مجلة سيناء لعلوم الرياضة

The effect of asynchronous learning strategy (reversed learning) on the performance level of some rhythmic gymnastics skills

*** Dr/ Mona Yahya Amin Al-Bassal**

*** Lecturer in Faculty of Physical Education, University of Sadat City**

First: Research Introduction:

This introduction or paragraph referred to **by P** ,Abeysekera, L & Dawson **2014** was the idea of this study of flipped classroom learning, which is– –Flipped Learning **to** as referred **by Zohey ,Nadeeb 2018** as a turbo model. It aims to use modern technologies and the Internet in a way that allows the teacher to prepare the lesson through videos, audio files or other media, for students to view at home oranywhere else using ters, smartphones or their compu tablets before attending the lesson, while the lecture time is devoted to discussions, projects and exercises. Video is an essential element in this style of education where the teacher prepares a video clip lasting

The idea of " flipped learning is based on the reversal of the educational process, instead of students receiving new concepts in class and then returning home to do homework in traditional education, students here in ing receive new flipped learn concepts for the lesson at home by preparing a video clip lasting between 5 – 10 minutes, and sharing it with them on one of or ,.the sites or social networks share videos, multimedia or educational games from es electronic information sourc such asYoutube for Education". (Abeysekera, L., & Dawson, P. 2014)

treat general weakness in traditional education and develop the skills of learners, as learning with the flipped learning strategy is based on investing technology to benefit from it in the educational process, so that the teacher can take advantage of class time to discuss learners in lessons after watching them explain them through short videos, This, in turn, saves class time, and is therefore an educational mploys strategy that e asynchronous learning by watching recorded videos of lectures and lessons, which motivates students to watch them as homework before attending a class or lecture that allocates their time to participate effectively in solving methods -problem ..ctivelycolle(Pashler et al. 2008), (Pope, et al. 2011), (Bergmann, J., & Sams, A. 2012b), Berrett, D. 2012), (Fulton, K.P. 2012), (Tucker, B. 2012)

between 5 to 10 inutes and m shared with students on a or social networks, so **website** the concept of flipped classroom largely ensures the optimal use of the teacher's time during the lesson, lesson or lecture, where the teacher assesses the level of ing of the students at the beginn lecture and then designs activities within the classroom by focusing on clarifying concepts and fixing knowledge and skills; He then supervises their activities and provides appropriate support to the defaulters, so that the levels of ing and educational understand achievement are very high, because the teacher took into account the individual differences between the .learners(Zohey Nadeeb 2018)(Abeysekera, L., & Dawson, P. 2014)

Learning based on the flipped learning strategy is one important effective of the most modern solutions based on the use of modern technologies to

Flipped Learning is one of the types of blended learning that uses technology to transfer e classroom, lectures outside th and the flipped learning strategy is the popular idea these days, which is advocated by everyone, starting withBill Gates , founder and former CEO of the giant company Microsoft, where he sees in this type of education and an example of exciting promising educational .innovation(Lage, et al. 2010), (Baker, J.W. 2000), (Bergmann, & Sams 2012a,b)

Flipped learning is an educational strategy that reflects the traditional learning by providing environment educational content online or ugh any other means thro through which discussions and viewing educational materials such as photos and videos)) such as WhatsApp can be made available outside the classroom. They transmit activities, including activities that may have been usually considered omework, in the classroom. In h the flipped learning, students collaborate on , lectures watch online discussions or any educational group, or do research at home while engaging in concepts in the classroom under the guidance of .a mentor(Ryback, 2008)، (Rotellar, 2016)

,Accordingly the teacher's interaction with students in the flipped learning strategy can be more personalized and lessrelevant, and students are actively involved in acquiring knowledge and building as they participate in the learning .process and its evaluation (Abeysek, Dawson 2015), (Alvarez 2011), (Baker 2010)

Inversely flipped -learning is divided into learner centered model instruction, where classroom time explores topics in more depth and creates meaningful learning s, while educationalopportunitie such as online technologies

problem solving, .(.etc(Mao, et al. 2017)

2. Instead of learning in the ,traditional classroom Flipped Classroom uses based -a more app approach for students ing on train-such as hands) solving -and problem .(activities(James, Glynn 2013), (Sharma, et al. 2015)

