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USE OF THE SPECIFIC MEANS OF RUGBY IN THE FORMATION OF APPLIED SKILLS

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Abstract: *One thing is for sure, the level of development of applicative utility qualities is increasingly low. With these intergenerational differences, they are no longer nuanced, they are alarmingly different, and the causes are related to ever-evolving technologies. The values presented were collected in an experiment with 50 subjects aged 12 years. The results indicate that the probability of the Lavene test with respect to variance equality is less than p=0.05, i.e. p=0.00, we will consider the second line of the table, i.e. t=-5.36. t is significant on p <0.01, hence there are significant differences between the two groups. The training and improvement of the skills and driving skills required especially in sports activity, but also in the productive life and technical activity were improved by using the means of rugby play.*

Key words: *application skills, rugby, future.*

1. Introduction

The training and improvement of the skills and driving skills required especially in sports activity, but also in the productive life and technical activity were improved by using the means of rugby play. The specific means of rugby, particularly the integration of various skill-based training methodologies, play a significant role in forming applied skills within the sport. Rugby, being an intricate combination of physical, technical, and cognitive demands, necessitates a nuanced approach to skill development. We considered that motor learning at the level of secondary education is carried out in accordance with the content of the specialized curriculum and with the age peculiarities of pupils, then the stages on the level of acquiring and strengthening the motor skills can be optimized by using the means specific to the game of rugby.

Several studies underline the importance of tailoring skill acquisition methods to the unique aspects of rugby, affirming that effective training can enhance both individual and team performance. A foundational aspect of skill development in rugby is the

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conceptual framework of ecological dynamics, which emphasizes the relationship between performance and the environment in which athletes train and compete. The work by Pocock et al. illustrates how manipulating individual constraints can influence performance outcomes during specific skills such as place-kicking, reflecting broader themes in performance psychology and ecological dynamics [10]. This framework can guide coaches in designing practice scenarios that closely simulate competitive contexts, thus preparing players for real-game situations through context-aware training methodologies. In addition to ecological dynamics, it is essential to incorporate contact skill training programs, which are vital for rugby union. According to Hendricks et al., the establishment of a focused training program aimed at contact skills is necessary, given the inherent risks associated with the contact nature of rugby [7]. Their editorial underscores that systematic training in tackling and related skills can significantly enhance player safety and effectiveness [6].

Furthermore, it is crucial to recognize that a well-structured approach to training helps bridge the gap between theoretical knowledge and practical skill execution, leading to better preparation for competition. One thing is for sure, the level of development of applicative utility qualities is increasingly low. With these intergenerational differences, they are no longer nuanced, they are alarmingly different, and the causes are related to ever-evolving technologies.

The tasks of future specialists are increasingly complex to meet changing needs. Age-appropriate skill progression is another crucial aspect of rugby training. Thomas and Wilson highlight the necessity of developing specialized skills sequentially, building on fundamental abilities like evasion, handling, and tackling skills. They assert that elite coaches prioritize less structured formats, or deliberate play, as being beneficial for skill acquisition because they mirror the unpredictability and variability of actual matches [14].

This method fosters an engaging and effective learning environment, which is particularly important for younger players who are still developing their foundational skills. Further emphasizing the role of varied learning experiences in rugby skill development, Dimundo et al. discuss the perspectives of coaches within an English Premiership rugby union club. Their findings support the notion that exposure to diverse activities can facilitate the learning of rugby-specific skills. Coaches recognized the benefits of combining deliberate practice alongside more exploratory forms of training, which enrich the overall development process for players [2]. This aligns with the sentiment that skill acquisition should not be a rigid process but rather one that evolves through exploratory learning and adaptation. The implications of this diverse approach to skill training extend beyond technical capabilities; they also encompass psychological readiness. Holland et al. illustrate that mental techniques acquired through experience in play are vital for high-performance scenarios in rugby, indicating that cognitive skills contribute significantly to athletic success [8]. This suggests that the integration of mental conditioning

alongside physical skill training can be advantageous for players, ensuring they are equipped not only with technical skills but also with the psychological resilience necessary for competitive play. One of the effective methods to promote fundamental motor skills, particularly in young athletes, can be derived from games designed to enhance play and engagement. As illustrated by Shi et al. in their study on flag rugby games, engaging young children in structured yet playful activities can promote gross motor skill development essential for their future participation in rugby [12]. Such methodologies can be foundational in creating a pipeline of skillful players who are comfortable within the sport's dynamic and often chaotic environment.

