Blended Learning Is the Natural Evolution of Electronic Learning

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Abstract

The aim of this study was to structure a knowledge matrix, through in which to manifest the features of blended learning , its concept , success criteria, advantages and its application in university teaching , many studies have agreed that blended learning is the natural evolution of E-learning . it is perceived as a teaching – learning method which blends modern techniques and traditional methods together in specific time and place frames, within normal environmental classroom teaching circumstances, in which the teacher and the student interact, each one according to his role and the requirements of the teaching situation, with the least possible cost in order to reach the teaching outcomes with high com pretence and quality. It appeared that the process of blending between different teaching methods does not occur in a random or moody way, but in an organized homogeneous scientific method , which is governed by several criteria and controls related to the requirements of the teaching situation . Therefore , the blended learning success criteria in its excellent aims , teachers and students good performance, excellent instructional content ,perfect infers and technical stature , provision of financial potentials societal mobilization.

The obstacles which hinder the application of blended learning are centered around the high financial cost of the inputs of such kind of learning, the low level of education experience and skill of some teachers and students in dealing seriously with information and communication technology and teaching technology. The study concluded by emphasizing the importance of reconsidering the inputs of the instructional process and the procedures of its implementation in order to cope with the concept of electronic and technological revolution employ its basics to achieve the requirements of current stage , pursue novelty , persuade individuals that change and development are a modern necessity.

Keywords: *blended learning, electronic learning, university teaching, technological revolution*

1. Introduction

Using technology in teaching has passed through several periods which reflected the functional role assigned to it, it has boon linked to the development of the different learning and teaching theories and followed teaching methods it has been considered as an integral part in a complete matrix in the teaching-learning process. In light of this method, the concept of teaching technology has gone beyond the use of instructional aides and materials concern has been centered on the inputs processes and outputs of the teaching process or what is called the system method. This method emphasizes the integrative theory of the role of teaching technology and its connection whit other components to of these systems in mutual way, the importance of technology lies in the existing relations of aids and purposes, for example we should not study how we learn without studying what we learn; in same way, we should not study what we learn, without studying why we learn (Kemp 1995). Modern educational trends emphasize the necessity for creating the best ways and the most effective methods concerned about providing an appropriate interactive teaching envious mint to attract the students interest , stimulate then to learn and exchange views and dialogue they should not just be recipients of information , but they should be positive participants , experience makers , searching for the information with all possible means , using group of practical procedures such as observation understanding, analysis , construction, measurement, data reading and conclusions under his teacher's supervision, guidance and assessment. The integration process of information techniques represented in computer and internet and other programs and multimedia related to the instructional process are of the most successful ways to create such rich environments which are full of learning and teaching resources, training and self-development to achieve the students needs and interests, enhance their motivation, serve the teaching process and elevate its outputs (Hawkins & Allan 1995).

 The increasing use of the techniques of communication and information in various activities has been a feature of nowadays. It is also based on anew deeper understanding of the role of knowledge and human capital in the development of education systems and the advance of society. Information technology, at present, forms the basic components in economic development. This has its great impact on the transfer of current communities to

the post industry era represented in the electronic revolution which appeared in the second half of the last century, this has resulted in the manufacturing of computers, software's, compact discs, multimedia and satellites which in their tarn have led to the development of the matrix of communications and computer and information networks with their different forms, with the aim of obtaining information, storing, retrieving, distributing and employing it, the fact that it has had the evident effect on the evolution of a new concept, namely, electronic learning which helped to make distant learning something possible (Al-Fakeeh 2009)

Those revolutions have had a direct and great impact on the teaching-learning process. With the age of technology, information and internet, interest in the use of wire and wireless communication techniques and lend to anew learning, namely, the blended learning in educational systems as a new form of learning and a unique electronic learning type completing the teaching process to present a new kind of teaching that suits variable circumstances and current novelties brought out by globalization. The roots of blended learning data black to the beginnings of old teaching systems where there were different form and various names from mixed learning to compact to hybrid , to composed learning and then to blended learning, however with the development of communication system and information, internet and computer networks and the emphasis on knowledge and how to discover and transfer it across possible means in light of what the word witnesses in regard to surprising development that come beyond expectation and spaces, especially in the area of electronic learning (Al-Mahdi 2008)

