

## STUDY THE DIFFERENCE BETWEEN THE PLANIFIED TRAINING LOAD AND THE ACCOMPLISHED TRAINING LOAD IN FOOTBALL DURING THE COMPETITION PERIOD

Dr. BISKRI Abdelmalik<sup>1</sup>, Dr. BISKRI Mustapha<sup>2</sup>

<sup>1</sup>Institute of Physical Education and Sports, University of Algiers 3 (Algeria), E-mail: [biskri.abdelmalik@univ-alger3.dz](mailto:biskri.abdelmalik@univ-alger3.dz)

<sup>2</sup>Institute of Physical Education and Sports, University of Algiers 3 (Algeria), E-mail: [biskri.mustapha@univ-alger3.dz](mailto:biskri.mustapha@univ-alger3.dz)

Received: 04/2025, Published: 05/2025

---

### Abstract:

The The study aims at knowing the difference between the planified load training and accomplished load training during competition period ,and that it is why we used the compared description method on a sample contains 32 players that was used by the intentional method and to collect datas we used polar team 2 device, after having collected the datas and and statically treated it we found that difference with stastical significance exists in football for the between of the accomplished load training thus , the study urges the reliance of planning a training program according to the moder football requires and also using load quantification method and modern technology for quantifying load training.

**Keywords:** Planified load, Accomplished load, football, competition period.

---

### 1. Introduction

sport training is a complex educational process, which leads to organize physical repeated exercises according to its amount and intensity, for example, producing increased efforts gradually for its development, stimulating "supercompensation" processes in the body and also ameliorating tactical physical, mental and technical skills of the athlete in order to improve and boost his performance during competitions ( vittori 1969) .

the main object of the coach is to improve performance by the ideal amount management of the training and the convenient healing period that allows the psychological and psychological adaptations to reach the maximum before competition.

this it is important to determine the training results ( psychological lets and performance) and the training process ( internal and external load ) in order to increase the level of fitness of the athletes the load of training should be précised to incite sport private adaptations ( impelliweri 2004, foster 1996 et al )E several studies have indicated the importance of diversification of training loads in the short and moderate rum ie daily alternating periods of heavy and lights training to get the perfect performance ( Estene - Zanao 2007).

training load can be fevered into two: external load or internal load (halson2014) external load is knows as the work (performance) that is done by the athlete and it can be measured despite its inside (internal) specifics whereas the internal loads is the relative and imposed physiological and psychological overwork ( halson 2014 ) the internal load gives us more information about degrees of adaptations and healing from fatigue.

despite the importance of the two types to understand the training load supported by the athletes it should be a perfect mixture of the two to control the right training ( halson 2014 ) in fact there should be a good correlation between the fatigue not only the internal load ( halson 2014 ).

The ability of controlling training is very important to quantify and evaluate the questioning of the athletes and load performance also to determine the relationship between training and performance ( mujica 2006 ) in the last years programs were developed to quantify training load in football. the internal and external load some were less others were more accepted for many reasons ( Vazquez 2012).

Internal load is one of the components for load training in general and it is a significant indicator to know the physiological changes in the vital body organs that represent its response to the external physiological stimuli's these changes and response in the vital body organs are one of the standards to define the physiological sport level we can recognize the response of the functional organs through physiological indicators such as heart beat blood pressure and the amount of lactic acid in blood and other functional by using advanced devices.(Ahmed Yocef Motib EL Hasnwi 2014/ p49).

In order to realize the physical performance of the training program the coach must balance between the latter and the load training of the footballer to discover to fatigue indicator and fulfil good recovery.

Hence, accurate and correct knowledge of the values of the training load for players is the most important indicator of the effectiveness of the training program to achieve physical performance according to the requirements of modern football, so the coach must be fully aware of the dynamics of the training load for his players so that he can plan and program the appropriate training program and modify it according to the requirements of modern football And given the development of technology in the sports field and the means of evaluating and controlling the training load in football in order to improve performance and achieve the best results, it is important that the planned training load fit with the accomplished et training load in order to avoid excessive training and improve recovery through monitoring and ambushing the training load, especially the completed training load These data motivated our attention to examine the level of difference between the planned training load and the accomplished training load in football during the competition period, and prompted the researcher to ask the following question:

-is there statically significant differences between planned load training and accomplished load training in football in competition period?

