



The influence of the BAYER strategy on teaching some basic football skills for students

La influencia de la estrategia de BAYER en la enseñanza de algunas habilidades básicas del fútbol para estudiantes

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Abstract

Objective: The BAYER method has a considerable impact on the learning of rolling and passing skills with a football ball for students, and there are statistically significant differences in the post-test results for students' learning of rolling and passing skills with a football ball based on their research group.

Research Methodology: The researcher used an experimental approach with a two-group design, the research community was selected from the first-year students in the College of Physical Education and Sports Sciences for the academic year (2024-2025 AD), numbering (150) students, distributed into (5) sections (AB, C, D, E). The research sample consisted of (40) students who were randomly selected by lottery from sections (AB, C, D, E). They were divided into two groups of (20) students for each group, with a percentage of (26.66%) of the community (10) students were excluded, with a percentage of (6.66%) of the community (15) exploratory sample were selected, with a percentage of (10%) of the community.

Results: The results showed that there were significant differences between the pre-test and post-test, in favor of the post-test, and the evidence of development was clearly recognizable to the researcher from the results, was due to the effect of the steps of the BAYER method on students learning rolling and passing in football. This indicates the effect of the strategy and its sequential steps.

Conclusions: The BAYER method, has a significant positive effect on students learning to perform football rolling and passing skills.

Keywords

BAYER strategy; rolling skill; passing skill; football skills

Resumen

Objetivo: El método BAYER tiene un impacto considerable en el aprendizaje de las habilidades de rodar y pasar con un balón de fútbol en estudiantes, y existen diferencias estadísticamente significativas en los resultados del postest en este aspecto según su grupo de investigación.

Metodología de la investigación: El investigador utilizó un enfoque experimental con un diseño de dos grupos. La comunidad de investigación se seleccionó entre los estudiantes de primer año de la Facultad de Educación Física y Ciencias del Deporte para el año académico (2024-2025 d. C.), con un total de 150 estudiantes, distribuidos en cinco secciones (AB, C, D, E). La muestra de investigación consistió en 40 estudiantes seleccionados aleatoriamente por sorteo de las secciones (AB, C, D, E). Se dividieron en dos grupos de 20 estudiantes por grupo, con un porcentaje del 26,66 % de la comunidad. Se excluyeron 10 estudiantes, con un porcentaje del 6,66 % de la comunidad. Se seleccionó una muestra exploratoria de 15 estudiantes, con un porcentaje del 10 % de la comunidad. **Resultados:** Los resultados mostraron diferencias significativas entre el pretest y el postest, a favor de este último. El investigador pudo apreciar claramente el desarrollo de los resultados, debido al efecto de los pasos del método BAYER en el aprendizaje de las habilidades de rodar y pasar en fútbol. Esto indica el efecto de la estrategia y sus pasos secuenciales.

Conclusiones: El método BAYER tiene un efecto positivo significativo en el aprendizaje de las habilidades de rodar y pasar en fútbol.

Palabras clave

Estrategia de BAYER; habilidad de rodar; habilidad de pase; habilidades futbolísticas.