3. Easy access to the Class Flipped app is very convenient, especially for students who may have difficulties traveling to the physical classroom. These students will still have the basic information for the online course. (Maria, Kettle2013)

4. Communication is highly emphasized in the flipped Classroom setting, which mainly refers to: student-student and teacher-teacher

videos or WhatsApp are used to deliver content" outside the " classroom. In flipped learning, content delivery" is through a " variety of forms. Often.. Video lessons prepared by the teacher .to deliver content are used (Heyer 2018), (Abeysekera, 2015)(Marco Ronchetti, 2010)(Greg Top, 2011)

The primary goal of flipped classes is to provide a greater focus on students' application of theoretical concepts rather than realistic of recall or straight transfer .information

Benefits of flipped learning or flipped classes:

There are many benefits attributed to the idea of using the flipped Classroom curriculum, including:

1. An empirical study in university reading defines the reversed study ing all approach in includ forms of learning (e.g. oral, visual, listening, practical training,

at the end of the
This, in turn, will course.
make them more prepared
re for more difficult futu
.courses(Rotellar, et al. 2016)

According to and in support of the above.. this study is based on providing the content of the lessons through a teaching strategy using the method of flipped learning with the aim of raising and improving the level of performance of rhythmic gymnastics skills in the physical education lesson for students of practical education, where the researcher noticed through **his work at the Faculty of Physical Education that** the methods and means used to learn and raise the level of performance of rhythmic gymnastics skills in the physical education lesson It lacks the motivation of the learner and the desire to learn more skills, considering that their use after a while leads the learner to a

interaction. (Özdamlı, Aşıksoy 2016)

5. Flipped Classroom uses model-based student-centered teaching to ensure that the course is primarily intended to contribute to the student's overall success in obtaining a relevant and effective education. (Özdamlı, Aşıksoy 2016)

6. It basically avoids the basic idea of "stacking" theexams and forgetting the information after the test, as it encourages students to understand the rationale behind the information presented to them. (Rotellar, et al. 2016)

7. Students must interpret
onsibilities given the resp
to them in relation to
learning the basic
information provided, as
their personal work and
contribution are reflected
in the grade they receive

management and system control, evaluation, teaching methods and methods) for students of practical education in the physical education lesson.

Research hypotheses:

1- There are statistically significant differences between the average of the pre- and post-measurements of the experimental group (teaching strategy group) in the level of performance of rhythmic gymnastics skills under research in favor of the post-measurement.

2- There are statistically significant differences between the average of the pre- and post-measurements of the control group (explanation and presentation group) in the level of performance of rhythmic gymnastics skills under research in favor of the post-measurement.

3- There are statistically significant differences in dimensional measurements

sense of monotony and boredom, and these traditional methods are not commensurate with what the world has reached now of technological uses in the educational process.

Thus, this research is based on providing multiple alternatives in teaching methods and content through this strategy (flipped learning strategy) in order to find alternative paths for learners in order to learn and raise the level of the educational process.

Research Objective:

The aim of the research is to design a teaching strategy based on the use of flipped learning and to know its impact on the level of performance of rhythmic gymnastics skills (skills: setting goals, lesson planning, preparing and equipping the lesson place, presenting and presenting the lesson, continuity of the lesson, diversity of stimuli and motivation for learning).Using teaching aids, classroom

traditional lectures athome via videos. (MORAN, et al. 2014)

Rhythmic gymnastics skills: In this research, it means the skill aspects of the implementation of the physical education lesson, which are the skills of: setting goals, lesson planning, preparing and equipping the lesson place, presenting and presenting the lesson, the continuity of the lesson, the diversity of stimuli and motivation for learning, the use of teaching aids, classroom management And adjust the system, evaluation, methods and methods of teaching. (procedural)

Search Procedure:

First: Research Methodology:

The experimental approach using the experimental design of two groups (experimental and control) and between the experimental and control groups in the level of performance of rhythmic gymnastics skills under research in favor of the experimental group.

Search terms:

Teaching strategy: It is the use of technology and technological means in the educational process through the method of flipped learning through the international information network "Internet", and employing it in delivering the academic content before and outside the lecture by watching short videos at home or anywhere, and thus employing lecture time to guide students and test their skills in applying knowledge and interaction in applied activities, i.e. students do homework and activities in School (educational institution), hear

presentation is used to improve the level of rhythmic gymnastics skills under research, and it consists of (10) students.