-the research chose the hypothesis like so:

-there are statically significant differences between planned load training and accomplished load in football in competition period

- The aim of this study was to:

1- Know the difference level between planned load training and accomplished load training in football in competition period.

2- The extent to which the planned load training matches the completed training in football in competition period.

3- Know the extent to which the trainer respects quantification and training load control in football.

The importance of this research is to:

-pay attention to the ways of quantification and controlling load training.

-Push the concerned researchers to make future hypothesis in controlling and quantifying training load field.

-Deal with new technical and technological devices for recording training load like polar team 2.

## **2-Key words in the study:**

**A- Planified load:** It is the amount of training load which the trainer makes in the planifying the daily and weekly training program such us Weak/ moderate or big load according to the aim of the training season.

**B- Accomplished load:** It is the real amount of training load that it is done by the trainer during the training season by quantifying the training load with one of the quantification method.

**C- Competition period:** It is a period that relies on competition calendar from 8 to 10 months (according to the country and the level of playing). It consists of weekly training seasons called **Micro-cycles** aimed at transforming general and private fitness into competitive fitness and acquiring ideal capabilities for performance and keep it for alone period of time. Create heavy competitive loads (often 2 matches which makes it important to program two renewal and recovery (regeneration) every week in the moderate training session, especially for young, It is also necessary to make educational moderate training sessions during the formation (Zouagui Khalifa and Bouhlata Sofian 2019/ p.70).

**3. Football:** It is a collective game between two teams, each of them consists of eleven players, using a puffed round ball that has a specific international scale in a rectangle stadium with specific dimension, in the end of each edge there is a goal , Each team tries to kick the ball into it through a goal keeper in order to get a goal, the ball is moved by feet and head, during playing, only the goal keeper is allowed to touch the ball with his hands inside the penalty zone( Djamiluna saf 1998 p 5).

## **4. Pervious and similar studies:**

- **Study of the Radwan Boubacar (2017) entitled:** “Evaluation of the load training during training session for football clubs” The study aims at evaluating load during training sessions for professional Algerian football clubs. The study procedures was for the first professional clubs association in order to determine the amount and type of load training that it is programmed weekly, its standard deviation also the average training intensity, training monotony value “training monotony” and over work training indicator value “constraint training” by using the way perceive efforts session “RPE session” characterized by honesty and validation confirmed by many researchers and this using the program of content analysis on a simple consists of 20 football players belong to first professional clubs association and the result of the study is the possibility of using the above mentioned method as a right tool to determine the amount of load training in football and get training monitory and overworking indicator value that allowed Vs to evaluate the load, monitory and overworking in training and reveal the deference in the content and intensity of the training for these clubs. In the end, the researcher game suggestion for future studies and

researchers about ways of quantifying training load and evaluating in sports training field especially in football according to the demands of modern football.

**- study of the Bonab Muhammad Al-Saleh bin Qara Yasin (2018) entitled:** The effect of training load during the period of physical preparation on the maximum consumption of oxygen and heart rate during rest for football players under the age of twenty. This research aims to study the effect of the training load during the preparation phase of physical activity on the variables of heart rate at rest and maximum oxygen consumption on the one hand, and to evaluate the training load for the phase of physical preparation for Algerian football. Under-20 team. The research sample included 17 players who officially represented the Skikda youth team in the 2016-2017 season, and they accepted to participate in the procedures of this research. The results showed that the training load applied to the research sample during the phase of physical preparation significantly affected the decrease in heart rate at rest, and the increase in the maximum oxygen consumption.

**5) - Study of the ghost of Khair al-Din and bin Laabed Abd al-Rahim (2018) entitled:** "Analysis and quantification of load training during physical preparation stage before season" The goal of this study is analyzing and quantifying training load for the Algerian professional football team during the physical preparation stage before the beginning of the season ,Methodology We analyzed and quantified the daily and weekly training loads for method RPE, Results Low training load during general preparation stage that lasted for bus weeks, it gradually increased to the edge (top) during the special preparation stage .The physical preparation ends in the second week; also the special preparation stage, the effort self sensing method allows for a better distribution of training loads during this phase.

#### **The practical side:**

#### **The methodological methods used:**

#### **Exploratory study:**

Before starting the main study the researcher made some procedures which aimed at:

-Meeting both the sport technical loss of USMA and NAHD football teams.

