q.* **2006**, *40*, 59. [CrossRef]
23. Littlewood, W. Communication-oriented language teaching: Where are we now? Where do we go from here? *Lang. Teach.* **2014**, *47*, 349–362. [CrossRef]
24. Nunan, D. Communicative language teaching: Making it work. *Elt J.* **1987**, *41*, 136–145. [CrossRef]
25. Reeves, T. Design research from a technology perspective. *Educ. Des. Res.* **2006**, 64–78. [CrossRef]

26. Leppisaari, I.; Herrington, J.; Vainio, L.; Im, Y. Authentic e-learning in a multicultural context: Virtual benchmarking cases from five countries. *J. Interact. Learn. Res.* **2013**, *24*, 53–73.

27. Lindsay, N.; Wood, D. Facilitating creative problem solving in the entrepreneurship curriculum through authentic learning activities. In *Activity Theory, Authentic Learning and Emerging Technologies*; Towards a Transformative Higher Education Pedagogy; Routledge: London, UK, 2014. [CrossRef]

28. Ozverir, I.; Herrington, J.; Osam, U.V. Design principles for authentic learning of English as a foreign language. *Br. J. Educ. Technol.* **2016**, *47*, 484–493. [CrossRef]

29. Al Shobaki, M.J.; Abu-Naser, S.S. *The Role of the Practice of Excellence Strategies in Education to Achieve Sustainable Competitive Advantage to Institutions of Higher Education*; DSpace at Alazhar University: Cairo, Egypt, 2017.

30. Grover, S.; Pea, R. *Designing a Blended, Middle School Computer Science Course for Deeper Learning: A Design-Based Research Approach*; International Society of the Learning Sciences: Singapore, 2016.

31. Warren, S.J.; Jones, G. Teaching Computer Literacy with Transmedia Designed by Learners with Broken Window. In *Learning Games*; Springer: Berlin/Heidelberg, Germany, 2017; pp. 199–220. [CrossRef]

32. Baumgartner, E.; Bell, P.; Brophy, S.; Hoadley, C.; His, S.; Joseph, D.; Orrill, C.; Puntambekar, S.; Sandoval, W.; Tabak, I. Design-Based Research: An Emerging Paradigm for Educational Inquiry. *Educ. Res.* **2003**. [CrossRef]

33. Hung, H.-T. Design-Based Research: Redesign of an English Language Course Using a Flipped Classroom Approach. *TESOL Q.* **2017**, *51*, 180–192. [CrossRef]

34. Anderson, T.; Shattuck, J. Design-Based Research. *Educ. Res.* **2012**, *41*, 16–25. [CrossRef]

35. Miles, M.A. *Qualitative Data Analysis: An Expanded Sourcebook*; SAGE: London, UK, 1994; pp. 50–72.