2. Problem of the study

The scientific progress and current teach no logical development have brought the world into the age of speed in which the technological means transfer with individuals and are carried by the hand .their use has become necessary available and fast at any time and in any place .The computer the intersect, the r software and multimedia are at the top of these means which spread quickly unlike any other technical matrix among teaching circles .there has been great interest in the camper in spilt of different in age, educations, sex and economic status of its users (AL-showbaki 2005). These stimulated the government and under developed and developed states to employ what is going in all fields of teaching in under to developed their systems and activity their inputs to perform their job role for the benefit of individual and society duo to the vital role played by university teaching in develop meant and change .It is the way for achieving further progress and awareness in all cultural social and economic fields .Its importance increases in (AL- Tal 2010):

1- Spreading creativity, distinction, knowledge and the applications of their, know instrument and implementation mechanism in teaching. 2- Combining the existing teaching methods with other ones that are full of modern technique and electronic teaching process variable in regard to clarity, and important.

3- Continuous training to develop teaching staff member's skills and capabilities controlling classroom teaching procedures.4- Flexibility in teaching respect of time and its appropriate management various methods of measurement and evaluation and reinforcement- Strategies of feedback and follow-up.

Blended learning technology, nowadays, ant core of human thought and occupying material of educational life, as a result of the technical age in which we live, for the clear concern of blending technology in teaching to enhance its capabilities, develop its performance, as being the most proficient for using various types of activities within the frame of objective teaching situation which are based on participation and interaction to create rich teaching environments that enrich individuals requirements, meet their needs and increase their achievement products, aiming at excellent teaching outputs (AL- Harethi 2008).

Based upon that, this study will shed light on the matrix of blended learning in light of what the world witnesses in regard to changes and fast cognitive, technical and scientific developments. This added new tasks and responsibilities to the teaching real facts, which made all the people concerned, especially the teacher and the student seriously think of the importance of the stage through which university teaching goes in order to be qualified and capable of dealing with the technical novelties skill fully and efficiently in a way that stimulates the teaching-learning process toward novelty, change and qualitative development.

3. Study Aims:

The study seeks to achieve the following aims: 1. Definition of blended learning and electronic teaching 2. Concentration on the criteria and advantages of blended learning success. 3. Checking the obstacles which hinder the application of blended learning. 4. Preparing a suggested design for blended learning programs.

Study Questions: 4.

The study will answer the following questions: 1.What is blended learning, its concept and matrix?

2. What are the models of blended learning, its success criteria and advantage? 3. What and the obstacles which hinder the application of blended learning? 4. How are blended learning programs designed?

Study Importance: 5.

This study reflects the important of investigating blended learning in the matrix of university teaching. It implies a host of rules and procedures which are related to teaching aims, teaching methods, activates, content, infrastructure potentials and the roles of both the student and the teacher within the frame of an attractive interactive teaching environment which seeks to employ modern techniques in current teaching patterns, for the aim of presenting everything new in blended learning, to achieve teaching aims, meet the students' needs, serve community and keep up with development and scientific progress, at a time in which the human minds products are increasing in both knowledge and techniques for this importance, universities should constantly develop their, programs and curricula when the computer and internet technology has become the main critical point of implementation procedures. This interest is manifested through grasping the concepts of knowledge revolution which are charged with advantages and disadvantages, presenting them to university students by using blended and effective teaching ways and methods which are capable of criticism, refutation and analysis, in light of modern theories and societal philosophy. The students personality should be developed in regard to its intellectual, social and skill full, sides, because the current stage requirement have placed all people responsible for university teaching, especially teachers, before question and hypotheses which forced them to give up their routines and imitation toward entering the world of communications, information and electronic teaching technology. They have to think seriously how to benefit from these novelties, incorporate and employ then with existing teaching methods, within the frame of effective and free participation of both the student and the teacher, with the aim of both the student and the teacher, with the aim of reaching the distinguished teaching service that meet the requirements of the teaching situation, reinforcing the principle of existing partnership between electronic teaching and traditional one (AL Ansari 2008).