-getting closer to the USMA and NAHD football coaches

-programming a formative day to how to use the device Polar team 2 with a study simple

#### **Research Methodology:**

The program is known as the method which the researcher follows in studying a problem aiming at discovering the truth (Abd El Rahman El Badwi 1993-p 05), In this study, the researcher was convinced that it is important follow comparative descriptive program as a scientific method suitable to the nature of the research problem descriptive method is known as the method which aims at collecting dates in order to test obligation and answering questions concerning the present state of the research sample members.

**5.1 Human field:** Football players under 21 years old of both USMA and NAHD teams of the first professional football league.

**5.2 place field:** Omar Hamadi stadium in Bouloghin and Ben siam stadium in Hussyn dey.

**5.3 Time field:** January 5<sup>Th</sup> 2020/February 5<sup>th</sup> 2020.

## 6) Research community:

Society consists of all the elements and problem vocabulary or under study. In this research society contains 400 football players involving in the first professional association football clubs for the season 2019/2020.

### -1 sample search:

is known as a part of the research community from which field data are collected and it is a part of the whole that it is to say, a group of the community members is taken and represented the research community (Rachil El Zezwaki 2007 p 334).

## 7) Collecting information and research tools

-Arabic and foreign sources and references.

-Personal meeting

- Managing both USMA and NAHD clubs of the 1<sup>st</sup> professional of football league.

-polar team 2 device to quantify training loads.

-Edward method to quantify training load which is about multiplying the past time in the five intensity zone to the coefficient of each zone, finally, by adding products, the taken time in each intensity zone to its coefficient get the work load.

### The zone with it specific coefficients:

**Zone 1: 50, 60%**

**Zone 2: 60, 70%**

**Zone 3: 70, 80%**

**Zone 4: 80, 90%**

**Zone 5: 90, 100%**

### -statistical methods:

The researcher relies on the following statistic tools for the statistic package program SPSS.

The Wilcoxon test coefficient was used, and this test is used to determine whether there is a difference or differences between two related samples. It is an alternative to the Sign-rank test. It is called the test of rank signs for T-linked samples.

### Presentation, interpretation and discussion of the results:

Presentation and analysis of the results of the hypothesis: There are statistically significant differences between the planned training load and the accomplished training load in the football competition period.

**Table No. 01:** There are statistically significant differences between the planned training load and the accomplished training load during the football competition period

---

Statistical variables	rank sign	Sample volume	average rank	total ranks	Test valueZ	probability value
-----------------------	-----------	---------------	--------------	-------------	-------------	-------------------

---

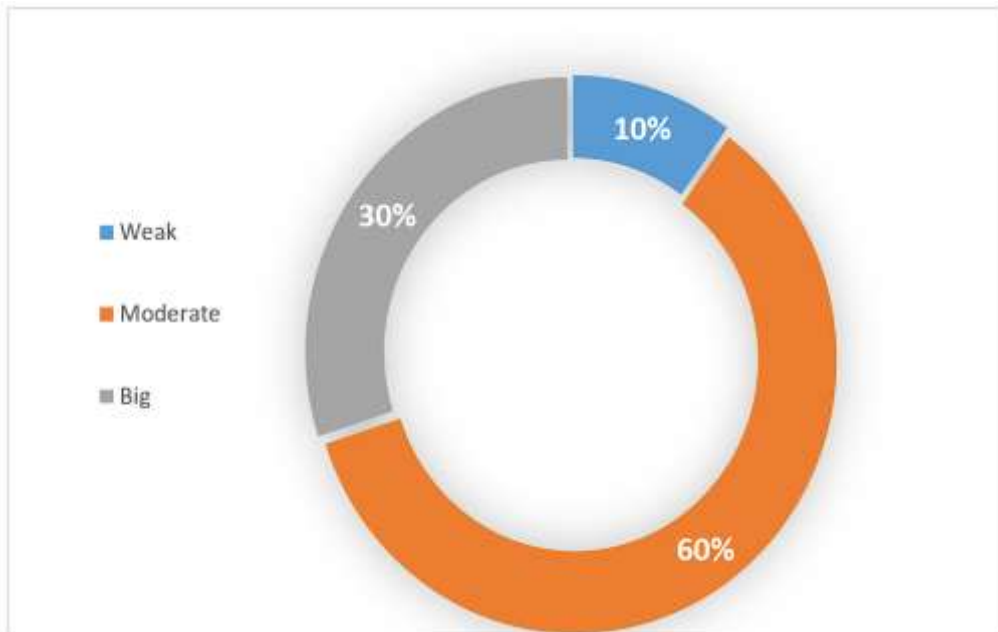
Planned load Accomplished load	positive ranks	20	10.50	210.00		
	Negative ranks	0	00	00	-3.920	0.000
	equal ranks	0				

