

Teaching behaviors among physical education teachers (in the primary stage according to the Flanders system. (A field study in some primary schools in the state of Khenchela).

Chermime Mourad ¹; karoum Bachir²

^{1,2}Ammar Theliji University of Laghouat, Laboratory of Cognitive Dimensions and Applied Perceptions in Sports Training Sciences, Institute of Science and Technology of Physical and Sports Activities.

¹ m.chermime@lagh-unvi.dz ; ² b.karoum@lagh-unvi.dz

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Chermime Mourad

m.chermime@lagh-unvi.dz

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Abstract

This research aims to know the teaching behaviors of primary teachers and their students, as well as to know the dominant behavioral categories in teachers' dealings with students during physical education and sports lessons, according to the Flanders system for measuring classroom interaction. The study was based on the hypothesis that the teaching level of primary education teachers during the physical education and physical education session differs from the percentages set by Flanders. The study sample consisted of eight teachers from some primary schools in the state of Khenchela, selected purposefully due to the facilities provided by their administrations and the significant cooperation of the teachers working. The researcher employed a descriptive-analytical approach in the study and used both the mean and percentage as statistical methods. These methods allowed the researcher to assess the feasibility of using Flanders System for measuring teaching behaviours in physical education classes.

1. Introduction

The teacher is the model who actively contributes to the upbringing and education of students through their influential teaching behaviour and their ability to teach various skills, manifested in their classroom communication and interaction. They are the cornerstone in the educational process. (Mohamed Mustafa Zidan, 1981, p. 46)

Teaching competencies are considered a fundamental requirement upon which the achievement of educational objectives in various learning domains depends. (Fayza Habeesh; Huryati Hakim, 2021)

Taouinat stated, 85% of success is attributed to communication and interaction skills, while only 15% is attributed to task accomplishment skills." (Taouinat Ali, 2009, p. 7). To assess the effectiveness of classroom interactions and enhance them, various systems and measurement tools have emerged, including the Flanagan System, the most widely used system for measuring interaction levels. Several studies, such as Qadri's 2012 study, aimed to identify the elements of student interaction in secondary education. Additionally, Sherifi's 2019 study aimed to improve the quality of classroom interaction between teachers and students by analyzing verbal interaction using the Flanders model among English language teachers in intermediate education.

Teaching observation is a representation of a specific type of educational human behaviour, or selected categories of it, in forms that allow for the measurement of teaching and the identification of its adequacy level." (Abdelhafid Qadri, 2019).

The teaching behavior of the teacher also has a very important role and influence in achieving learning and achieving the desired goals of the physical education and sports class in primary education. Therefore, it is necessary to know the level of teaching behaviors of physical education and sports teachers. Our study aims to answer the following question: Are there differences in the teaching levels of primary school teachers during physical education classes, as measured by the Flanders System's proportional categories?

Additionally, we pose the following questions:

-What is the prevalent pattern of classroom interactions among primary school teachers during physical education classes?

To address the study's questions, we propose the following hypotheses:

General Hypothesis: There are differences in the teaching levels of primary school teachers during physical education classes, as measured by the proportional categories of the Flanders System.

Sub-Hypotheses:

- The predominant pattern adopted by primary school teachers during physical education classes is the indirect non-verbal interaction pattern.

Objectives of the study:

The effectiveness and outcomes of classroom interactions require the provision of a democratic classroom climate that allows for the exchange of opinions and ideas among the involved parties during the educational situation. Our research aims to achieve the following:

- Compare the proportions of classroom interactions for teachers during physical education classes with the standard proportions of the Flanders System.
- Identify the predominant pattern during primary school teachers' physical education classes.

Significance of Study:

Our study derives its importance from the significance of teaching behaviours that assist teachers in realistically and objectively categorizing their practices to address shortcomings and enhance classroom interactions. Understanding the prevalent pattern within the classroom is crucial for adopting and implementing governing rules that regulate the type of communication during educational situations.

Study terminology:

Classroom Interaction: Hamdan defines classroom interaction as all behavioural actions that take place inside the classroom, whether verbal (spoken) or non-verbal (gestures), with the aim of mentally and psychologically preparing the learner for better learning. (Mohammed Zidan Hamdan, 2001, p. 150).

