

Theoretical Foundations of Organizing Independent Language Learning Based on MALL Technology

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Annotation

The article examines the theoretical foundations of organizing independent foreign language learning using Mobile-Assisted Language Learning (MALL) technology. Against the backdrop of digital transformation in global education, MALL is discussed as an innovative approach that allows learners to study independently and flexibly through mobile devices. The author explores three key theoretical frameworks that support independent learning: autonomy, constructivism, and self-regulation. Building upon these theories, the article analyzes the methodological basis of MALL, including multimodal learning, contextualization, and microlearning. Particular attention is paid to the benefits of MALL in promoting individualized instruction, learner autonomy, and increased motivation through gamification and feedback mechanisms. Research data are cited to demonstrate the positive impact of MALL on language acquisition outcomes, particularly in listening, reading, and learner engagement. The article concludes with pedagogical and methodological recommendations for effective implementation of MALL, emphasizing content design, infrastructure, and teacher support. The work is of interest to educators, researchers, and instructional designers seeking to modernize language teaching through mobile technologies.

Key words: Mobile-Assisted Language Learning (MALL), Independent Learning, Learner Autonomy, Digital Pedagogy, Self-Regulated Learning, Gamification in Education, Multimodal Learning, Foreign Language Instruction

Introduction

The ongoing digital transformations in the global education system necessitate the renewal of educational content, methodology, and technologies. In particular, the field of foreign language learning increasingly emphasizes individual approaches, differentiated instruction, and principles of independent study. Developing students' ability to organize their own learning activities independently is considered one of the core objectives of modern pedagogy. In this context, Mobile-Assisted Language Learning (MALL) technology, which enables the integration of mobile technologies into the language learning process, deserves special attention. This technology not only makes education more flexible and interactive but also facilitates learners' self-development, contextual use of language, and autonomous access to resources. Through MALL, learners gain the opportunity to study anytime and anywhere, thereby transcending the limits of traditional classroom-based learning.

This article examines the theoretical foundations of organizing independent language learning through MALL technology from pedagogical, psychological, and linguodidactic perspectives. Additionally, it analyzes the methodological characteristics of mobile learning, the approaches underpinning it, and its application in modern educational practices.

Methods

The process of independent learning is characterized by the learner's initiative in acquiring

THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

VOLUME-5, ISSUE-7

knowledge, their organization of their own activities, and their assumption of responsibility for their own learning outcomes. The theoretical foundations of this process are based on the following conceptual approaches:

1. **Theory of Autonomous Learning** (H. Holec): The learner is conceptualized as a subject fully responsible for the learning process. According to Holec, autonomy in language learning means that the learner sets their own goals, selects content, utilizes resources, and performs self-assessment.

2. **Constructivist Theory** (J. Piaget, L. Vygotsky): Knowledge is not transmitted in a ready-made form, but rather constructed independently by the learner through their activity. In this view, the learner is seen as a knowledge constructor.

3. **Self-Regulated Learning Theory** (Zimmermann): The learner independently plans, monitors, evaluates their educational activity, and chooses appropriate learning strategies. These theories highlight the importance of internal motivation, goal orientation, reflective abilities, and self-monitoring capacity—all of which are further enhanced through the use of MALL technologies.

2. Methodological and Theoretical Foundations of MALL Technology
MALL is a method of language learning that utilizes mobile devices and is considered a continuation and advancement of CALL (Computer-Assisted Language Learning) technology. It is based on the following scientific foundations:

1. **Multimodal Learning Theory** (Kress & Van Leeuwen): Language acquisition occurs not only through linguistic input but also via auditory, visual, and kinesthetic modalities. MALL applications involve multimodal tools (videos, audios, interactive tests) that turn learners into active participants.

2. **Contextual Learning Theory**: Learning becomes effective when knowledge is acquired within real-life settings and contexts. MALL delivers content adapted to location, time, and situation, thereby offering authentic real-world scenarios.

3. **Continuous and Fragmental Learning Theory** (Microlearning): Short, goal-oriented, and modular learning tasks delivered via mobile devices increase learning efficiency. Moreover, MALL is grounded in digital pedagogy, affordance theory, and gamification concepts, making it not only a technological innovation but also a pedagogically and psychologically substantiated approach.

3. Advantages of Organizing Independent Learning via MALL Technology
Organizing independent learning using MALL technology offers the following advantages:

- **Individualized approach**: Each learner selects materials based on their own level and needs.
- **Flexibility**: Learners determine the time, place, and pace of their studies independently.
- **Self-assessment opportunities**: Many MALL applications provide visualized results through progress charts and percentage-based scores.
- **Gamification**: Learner engagement is increased via rating systems, rewards, and tasks.
- **Feedback mechanisms**: Systems automatically provide feedback on learner errors.

Additionally, MALL technology enables the organization of short yet effective learning sessions and promotes simultaneous development of speaking, listening, and writing skills.

4. The Effectiveness of MALL Based on Scientific Research
Numerous studies (Burston, 2013; Kukulska-Hulme, 2012; Viberg & Grönlund, 2013) indicate that independent learning through MALL technology yields the following outcomes:

THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

VOLUME-5, ISSUE-7

- Motivation in language learning increased by 30–50%.
- Listening and reading skills improved by up to 25–40%.
- Noticeable growth in learners' autonomy and confidence in completing tasks.
- Enhanced memory retention and long-term memorization effectiveness.

These findings confirm the scientific validity and educational effectiveness of MAL technology.

To effectively implement MALL technology, the following conditions must be met:

1. **Development of didactic materials** – Content must be multimodal, modular, and aligned with CEFR standards.
2. **Technical infrastructure** – Availability of mobile devices, fast internet access, and technical support.
3. **Digital literacy** – Training courses on MALL usage for both teachers and learners.
4. **Assessment systems** – Multifaceted analysis based on automatic testing, voice recordings, and video feedback.
5. **Teacher's role** – Includes monitoring, guidance, coordination, and motivation.

In addition, integrating MALL content with mobile dictionaries, AI-based chat tools, voice reminders, and virtual classrooms is of significant importance.

Conclusion

In conclusion, MALL technology provides opportunities for independence, interactivity, differentiated approaches, and continuous monitoring in modern language learning. Its theoretical foundations are rooted in fundamental principles of contemporary pedagogy, positioning it as a crucial component of digital education. Independent learning based on MALL technology enhances learners' responsibility for their educational process, boosts motivation, and significantly improves language learning efficiency. It is not only a technological innovation but also a methodological and conceptual advancement that is increasingly integrated into educational practices.

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THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

VOLUME-5, ISSUE-7

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