The sample size of the survey was (10) students from the research community and from outside the basic sample, Thus, the size of the sample of the basic and survey study included (30) students.

Third: Means and Tools of Data Collection:

A- Data Registration Form: (Appendix 1)

A form has been prepared to record the data of the members of the research sample in terms of: (name - age - grades of the rhythmic gymnastics skills assessment form) as shown in Appendix (1).

Mental Abilities Level -B

Appendix) **:Test**2(

The verbal intelligence test was used for the secondary and university stages, which he by Tribal measurements And after Per group.

Second: Research Community and Sample:

The research community is represented by the students of the third year of the Faculty of Physical Education – Sadat University for the academic year 2017/2018, and the actual sample was selected to conduct the basic experiment in a random way and consisted of (20) students from the schools of scientific education in Sadat, and the sample was divided randomly into two groups as follows:

Experimental group: The teaching strategy using the flipped learning method is used to improve the level of rhythmic gymnastics skills under research, and it consists of (10) students.

Control group: The method of explanation and

the third year (from the research community and from outside the basic sample) with the aim of conducting scientific transactions for the intelligence test (honesty - stability) as shown in Table (1):

preparedGabir, Mahmoud (2007) .

Scientific parameters for the test:

To ensure the suitability of the test for the research community, the test was applied to a sample of a survey study consisting of (10) students from

Table (1)
the differences between the upper and lower The significance of quartile of the intelligence test

N=8

Calculated value of "T"	The difference between the two averages	Lower spring ن2 =4		Top Spring ن1 =4		Variables
		on ±	Going to	± on	Going to	IQ test
3.45 *	5.27	1.75	85.50	1.85	90.77	

Tabular "T" at (6, 0.05) = 2.45 (two directions)

differences between the upper and lower quartiles in favor of the upper quartile and thus the validity of the IQ test.

It is clear from Table (1) that the calculated value of "T" is greater than the tabular "T", which indicates that there are

Table (2)
Stability correlation coefficient between the first and application of the IQ test

N = 10

Correlation coefficient	Second application		First application		Variables
	± on	Going to	± on	Going to	
0.946 *	1.91	86.84	1.89	86.49	Q testI

The form contains (10) teaching skills, which is shown in the following table:

Survey:

The teaching strategy (flipped learning) was tested by presenting the site to the sample of the survey study in order to identify the clarity of the images, graphics and videos contained in the teaching strategy on the website, and the result of that experiment was the clarity of all the contents of the flipped learning strategy.

Fifth: The duration of the study units (flipped learning strategy, explanation and presentation method):

The teaching strategy and the method of explanation and presentation were implemented on the basic study sample of (20) students, as shown in the following table:

It is clear from Table (2) that the calculated value of "t" is greater than the tabular "r", which indicates a correlation between the first and second application and thus the stability of the test.

C – Form for evaluating rhythmic gymnastics skills: (Appendix 3)

The evaluation form for his rhythmic gymnastics skills was usedAbdallah 2008Where the form aimed to "identify the level of performance of rhythmic gymnastics skills for students of practical education the physical education in lesson" and the form was by reviewing ٢٠٠٨prepared in :the following references (Abdallah 2008), (Essam 2007), (Moustafa, Fathy 2002), (Zaghloul, Hany 2001), (Zaghloul, Moustafa 2004), (Lamia 2002), (Ahmed et al. 2005), (Zaghloul et al. 2001), (Bodour, Suheir 2006), (Nisreen 2007), (Nawal, Mirvat 2002) and (Wafika 2002)

Table (6)
Time distribution of the two research groups

M	Content	Time distribution
2	Duration of application	10 weeks
3	Number of units (lessons) per week	Two units per week
4	Total number of study units	20 Count
5	Unit time	45 BC

only in the method of learning and implementation for each group, where the learning and implementation of the experimental group was through the teaching strategy via the website, while the control group was through the method of explanation and presentation by the teacher, and Table (7) and Appendix (5-b) shows the distribution of teaching content to the experimental and control research groups.

It is clear from Table (6) that the duration of the application of the program is (10) weeks, with a total of (20) study units for each of the two research groups.

