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## THE IMPORTANCE OF DETERMINING AND ELIMINATING THE DISRUPTIVE FACTORS THAT INFLUENCE THE EFFICIENCY OF THE USE OF VIDEO IN TEACHING

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### Abstract

*Aim.* The aim of this study is to examine the relationship between the initial perceptions represented by certain psychological barriers and the effectiveness of the use of video during practical activities in rugby sports discipline.

*Methods.* The study was conducted with the participation of 48 clients of the University of Ovidius from Constanta, to whom we addressed a questionnaire with ten questions, to find out what is their perception of their own opinions and perceptions about the game of rugby and the need to use video means in the teaching process. The subjects participating in this study are clients of the university, following the bachelor's cycle.

*Results.* The study confirmed that the accumulation of theoretical information about the rules of the game, increased efficiency in practical work and the ability to comply. The study highlighted the aspects that limit learning and decrease the efficiency of the use of video means. The distorted perception on all aspects of learning and playing rugby has been confirmed in repeated situations, the answers show that the sum of the options is 86.7% - the two options chosen by the majority of the participants in the study were - Then I did not understand too many 51.1% and Total different the two perceptions 35.6%.

*Conclusions.* The individual presentation of the video recording with the execution of each participant in this study brought to our attention the need to resume certain theoretical aspects related to the theoretical disciplines studied in previous years and which clients could use to understand theoretical aspects of the methodical course, but also to improve the executions and subsequently the demonstrations they will make in the future quality of professor.

*Keywords:* misunderstanding, fear, video, teaching

### Introduction

Video media and analysis provided by video tools and applications play a key role in the process of learning and teaching all technical processes and elements in all sports. More and more frequently we meet physical education and sports teachers who use a powerful teaching tool to improve students' performance in physical education. The study aims to evaluate the effect of video-based presentations on the process of understanding, learning and driving actions, as well as on learning performance, but at the same time to evaluate the effects of video-based presentations as a tool to intervene in performance growth. The process of transmitting information to the university's clients is subject to a permanent change for several reasons. The period during which the teaching process was carried out in the online environment brought a number of mutations both from the teacher's point of view and for the customers. In the field of physical education, the restrictions imposed by the pandemic restrictions have put the entire group of teachers in a position to make greater use of video means in order to form a number of skills among the clients or to strengthen or improve those in the motor luggage owned by the clients. In customer-centric active learning environments, they are assumed to learn better when they discover things on their own and control their learning speed (Leidner & Jarvenpaa, 1995). The interaction means that the learners are active participants in the training/learning process (Smith, 1987). So, if motor learning is fundamental to the process of individual development and is possible at all ages (Voelcker-Rehage, 2008), we considered that the use of video recordings brought additional efficiency. Several studies on sequential presentation of pictures provide support for this argument. For a task in which learners had to rearrange a random sequence of the eight images representing kangaroo jumping, a static-sequential presentation of the learning materials was superior in comparison to a static-simultaneous presentation (Lowee, Schnotz & Rasch, 2010). Learning is maximized when learners are active, motivated, involved, participating and interacting with the material presented by the teacher (Dror, 2008), in our study we are talking about video recordings made during practical work at the discipline of rugby and rugby 7. The positive role and use of learning/repeating a movement from a screen picture in a classroom has been recently investigated and the studies showed that exposure to the movement tasks can be helpful for the attitudes of pupils towards physical activity (Glapa et.al., 2018). We know that there are few studies that have investigated to some extent the effectiveness of visual feedback using videos in physical education in physical education classes in schools, which encompass more heterogeneous target groups in terms of performance and motivation than voluntary settings like extracurricular sports activities. Interaction plays an