Study methodology: 6.

The researcher will use the descriptive analytical method in collecting view , information, facts and concepts related to the core of the study in order to build up an integrative knowledge matrix that will reveal the study problem, backgrounds, importance and aims , by referring to many studied , researches and essays to be acquainted some international experiences in the fields of electronic learning and blended learning to benefit from than in regards to the concept of blended learning and its applications success, criteria and average in the teaching process .

Definitions of procedures: 7.

Blended learning: IT is one of the forms of the forms of   electronic learning which combines, in its use, information and communications technology and the other traditional teaching methods. In a way that they become integrative and interactive with students and teaching aims and students benefits without disregarding the teaching reality of the classroom.

* *Electronic learning*: It's a teaching – learning methods in which modern communications means, many various multimedia and computers techniques are used in the in frame of free interactive practical matrixes among the sides of the teaching process, which is not limited by time or place in order to achieve specific aims that serve the individual and society quickly and with low cost.

Study plan: 8.

After discussing the study background, importance, problem, aims and question, the study will be in the following five main cores:
First core: Blended learning and electronic teaching.
Second core: Blended learning matrix.
Third core: The models of blended learning and its success factors.
Forth core: Designing the program of blended learning program.
Fifth core: Advantages and disadvantages of blended learning.

8.1 Blended learning and electronic teaching

8.1.1 Blended learning: it is a type of electronic learning that has carried different names which imply the same name in educational circles. It has its method and way of teaching and has been applied in some studies. Several

definitions have been common for this type of learning reflecting the researchers' views and their interest in the types of electronic learning, the following are of these definitions:

*It is the restructuring and reformation of teaching content by depending on the theories of learning and combining it with different modern electronic media which provide an interactive environment for the learner the programs of managing the content by transferring it form the traditional classroom to a wider one which is not restricted by time or place (Shatarat, 2010)).

* A type of learning in which tradition learning and electronic learning meet in different ways to obtain productivity with little cost (Byrne 2004).

* The teaching which uses an efficient group of various assessment methods, teaching ways and teaching patterns which facilitate the learning process. It is based on the incorporation of traditional methods, in which the students meet face-to-face and electronic learning (Aleks 2004).

* An integrative system which aims at helping the learner through each stage of learning and is based on the incorporation between traditional learning and electronic learning in different forms inside the classroom (Khameess , 2003).

* It is a type of learning which combines connected models through the internet and disconnected ones that occur in traditional classes (Harveys 2003).

It is clear that the previous definition emphasized the fact that blended learning is the use of modern communication means such as the computer, multimedia and the internet in the classroom in a way that teaching methods are integrated and students and teachers interact by using electronic materials in an individual way or in groups, without abandoning the normal teaching reality and students' presence, away from the limits of time and place, with least possible cost, in a way that enables the management and control of the teaching process and the measurement and evaluation of students' performance. The study proposes a definition of blended learning: it is an unfamiliar teaching learning method which blends traditional and electronic methods through the employment of modern teaching techniques without neglecting the normal teaching reality inside the classroom for the sake of creating an objective rich interactive teaching environments, not restricted by time or place, that meets the students' needs and reinforces the teacher's position in order to enhance excellent teaching and elevate its outputs.

 The use of blended learning technology in teaching is not a modern phenomenon, but it is historically connected with the development of man across history. The scientific and educational experiments the early Arab and non-Arab scholars carried out before and after the renaissance were examples of connecting teaching and incorporating it with real facts and going to nature and benefiting from it in reinforcing the senses of individuals and satisfying their needs. In spite of this call, blended learning has not entered the world of education in its modern technical characteristic and its intended organized use before the first half of last century when a limited number of western school, institutes and universities , especially the united states of Amharic started to use and blend some audio and visual teaching aids in the educational process however ,the actual recognition of the importance of aids in education and the necessity of incorporating them in teaching occurred after the second World Wok when they became an essential part in the educational matrix in general , The most supporting proponents of blended learning Called for making teaching without restrictions and Limits , respecting the learner s , positive role , freedom and culture besides supporting specialized and strategic teaching patters, strengthening the concept of long life teaching, coping with scientific development and teaching progress, concentrating on knowledge, its discovery, production and employment in teaching situations medication media, Another importations thing is the link and partnership between public and private sectors in order to provide financial and technical support necessary for this teaching. Dealing with technology does not eliminate the role of the effective teacher in the teaching process. Without the teacher no appropriate material or teaching media can be assigned or selected. Without his knowledge, guidance, instructions and activities, there will be no effective teaching. The teacher is person who draws the teaching aims, designs and develops programs, is responsible for implementation and assessment.(AL-Ghamidi,2007).