Introduction

Today's world is experiencing rapid development and progress in various fields of science. To build a solid mathematical foundation, it is best to shift learning methods by using diverse teaching strategies that suit learners and establish the lesson objective as a foundation upon which the teacher relies (Abdulhussein & Hadi, 2022; Bouzid et al., 2025). Many teaching strategies can bring enjoyment to learners through a deductive approach. This is achieved by allowing learners to identify the main components of a skill when using it. When discussing these components, students apply the strategy and review its components (Madloul et al., 2025; Potisaen et al., 2025; Yunus & Aditya, 2024; Low et al., 2023; Konoval et al., 2021). When introducing any skill, understanding its content is essential to its continued use. Physical education teachers need to use teaching strategies that are compatible with contemporary developments and the explosion of knowledge, centered on the learner, helping them exploit their abilities, build their knowledge, and develop their thinking. One such strategy is Bayer's strategy. After Bayer, one of those who developed the concept of strategies, teachers can use his strategy to deliver better instruction than teachers who do not rely on strategies that fit the spirit of the scientific age in teaching (Hadi, 2022; Burgos Angulo et al., 2025). The student is the focus of the educational process, placing them in a situation that requires in-depth and purposeful thinking. Through Bayer's strategy, students learn knowledge, skills, flexibility in thinking, and the ability to analyze, in addition to acquiring skills. This is achieved by learning and teaching the skill, which requires providing students with sufficient examples of a particular skill before asking them to apply it (Al-Birman, 2003; Zouer Habeb et al., 2025). Therefore, it is preferable to introduce or present the skill components in as systematic a manner as possible. God distinguished man from all other creatures with reason and elevated him in degrees of knowledge. Through his efforts and knowledge, created images on the pages of his history that reflect his development and distinguished intellectual transformation, until he now stands on the threshold of a new era: the era of knowledge, information, and globalization (Shalan et al., 2022; Mercê et al., 2025). This has given him the opportunity to freely think or express his viewpoint without fear. Football is a game that is gaining increasing interest in countries around the world (Lahinda et al., 2025; Oudah Zamil & Thare Hani, 2025; Thare Hani et al., 2025; Fernández Guerrero et al., 2025; Maraba et al., 2025). This interest has prompted experts and specialists to consider finding the best methods and approaches to develop this game, hone talent, and raise their levels in various aspects (physical, skill, mental, tactical), by enhancing their ability to understand and implement mixed performance. Hence, the importance of this study is evident in identifying the impact of the Bayer strategy on developing integrated thinking and understanding its impact on some basic football skills for first-year students in the College of Physical Education and Sports Sciences.

Research problem

A problem was found in the research through the researcher's experience and his observation as one of the football teachers in the College of Physical Education and Sports Sciences at the University of Kufa. When studying football in the first stage, he found a weakness in learning basic skills, including the skills of rolling and handling the football. The reason for this may be the teachers' use of conventional teaching strategies, based on indoctrination and memorization of information, which do not stimulate students' motivation because they do not suit their nature or the nature of the educational material presented to them, and do not take into account individual differences between them and do not connect them to the reality of their practical life, which made this material abstract and impractical, devoid of the spirit of thinking and creativity among them. Since students vary in their ways of thinking and the speed of obtaining information, a strategy should have been used to help them absorb the educational material and make it more suitable for their thinking and mental abilities. The problem that learning suffers from in most educational stages, especially the effectiveness of football, is a weakness in learning skills because they do not include basic performance skills correctly, and the professors' reliance in teaching some football skills and educational methods that do not carry within them and their errors the knowledge in which the learner is a vital and effective element in the process Educational. Therefore, the researcher wanted to test an educational strategy that would help students be active and effective in the educational process, nurture learners, create a sense of excitement and suspense among students, and utilize lesson time appropriately. This strategy also taught basic soccer skills to first-year students. Therefore, the researcher posed the following question:



Does the Bayer strategy's educational approach have an impact on students' learning of some basic soccer skills?

Research objective

- The BAYER strategy exerts a marked influence on students' learning of rolling and passing skills with a football.
- There are important differences in the results between post-tests of the two groups of the study, regarding teaching rolling and passing skills with a football.

Research hypotheses

- There were statistically significant differences found between the post-test results of students' rolling and passing skills with a football ball. There are significant statistical differences in the pre- and post-tests of the experimental and control groups with respect to student learning of rolling and passing skills with a football ball, and the post-test is considered valid.

Terminology

- BAYER strategy : It is an educational strategy for teaching critical thinking that begins with presenting the skill by the teacher and through displaying it to the students so that the learning process is completed for them and then they employ it in different life situations (transfer of learning effect) and includes presenting the skill and explaining the skill theoretically, demonstrative presentation of the skill, discussion, demonstration and review of what the teacher has done, applying the skill practically and reflective thinking about what the students have done. (Al-Waryash, 2009)

Research fields

- Sample human field: a sample of first-year students from the College of Physical Education and Sports Sciences. The sample should be made up of students enrolled during the academic year (2024-2025) at the University of Kufa
- Time field: (15/12/2024) to (20/2/2025)
- Spatial field: stadium of the College of Physical Education - sports sciences at the University of Kufa.

Method

Research Methodology

The nature of the problem posed determines the nature of the approach. The researcher used an experimental approach with a two-group equivalent design, and the closest and most reliable approach to solving many scientific problems practically and theoretically and it is compatible with the nature of the problem. The researcher used an experimental approach with a two-group design: experimental and control, with pre-test and post-test, to suit the nature of the problem, as shown in Table (1).