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important role in multimedia projects, providing students with opportunities to perform tasks or perform a procedure, but to do so, the interaction must be more advanced than simply allowing the student to choose how to search for videos about the subject presented by the teacher (Haughey & Muirhead, 2005). Although static pictures do not move (contrary to videos) they can effectively represent change over time when they are designed to promote mental animation that is, the ability to infer the motion from the information given in the static displays (Hegarty, 1992). All movements are represented and stored at the level of the central nervous system and can be taken on demand (Schmidt, 1975). The learning process focuses on accessing previously acquired motor knowledge and designing new codes of correspondence to the representations of new movements. Other research, however, has shown that complex dynamic representations such as videos or animations are not necessarily more effective than static ones for learning (Mayer, Hegarty, Mayer & Campbell, 2005). Parameter learning, activated on the other hand, focuses on information that provides clues about current execution, signals and perceptions that represent information about real-time movements, but also deviation from a correct execution model at performance level, this information is called information about the discrepancy, (Blischke, Marschall, Müller & Dausg, 1999). Videos are popular teaching materials among students around the world, providing rich and flexible learning experiences as well as a stimulating learning environment where students can better understand and retain information (Franzoni et al., 2013; Sablić et al., 2021). Some-times a combination of both is used to superimpose the model on the movement execution (Korban & Künzell, 2019). Despite evidence that different visualization methods can be effective for self-modeling (Kelley & Miltenberger, 2016), expert modeling (Arabi & Sarabandi, 2016), and using both methods simultaneously (Baudry, Leroy & Chollet, 2006), reliable statements about a preferred method are difficult to make as they have rarely been compared directly. The correlation between observation exercises, in our case the video recordings of technical elements and processes, direct self-direction execution and conscious control of attention, is a key influence factor (Wulf, Shea & Lewthwaite, 2010). Videos enhance students' learning performance and students perceive video technology as a practical means of resource learning (Giannakos et al., 2015), in addition, the newly designed improved video learning environment was a higher training tool than the common video learning environment in terms of student learning performance (Delen et. al., 2014). This is because the information they convey involves nonhuman movement and thus requires extra resources to integrate them in memory (Bétrancourt, Tversky, 2000).

## Methods

The study was conducted with the participation of 58 clients of the University of Ovidius from Constanta, to whom we addressed a questionnaire with ten questions, to find out what is their perception of their own opinions and perceptions about the game of rugby and the need to use video means in the teaching process. The subjects participating in this study are clients of the university, following the bachelor's cycle. Subjects were trained in completing the questionnaire. The subject values were analyzed mathematically. The answers generated a number of questions, but also confirmations.

## Results

The first question of this study was - To what extent do you know this sport before this semester, what was your opinion on rugby? Responses were grouped by orientation and a number of relevant issues were highlighted. Group A - with answers: "Not at all, as a very aggressive sport", "I thought it was a dangerous sport", "To a small extent, rugby seemed to me an aggressive sport". This perception was expected and is represented by 34.5% of the total number of responses. Group B - is those who did not know the denotations of rugby and is represented by 55% of the total answers to the first question. Group C - is those who had knowledge of this sports discipline and did not consider it a dangerous sport "I did not know Rugby so well, but I had a good opinion because I had the opportunity to practice sports in general school", "I knew very little about this sport, it is a team game, a game in which respect is above all and in which you can tie very beautiful friends, a sport from which you can learn a lot of things". The majority of study participants provided group A and B responses. For the second question I formulated the following statement - How often do you watch short films (youtube, TikTok or other source) in which are the developments of some athletes? The first choice of answer was — Never, and it was 4.4%, our expectations were less than 1% for this first choice of answer. The second choice was - Rarely more than one sport and has a percentage of 31.1%, we consider that customers who practice a certain discipline and for whom they have a concern oriented only to a small sector of sports activities are included in this group. One aspect that we are interested in from the point of view of the trainer, namely our task to make the client aware that obtaining a higher degree of understanding is correlated with the volume of theoretical and practical knowledge belonging to a large number of sports disciplines. The following response was common and is represented by a percentage of 24.4%. The fact that the first variants account for 60% of the total number of participants in this study indicates and confirms that the intervention of teachers is necessary to produce the expansion of the customer interest sector with the ultimate aim of better understanding the complexity of sports training and the special importance of video representations in this interdisciplinary mechanism. The last answer was only 40%, this last option was - Many times, various sports, but which gives us an optimistic horizon. The third question was - What aroused your interest in playing rugby? The response options were presented with three gradual options, bringing more precision to this approach and helping to draw conclusions from the facts. The first answer was - World Cup deployment - relatively true - 51.11% true - 40%, very important - 11.11%. It



