



INTERNATIONAL EXHIBITION & SYMPOSIUM ON PRODUCTIVITY, INNOVATION, KNOWLEDGE & EDUCATION

“Optimizing Innovation in Knowledge, Education and Design”

EXTENDED ABSTRACT



e ISBN 978-967-2948-56-8



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eISBN 978-967-2948-56-8

Published by:
Universiti Teknologi MARA (UiTM) Cawangan Kedah,
Sungai Petani Campus,
08400 Merbok,
Kedah,
Malaysia.

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Assalamualaikum warahmatullahi wabarakatuh,



First and foremost, I would like to express my gratitude to the organizing committee of i-Spike 2023 for their tremendous efforts in bringing this online competition a reality. I must extend my congratulations to the committee for successfully delivering on their promise to make i-Spike 2023 a meaningful event for academics worldwide.

The theme for this event, 'Optimizing Innovation in Knowledge, Education, and Design,' is both timely and highly relevant in today's world, especially at the tertiary level. Innovation plays a central role in our daily lives, offering new solutions for products, processes, and services. By adopting a strategic approach to 'Optimizing Innovation in Knowledge, Education, and Design,' we have the potential to enhance support for learners and educators, while also expanding opportunities for learner engagement, interactivity, and access to education.

I am awed by the magnitude and multitude of participants in this competition. I am also confident that all the innovations presented have provided valuable insights into the significance of innovative and advanced teaching materials in promoting sustainable development for the betterment of teaching and learning. Hopefully, this will mark the beginning of a long series of i-Spike events in the future.

It is also my hope that you find i-Spike 2023 to be an excellent platform for learning, sharing, and collaboration. Once again, I want to thank all the committee members of i-Spike 2023 for their hard work in making this event a reality. I would also like to extend my congratulations to all the winners, and I hope that each of you will successfully achieve your intended goals through your participation in this competition.

Professor Dr. Roshima Haji Said
RECTOR
UiTM KEDAH BRANCH



WELCOME MESSAGE (i-SPIKE 2023 CHAIR)



We are looking forward to welcoming you to the 3rd International Exhibition & Symposium on Productivity, Innovation, Knowledge, and Education 2023 (i-SPIKE 2023). Your presence here is a clear, crystal-clear testimony to the importance you place on the research and innovation arena. The theme of this year's Innovation is "*Optimizing Innovation in Knowledge, Education, & Design*". We believe that the presentations by the distinguished innovators will contribute immensely to a deeper understanding of the current issues in relation to the theme.

i-SPIKE 2023 offers a platform for nurturing the next generation of innovators and fostering cutting-edge innovations at the crossroads of collaboration, creativity, and enthusiasm. We enthusiastically welcome junior and young inventors from schools and universities, as well as local and foreign academicians and industry professionals, to showcase their innovative products and engage in knowledge sharing. All submissions have been rigorously evaluated by expert juries comprising professionals from both industry and academia.

On behalf of the conference organisers, I would like to extend our sincere thanks for your participation, and we hope you enjoy the event. A special note of appreciation goes out to all the committee members of i-SPIKE 2023; your dedication and hard work are greatly appreciated.

Dr. Junaida Ismail

Chair

3rd International Exhibition & Symposium Productivity, Innovation, Knowledge, and Education 2023 (i-SPIKE 2023)

LINGOACTIVE 1.0: INTEGRATING THE ITALIAN LANGUAGE AND EXERCISE IN A FUN GAME

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ABSTRACT

In a world that is increasingly digital and fast-paced, finding innovative ways to combine education, entertainment, and physical activity holds significant importance. The “Lingoactive 1.0: Integrating Italian Language and Exercise in a Fun Game” is a creative and engaging board game that seamlessly merges language learning, physical exercise, and social interaction. Traditional language learning methods often struggle to captivate learners' attention, leading to waning motivation and limited retention. Concurrently, the sedentary nature of learning exacerbates the growing health concerns posed by physical inactivity. Newlearners of the Italian language often find themselves susceptible to boredom and swift forgetfulness of Italian terms when studying in a manner without practice it in a fun way. This underscores the significance of incorporating innovative language games into the learning process, as it cultivates attachment and interest. This highlights the necessity for learners to immerse themselves in a dynamic and enjoyable environment, surrounded by a community of individuals sharing the goal of mastering the language. Such an environment encourages not only mental engagement but also physical activity, ensuring a comprehensive and fulfilling learning experience (Nakao, 2019). The game play for this board game is players will navigate the board with dice, encountering exercises tied to Italian terms. A QR- coded video accompanies each exercise, offering visual and auditory guidance, thereby fostering immersive learning. Players progress through rounds, performing exercises corresponding to landed spaces, cultivating both language proficiency and physical vitality. The game introduces interactive Q&A segments, promoting social interaction. Successfully answering questions rewards players, while incorrect responses lead to entertaining penalties, adding an element of excitement. The winner will be the individual who completes the 5 rounds first. The combination of English and Italian language will make this product universal. By using the English and Italian languages as the primary mediums of communication, this product attains universality, rendering it accessible and beneficial to individuals worldwide.

