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Original Article

Active Learning: Is it possible to learn English while Exercising?

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Authors' Contribution: A: Study design, B: Data collection, C: Data analysis, D: Manuscript preparation, E: Discussion and conclusion

ABSTRACT

Study aim(s): This study aims to evaluate the effectiveness of an innovative teaching method, "Active Learning: Is it Possible to Learn English while Exercising?", which integrates English language learning with physical exercises for second-grade students. This method seeks to address the current inefficiencies in English-speaking proficiency among youth in Kosovo, despite extensive exposure to English language education.
Methods: An experimental study design will involve randomly selected second-grade students divided into experimental and control groups. The experimental group will participate in the "Active Learning" program, integrating English vocabulary and physical activities. In contrast, the control group will receive traditional English language instruction. Both groups will undergo pre- and post-intervention assessments to measure their English language proficiency and physical fitness over a school term. This experimental study is planned for future implementation and targets grade 2 students.
Results: The anticipated outcomes include improved English-speaking proficiency and enhanced physical fitness in the experimental group compared to the control group. The study will analyze the effect size and significance of integrating physical exercises with language learning, highlighting the potential benefits of this interdisciplinary approach.
Conclusions: This study proposes that integrating physical exercises with English language learning can significantly enhance vocabulary acquisition and speaking skills in young learners. The method aligns with WHO recommendations for physical activity and the PYP's interdisciplinary educational approach, offering a holistic development model. This innovative teaching method not only addresses language learning inefficiencies but also promotes physical health, potentially transforming educational practices by creating a new role for educators as English exercise teachers.

Keywords: Exercise, English, Dual, Teaching, Innovation

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INTRODUCTION

In today's world, international communication is key to success in various spheres of life. However, in our country, most of the working population and youth do not speak foreign languages such as English, even though this subject is included in the educational curricula of the Republic of Kosovo from the first grade until the completion of the twelfth grade [1,2,3].

Despite evidence suggesting that English can be acquired within one year (in specific cases longer or shorter), participating in English language classes in schools for twelve consecutive years has resulted in many young people not attaining proficiency in speaking English [4,5,6]. This prolonged participation often proves ineffective, highlighting the need for new studies to explore more efficient methods for English language learning, with a particular emphasis on acquiring speaking skills. Analysis of tests and results from schools and various courses indicates that speaking in a foreign language is where young people encounter the most difficulties [7].

So, even though the language's grammar may be mastered and the passive vocabulary may be rich, activating the learned knowledge through speaking proves to be more challenging. This difficulty arises because the memorization of words during the learning process typically involves rote memorization, making it challenging to apply the acquired vocabulary [8]. This leads to the idea that acquiring foreign language vocabulary through practice and the application of learned actions can significantly increase memorization ability compared to the classical method of learning in schools [9].

One of the most effective methods for language learning is organizing it through practicing words in sports and exercises. Executing learned movements as words, imitating animals while learning about them, using the body to represent learned figures, and creating real-life settings based on the content of learned words can ensure the increase of active vocabulary in terms of the repertoire of words in English [10].

At the same time, language learning and the entire educational process in school settings have long concerned the WHO regarding the fulfillment of daily needs for physical activities [11]. According to the WHO, children aged 5-17 should engage in at least 60 minutes of moderate to vigorous physical activity daily, at least 3 times a week. In addition, this organization suggests and actively works on reducing the passive time of children [11]. Physical activity develops critical thinking, recognition skills, cognitive abilities, academic performance, and executive functions [12,13].

Based on this, it can be concluded that the attempt to learn a language, particularly English speaking, through practice and sports exercises has a scientific basis and can result positively in language acquisition and in terms of fulfilling WHO requirements. This organization has identified that due to physical inactivity, which is primarily attributed to prolonged sitting at school desks during lengthy learning processes, today more than a fourth of the world's population (one-third of females and one-fourth of males) experiences a significant lack of physical activity [11].

The WHO has also initiated proposals for new projects that can be adaptable to local cultures and specific needs to promote physical activity. This aligns with the design of our project, which aims at interdisciplinary work with positive outcomes in both language learning and physical activity [14].