follows from the answers provided by the participant that the World Cup, a major event, has a great importance for understanding, promotion, but also a very important support for all trainers from those who are involved in the selection and training activity of future players, to the highest level in the game of rugby. The second choice was about the peculiarity of the game of rugby, namely physical contact with the opponent and with the teammates. The second choice of response was - It is a physical contact sport - relatively true - 15.55%, true - 46.66%, very important - 37.77%. The percentage of 15.55% recorded in this version excludes the motivation by which some specialists of the field try to find an argument for the small number of hours or in the most undesirable situation the lack of any form of rugby play within the physical education hours. Most of those who participated in the study consider this sport in which there is physical contact to be interesting. Physical contact does not pose a danger to 84.43%. Principles and Laws of Rugby Game - relatively true - 11.11%, true - 48.88%, very important - 40%. A much higher percentage than we estimated prior to the study preparation period presented is composed of the two options of this response, 88.88% consider that the Principles and Laws of Rugby Game are an important and very important factor. INTEGRITY · PASSION · SOLIDARITY · DISCIPLINE · RESPECT, are the principles of the rugby player and define this sport discipline. I am not interested in the game of rugby - relatively true - 97.77%, true, very important - 2.33%, the last option confirms the interest of the participants in the game of rugby, but also a change of perception and deep understanding of this game. The next question, the number four question was - What specific knowledge, skills and attitudes do you think you should accumulate in order to be able to organize an S-Rugby team (Rugby Tag)? We grouped the answers in three groups, so in group A, there were recorded answers that referred to issues related to the regulation "I believe that most of the knowledge to organize a rugby team must be based on regulation and tactics. The necessary skills are: confidence in each player and planning and implementing a well-structured program. The attitudes leading to the creation of an S-Rugby team are: "respect and trust", "Rules of the game", "Catching the ball, rules of the game", this group was represented by a percentage of 45%. Group B, has in its composition answers regarding the aspects of physical engagement "Fair play, speed, skill", "We need to know first of all the rules of this beautiful but also tough sport, the ability to have running resistance, concentration as well as a good orientation in the field. Aggressive attitude has a very important role in the practice of rugby", "Strength and discipline", this group of answers has a percentage of 32.5%. Group C, is those who considered that management and organizational skills are the ones that are needed, having a percentage of 22.5% "Organizing a team of S-Rugby, you should accumulate knowledge about rules and strategies. Communication and leadership skills are essential to coordinate the team.", "Rules and strategies, communication and leadership skills, organizational and planning skills, positive attitude and ability to work in the team, safety knowledge and first aid". Discussions with the participants brought different approaches in formulating the answers, these answers having personal aspects, theoretical knowledge and psychophysical structure of each participant in the study. The question number five was - From a pedagogical, methodical, organizational point of view, what approach do you consider to be the most appropriate for working with a group of students - regardless of objective, or sports discipline? The purpose of this question was to understand what is the position regarding the use of other teaching means in the teaching process in the education-physical discipline. Ability to adapt current and customer-friendly means. Responses have been recorded as follows: "The approach must be involved and interactive because creative and varied methods maintain students' interest throughout the hour", "Demonstration and motivation", "A simple, direct, empathetic style that inspires students to self-overcome both physical and psychics". Question number six correlates with question number three, this was - What was your perception of rugby last year compared to what you have today? Same 8.9%. We believe that the percentage is far too low among customers and that the level of information is unacceptable for a nation that has scored important victories in confronting major world juggling nations in the past decades. In addition to the first option is - Similar 4.4%. The last two options for this response range amount to 86.7% and confirm that contact with the promoters of the game of rugby (university teachers) and reading an academic program with seven theoretical meetings and fourteen practical meetings produces a statistically significant change in the understanding of the game of rugby. Confirmation of the accumulation of theoretical information and practical experience in the ability to comply with the rules of the game in all stages of the game in XV or with a reduced effective is statistically represented by the sum of the 86.7% options. The two options chosen by the majority of the participants in the study were - Then I didn't understand too many 51.1% and Totally different the two perceptions 35.6%. Question number seven - How important were the teacher demonstrations? The result of this question shows the importance of the example that the teacher, coach or trainer (if we want to express ourselves in general) has in understanding the tasks that customers have to perform. For level 4 out of 5, we have 8.1%, and for level 5 out of five we have achieved 91.9%. Does the question number eight have as its objective, the discussions about the various stages of the game pursued on the screen of the classroom helped you better execute certain processes or elements in the game of rugby? The introduction of the analysis of the kinograma of certain processes and technical elements in the presentation of theoretical content is subject to two conditions. In the first stage, the luggage of motrical experiences that customers can use to understand or execute the requirements of the rugby game are decisive for obtaining a demonstration capability. In another approach to the first stage of training, the correlation of video images with the tasks received in the practical activities program makes a significant contribution by shortening the time needed to learn certain moves. The help that customers received by exposing video images is shown by the centralized results as follows: for the first response - we