Contextual and task-specific training also proves beneficial for skill retention and transfer. Gabbett et al. emphasize the importance of attentional demands in training environments, advocating for dual-task methodologies that mimic the complexities of actual games.

Furthermore, cultural dimensions play a critical role in shaping skill acquisition in rugby. Research by Downey reflects on the variations in cognitive-perceptual strategies among different cultures, suggesting that understanding these cultural influences can inform how training is approached across diverse backgrounds [3]. This highlights the potential for customized skill training agendas that consider the broader sociocultural context in which athletes develop their skills. Their studies demonstrate that under conditions of heightened attentional demands, players can better retain skills necessary for game performance [5]. This approach is vital, especially in rugby, where decisions must be made rapidly in response to changing game dynamics.

Moreover, the structured assessment of skills through systematic evaluation could also help identify areas for improvement. Hendricks et al. propose a technical skill training framework aimed specifically at refining the rugby tackle, illustrating a systematic approach to developing specialized skills within the sport's context [6]. The establishment of comprehensive assessment metrics assures that player development aligns with the expectations and demands of the game. As coaches seek to refine their techniques, integrating qualitative and quantitative data becomes paramount. Information derived from players and coaches through self-reports and observational studies can provide insights into the effectiveness of training programs and players' perceptions of their skill acquisition preferences. Such data is instrumental in designing effective training pipelines that cater to the specific needs of rugby athletes [1]. The imperative of continuous feedback and instruction underscores the role of video analysis in rugby coaching. Solomons et al. discuss how video-based feedback significantly contributes to developing tackling techniques among community rugby players, demonstrating the effectiveness of technological tools in resolving skill-related challenges [13]. Such methods of instruction and feedback facilitate an iterative learning process whereby players can adjust techniques based on visual evidence of their performance.

Moreover, the interplay of fundamentals-such as physical conditioning and psychological readiness-cannot be overstated in the context of

rugby. Conditioning has been highlighted as a key determinant in managing the demands of the sport. For instance, studies have shown that well-rounded physical fitness is indispensable for tackling proficiency and overall performance in competitive settings, underscoring the necessity of physiological preparation alongside skill acquisition [4], [15]. As rugby continues to evolve, the mix of traditional skill development approaches with modern training frameworks that embrace flexibility and innovation is essential.

Coaches are encouraged to employ progressive frameworks that adapt to individual players' needs, fostering an inclusive and effective environment for skill acquisition [11]. This tailored approach acknowledges not only the physical capacities of players but also their psychological requirements, creating a holistic model of athlete development. Maintaining player welfare alongside skill development is of utmost importance in rugby. Studies advocate for comprehensive training programs that not only focus on technical skills but also consider players' physical and mental health. The implementation of injury prevention strategies emphasizes that effective training should always prioritize player safety while fostering performance excellence [9].

2. Methods

In this paper were fifty subjects aged 12 years girls and boys, divided into two groups, the measurements and the intervention program was implemented within the physical education classes. We have designed a package of practical exercises inspired by rugby. Exercise one "Hold the balloon!" in which the students run freely in the delimited space. One of them has a rugby ball. At the signal, you have to pass the balloon to a colleague. The goal is for the balloon not to stay too long with one person and not fall down - it helps mobility, attention and cooperation. Exercise two, lateral shift (8 min). Exercise 3, utility-applicative circuit with rugby balloon (10 min) - slalom among balloon milestones in hand, passing through circles on the ground (with the balloon under the arm), jumping over small obstacles (with the balloon), short and long pass at a marked target on the wall.