Significance level 0.05

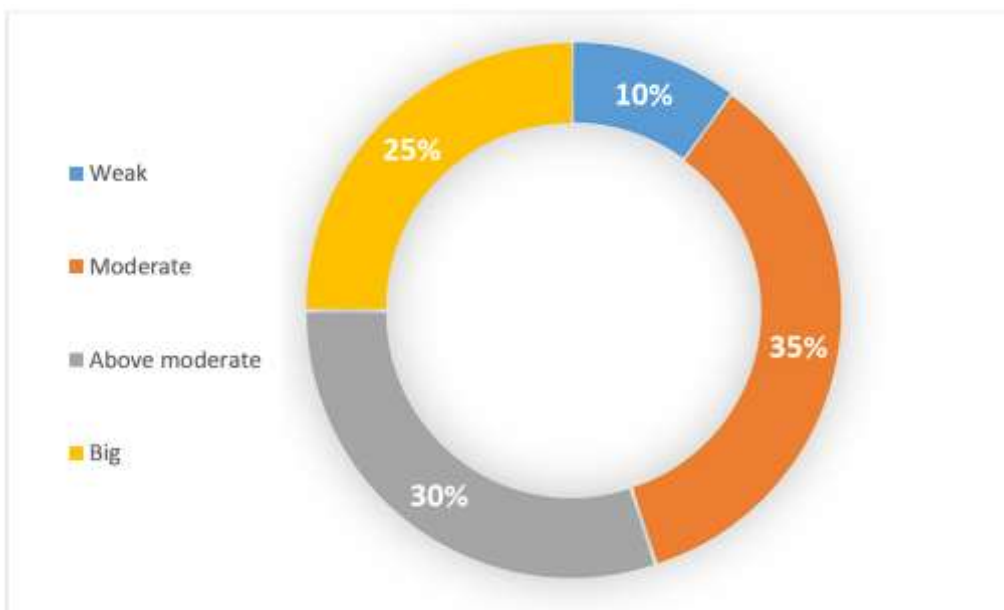
Statistical decision: There are statistically significant differences

The results of the above table shows the test of the difference between planned training load and accomplished training load in competition period of the studied teams and its aim is to determine the degree of the similarity and difference between the two loads training the study period for many scientific reasons the researcher confirms the test value  $z$  (-3:920) which is a significant statically value in the level of the 0,05 , so that the possible value (SIG) is lesser than the significance level thus refusing the zero hypotheses and accepting alternative hypothesis which confirms the existence of the differences between the two loads in the suggested rates field and the existence of these differences are a proof that planned training load doesn't match the accomplished training load because the trainers donit give much importance to the scientific and theoretical field to codify the load and the way of its calculation but they only give specific indications to determine the load that it is why the researcher confirms that load level has to be abide by criterias and conditions which where not taken into consideration and that is why differences were found , the codifying of load training is an important factor to achieve the underhined aims that its results will be shown in a direct why in various physical and skillful private needs , that it is why all the tools and scientific coefficients must be used so that the planned load training matches the accomplished load training according to the players abilities

**A graph representing the planned load:**



**A graph representing the accomplished load:**



**Conclusion:**

Controlling the monitoring of the training load is an important point for the coach and the physical preparation t allows to get a lot of information's which concern daily and weekly load that it is managed by themselves in order to discover fatigue indicator and avoid injuries and also improve recovery process after training competition and this due to the good pacification of the daily training by specify the right does of the training sessions using controlling and quantification ways of load training.

Thanks to our study we shed some light on the difference between planified loaf training and accomplished load training in football in competition period we followed two microcycle training sessions in which we compared training sessions and then we quantified the training sessions heart rate Edwards we came up with a conclusion that statically significant difference exist between the [www.psychologyandeducation.net](http://www.psychologyandeducation.net)

planned load training and accomplished load training for the benefit of the accomplished load training.