Physical Education and Sports: It is an integral part of general education, as it engages the motivations of activities within each individual for their organic, cooperative, emotional, and mental development. (Ahmed Bouskra, 2005, p. 7)

It is the integrated part of general education whose primary goal is to shape the physically fit individual in all cognitive, emotional, and social aspects

through the effective practice of physical activities. (Mohammed Mohammed El-Shahat, 2007, p. 13)

Physical Education and Sports Lesson: It is the small unit in the curriculum, encompassing all aspects of activities that the teacher wants students of a school to engage in, acquiring the skills included in these activities along with direct and indirect teaching. (Basyuni, Mohamed Awad; Al-Shatit, Faisal Yassin, 1990, p. 94)

Flanders Tool for Observing Classroom Interaction: Flanagan's system, developed in 1960, describes interactive behaviour between students and teachers. According to this system, we can expect interaction between both parties, the teacher and the student. This interaction involves practices performed by the teacher and others by the student, and it may involve shared behaviours such as silence and chaos. (Mohsen Ali Atiya, 2008, p. 130)

How to Register in Flanders Tool for Verbal Interaction Analysis:

Flanders tool was developed as an educational research instrument to understand the behaviours and interactions between teachers and students within classrooms. However, this system focuses solely on verbal interaction, considering verbal interaction as the essence of teaching behaviour. Seventy percent of a teacher's tasks within the classroom are verbal. If we observe a sufficient sample of teaching sessions, we find the following situations: either the teacher is speaking or the student is speaking. The teacher's speech can be either indirect, allowing freedom for students, or direct, restraining their enthusiasm. Students' speech can either be a response to a question posed by the teacher or an initiative taken by the students themselves. There is another case called by Flanagan 'Disturbance' or 'Chaos,' representing a disruption or a breakdown in communication between the interacting parties. (Mohammed Jarb Al-Lisasa, Pages 87-88)

For optimal use of this system, the following steps should be taken:

- Sit in a position within the classroom where you can simultaneously see the students and their teacher, observing everything happening in the classroom.
- The observer should be proficient in using this tool with a degree of automaticity and stability.
- Allow a period ranging from five to ten minutes before starting to record behaviour to understand the classroom atmosphere and observe more accurately and realistically.

- According to Flanagan's instructions, the observer records behaviour every three seconds, with twenty behaviours that can be recorded by the observer per minute.
- Take a moment when there is a change in the lesson flow, make a note in the margin about this change, and then resume the observation of verbal behaviour.
- Start and end with category number ten when observing teaching behaviour; this category represents the state of silence and chaos.
- Analyze by converting verbal communication into numbers in Flanagan's language. For example, when the teacher praises the student and encourages them to continue, this means in Flanders language a classification number (2). If this continues for more than three seconds, the observer should repeat the classification number (2) at a rate of once every three seconds. If the teacher asks questions to the students, we observe classification number (4) at a rate of once every three seconds. If the teacher continues to ask questions, it is important for the observer to estimate the duration of three seconds, and they should memorize the Flanders system automatically. Thus, when the teacher engages in any activity, the observer responds with Flanagan classifications instead of the language they are accustomed to." (Mohammed Jarb Al-Lisasa, Page 92)

Table No. (1): The standard ratios represent the Flanders classroom interaction tool

number	field	percentage
01	The teacher's words	%68
02	Student's words	%20
03	Silence and chaos	%12
04	The teacher's response	%42
05	The teacher's immediate initiative	%60
06	The teacher's questions	%26
07	The teacher's immediate questions	%44
08	Student initiative	%34
09	Orthogonal content	%55
10	Cell equality and uniformity	%50
11	Student stability	%40-25(32.5)

(Al-Zaghloul, Imad Abdel Rahim; Oqla, Shaker Al-Mahamid, 2007, page 37)

Research Methodology and Field Procedures:

The Research Method: The researcher employed the descriptive-analytical method, deeming it suitable for the research topic, given its characteristics that enable the study of teaching behaviours of primary school teachers during physical education classes according to the Flanders System.

The Research Population: The research population consists of primary school teachers in Khenchela state.

The Research Sample: The researcher relied on a sample of 8 physical education teachers from selected primary schools in Khenchela state, with a total of 280 students.

The Study Tools: The researcher utilized the Flanagan's Tool for Observing Classroom Interaction, as outlined in

Table (2): The Decimal System for Observing Classroom Interaction (Flanders).