Exercise 4, traction – “Who takes the ball?” (6 min) - a pupil holds the rugby ball to his chest and tries to reach a set point, and the colleague only stops him by passive resistance (no plywood, only by gently pulling the arm or waist). Exercise five - race with pass and turn (8 min). two teams are formed, on a marked route, the first student runs with the balloon and, at the signal, passes sideways to a colleague from the back, then exits the route. Exercise six - mini-game: “Contactless Rugby” (Touch Rugby) (10 min). Adapted game: instead of plywood, students just need to touch the opponent with two hands to stop him. Objectives: Training the skill of handling the rugby ball, coordination, orientation, speed and control of the ball. developing attention and team spirit, improving balance and motor control.

3. Results

The values presented were collected in

an experiment with 50 subjects aged 12 years. The results indicate that the probability of the Lavene test with respect to variance equality is less than p=0.05, i.e. p=0.00 and t=-5.36, respectively. t is significant on the p <0.01, which shows that there were significant differences between the two experimental and control groups. The values recorded in the weight-bearing sample — table above, it follows that the probability of the Lavene test for variance equality is greater than p=0,05, i.e. p=0,10, we will consider the first line of the table, i.e. t=3,69. t is significant on p <0,01, which indicates that there were significant differences between the two groups, the experimental group, and the control group in this sample. This can be explained by the fact that the experimental group benefited from methodical processes to improve the driving technique compared to the control group. For the table tennis ball maintenance test, the following values were recorded: Mean initial scores (TI) = 17.22 reps. Mean final scores (TF) = 21.33 repetitions. Standard deviation TI = 4.74. Standard deviation TF = 4.03. Mean difference = 4.11. Standard deviation of the differences = 1.76. T test (8) = 6.99, p = 0.0001 (p < 0.001, the difference is highly statistically significant). The size of the effect (Cohen's d) - d = 2.33 very large effect. Test t for independent samples.

Results of comparative analysis between experimental and control groups: Mean final test scores — Experimental group: 21.33 repetitions. (SD = 4.03). Mean final test scores - Control group: 17.89 reps. (SD = 3.72). Mean difference = 3.44 points in favor of the experimental group. T test (16) = 1.88, p = 0.078 → the difference is not statistically significant at p < 0.05, but is almost significant (tends towards significance). Effect size (Cohen's d) - d = 0.88 → large effect (even if p is slightly above the threshold, the effect is considerable).

Table 1

Test	Group	Initial Mean	Final Mean	Initial SD	Final SD
Table Tennis Ball Maintenance (initial vs. final)	All subjects	17.22	21.33	4.74	4.03
Table Tennis Ball Maintenance (exp. vs. control)	Experimental vs Control		Exp: 21.33 / Ctrl: 17.89		Ctrl: 3.72
Tire Pull Test (general)	Experimental vs Control		Exp: 36.67 / 37		Exp: 5.39 / Ctrl: 3.95
Tire Pull Test (girls)	Experimental vs Control		Exp: 46.56 / Ctrl: 52.89		Exp: 6.65 / Ctrl: 3.76

Although the difference between the experimental and control group scores does not reach the classic statistical significance threshold (p < 0.05), the achieved p-value (0.078) indicates a trend towards significance with a large effect size (d = 0.88).

Table 2

Test	Group	Difference SD	t-value (df)	p-value	Effect Size	Observations
Table Tennis Ball Maintenance (initial vs. final)	All subjects	1.76	6.99 (df=8)	0.0001	Cohen's d = 2.33 (very large)	Very strong effect
Table Tennis Ball Maintenance (exp. vs. control)	Experimental vs Control		1.88 (df=16)	0.078	Cohen's d = 0.88 (large)	Large effect, marginal significance
Tire Pull Test (general)	Experimental vs Control		-0.998	0.334	-	Control group consistent
Tire Pull Test (girls)	Experimental vs Control		-3.36	0.00995	-	Significant difference
Pearson Correlation (girls)	-		-	0.144	r = 0.53 (moderate positive)	Moderate positive correlation

This suggests that the intervention applied to the experimental group had a positive impact on the ability to think critically, but the small sample size (9 participants/group) may be the cause for lack of statistical significance. Last test - pulling the tire - Final test experiment: 36.67 seconds. Final blank test: 38.89 seconds. The control group has a slightly higher average, but the difference is not considerable. Final test experiment: 37 seconds. Final blank test: 39 seconds. The median of the control group is larger, suggesting that on average its time tends to be longer. Standard deviation (measures variability):TF experiment: 5.39 seconds. TF blank: 3.95 seconds. The control group has less variability, indicating more consistent results. Test t (for comparison of the two averages) - t-value: -0.998 - p-value: 0.334.