These differences are proof that planned training load doesn't match the accomplished training load because the trainers don't give much importance to the scientific and the theoretical field to codify. The load and the way of its calculating but they only give superficial indications to determine the load that is why the research confirms that load level has to abide by criteria's and conditions which were not taken the ...of Load training is an important factor to achieve the underlined aims and that its results will be shown in a direct way in various physical and skillful private needs that it is why all the tools and scientific coefficients must be used so that the planned load training matches the accomplished load training according to the players abilities.

here are some suggestions and recommendations

- accreditation a planned program according to the modern needs of football.
- using technology to quantify load training such as word and RPE methods.
- using technology to quantify load training such as polar team 2

#### **List of references:**

- 1- Basile Matteo ET Prof.re Colli Roberto (2011) Il controllo dell'allenamento nel calcio tramite session RPE, frequenza cardiaca e potenza metabolica tramite Gps <https://docplayer.it/16120477-Il-controllo-dell-allenamento-nel-calcio-tramite-session-rpe-frequenza-cardiaca-e-potenza-metabolica-tramite-gps.html>. Le 13/10/2019 a 00h45
- 2 -Mario Sandúa Escribano : (2018) Validacion tom-scail como herramienta para programar la carga de entrenamiento en jóvenes futbolistas <https://buleria.unileon.es/handle/10612/8478?show=full>. Le 11/11/2019 a 10h 15

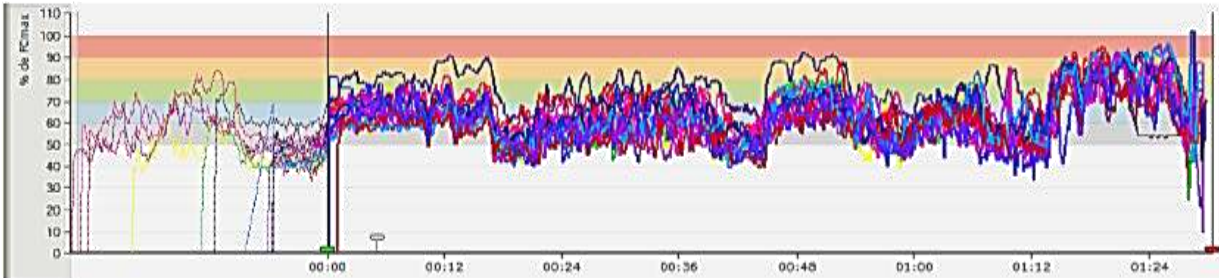
#### **- In the arabic language:**

- 1- Ahmed Youssef Miteb Al-Hasnawi. . (2014) Sports Training Skills, Amman, Dar Safaa for Publishing and Distribution.
- 2- Abd al-Rahman al-Badawi. (1963). Scientific Induction Methods, Egypt, Al-Kitab Center for Publishing.
- 3- Rachid Zawati. (2007.) Methods and tools for scientific research in the social sciences, Algeria, Dar Al-Huda for publication and reprint.
- 4- Zwaghi Khalifa and Bouhalata Sufyan. (2019). The effect of a football training program during the winter truce on the level of some special physical characteristics of football players. Master's degree, Institute of Science and Techniques of Physical and Sports Activities, University of Oum El Bouaghi, Algeria.
- 5- Jamil Nasif 1998, Encyclopedia of Sports Games, Beirut, Arab Thought House.
- 6- Radwan Abu Bakr 2017, download the training pregnancy calendar during the training sessions for football clubs, the Scientific Journal of Science and Technology, Physical and Sports Activities, issue fourteen, Mostaganem University.

7- Gabba Khair El-Din and Ben Laabed Abdel Rahim (2018), analysis and quantification of the training load during the pre-season physical preparation period, Scientific Journal of Science and Technology, Physical and Sports Activities, Fifteenth Issue, Part One, Mostaganem University.