When interdisciplinary work is mentioned, this project also has a scientific basis in the primary education curriculum [15], which primarily relies on leveraging the strengths of one field to enhance the level of another [16]. This program is designed to focus on the holistic development of the child as a learner, both in the classroom and in the outside world

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[17]. The PYP program is mainly based on the six disciplines: language, social studies, mathematics, arts, science, and physical, social, and personal education [18].

This project is based on the unsuccessful methods of teaching the English language (specifically speaking). It is based on the lack of physical activity among children and teens, and the contemporary educational system called PYP, which suggests and is based on interdisciplinary work, thus aiming to accelerate English language learning through the integration of language teaching processes and exercises and to reduce passive time to promote physical and mental health development.

METHODS

This experimental study is planned for future implementation and targets grade 2 students. It involves both an English and a Physical exam conducted before and after the intervention. Our objective is to evaluate the impact of integrating Physical exercise with English language learning on vocabulary and grammar proficiency. We aim to demonstrate that this innovative approach, combining physical activities with educational exercises, is more effective than traditional teaching methods in enhancing students' English language skills.

Reviewed literature

1. International English Language Testing System (IELTS) [5].
2. Test of English as a Foreign Language (TOEFL) [6].
3. State schools' curriculum of English language in Kosovo [1,2,3].
4. Private schools' curriculum of English language in Kosovo.
5. Private courses curriculum of English language in Kosovo.
6. Primary year program (PYP) [15].
7. World Health Organization (WHO) [11].

Study Model

To determine the effect of the previously untried "Active Learning: Is it possible to learn English while Exercising" an experimental study model will be designed based on the model created from the content analyses.

The study will consist of an experimental and a control group. The intervention will last for a predetermined period (e.g., one school term) to assess the impact over a significant timeframe. While the experimental group will demonstrate the effects and effect size of active learning, the control group will be used to prevent outside factors from influencing the study outcomes. To ensure equal probability, the study sample will be selected randomly.

Both groups will undergo pre- and post-intervention assessments to measure their English language proficiency and physical fitness.

English Exam with Physical Activities for 6–7-Year-Old

Section 1: Vocabulary Relay

Instructions: Divide the class into teams. Place flashcards with English words around the room. When you say a word in English, one member from each team must run to the corresponding flashcard and bring it back to their team.

Example: Say the word "apple/ cat/ house"

Section 2: Simon Says

Instructions: Play "Simon Says" with English words or phrases related to listening. Students must act only if preceded by "Simon says."

Example: "Simon says, touch your nose/ point a book/ clap your hands twice"

Section 3: Storytime Stretch

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Instructions: Read a short story to the class. Incorporate physical actions related to the story. Students should mimic the actions while listening to the story.

Example: Read the story "Going on a Bear Hunt" and ask students to stand up and act out the different movements (swim, jump, run, sit, stand up, stand on one foot… etc.).

Section 4: Action Verbs Challenge

Instructions: Call out action verbs, and students must perform the action. Use a mix of common action verbs suitable for physical movements.

Example: Say the word “Jump! / Run in place! / Spin around! / Hop on one foot!”

Section 5: English Song Dance

Instructions: Play a fun English song with danceable rhythms. Encourage students to dance along while singing the lyrics. Depending on the vocabulary you want to test, find relevant songs.

Example: Play the song "Head, Shoulders, Knees, and Toes" and have students follow along with the actions.

Section 6: Play games to test students

Instructions:

- Play XOXO by using cones.

Play the game by dividing students into groups and asking them to place specific colors in the right place in order not to let the opposite side have three of the same colors in the row.

Another way of testing colors is by ordering cones with different colors and then asking students to go and touch specific ones and see if they know them.

- To test prepositions of place, we arrange obstacles and ask them to go through them by giving commands such as; go under the stick/ jump over the stick/ go around the vertical obstacle/ put the cone on/in/under/in front of/behind the box.

- Pantomime to test emotions.

Put students in front of each other, put on their head a happy/sad/stressed/ nervous/ angry … and their friend mimics the emotion their friend is holding so they have to find how they are feeling.

Section 7: Speaking games to test students

Instructions: We take a big dice, where we have already put figures that we want to test. Ask students to roll the dice and which figure shows up they have to say what it is.