It is work noticing that process of blending between different teaching methods does not happen randomly, but through scientific. Organization and homogeneous way, which is controlled by many criteria related to the requirements' of the educational situation. Some educated people prefer it to electronic learning for the following reasons: 1-Electronic learning concentrates on cognitive and skillful aspects disregarding affective domain. 2- It causes students introversion in which there is inter action between them and the teachers. 3- It faces some difficulties in the application of assessment methods. 4- It requires a certain type of teachers. 5- It lacks social intimacy between the teacher and the learner. 6- Many students still prefer the traditional way of attending lectures.

8.1.2 Electronic Teaching: Some teachers believe that their use of the computer in the classroom or entering the computer lab or sitting in front of the computer and the use of the internet have completely eliminated electronic

teaching .other people think that electronic trashing can be achieved by distributing computers and multimedia to universities, schools and offices. The common belief is that the main field of electronic teaching is the intelligent and electronic brains which characterize language with scientific and technical development.. On the other hand, this type of teaching has been famous recently, in a way that it is definitions have been about it and the various information media have been interested in it by reviewing its aims and its role in the teaching process .However, the real facts are far away from its reality because electronic teaching is an integrative educational matrix (inputs, processes and output) which includes (Abdulmajeed2009): 1. Hardware: it includes the infrastructure, the computer and high speed internet. 2.Software: it includes: a learning management systems which depended on the internet which provide management and follow-up for the learning in regard to his going in or out and giving him authority and content arrangement, it performs the following processes: registering learner's data, scheduling syllabuses and teaching plan, making content accessible to the learner, tests and assessment communication between learners via the e-mail and other communication means, checking up the learner's performance and issuing reports B-content management system: it belongs to learning managements system which is an advanced system that controls content and it could be open or closed.

3. Human resources: they include system manager, instructional designer and a specialist. In various drawings, programming, goodness control and technicians of support and aid.

4. Legislations and regulations: they include assessment methods, students' attendance, publication rights, quotation, individuals' and information privacy, academic credit and degree conferment.

In light of that, the concept of electronic teaching has gone beyond the use of international machines and instrument and traditional and random methods. It is similar to a complete revelation built on the shoulders of computer technology, soft wares and communication revolution. This blending is not something arithmetic but maximized capabilities in scientific production in regard to quantity, quality and kind. This way emphasizes the integrative view of the electronic teaching matrix and its connection with other system in a mutual way, aiming at achieving the aspired aims. Which ensure the high goodness of teaching and the elevation of its outputs, in a way that conforms with students' needs, individuals ambition the world development and keeping up with international civilization and cultures.

8.2 The matrix of blended learning:
One of the most important things which help in the success of blended learning is to mark sure about its inputs. It should have the potential of implementation, application and assessment in light of the existence of an educated supportive, trained and qualified human infrastructure, as well as a wide societal base in the field of using the computer and the internet. It also requires a dynamic electronic university community which includes instructors, lecturers, learners, technicians, syllabuses, labs, guidance and orientation, training and teaching. The people concerned should have the ability to grasp technology, research, thought, indication, design and an effective electronic connection matrix. These inputs are the following:

*8.2.1 Aims***:** the formation of sound, clear and reasonable aims which are appropriate for teaching ways, syllabuses and students' needs that can be implemented performed, applied, measured and assessed in the appropriate place and time.

*8.2.2Ways and methods of teac***hing**: choosing the ways and methods of teaching which are various, purposeful, equipped with electronic and technical means and co-curricular activities appropriates for implementing study content, a accomplishing teaching Aims , meeting students desires , stressing the principle of learning through practice , partnership , interaction ,dialogue , problem solving and enhancing students creativity , innovation and continuous learning.