**Appendices:**

**Training Session Report**  
 17/03/2019 - Football 16:34-18:30



**Training Session Report**  
 17/03/2019 - Football 16:34-18:30

			FC			Temps sur la SportZone				Au-dessus du se...	Charge de travail	Kcal	
			Minimale	Moyenne	Maximale	50-59	60-69	70-79	80-89				90-100
1	nadjib berabah	01:29:36	46	122	178	00:36:19	00:28:40	00:13:41	00:09:48	00:01:08	00:02:13	93	823
	Max FC: 191		24 %	83 %	93 %	40,4 %	32,0 %	15,3 %	11,0 %	1,3 %	2,5 %	100,0 %	100,0 %
2	abdelah nasef	01:28:55	80	128	188	00:38:08	00:26:06	00:16:10	00:06:24	00:02:07	00:03:21	91	788
	Max FC: 201		39 %	62 %	93 %	42,8 %	29,4 %	18,2 %	7,2 %	2,4 %	3,8 %	100,0 %	100,0 %
3	sohaib noui	01:28:29	84	151	187	00:08:18	00:16:56	00:28:52	00:27:12	00:07:13	00:10:29	184	1102
	Max FC: 200		42 %	75 %	93 %	9,4 %	19,1 %	32,6 %	30,7 %	8,2 %	11,9 %	100,0 %	100,0 %
4	fares hamadou	01:28:43	89	130	179	00:27:54	00:38:47	00:14:30	00:07:29	00:00:03	00:00:43	93	854
	Max FC: 201		44 %	64 %	89 %	31,4 %	43,7 %	16,4 %	8,4 %	0,1 %	0,8 %	100,0 %	100,0 %
5	bilal amrani	01:27:57	59	141	192	00:12:39	00:26:22	00:35:41	00:09:39	00:03:36	00:04:47	128	998
	Max FC: 199		29 %	70 %	96 %	14,3 %	30,0 %	40,8 %	11,0 %	4,1 %	5,4 %	100,0 %	100,0 %
6	mohamed latrech	01:29:15	26	118	179	00:52:58	00:26:57	00:05:43	00:03:24	00:00:13	00:00:27	67	694
	Max FC: 200		13 %	59 %	89 %	59,4 %	30,2 %	6,4 %	3,8 %	0,2 %	0,5 %	100,0 %	100,0 %
7	abdelah sihali	01:28:39	92	138	187	00:17:17	00:36:12	00:26:01	00:07:23	00:01:46	00:02:10	107	928
	Max FC: 200		46 %	68 %	93 %	19,5 %	40,8 %	29,4 %	8,3 %	2,0 %	2,5 %	100,0 %	100,0 %
8	chakib taghemount	01:28:25	79	121	182	00:46:08	00:26:08	00:10:04	00:05:13	00:00:52	00:01:20	77	716
	Max FC: 200		39 %	60 %	91 %	52,1 %	29,6 %	11,4 %	5,9 %	1,0 %	1,5 %	100,0 %	100,0 %
9	nadir djabri	01:29:39	41	123	192	00:45:11	00:23:49	00:11:17	00:05:53	00:03:29	00:03:52	89	759
	Max FC: 200		20 %	61 %	96 %	50,3 %	28,6 %	12,8 %	6,6 %	3,9 %	4,3 %	100,0 %	100,0 %
10	abdenour bounaas	01:29:40	22	125	185	00:41:26	00:27:03	00:10:36	00:08:51	00:01:44	00:02:23	89	781
	Max FC: 201		10 %	62 %	92 %	46,2 %	30,2 %	11,8 %	9,9 %	1,9 %	2,7 %	100,0 %	100,0 %
11	aymen melih	01:29:53	78	134	188	00:24:18	00:31:10	00:24:08	00:08:19	00:01:58	00:02:50	107	908
	Max FC: 200		39 %	67 %	93 %	26,9 %	34,7 %	28,9 %	9,3 %	2,2 %	3,2 %	100,0 %	100,0 %
12	massinissa amrani	01:29:38	89	132	209	00:27:05	00:33:43	00:20:56	00:07:01	00:00:53	00:01:34	100	872
	Max FC: 201		44 %	65 %	103 %	30,2 %	37,6 %	23,4 %	7,8 %	1,0 %	1,8 %	100,0 %	100,0 %
14	hani gherib	01:29:44	75	128	196	00:45:18	00:21:07	00:10:55	00:07:52	00:04:32	00:06:19	100	811
	Max FC: 201		37 %	63 %	97 %	50,4 %	23,5 %	12,2 %	8,8 %	5,1 %	7,1 %	100,0 %	100,0 %
15	fouad essaid	01:28:38	79	118	184	00:52:47	00:26:19	00:05:50	00:03:13	00:00:29	00:00:50	68	679
	Max FC: 201		39 %	58 %	91 %	59,6 %	29,7 %	6,6 %	3,6 %	0,5 %	1,0 %	100,0 %	100,0 %
16	anes boudali	01:27:01	68	121	178	00:45:09	00:24:25	00:09:45	00:04:35	00:03:07	00:03:42	71	706
	Max FC: 201		33 %	60 %	88 %	51,8 %	28,1 %	11,2 %	5,3 %	3,6 %	4,3 %	100,0 %	100,0 %