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Physical Activity Test (Parkour) for Physical Activities

The presented coordination parkour tests general coordination in children aged 4-7 years.

Its content is explained below:

The coordination test was created by the researcher, considering the inclusion of motor skills involved in coordination (strength, speed, balance, agility, etc.), psychological abilities (sense of movement, sense of sound, etc.), and physical factors (body type, body functions, etc.). Characteristics that define coordination ability include body functions, sense of space and location, sense of movement, motion smoothness, variation ability, motor adaptation and displacement, balance, versatility, flexibility, and rhythm [19].

Content of the Coordination Test:

- Direction 1: Straight running in 8 meters and touching the cone.
- Direction 2: Straight running, jumping on the aerobic steep box, running, and touching the cone.
- Direction 3: Running for 5 meters, lying on the floor, then running in the left direction for 3.40 meters, and then running in the right direction for 4.20 meters.
- Direction 4: Transition under a barrier (height: 50 cm) and running to the finish with maximal speed.

Note: During the Coordination Parkour: the medicine ball (Avessa 25 cm, Pilates Ball) is held in the hand.

The parkour course depicted in the image includes the following components and their effects on the body:

1. Running Segments (8m, 5m, 3.4m, 4.7m):
    - Effect: These segments enhance cardiovascular endurance, leg strength, and overall stamina.
2. Jump on the Aerobic Step Board:
    - Effect: This activity improves explosive power in the legs, balance, and coordination. It also engages the core for stability.
3. Lying Mat (5m Run Leading to It):
    - Effect: The mat could be used for activities like rolling or transitioning from a run to a floor-based movement, enhancing agility and body control.
4. Pilates Ball:
    - Effect: Using a Pilates ball engages core muscles, improves balance, and enhances proprioception.
5. Transition Under Barrier (50cm High):
    - Effect: Crawling or ducking under the barrier increases flexibility, improves coordination, and strengthens the core and upper body.

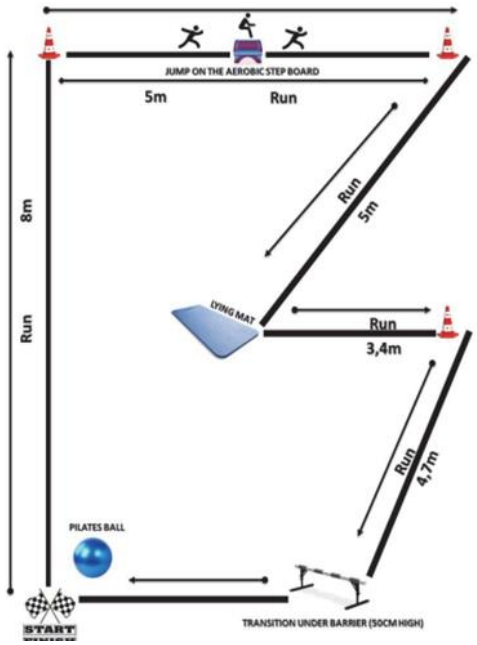

Figure 1. Coordination Parkour

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FINDINGS

Table 1. English Vocabulary for Grade 2

Category	Words	Grammar	Games and exercises
The alphabet a-z	A – apple / B – ball / C – car /D – dog / E – egg / F – fish / G – gorilla / H – horse / I – insect /J – jelly / K – kite / L – lorry / M – monkey / N – nut / O – orange/P – pen / Q – queen / R – rabbit / S – star / T – tree / U – umbrella /V – violin / W – watch / X – fox /Y – yo-yo / Z – zebra		Games like Alphabet Relay Races, Scavenger Hunts, Hopscotch, and Obstacle Courses combine physical movement with letter recognition and vocabulary building.
Numbers and colors	Numbers: One / Two / Three / Four / Five / Six / Seven / Eight / Nine / Ten / Eleven / Twelve / Thirteen /Fourteen / Fifteen / Sixteen / Seventeen / Eighteen /Nineteen / Twenty Colors: Black / Blue / Red /White / Brown / Yellow / Green / Purple / Orange / Grey / Pink		Games like Color Tag, Number Hopscotch, Ab circuits integrating numbers, Color Relay Races, and Number Obstacle Courses integrate physical movement with number recognition and color identification.
School things	Pencil / Ruler / Bag / Book / Pen /Crayon / Rubber / Pencil case	Demonstrative pronouns(this, that, these, those) There is/are Asking and answering questions	Games like School Supplies Relay, Classroom Scavenger Hunts, Obstacle Courses, Pictionary with School Supplies, and use of demonstrative pronouns when naming the school supplies.
Family	Brother / Mum / Dad / Sister /Friend	Subject pronouns (I, you,he/she/it, we, they) The verb ‘to be’	Games like Family Role Relay, Family Pronoun Tag, Pronoun Hide and Seek, and Obstacle Courses blend physical movement with family vocabulary and subject pronoun practice.
Pets	Hamster / Guinea pig / Rabbit / Pet / Parrot / Snake / Bird / Dog / Cat /Elephant / Lion	The verb phrase ‘have got’	Games like Pet Role Relay, Imitating Pets, Pet Pronoun Tag, Have Got Hide and Seek and Pet Jump Rope blend physical movement with pet vocabulary and the verb phrase "have got"