Table 1. Shows the educational approach.

Groups	Instructional Method Used	Number of sample
Experimental group	Bayer's Strategy	20
Control group	Method Followed by the Teacher	20

Community and sample research

The research community was selected from the first-year students in the College of Physical Education and Sports Sciences for the academic year (2024-2025 AD), numbering (150) students, distributed into (5) sections (AB, C, D, E). The research sample consisted of (40) students who were randomly selected by lottery from sections (AB, C, D, E). They were divided into two groups of (20) students for each group,



with a percentage of (26.66%) of the community. (10) students were excluded, with a percentage of (6.66%) of the community (15) exploratory sample were selected, with a percentage of (10%) of the community. The experimental group included (Bayer's strategy), and the control group used the usual method followed by the subject teacher, as shown in Table (2).

Table 2. Shows the sample distribution.

Division	Total number	Exploratory experiment	Main experiment
A	30	0	8
B	30	0	8
C	30	0	8
D	30	0	8
E	30	0	8
Exploratory Experience		15	
Excluded Students		10	

Sample homogeneity and equivalence

A homogeneity of variance analysis determined the following values from the participants, as presented in Table (3).

Table 3. Demonstrates the homogeneity of the participants in the variables (height, weight, age).

Variables	Measuring unit	Mean	Std. Deviations	Skewness
Height	Cm	178	4,51	0,42
Mass	Kg	69	6,20	0,36
Age	Year	19	3,74	0,49

Research Methodologies, Instruments, and Tools Utilized in This Study

Research Methodologies

- Arabic and foreign references
- Observation
- Interview
- Questionnaire
- Educational units
- Statistical methods
- Tests

Instruments and Tools

- Sony digital video camera (2).
- CD (2).
- Casio stopwatch (2).
- Video film
- Whistle
- (10) colored cones
- (10) legal footballs

Field Research Procedures

Determining the Tests Used in the Research



The assessments implemented by the researcher corresponded directly to the competency being investigated and were consistent with Skill 1 of the first stage curriculum for the 2024/2025 academic year. It should be noted that the rolling and passing assessment was carried out for students' football because the researcher relied on expert evaluation of technical performance in the rolling and passing assessment, as noted in the information about the rolling and passing assessment.

Exploratory Experiments

With the intention of achieving trustworthy findings, the researcher carried out two exploratory experiments. These are preliminary studies undertaken by the researcher specializing in a small convenience sample beyond the research sample prior to the study with the purpose of testing validity the study instruments and applications. The first and second exploratory experiments took place with first-stage students in the play ground of the College of Physical Education and Sports Sciences, University of Kufa, Section (A), with 20 students and 10 each experiment on the playground on Sunday, December 22, 2025, at 9:00 a.m., and aimed to the first exploratory purpose was:

- Identify the extent to which the tests were appropriate for the level of the sample members and the feasibility of their application: overcome any errors that may arise during test implementation, and the competence and adequacy of the support team.
- Determine the time interval needed in order to introduce the assessments and the challenges and obstacles that come with the research process.
- Identify the professional background of the support staff.
- How to utilize the competencies in the selected educational approach.
- Identify the work model proposed for the experimental group and its implementation plan.
- Identify the appropriateness of measures to the skill level of the sample members.
- Assess the professional background of the support staff in implementing the components of the educational curriculum.

Extracting the scientific basis for the tests used in the research

1- Validity: Test validity refers to the extent to which a test or scale is valid in measuring what it was designed to measure. There are several types of validity. The researcher derived individual validity using valuable content or the content validity of the test that specifically measures the students' rolling and passing skills of football. This was done by presenting the test to a group of experts and specialists before executing the test, to measure the test's validity, whether it measures what it was intended to complete, and its fit to the level of the sample members. Finally, a high percentage of agreement was deduced to achieve validity of the test.

2- Reliability: A reliable or stable test is one that will produce similar or same results if administered more than once under similar conditions. The researcher used the retest method because the test is done on a group of (10) Students on Sunday, December 29, 2024. The skill tests were given to the sample again a week later on Sunday January 5, 2025. When the data was processed statistically by the simple correlation coefficient (Pearson), it was determined that all the skills had a high degree of stability, explained in Table (4).