8.2.3Content (syllabus):It is the heart of study plan because it should be characterized by inter action and in clues aims, knowledge and techniques which the student studies to en rich their skills appropriately, Therefore, syllabus goodness is one of the most important factors related to the goodness of university teaching, The following are requirements that should be available in the syllabus for the sake of blended learning (Ahmed 2007):

- Division of the instructional content into graded and logical units that can be easy to understand and achieve, on one hand serve individual learning, on the other.

- Each lesson should contain a detailed integrative ex- plantation, exercises, questions and simulation according to students, needs and allow a continuous student.

- Each lesson should include additional and external knowledge resources that complete students' needs.

- The content should cover the same content included in the tradition syllabus, and should be in harmony with the strategies of the teacher and learning methods.

- The content should employ all possible aspects of technology.

- Capability of syllabus modification (dynamics and flexibility) and Capability of use and re –use

8.2.4 Infrastructure: it includes physical and climate conditions, space, speed and the ability to hold communication means and possible alternatives.

8.2.5 Technical requirements which imply (Amashah 2010):

- Providing a sufficient number of modern computers which are supplied by data show and internet.
- Providing an electronic place for each course. and system for electronic learning management.
- A system for managing instructional content electronic assessment programs.
- Electronic sites for communication and dialog guidance and orientation by teachers.
- Hypothetical and traditional classes, and e –mail, messages and electronic simulation.
_ Weekly meeting between student and course supervisors
_Partnership and connection between public and private sectors

. *8.2.6 Human requirements* (AL- hade 2005)

. *8.2.6. 1- The teacher* who should have: _ Desire to transfer from traditional teaching to e _ learning

_ Desire to enter hypothetical classes. _ Ability to combine traditional and electronic teaches.

_ Ability to deal with the internet to renew his information and develop syllabuses.

_ Ability to train student to deal with computers. _ Ability to deal with programs of designing syllabus.

_ Ability to design computer tests. _ Ability to deal with e-mail and exchange messages with students.

_ Ability to stimulate students' motivation and create the spirit of participation and interaction in the classroom.

_ Complete understanding of students' characteristics, needs and requirements at all their levels.

_ Observing each student's performance. _ Understanding the aim of blended learning.

8.2.6.2- The learning: the centre of concern for all circumstances of learning to perform this task, the following should be available: _ Real desire in teaching and blended learning

_ Independence which means commitment and persistence for the sake of electronic learning success.

_ Ability to participate in the teaching process in order to be interactive and not just a recipient.

_ Ability of training and dealing with e-mail. _ Capability of perception, complete awareness and mature thinking. _ Capability of dialogue, debate, objective criticism and decision taking. _ Respecting, managing and maintaining time.

8.2.6.3- Computer labs technicians who possess sufficient knowledge and skills which make them qualified for performing their technical, orientation and training roles toward students according to the teaching situation requirements and providing all aid, and support for the sake of the instructional process success.

8.3 Blending learning models and its success factors.

8.3.1 Blending Learning Models: valetan said that blending learning has the following three models as cited by (Al-Ghamidi 2007): 1- Skill development model: it combines self-learning and the teacher who performs the role of supporting and developing knowledge. 2- Situation development model: it is away in which events and their presentation means are blended in order to develop certain behaviors. 3- Competence development model: this approach blends performance, its supporting instruments with the management of knowledge, guidance and experts resources for the sake of developing competences, acquiring and transferring knowledge. Salem (2004) pointed out that the process of blending is conducted in several dimensions:

a- Blending network learning with non-network on. b- Self-learning with co-operative one. c- Special pre-prepared content according to need and ready content. d- Learning by practice.

Driscoll, as cited by Abu mousse, stated that blended learning has the following four meanings (Abu (Moussa 2010): a- Learning by blending computer techniques with traditional teaching methods. b- Learning by blending audio visual instructional aides and machines with traditional methods and learning by practice.