Keywords: Board Game, Italian language, Physical Activity, Social Interaction, Exercise Gamification

INTRODUCTION

In an era characterized by the pervasive influence of digital engagement and the unrelenting pace of contemporary life, the imperative to synchronize education, entertainment, and physical well-being has acquired unparalleled importance (Thomas, Reinders, & Warschauer, 2013). In response to the challenges posed by the difficulties of language learning and sedentary lifestyles, the "Lingoactive 1.0: Integrating Italian Language and Exercise in a Fun Game" stands as an innovative solution that intricately melds language acquisition, physical activity, and social interaction. Moreover, this innovative product serves to promote a healthy lifestyle in an enjoyable and interactive manner (Deterding, Dixon, Khaled, & Nacke, 2011).

PROBLEM STATEMENT

In our swiftly changing world, conventional approaches to language learning frequently face difficulties in captivating and involving learners, resulting in reduced motivation and limited language retention (Hadžić & Dragičević, 2015). Furthermore, the largely inactive nature of numerous learning pursuits adds to the mounting apprehension regarding physical inactivity and its correlated health hazards. To tackle these issues, there arises a requirement for an innovative strategy that amalgamates language learning with physical activity and interactive involvement. This approach aims to cultivate efficient learning results while simultaneously advocating for a healthier way of life.

INNOVATION DESCRIPTION

This board game is thoughtfully designed for new learners who wish to acquire Italian vocabulary related to exercises and numbers. The game not only facilitates language learning but also encourages physical activity. By integrating Italian terminology with exercise routines, players are immersed in an engaging and enjoyable fitness experience. Progressing through rounds, players undertake exercises associated with their designated spaces, thereby enhancing both their language proficiency and physical well-being. The game incorporates interactive Q&A segments to promote social interaction. Providing accurate answers results in rewards, while incorrect responses lead to amusing penalties, injecting an element of excitement. Victory is achieved by the first player to successfully complete five rounds. Throughout the game, players roll a dice to advance on the board. When landing on exercise spaces, they select and perform exercises labeled with Italian names from cards. To bolster their language skills, players can access video guides through QR codes on the cards, offering visual demonstrations of how to perform each exercise accurately. This unique fusion of visual and auditory learning encourages comprehensive understanding and precise pronunciation of the terminology. Additionally, Q&A spaces involve posing and answering questions, where incorrect responses result in lighthearted penalties. Correctly answering questions leads to rewards. The game typically lasts around 1-2 hours, and comprehensive instructions for gameplay are provided in the manual.

Table 1. List of specific items included in a “Lingoactive 1.0: Integrating Italian Language and Exercise in a Fun Game” Board Game Set

Items	Size & Measurement	Quantity
Retractable Board Tube	10cm x 108cm	1
Board Game (Paper Tarpaulin)	50.8 cm x 50.8cm	1
Dice	1cm x 1cm	2
Marker (Pieces to move around boards)	2.3cm x 2.3cm	20
Q&A, Esercizi, Rewards & Penalty Cards	5cm (H) x 9cm (W)	60
Manual Guideline Game play	14.8cm (H) x 10.5cm (W)	1

NOVELTY

Inclusivity:

This product represents a breakthrough in language learning by introducing an integrated approach that encompasses education, physical fitness, and entertainment. By seamlessly merging language exercises, physical activities, and interactive challenges, it creates a comprehensive and captivating learning experience.

Motivation and Engagement:

The game incorporates a dedicated Q&A space that acts as a hub for social interaction and collaborative endeavors. Upon landing in this space, players draw question cards linked to Italian language terminology. Should an opponent struggle with an accurate response, a "penalty" card comes into play, injecting an element of amusement and unpredictability into the game. Navigating these challenges successfully allows players to draw "reward" cards, granting them advantages such as moving ahead extra spaces.

Physical and Cognitive Stimulation:

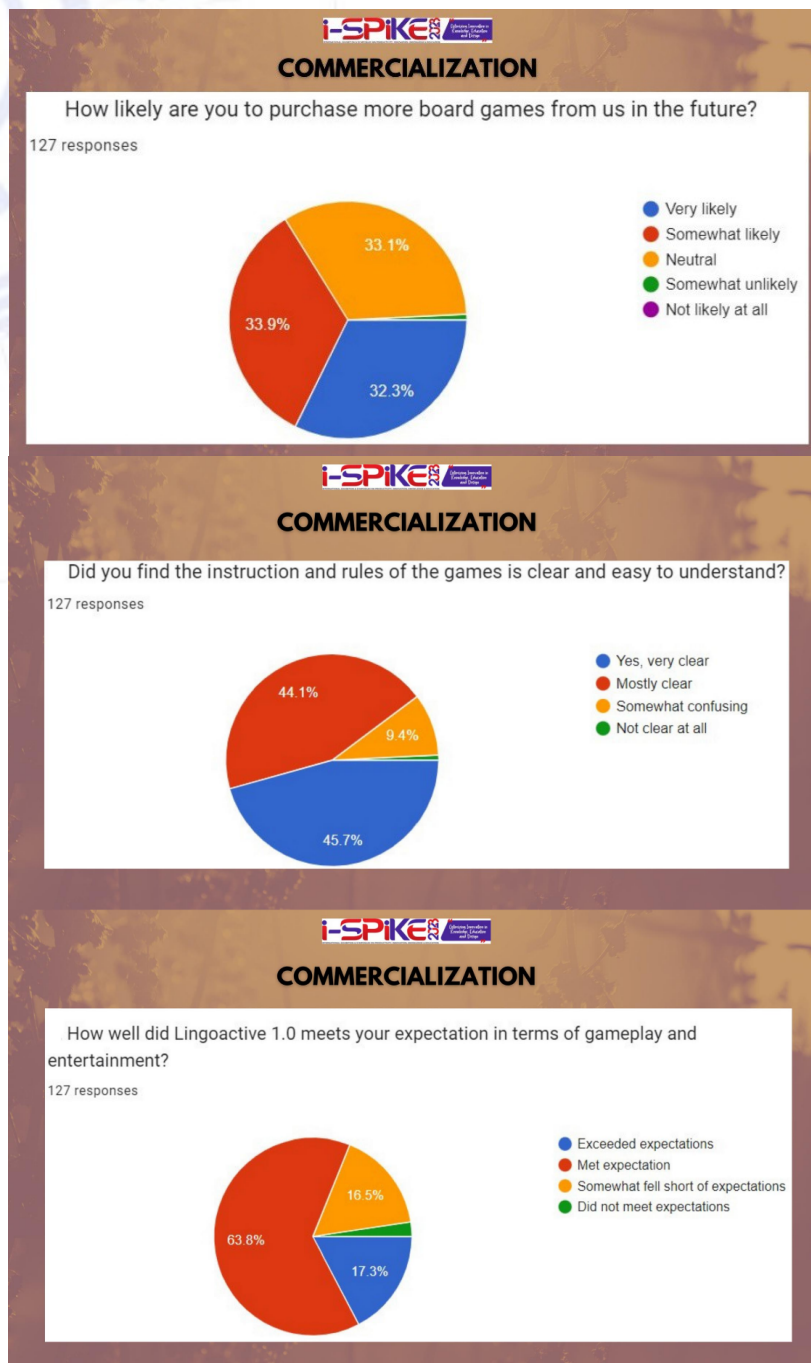
This board game goes beyond promoting physical activity; it also provides cognitive stimulation through the necessity of memorizing Italian words to deliver correct answers and secure victory.

Customizability:

The game's modular design offers players the flexibility to adjust the number of rounds to suit their individual preferences. Whether opting for an educational experience with approximately 5 rounds lasting around 1-2 hours or a more casual recreational setting with 1- 3 rounds spanning approximately 1 hour, the game accommodates various play styles.

COMMERCIALIZATION

Figure 1. Market survey



For commercialization, we conducted a straightforward market survey among Italian language students from different universities. Among 127 respondents, 81.1% (103 individuals) discovered that the gameplay and entertainment exceeded their expectations. Furthermore, 89.8% (114 individuals) found the game's instructions and rules to be clear and understandable. Notably, 84 individuals (66.2%) expressed interest in purchasing our product, while others are still evaluating their decision.

COMMERCIALIZATION STRATEGY:

Niche Appeal:

The distinct combination of language learning, physical exercise, and interactive gameplay positions this product as highly attractive to individuals seeking engaging and comprehensive learning experiences. This niche appeal can facilitate the establishment of a dedicated customer base.

Language Learning Trends:

Given the rising interest in language acquisition fueled by globalization, cultural exchange, and travel, the market for language-related products is receptive. The game's gamified learning approach aligns perfectly with this trend, allowing the "Lingoactive 1.0: Integrating Italian Language and Exercise in a Fun Game" to capitalize on this demand.

Fitness and Wellness:

The growing emphasis on fitness and well-being has generated a heightened demand for products that seamlessly blend physical activity with enjoyment. The game's incorporation of exercise resonates well with this trend, offering a unique selling proposition.

CONCLUSION

To conclude, "Lingoactive 1.0: Integrating Italian Language and Exercise in a Fun Game" stands as an exemplar of innovative pedagogical approaches that artfully weave together entertainment, education, and physical fitness. By seamlessly merging language exercises, physical activities, and interactive Q&A sessions, this product transforms the language learning journey into an engaging adventure (Wright, Betteridge, & Buckby, 2006). This innovation surpasses traditional language acquisition, fostering a balanced lifestyle by intertwining linguistic mastery with physical well-being. It emerges as an ideal choice for individuals seeking a rewarding and effective means of mastering a new language.

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e ISBN 978-967-2948-56-8