Table 4. Displays the validity and reliability coefficients for the rolling and passing tests with a football ball.

Tests	Validity coefficient	Reliability coefficient
Rolling (30) m and passing five times continuously	0,92	0,89
Measuring passing accuracy from movement	0,90	0,90

3- Objectivity of the rolling and passing tests of the ball: The examiner achieved objectivity with the two tests that he used in the study and the level of suitability for sample level by calculating the simple correlation coefficient (Pearson) between the scores from the two evaluators.

The data indicated that the skill test of rolling and passing was extremely objective, as observed in Table 4. As discussed, it is clear that personal or subjective factors did not impact the evaluation and results

on the part of the expert. "Freedom from fanaticism and bias and not introducing the tester's factors, such as his whims, personal inclinations, and even his bias or prejudice, means describing the individual as he is, not as we would like him to be" (Shahana, 2004).

Table 5. Shows the objectivity of the two tests: rolling and passing of a football ball.

Tests	Correlation coefficient	Type sig
Rolling (30) m and passing five times continuously	90	sig
Measuring passing accuracy from movement	89	sig

Pre-tests

The pre-tests were conducted on Tuesday, January 12, 2025, at 9:00 AM.

Implementing the Bayer Educational Strategy

The researcher utilized the Bayer strategy steps to instruct the experimental group on rolling and passing skills in football. The control group was taught the skills according to the existent methods of a teacher in the subject. Teaching was conducted according to the usual teaching method used by the teacher, known as the imperative method. The subject teacher applied the educational curriculum to both groups (experimental and control). The introduction, warm-up, and final section were implemented in a similar manner for both groups and using the same material. The educational curriculum was prepared according to the daily lecture schedule for the football subject (Sundays and Tuesdays). Two weekly learning units were applied from Sunday, January 12, 2025, to Tuesday, February 4, 2025.

- Time in units of the learning experience was (6) weeks.
- The total number of learning units: (12) learning units.
- The total number of hours for each learning unit is (90) minutes.
- Duration of the preparatory section is (20) minutes; duration of the main section is (60) minutes and is divided into:
- Duration of the learning section is (20) minutes, duration of the practical section is (40) minutes, and duration of the closing section is (10) minutes.

Implementing the experimental group according to the Bayer strategy

After reviewing a number of instructional design models based on the Bayer strategy in the educational unit, the researcher adopted the following model:

- Preparing the classroom environment
- Introducing the lesson
- Asking students to read the lesson objectives
- Introducing the students to the Bayer strategy through

These steps include the following as mentioned by (Shahana, 2004)

1- The Instructional Part (20) minutes

- The first step is the physical education teacher's introduction to the skill, including (the name of the skill, the importance of studying the skill) in the instructional part. (6) minutes
- The subsequent component is the presentation of the skill which is shown by the physical education teacher in the instructional part of the lesson plan, with an accompanying simple explanation for the students in the instructional part. Six minutes.
- The third step is the discussion of the demonstration (reviewing what the teacher did), and a brief explanation of what happened in the instructional part. (8 minutes)

2-The applied part (40) minutes, as explained in Appendix (1).



- The fourth step is the practical application of the skill, which is done by having students work in small groups in the application part of the lesson plan.
- The fifth step is the teacher's feedback when reviewing errors made by the students during their application of the skill under investigation in the application part of the educational unit.

Post-tests

Post-tests were administered on Sunday, February 11, 2025, at 9:00 AM, at the fields of the College of Physical Education and Sports Sciences of the College of Kufa University. The same conditions were applied for the pre-test and post-test to obtain accurate results for statistical testing.

Statistical analysis

The researcher used the statistical package (SPSS) to assess the arithmetic mean, standard deviation, t-test for normally distributed scores, and a non-parametric associated samples t-test for non-normally distributed scores.

Findings

Presentation the results of the pre- and post-tests in the variables under study for the experimental group:

Table 6. Shows the differences between the pre- and post-tests in the variables under study for the experimental subjects

No.	Groups	Pre-test		Post-test		T value calculated	Type Sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
1	Rolling	3.761	0.296	6.466	0.441	25.859	Sig
2	Passing	3.616	0.376	6.233	0.220	27.816	Sig

Presentation the results of the pre- and post-tests in the variables under study for the control group:

Table 7. Shows the differences between the pre- and post-tests in the variables under study for the control group.