Sixth: Distribution of study content (educational content) to the two research groups:

The time distribution of the program was unified for the experimental and control groups, and the difference was

Table (7)
Distribution of the study content to the total units of thetwo research groups

(Teaching content (rhythmic gymnastics skills	*The week*	*Unit*
Goal setting skill	**1**	**1 . 2**
Lesson planning skill	**2**	**3 . 4**
place of the lesson The skill of preparing and equipping the	**3**	**5 . 6**
The skill of presenting and presenting the lesson (implementing (the lesson or mastering the scientific material	**4**	**7 . 8**
Lesson continuity skill	**5**	**9 . 10**
The skill of diversity of stimuli and motivation to learn	**6**	**11 . 12**
The skill of using teaching aids	**7**	**13 . 14**
Classroom management and system control skill	**8**	**15 . 16**
Evaluation skill	**9**	**17 . 18**
Skill of teaching methods and methods	**10**	**19 . 20**

Seventh: Research Measurements :

1- Moderate distribution:

It is clear from Table (7) that the teaching content has been distributed to (20) study units.

Table (8)
Moderate distribution of the population and sample of research n = 30

Statistical Treatments				Unit of measurement	Variables	M
Torsion coefficient	*Broker*	*Deviation*	*Average*			
0.42	**20.00**	1.07	20.15	eary	**Age**	1
- 0.71	87.00	1.90	86.55	degree	**wits**	2
0.01	169.00	20.56	169.04	degree	**Rhythmic Gymnastics Skills Assessment Form**	3

distribution of the population and the research sample.

2- Equivalence (tribal measurements):

It is clear from Table (8) that the previous variables range between (-3, +3), which indicates the moderation of the

Table (9)
Equivalence of the two research groups

n=20

Value of t	The difference between the two averages	Control group N2=10		Experimental Group n1=10		Variables	M
		on ±	s	± on	s		
0.76	0.04	1.10	20.18	1.06	20.14	**Age**	1
0.84	0.06	1.92	86.58	1.91	86.52	**wits**	2
0.80	0.05	20.54	169.05	20.51	169.00	**Rhythmic Gymnastics Skills Assessment Form**	3

Tabular "C" at (18, 0.05) = 2.10

implementation was carried out according to the following:

i) How to implement the flipped learning strategy:

- Students first view the explanation, information, knowledge and educational videos of rhythmic gymnastics skills for the physical education lesson on the website, i.e. before implementation at the practical education school (at home, for example).
- Students know through the educational website or through the researcher what is required to prepare the duties and tasks for the part

It is clear from Table (9) that all the values of the previous variables are not statistically significant , which indicates equivalence between the two research groups.

3- Application of the study (flipped learning strategy, method of explanation and presentation):

The **flipped learning strategy was applied, and the method of explanation and presentation** for a period of (10) weeks and a total of (20) units, which was explained in tables (6, 7), and the

- The researcher observes the performance of students as they implement what has been explained and presented, with the researcher correcting errors, providing feedback, and modifying students' performance.

4- Dimensional measurements:

The post-measurements of both the experimental and control broadcasting groups were carried out in the same order and under the same conditions as the pre-measurements.

Eighth: Statistical Treatments:

The following statistical treatments were used: arithmetic mean, standard deviation, median, torsion coefficient, correlation coefficients, half segmentation, "T" test.

Presentation and discussion of results:

to be implemented in the school.

- The students' implementation of what was seen inside the lecture (playground) at the School of Practical Education.
- The researcher observes the performance of students during the implementation of what has been reviewed, with the researcher correcting errors, providing feedback and modifying students' performance.

Implementation of the usual method of teaching (method of explanation and presentation):

- The researcher first explains and presents information and knowledge of rhythmic gymnastics skills for the physical education lesson.
- Students implement what was explained and presented by the researcher inside the lecture (playground) at the School of Practical Education.