Since p-value is greater than 0.05, there is no statistical evidence that there is a significant difference between the two groups. Results of statistical analysis for girls groups Final test experiment - average: 46.56. Standard deviation: 6.65. Final blank test - average: 52.89. Standard deviation: 3.76. Test t: -3.36. P-value: 0.00995 (below threshold of 0.05, indicating a statistically significant difference between the two groups). Pearson correlation - Coefficient: 0.53 (moderate positive correlation). P-value: 0.144 (not statistically significant). At the age of 12, girls are at a crucial stage of cognitive, emotional and physical development. This is the period of pre-adolescence, characterized by: They begin to think more logically and abstractly, but are still influenced by concrete thinking. It develops the ability to link concepts and make decisions based on reasoning. Memory and selective attention improve, allowing them to learn more effectively.

They are starting to become more independent, but they still need guidance and support. Relationships with colleagues become very important, and social influences can have a major impact on motivation and learning. More frequent emotional fluctuations occur due to hormonal changes. Applied utility skills (such as orientation in space, coordination of movements, correct use of objects and tools) are essential during this period, as

they contribute to: learning practical skills helps them feel more capable and safe on them. Applicative exercises reduce anxiety and help increase motivation. Helps them understand the importance of organization and efficiency in their daily activities. Improving school performance - application skills are essential in disciplines such as science, physical education and technology. Practical exercises reinforce theoretical learning. Applicative skills help develop dexterity and oculomotor coordination.

Table 3

Test	T-value	T-value	Significance	Variance Equality
Levene's Test (general variance)	-5.36	0.00	significant ($p < 0.01$)	Different variances
Levene's Test (weight-bearing sample)	3.69	0.10	significant ($p < 0.01$)	Equal variances

4. Conclusion

In conclusion, utilizing specific means of rugby, such as varied training methodologies and tailored skill development programs, is pivotal in cultivating applied skills in athletes. Integrating ecological dynamics, technical skills training, and psychological aspects equips players to perform at high levels while nurturing their overall development. As the sport progresses, an ongoing commitment to innovative coaching practices rooted in a comprehensive understanding of skill acquisition will pave the way for future generations of rugby players. In the table tennis ball maintenance test, the results show that there is a statistically significant difference between the scores obtained in the initial and final test. Participants improved their critical thinking test scores considerably after the experiment. The high value of Cohen's d (2.33) indicates a strong effect of applied intervention in research. This suggests that the factors introduced between pretest and posttest (e.g. reduced exposure to social media, critical understanding exercises) had a significant impact on the ability of participants to analyze and interpret information. The average difference of 4.11 points is important not only statistically, but also educational: the participants significantly increased their scores, which can mean a more realistic perception of information and an increased ability to critically analyze content. Comparative results show a difference in favor of the experimental group with higher mean final test scores. Although the difference is not statistically significant at the 95% confidence threshold ($p = 0.078$), the large size of the effect (Cohen's $d = 0.88$) suggests that there is a practically relevant effect. This result partially supports the hypothesis that the intervention contributes to developing the critical understanding of content and to reducing the perceptual distortion caused by excessive social media consumption. Last test - pulling rubber - The control group has slightly longer average times, but the difference is not statistically significant. The variability is lower in the control group, suggesting more homogeneous results. The t-test confirms that there is no clear difference between groups. In contrast to the above analysis, the girls group now makes a statistically significant difference between the experimental and control groups ($p<0.05p<0.05p<0.05$), suggesting that the BR treatment may have an effect. The correlation between

the two datasets remains moderate and is not statistically significant.

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