do not have much of a 0%. The second answer was - to a small extent 4.4%, the percentages of the first two answer variants being correlated with the values recorded by the answers of the previous questions, those with number six and number three. The last two variants of the answer gather a large value, the percentage is 85.6%. Most of those who participated in the views and analyzes of the presented sequences positively appreciated the contribution generated by the use of video means in the teaching process. The last two answers were as follows: They were useful, with a percentage of 68.9% and - Without them we understand nothing with a percentage of 26.7%. We bring to the attention of the specialists that in order to check the usefulness of video recordings in correlation with the efficient use of the time intended for the transmission of theoretical content, we used in this study and customer records during practical activities. Next survey question was - In your opinion, what key topics can be interlinked with the game of rugby? How does this integration contribute to pupils' skills development? To this question we received a series of answers that fall within the sector we had previously thought about, but we also recorded answers that prove an understanding capacity above the group average, as expressed as: "Physical education and health: Promoting an active lifestyle. Mathematics and statistics: Analysis of the statistical data of the game, calculation of the score. Language and Literature: Developing communication skills during instruction and feedback. Moral and civic education: Learning values such as fair-play, respect, collaboration, failure management. Social Sciences: Understanding the History and Evolution of Rugby" or "This sport contributes to the development of students' competences through physical education and health but also the fair play that this sport offers", the game can be interconnected with various key topics, both from an educational point of view and personal development. Integrating rugby in a broader context can significantly contribute to the development of pupils' competences in various fields. Here are some key topics and how they can interconnect with rugby: Physical Education and Health: Motor Skills: Rugby Develops Fundamental Motor Skills, such as Running, Throwing, and Catching. Active Lifestyle: By practicing rugby, students learn the importance of an active and healthy lifestyle. Social and Emotional Education: Collaboration and Team: The Rugby Game promotes team spirit, cooperation and trust in teammates. Conflict Management: Gaming situations can involve rapid conflict resolution and decision-making under pressure. Civic Education: Respect and Fair-Play: Rugby promotes principles such as respect for opponents, fair play and acceptance of arbitrators' decisions. Academic Education: Mathematics: Scoring and strategy involves mathematical notions such as scoring and subtracting points. Language and Communication: The development of communication skills is essential during the game, especially to convey instructions and strategies to your teammates. Personal Development: Leadership: Players can develop leadership skills by assuming key roles in the team. Resilience: Facing challenges during the game helps build resilience and the ability to manage failures. Cultural and Social Education: Diversity and Inclusion: Rugby brings together players from different backgrounds and cultures, promoting diversity and inclusion. Global Awareness: Participation in competitions and sporting events can contribute to developing a broader world perspective. Financial Education: Resource Management: Strategy planning and decision making during the game involves management of available resources (players, time, points). Integrating these key topics in the context of rugby play not only diversifies the educational experience, but also contributes to the development of a complex set of skills. Rugby provides an excellent platform for learning and applying these skills in a practical and interactive way". We believe that there is currently a group of clients of the university, which is characterized by the concern to open up to other ways that include the use of video means. Next survey question was - You think you can get a comprehensive understanding of the learning process using an advanced video analysis that identifies areas for improving and optimizing your technical execution. Preliminary work on this study brought to our attention the openness and ease in the use of terminals capable of illustrating short video recordings. The first choice of answer was - certainly not, with a percentage of 4.4%, we appreciate that it is an increased percentage. The first and second response variants add up to 15.5%, a value higher than the estimated value, which is based on the reluctance to use the means of video recording, or the lack of means capable of making such recordings, correlated with the lack of knowledge necessary to use and edit the video content. The second choice of answer - Approximately, has a percentage of 11.1%. Independently of the present study, this aspect being studied in other works appears and the variant - I do not understand the question, with a percentage of 2.2%, the reasons for the low understanding of the requirement are not subject to this study, but obviously influence the outcome of this paper. The last choice was — Yes, definitely, with 82.2%, which we don't think is very high.

## Conclusions

As the first step we considered necessary we intervened in correcting the perception of customers regarding the association of hazards with the game of rugby, understanding the laws and principles governing the game and the values underlying the spirit characteristic of this sport discipline. I understood that there are psychological barriers in the educational approach, which in the first stage we wanted to highlight and measure their importance, then to exclude them in order to optimize the complex process of training and strengthening the specific skills of the game of rugby. The efficiency of the use of video recordings and the analysis of each sequence of execution made by the university's clients was conditioned by the raising of psychological barriers, but also by the increase of confidence in their physical abilities.

Another conclusion of this study is that the importance of clarifying the aspects related to the rules of rugby is in the first stage to remove some fears generated by the physical particularity of this game. Further to this conclusion, the



presentation and clarification of the rules of the game produced an increase in confidence in their own forces, but also a greater degree of physical commitment, but also a more courageous approach during practical work. The individual presentation of the video recording with the execution of each participant in this study brought to our attention the need to resume certain theoretical aspects related to the theoretical disciplines studied in previous years and which clients could use to understand theoretical aspects of the methodical course, but also to improve the executions and subsequently the demonstrations they will make in the future quality of professor. At the same time, we believe that an interdisciplinary approach to the use of video means can bring a more efficient use of the time allocated to the transmission of theoretical information but to the training of the practical skills required in the future professional activity of our clients.

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