Table (10)
The significance of the differences between the averages of the research measurements of the experimental and control groups in rhythmic gymnastics skills

Value of t	The difference between the two averages	Experimental Group (Teaching Strategy) n1=10				Variables
		you go away		before me		
		± on	Going to	± on	Going to	
35.82*	**33.61**	13.67	202.61	20.51	169.00	Rhythmic Gymnastics Skills Assessment Form
Value of t	**The difference between the two averages**	**The control group (explanation and presentation)** N2=10				**Variables**
		you go away		**before me**		
		± on	**Going to**	**± on**	**Going to**	
28.21*	24.52	13.10	193.57	20.54	169.05	**Rhythmic Gymnastics Skills Assessment Form**
Value of t	**The difference between the two averages**	**Dimensional measurements** ن=20				**Variables**
		Control group		**Experimental Group**		
		± on	**Going to**	**± on**	**Going to**	
12.68*	9.04	13.10	193.57	13.67	202.61	**Rhythmic Gymnastics Skills Assessment Form**

Tabular "T" at (9, 0.05) = 1.83 "one-way"
Tabular "T" at (18, 0.05) = 1.73 "One Way"

Discussion of the results of the first hypothesis:

It is clear from Table (10) that there are statistically significant differences between the pre- and post-measurements of the experimental group in the level of performance of rhythmic gymnastics skills in favor of the post-measurement at the level of significance 0.05.

It is clear from Table (10) that there are statistically significant differences between the pre- and post-measurements for each of the two research groups, as well as in the post-measurements at a significant level of 0.05.

Presentation and discussion of results:

general, such as the process in study of(Abdel-Rahman Al-Zahrani 2015), (Turner, and Meyer 2009), (Lage, Platt, & Treglia 2010), (Ayat 2016), (Eman 2018):

Thus, the researcher attributes the reason for the differences between the pre- and post-measurements to the experimental variable only, which is represented in the teaching strategy using the Internet, and the researcher attributes the progress in the level of performance of rhythmic gymnastics skills under research to relying on the teaching strategy and its multimedia content (texts, images, drawings, sound and video) and thus the positive impact on the research variables, represented in rhythmic gymnastics skills in the physical education lesson. This is due to the attractiveness and effectiveness of the teaching strategy (flipped learning style).

These results indicate that the teaching strategy through the Internet site had a positive impact on the skill level under research (the level of performance of rhythmic gymnastics skills) and this indicates that the teaching strategy led to the formation of the optimal perception of how to perform and implement the skills of teaching physical education, and thus this indicates that the images, graphics, texts and videos attached to the site had a positive result on the learning process or on the level of performance and implementation of rhythmic gymnastics skills in the physical education lesson.

These previous results are consistent with many studies, which indicated that the use of the flipped learning strategy in the teaching process hows an improvement and s effectiveness in the level of performance andthe learning

has led to improvement and effectiveness in the implementation of rhythmic gymnastics skills in the physical education lesson.

The previous results also the method of indicate that explanation and presentation leads to progress and improvement in the teaching process, as the teacher was n to communicate relied o information and understand the content of the performance through verbal explanation and presentation of a model of how to implement and this has led to the presence of effectiveness andpositivity on the implementation of rhythmic cs skills in the control gymnasti t group, and this is consisten : with what was indicated by Ayat Abdel-Halim (2016), Eman Aly (2018), Zakia Kamel, Nawal Shaltout and Mervat Khafaja (2010)

In that the style of explanation and presentation has a positive impact on the level of

Thus, the first hypothesis is achieved, which indicates that there are statistically significant differences between the averages of the pre- and post-measurements of the experimental group (Teaching Strategy Group) In the level of performance of rhythmic gymnastics skills Under research in favor of telemetry.

- Discussion of the results of the second hypothesis:

It is clear from Table (10) that there are statistically significant differences between the pre- and post-measurements of the control group in the level of performance of rhythmic gymnastics skills in favor of the post-measurement at a significant level of 0.05.

These results indicate that the method of explanation and presentation had a positive impact on the level of performance of rhythmic gymnastics skills under research, and this indicates that the usual method of teaching

and presentation group) in the level of performance of rhythmic gymnastics skills under research in favor of the post-measurement.

- Discussion of the results of the third hypothesis:

It is clear from the results of Table (10) that there are statistically significant differences in dimensional measurements at a significant level of 0.05 between the experimental and control groups in the level of performance of rhythmic gymnastics skills in favor of the experimental group, where the calculated value of (T) (12.68) is greater than the value of (T) tabular (1.73 one direction), and this indicates a high level of performance of the group Experimental (teaching strategy group) compared to the control group (explanation and presentation method).