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			practice.
Body parts	Wings / Legs / Arms / Body / Tail /Eyes / Nose / Mouth / Hair / Ears / Long / Short / Straight / Curly	Possessive pronouns (his,hers, mine, yours, ours, theirs)	Games like Simon Says, Twister, Hokey Pokey, and Obstacle Courses blend physical movement with vocabulary practice.

Adapted from "Yazoo Level 1" by Ch. Covill & J. Perret, 2019 [20].

This table presents the categories of words and grammar in English for second-grade students and the paired exercises and games that can facilitate learning these categories.

Table 2. Top Gymnastics (Vocabulary related to sport)

Topic	Words
Stretched and tucked shapes	Tall, long, tuck, squat, curl narrow, feet, thighs,hips, tummy, shoulders
Straddle and piked shapes	Wide, pike, straddle, astride, stretched, extended,symmetrical, asymmetrical, back, trunk, shins, arms, elbows
Using hands, feet, and alternate feet	Parallel, extend, sequence, routine, combine, point, opposite, transfer, travel, waist, drag, invert, perimeter
Standing, kneeling, and large body parts balances	Control, still, static, support, degrees, angle, lunge, scale, arched, hollow, diagonal, horizontal, lever, coupe, passe, battement
Balance on hands, feet, and head	Front support, back support, push-up, tension, squeeze, perpendicular, triangular, stable, bridge,headstand, half lever
Hand apparatus 1 – bean bags and balls	Rhythm, variation, coordination, suppleness, release, catch, pivot, outward, inward, manipulate
Hand apparatus 2 – hoop, rope, and ribbon	Throw, return, recoil, ribbon, swing, stream, circular, overhead, combine, wrap, spiral, plane,clockwise, anti-clockwise, propel, ascend, descend
Side rolls and lead-ups to forward and backwardroll	Orientation, rock, seated, spine, compare,contrast, roll, turn, rotate, backward, forward
Combinations of forward and backward rolls	Entry, exit, crouch, incline, slope, maintain,press, raise, lower, matted, smooth
Introduction to handstands and cartwheels	Quarter turn, half turn, sideways, lateral, continuous, strength, flexible, suppleness, approaching, leaving
Using large apparatus	Grip, over grasp, under grasp, twist, turn, slow, quick, pause, stop, accelerate, decelerate, poise, stamina, towards and away, timing
Working with a partner	Base, top, grasp, pair, trio, supported, contrasting, counter-balance, matching, tension, stable, unison, co-operate, complement, synchronize, trust, adapt
Introducing sequences	Linking, routine, sequence, repeat, continuity,flow, pause, pathway, direction, level, speed, simple, complex, amplitude, originality, artistic, tasteful
Building more complex sequences	Aesthetic, choreography, composition, observe, judgment, evaluate, refine, unison, counter, balance, mirror, obstacle, accelerate, decelerate
Landing, jumps, leaps and turns	Impact, absorb, soften, coordination, stag, stride split, hurdle step, rotation,

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synchronized,controlled, pile, mount, dismount, elevation

Adapted from "Top Gymnastics" by Youth Sport Trust, 2005 [10].

This table displays sports-related topics and the associated vocabulary within each category.