No.	Skill	Pre-test		Post-test		T value calculated	Type Sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
1	Rolling	3.333	0.368	5.366	0.451	15.877	Sig
2	Passing	3.300	0.301	5.033	0.399	13.316	Sig

Presentation, the results of the post-tests between the experimental and control groups on the research variables:

Table 8. Shows the results differences between the post-tests in the variables under study for the experimental and control groups.

No.	Skill	Control group		Experimental group		T value calculated	Type Sig
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
1	Rolling	5.366	0.415	6.446	0.441	6.741	Sig
2	Passing	5.033	0.399	6.233	0.220	10.182	Sig

Discussion

Tables (6) and (7) show the results of learning the skills of rolling and handling for the research sample group. The results showed a significant difference between the pre- and post-tests for the control group. The method followed by the teacher in teaching forced the students to adhere to the motor model, to repeat constantly, and not to deviate from it until they were able to perform the game in a manner similar or identical to the model. This means not performing operations that help in the abundance of ideas, as it does not activate the mental processes within him, as focusing on a specific response makes the students unable to provide new solutions and they find it difficult to change ideas. "The student who stops at a specific idea or is rigid in the face of a method is less capable of creativity than the student



with flexible thinking who is able to change where necessary" (Akbar et al., 2025; Aceña Rodríguez et al., 2025). This led to the development not occurring in the required manner.

The ineffectiveness of the curriculum used by the subject teacher to teach dribbling and handling skills to the student and their role in developing the student's personality. There is also a lack of serious cooperation among students, and the curriculum does not develop mental abilities to the level of student ambition. It also does not prepare them to advance their level and develop their physical, skill, and psychological abilities according to the characteristics of the educational stage. As for the results of learning dribbling and handling skills for the experimental group, the results showed significant differences between the pre- and post-test results, in favor of the post-test in the experimental group. The researcher attributes this development to the effectiveness of using the Bayer strategy and its role in achieving the goals of the educational process. Students found themselves in an educational situation that provided them with the freedom to discuss and engage with each other, which led to an increase in their love of the subject and their engagement with new things, albeit in a relatively different way. This is what we observed regarding the traditional method. The reason for this may be the limited time invested in the lesson compared to the other method. Developing the educational curriculum according to the Bayer strategy provided students with the opportunity to actively participate in groups, which led to them gaining a spirit of cooperative work, participation, and positivity through organizational steps, making the lecture enjoyable and engaging. The attractive role of the teacher according to Bayer's strategy provides the opportunity for learners to express their ideas and opinions in a wonderful circle of science, and to create an atmosphere of security, trust and support for students in a scientific and educational atmosphere. Therefore, the teacher plays the role of a flexible mediator between the learners on the one hand and what the educational process aims for on the other hand. The researcher agrees with what the study of (Gharib, 2019; Ahmed et al., 2025) has reached.

Bayer's strategy helped to detail the role of students and work on exploiting their energy, developing their thinking, understanding, exploration, investigation, questioning, and freeing them from the way in which the learner is a recipient of opposing information (Al-Sheikh, 1993; Yunus & Aditya, 2025). Points out that one of the advantages of Bayer's strategy is the positive connection between the student's achievement and learning with the rest of the members of his group to which he belongs, in contrast to the traditional method whose tendency is individual performance. This is what (Al-Hila, 1999) pointed out, that Bayer's strategy "is based on synergy between members, that synergy which directs the planned goals genetically and which involves individuals and groups and allows them to participate effectively and actively in the educational process and perform the tasks assigned to them, while this light or peer learning and mutual dependence is not present in traditional learning groups. The researcher believes that the student in this strategy plays an active and effective role that is completely different from the traditional situations practiced in the regular lecture. He is no longer just a recipient of information and concepts, but rather has an active and prominent role in the discussion and application of the skill collectively and cooperatively within the educational unit. The simple progress that occurred in the control group, and this is what we notice in Table (7), is due to the usual method that is based on verbal explanation, model performance, and error correction by the subject teacher, and practice and repetition on the part of the learner. In this regard (Abdul Salam, 2001) mentioned that the method of explanation and model performance (the traditional method) does not achieve the learner's autonomy and does not allow him an opportunity for positive mutual participation in accordance with what modern educational trends call for ((Al-Nashif, 2011).