The teacher's words	Indirect teacher words	1- Accepting feelings: The teacher accepts the student's feeling or clarifies a trend or interest expressed by the student in a non-threatening way, and the feelings may be positive or negative. 2- Praise and encouragement: The teacher presents the student's behaviour or work positively, and the joke that is made can be classified as relieving tension, provided that it does not come at the expense of another student's behaviour. 3- Accepting students' ideas: He listens to students' ideas and adds to them or amends them if necessary. 4- Asking questions: The teacher asks a question about the content or method of the lesson with the intention of the student answering it.
	direct teacher words	5- Lecture: Here the teacher presents the contents of the lesson he intends to present to the students. 6- Directions and instructions: The teacher directs or gives instructions in a way that the student is expected to comply with. Example: Open the book, page (30), and complete the first exercise. 7- Criticism or justification of authority: If the students do not comply, the teacher intends to impose his authority in multiple ways.
Student's words		8- The student's response: The response here is related to what the teacher says, such as answering a question, he asked or inquiring about a topic related to what he is talking about. 9- Student initiative: Here the student presents his ideas or inquires about something that is not related to the point at which the teacher is speaking.
Silence and chaos		10- Silence or confusion: This indicates a breakdown in communication between the teacher and the students, such as the students talking together or causing some chaos.

(Mufdi Ayed Al-Masaieed, Saud Fahad Al-Kharisha, 2012, page 76)

Validity and reliability of the tool:

Validity: The tool was applied in the Algerian environment and was presented to a group of arbitrators who expressed their approval of the tool.

Reliability: It was tested and retested, and the reliability coefficient was calculated, which is estimated at 0.94. It has a high degree of reliability for all behavioural categories.

Period: from October 10 to December of the 2022/2023 academic year.

Spatial field: Some primary schools in Khenchela state.

Analyzing and discussing the results:

Table No. (03): Represents repetitions of the results obtained during classroom observation using the Flanders tool on sample members.

Behavioural category	Type of behaviour	T1	T2	T3	T4	T5	T6	T7	T8
1- Acceptance of students' feelings	Indirect teacher words	8	6	9	7	17	18	13	16
2- Praising and encouraging students		18	15	17	16	22	25	25	24
3- Acceptance of students' ideas		21	23	21	25	32	36	33	32
4- asking questions		35	36	36	34	76	74	77	70
5- Lecture and explanation	direct teacher words	105	90	109	96	56	60	65	64
6- Instructions and directions		33	40	36	38	46	40	39	38
7- Criticism and justification of authority		23	18	25	21	15	13	12	11
8-Pupils' response	Student's words	51	68	44	65	30	31	30	42
9-Pupils' initiative		40	48	33	46	64	58	59	62
10-Silence and chaos	Common behaviour	66	56	70	52	42	45	47	41
total		400	400	400	400	400	400	400	400

Table (03) illustrates the proportional percentages obtained for the behavioural categories during the classroom observation for a duration of 25 minutes for each individual in the sample. The recorded percentages are presented in the subsequent table.

Analysis of the Results of the First Hypothesis: The predominant pattern adopted by primary school teachers during physical education classes is the indirect non-verbal interaction pattern.

Table (04): Represents the recorded percentage for behavioural categories and the standard percentages according to Flanders.

Behavioural category	Type of behaviour	P% by behavioural category	P % by Type of behaviour	S.P %	
1- Acceptance of students' feelings	Indirect teacher words	2.9375	28.65375	0.5 to 1	67
2- Praising and encouraging students		5.06		01 to 02	
3- Acceptance of students' ideas		6.96875		10 to 15	
4- asking questions		13.6875		08 to 15	
5- Lecture and explanation	direct teacher words	20.15625	34.155	20 to 50	
6- Instructions and directions		9.6875		0.5	
7- Criticism and justification of authority		4.31125		0.5	
8-Pupils' response	Student's words	11.28125	24.09375	25	
9-Pupils' initiative		12.8125			
10-Silence and chaos	Common behaviour	13.09375	13.09375	10 to 15	
total		100	100	100	100

Based on the results obtained in Table (04), we find that the teacher during the physical education class uses the direct style more than the indirect style. The percentage of indirect teaching behaviours by the teacher is estimated at 34.155%, while direct behaviours are used at a rate of 28.63%. Teaching behaviours for students are estimated at 24.093%, and the common behaviour of silence and chaos is at 13.09%. Our study's results align with Sherifi's 2019 study, where the researcher found that the dominant and controlling pattern of verbal interaction is the teacher's speech. The researcher attributes this to the limited teaching resources and the teacher's reliance on a large percentage of explanation and execution of motor skills, such as presenting the motor model, providing guidance and instructions to streamline the students' behaviour, especially in this age group, where they are more active and inclined towards exploration and experimentation. This is justified by the results obtained in the students' behaviour category, both in their responses and initiatives during educational situations. The percentage approximated by Flanagan, which is 25% of the total teaching behaviours, is consistent with the study's findings. It also aligns with the study conducted by Abdulrahman bin Suleiman Fahd Al-Ruhait, 2004, where the researcher found a statistically significant difference in all categories of verbal interaction, except for category number 6, which involves giving orders and instructions. There is no difference in the percentage of student behaviours and the percentages set by Flanagan for this category.