Technical vocabulary used during classes:

In a dynamic classroom where English is taught as students exercise, effective communication and instructions require a specific technical vocabulary.

Commands such as "Be quiet", "listen", and "look" aid in maintaining order and focus. Phrases like "look at me", "listen to your friend", and "stay there" or "go there" are essential for directing attention and movement. Instructions such as "sit down", "stand up", "come here", and "next" facilitate smooth transitions between activities. During physical activities, verbs like "run", "walk", "stop", and "start" are essential for regulating pace and motion.

Additional directives such as "come closer", "stay away from each other", and "stay in the line" provide safety and organization. Adverbs like "slowly", "fast", and "faster" help modulate speed, while "point" is frequently used to indicate direction or focus.

Integrating these and other words enhances both language acquisition and physical coordination, creating a holistic learning environment.

DISCUSSION

Based on the existing literature's content analysis, teaching English speaking skills while exercising is a feasible approach, particularly for second-grade students. According to the literature, the second-grade curriculum includes topics such as the alphabet, numbers, colors, school things, family members, pets, and body parts [1,2,3].

The exercises used to develop basic motor skills in the second grade are also highly varied, and the terminology involved in the exercise process includes names of the body parts, colors as orientation tools, animal walks, and more [10].

The challenge of integrating English language speaking education with sports exercises lies in developing an appropriate training program tailored to the specific vocabulary categories that need to be learned in the second grade. For example, children learn the names of animals and body parts by physically mimicking them (e.g., walking like a crab, dog, or bear), while saying the names out loud and repeating them. In addition, colors, numbers, and the alphabet can be integrated into the exercise program as supportive tools that can be learned simultaneously [10]. However, vocabulary categories such as family members and school things are somewhat harder to incorporate into the exercise program.

The children's age and the English language content are key determinants of the success of learning English language speaking skills through sports exercise and gymnastics. As children grow older, the content and vocabulary of the language increase, making it more difficult to develop an exercise program for that content. Thus, this study focuses on the second grade, which is deemed to have suitable content for the trial of a proposed method. First grade is avoided because children starting first grade are still mastering basic terminology in their language [1,2,3]. Given that first grade introduces the basics of their native language and poses many challenges, we believe that implementing this new method would be inappropriate for that age group.

On the other hand, the benefits of teaching English speaking skills while exercising align with the WHO's recommendations to incorporate movement

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into the learning process rather than having students sit for long hours at school [11]. Additionally, learning through practice is strongly supported by the PYP, which includes six strands: health-related activities, body control, and spatial awareness, athletic activities, games, movement to music, and adventure challenge (PYP Primary Year Program [15]. Using actions to represent words, imitating animals, embodying figures, and creating real-life settings based on learned content can enhance students' active English vocabulary.

The notion that children learn better when they are active rather than passive is supported by a wealth of educational research. Active learning encourages critical thinking and problem-solving by prompting children to question, investigate, and explore, thereby fostering higher-order thinking skills [21].

Additionally, it involves collaborative activities where children work together, helping them develop social and communication skills [22]. Incorporating physical activity into learning not only improves children's physical health but also enhances cognitive function, as movement increases blood flow to the brain, boosting concentration and cognitive performance [23].

Overall, active learning methods are generally more effective than passive ones because they engage children, promote deeper understanding, develop critical skills, and make learning more enjoyable and meaningful.

CONCLUSIONS

In conclusion, learning English through sports presents both unique challenges and significant benefits. One challenge is expanding the vocabulary in parallel with age-appropriate content, ensuring learners are continuously engaged and acquiring relevant words. Additionally, designing an effective exercise program that integrates language learning requires careful planning to balance physical activity with educational content. However, this method offers numerous advantages. It promotes better health by decreasing obesity, as endorsed by the World Health Organization (WHO), and saves time by combining sports and language learning into a single activity. The physical activity involved also aids in better word memorization compared to traditional methods. This innovative approach not only creates a new concept of teaching but also introduces a new profession: the English exercise teacher. By integrating physical exercise with language learning, this model transforms the educational experience, making it more dynamic, engaging, and effective.

CONFLICT OF INTERESTS

No potential conflict of interest was reported by the authors.

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