The researcher attributes this progress to the experimental group compared to the control group to the interaction that performance aspects of skill. (Ayat 2016), (Eman 2018), (Zakia et al. 2010)

Accordingly, this proves that teaching through explanation and presentation leads to a high level of performance and learning as a result of the practice of what was explained and presented by the teacher and thus reflected on the level of students' performance during the teaching process.

This indicates that the method of explanation and presentation led to effectiveness and positivity in the level of performance and in the teaching process in general according to the results of statistically significant differences between the pre- and post-measurements.

Thus, the second hypothesis is achieved, which indicates that there are statistically significant differences between the average measurements before and after the control group (explanation

pre-preparation for teaching skills in the physical education lesson by watching recorded videos that have been provided to them in advance, and this gives enough time to prepare rhythmic gymnastics skills and allow more time for application In the playground (school of practical education) instead of explanation, and thus acquire, refine and develop the rhythmic gymnastics skills under discussion (parts of the physical education lesson), which ensures good use of the time of the practical lecture or practical application.

This proves that the use of the teaching strategy (flipped learning) has a positive impact on the implementation of rhythmic gymnastics skills in the physical education lesson, due to the attractiveness and effectiveness of the use of flipped learning through the site and thus increasing the element of suspense and increasing the tendency towards learning and took place between the student and learning through the teaching strategy, through which students were able to control themselves in what is presented to them and control the sequence of presentation and time and at the time convenient for them, in addition to the formation of the optimal perception of the skill performance in how to implement rhythmic gymnastics skills in the physical education lesson, and thus provide the student with immediate feedback, which helped in building and developing his kinetic perception and this is what was not available to him Students of the control group, and therefore the effectiveness of the teaching strategy via the Internet compared to the method of explanation and presentation, and this is consistent with (Mohamed Sarhan, Al-Tayeb Haroun 2015), (Marcey, D. J., & Brint 2012) in that the use of flipped learning allows students to spend more time learning and

gymnastics skills in the physical education lesson compared to the control group, and this is consistent with the results of the study of: (Atkins 2013), (Jaster 2013), (Johnson & Renner 2016), (Ayat 2016), (Eman 2018) in that the use of The flipped learning strategy leads to learning different skills positively compared to the method of explanation and presentation.

Thus, the third hypothesis is achieved, which indicates that there are statistically significant differences in dimensional measurements between the experimental and control groups in the level of performance and implementation of rhythmic gymnastics skills in the physical education lesson (skills: setting goals, lesson planning, preparing and equipping the place of the lesson, presenting and presenting the lesson, Continuity of the lesson, diversity of stimuli and performance by arousing students' interests and motivating them to exert effort and not feel bored compared to the usual method of teaching, which did not have these features, which led to the effectiveness and positivity of learning and performance through the use of the teaching strategy compared to the method of explanation. and display.

The above is consistent with the study of Chastre and Edouard (2015), which indicated that the use of multimedia and technology in general in the educational process is effective in the performance and learning of the skills under research due to the attractiveness and effectiveness of electronic studies () compared to other usual or traditional methods.

Thus, it is clear from the above that the teaching strategy using flipped learning has a positive impact on the rhythmic

methods) for students of practical education in the physical education lesson.

- The teaching strategy using the flipped learning method has a more effective impact on the level of performance and implementation of rhythmic gymnastics skills under research in the physical education lesson for practical education students compared to the usual method of teaching (explanation and presentation method).

Second: Recommendations:

In light of the results of the research , the researcher recommends the following:

- Work on the use of the flipped learning method because of its positive impact on the level of performance and implementation of rhythmic gymnastics skills in the physical education lesson for practical education students.

motivation for learning, use of teaching aids, classroom management and system control, evaluation, teaching methods and methods) for the benefit of the experimental group (teaching strategy using flipped learning).

Conclusions and recommendations:

First: Conclusions:

- The teaching strategy using the method of reverse learning, and the method of explanation and presentation is effective at the level of performance and implementation of rhythmic gymnastics skills (skills: setting goals, lesson planning, preparing and equipping the lesson place, presenting and presenting the lesson, continuity of the lesson, diversity of stimuli and motivation for learning, use of means Educational, classroom management and system control, evaluation, teaching methods and

- Conducting other studies on the effectiveness of the flipped learning strategy in other cognitive and skill aspects.

- Work on introducing learning using the flipped learning method within the study plans for scientific subjects in the faculties of physical education.

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