General hypothesis: There are no differences between the teaching level of primary education teachers during the physical and physical education session and the percentages of the Flanders system.

Table No. (05): Represents the percentages obtained during classroom observation and the Flanders percentages

Behavioural category	Type of behaviour	The total percentages obtained		Standard proportions according to Flanders	
		P% by behavioura l category	P % by Type of behaviour	S. P %	
1- Acceptance of students' feelings	Indirect teacher words	2.9375	28.65375	0.5 to 1	67
2- Praising and encouraging students		5.06		01 to 02	
3- Acceptance of students' ideas		6.96875		10 to 15	
4- asking questions		13.6875		08 to 15	
5- Lecture and explanation	direct teacher words	20.15625	34.155	20 to 50	
6- Instructions and directions		9.6875		0.5	
7- Criticism and justification of authority		4.31125		0.5	
8-Pupils' response	Student's words	11.28125	24.09375	25	
9-Pupils' initiative		12.8125			
10-Silence and chaos	Common behaviour	13.09375	13.09375	10 to 15	
total		100	100	100	100

From the results obtained in Table (05), we observe that the percentage of **the first behavioural category**, which represents the teacher's acceptance of students' feelings, is 2.93%. This exceeds the range specified by Flanders, which is 0.5% - 1%. Similarly, **the second behavioural category**, praising and encouraging students at 5.06%, has surpassed the standard percentage set by Flanders, which is 1% - 2%. As for **the third behavioural category**, accepting and using students' ideas at 6.96%, it is lower than the standard percentage set by Flanders in the range of 10% - 15%.

The fourth behavioural category, the teacher asking questions during the class at 13.68%, aligns with the standard percentages set by Flanders, ranging from 8% to 15% for teachers.

The fifth behavioural category, explanation and lecture, the teacher uses the explanation method at a percentage estimated at 20.15%, which is consistent with Flanders range of 20% to 50%.

The sixth and seventh behavioural categories show that the teacher tends to give instructions and guidance during the physical education class. The teacher's excessive use of instructions and orders surpassed the percentage specified by Flanders, which is 0.5%, while giving guidance and orders was at 9.68%, and using authority and justifying his power was at 4.31%.

The eighth and ninth behavioural categories, student talk, show that students' responses are nearly equal among all teachers, approximately within the range specified by Flanders, which is 25% of verbal interaction.

The tenth behavioural category, student silence or chaos, had a percentage of 13.09%, falling within the range set by Flanders from 10% to 15%.

From the results obtained, we find that the level of teaching behaviours for teachers during physical education classes differs from the percentages set by Flanders, especially in categories related to teacher talk. However, the results align with the standard percentages set by Flanders in categories related to student talk, silence, or chaos. Our study agrees with Sultan's 2019 study, which found that the quality level of verbal interaction for teachers is low, at 1.3 sigma, with statistically significant differences between the calculated percentages and the standard percentages of Flanders model in areas such as teacher talk, student response, content alignment, equal cells, and suppression.

The researcher suggests the necessity of conducting educational seminars, dialogues, and discussions with teachers to address the requirements and pedagogy of teaching. Empowering teachers to

communicate effectively, especially with this age group, is crucial for achieving the desired goals of physical education classes.

Based on the results obtained in Table (04), the predominant pattern adopted by elementary school teachers during physical education classes is the direct verbal interaction pattern. The researcher attributes this to the lack of necessary resources and facilities for physical education classes in this age group. Moreover, this age group requires more explanation, guidance, and instructions to streamline the behaviour of learners and direct them towards better learning.

Conclusions: Through our presentation and discussion of the results, we have reached the following conclusions:

- The possibility of using Flanders verbal interaction tool to measure teaching behaviours in physical education classes. With the necessity of applying the necessary conditions to achieve classroom observation in a way that enables us to classify the behavior of the teacher and learners, since students at this stage are characterized by activity and a lot of movement.
- The study results vary from Flanders results in categories related to teacher talk while aligning with them in student talk, silence, and chaos.
- The physical education and sports teacher uses the direct method more than the indirect method, meaning that the teacher relies on explaining and giving instructions, as well as using his authority, meaning he controls the largest amount of class time.

Conclusion:

The topic of teaching behaviours is of utmost importance as it forms the foundation for the success of the educational learning process. Therefore, administrators, inspectors, as well as teachers, should measure classroom interactions to identify strengths and weaknesses, address shortcomings, and strive to transform classroom interactions into productive and effective ones. This is particularly crucial in physical education classes, given their dynamic nature and popularity among students. It is essential to enhance students' motivation for learning and achieve the goals of the educational process.

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