The results presented in table (8) indicated the presence of significant differences between the two groups in favor of the experimental group in the post-skill tests under investigation. The researcher attributes the reason for this to the clear effect left by the use of Bayer's strategy, which begins with the presentation of the skill by the subject teacher in the main section of the educational unit and its presentation to the students so that the learning process is carried out by them and then they employ it in learning the skills under investigation, transferring the effect of learning and achieving interaction between the students with each other and feeling joint responsibility to achieve the objectives of the lesson. Bayer's strategy involves mental processes during its implementation stages, developing mental abilities, increasing learner experience resulting from interaction and use in every new situation they encounter. It also focuses on the learner's vitality, interaction, and activity, and effective learning events, making the student the focus of the educational process and enabling the student to be positive and effective in applying the skill. (Al-Jawhari, 2010)



This result is consistent with what he asserted, "Cooperative learning is an educational strategy. Small, cooperative groups of heterogeneous students work together to maximize their learning as a group or as individuals through positive interaction that leads to the development of their personal and social skills" (Khuraibat & Mazhar, 2016).

The researcher also attributes this to the imperative style followed by the physical education teacher, the lack of diversification of the methods used by the teacher, and the adherence to the imperative style, which relies on memorization and indoctrination without the learner's participation in the educational process. Through this, the learner is able to solve problems, gain personal experience, repeat the exercise, and the time spent on each exercise. Therefore, there was greater development in the experimental group than in the control group (Talat, 2008).

The researcher also attributes this result to the fact that the subject of football requires a strategy. Built on foundations that serve scientific facts, Bayer's strategy aligns with the nature of the football curriculum and includes illustrated activities and events that help students had better understand the scientific material than is traditionally practiced. This encourages students to interact during the class and benefit from the educational content. This also includes practical demonstrations that allow students to actively participate, moving away from listening only, and diversifying opportunities by varying the levels of questions to suit individual differences among students and stimulating interaction between students and the teacher.

The researcher also attributes this result to diversifying the teaching strategy, linking topics to practical interaction between students, raising questions that require thought while enhancing students' responses, linking lesson objectives to the learner's mental, psychological, and social needs, diversifying stimuli, involving students in planning their educational work, exploiting students' basic needs and helping them achieve self-realization, providing students with the results of their work immediately upon completion, and appropriately preparing, organizing, and planning lessons.

Conclusions

The Beyer strategy functions as an efficient and contributory resource for instructing students in the skills of rolling and passing in the sport of football.

Recommendations

- Promote the use of the Beyer strategy among football teachers by holding training courses to develop the skills necessary for its application.
- The need to conduct similar research and studies using the Beyer strategy for different educational levels and other sporting activities.

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Appendix

Appendix 1. Educational unit model for teaching football rolling

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No.	Educational Unit Sections	Time	Unit Content	Organization	Notes
1	Preparatory Section	18minute		***** +	Reinforce the concepts of attendance, the orderly student standing process with appropriate distance to students, then reinforce making sure the students demonstrate physical movements correctly.
	Introduction and General Warm-up	8minute	Standing in one line to record absences, perform the salute, and prepare all members of the body in general.	***** *****	
	Special Warm-up	10minute	Various, comprehensive exercises for the entire body serve the main part of the lesson.	+	
	Main Section	60minute		***** *	
2	Educational Activity	15minute	Explain, demonstrate and apply the rolling skill.	+ * *****	Focus on the student's understanding of any technical aspect of the performance while paying careful attention to the teacher's explanation and display of the skill using the method, and while the teacher asks questions and the students respond to teacher's questions related to the lesson during the display process.
	Practical Activity	45minute	1- Roll back and forth between the signs 2- Roll in a circle with the soles of the feet 3- Roll in a straight line	* * * * * + + + + + * * * * *	
3	Final Section	5minute	Calming exercises and a relaxing game with a goodbye greeting	***** #	Practical application of the skill: The skill is applied practically through the use of exercises designed for each educational unit. The teacher provides feedback in order to correct incorrect performance and reinforce correct performance, allowing the student to excel in learning it, consolidate what he has learned, and modify his behavior.