8.3 .2 Blending Learning Success Factors:

The program starts by a meeting with teachers and students, in which the program aims, its plan, who it is implemented; employed strategies and the role of each one in the success of blending learning are explained through (AL- Buhair ,Muhammad 2009):1- Effective communication between the parties of the teaching process.2- Learners independence in his learning according to his potential and capabilities.3- Encouraging creative work. 4- Emphasis or knowledge and how it is employed in teaching situation. 5- Co-operative work in the form of a team.6- Continuous and flexible choices.7- Students participation in choosing the appropriates syllabus. 8- Reparation as the student is allowed to get the message from different resources in several forms. 9- Its outputs should be measurable to make sure that they are effective.10- This type of learning should be appropriate for a big number of people.11- Availability of the infrastructure which supports its application through the use of teaching technology.12- Its outputs enhance teaching .

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8.4 Designing the program of blended learning:

Based on the previously mentioned information blending different teaching methods are not random or moody but occur in a scientific, organize and homogeneous method which is controlled by criteria and standards related to the requirement of the teaching situation . So, designing the blending learning program requires the following:
A _ Determining the type of blended learning program: is it a transferring creative one which implies changing the existing program into a blended pro-gram with technological and electronic means and instruments with the aim of developing and improvising it in order to enhance its performance , or will there be ready blended a teaching program that can be used ?
 B- Determining blending ways, types and manner .This is based on the following questions:-
_ What is the best teaching way for conducting content learning in a good way?
_ what is the best way o guiding student learning?
_ what is the best way for providing re-agreement, procedures and institutional limits in blending learning?
Therefore, the designer of lessons based on learning has to implement blended learning by depending on
(Abu Moussa 2010): 1- Analyzing the content into graded antis which include facts , concepts , generalizations ,principles and additional resources in order to make it easier for understanding, explaining, analyzing, structuring, criticizing and assessing them. 2_ Determining the way and method through which each content item will be implemented. 3_ determining students' needs and recognizing ideating their interests and individual differences. 4- Organizing requirements and records to organza the work environment (registrations of attendance, absentees and lecture times hours). 5- Determining unnecessary time and place circumstances for the program.

8.5 Advantages and disadvantages of blended learning.

Advantages of blended learning: 8.5.1

studies and researches unanimously agree that blended learning has many advantages, We can state what was cited by (Abu khutwah 2009) and (Charles and other2004) as follows: 1- It provides mechanisms of connection and communication, enhances social and partnership relationships and increases interaction between the parties of the teaching process (teacher, student, syllabus, trainer and technician). 2- Low cost and financial expenditure in comp-arisen with electronic learning. 3- Linking aims with results. 4- Increase in the possibility of obtaining information quickly, freely and flexibly between sites and people going beyond the limits of time and place. 5- Promoting the concepts of group and co-operative work. 6- Generating the learners feeling that learning occurs outside the four walls of classroom. 7- Combining the advantages of electronic learning and those of traditional learning without any aversion. 8- Enriching human knowledge and employing it by using the methods of understanding, analysis, structure and enhancing the goodness of teaching process, product and teachers competence. 9- Perfect use of teaching technology in the field of design, implementation and application in blended learning.10- Perfect use of financial and hypothetical resources.11- supporting traditional teaching ways through modern technical media.12- Integrating the formation and final assessment systems of students and teachers.

Blended Learning Obstacles 8.5.2

In spite of all that has been mentioned about the advantages and benefits of blended learning, there are sometimes some human, financial and procedural obstacles which hinder its application as follows:
1- The low level of experience and skill of some students and teachers when dealing seriously with teaching technology and computers.2- The low level of specialist's actual participation in curricula, education and teaching in marking compact electronic syllabuses. 3-The difference in the competence of computers, the versatility and capability of computer nets and their fast development from one generation to another hinders coping up with them. 4- The low level of efficiency of the system of observation, assessment, correction, attendance and absentee of students.5- Feedback, encouraging and marking-up are sometimes available.   6- For some academic stages, especial elementary, and some curricula and syllabuses, especially those demanding practical skills, use of electronic teaching is useless. 7- Emphasis is on the students' cognitive and skillful domains rather than the affective ones.

Recommendation 9.

Before this scientific progress and knowledge revolution and its present and future impacts, especially in educational fields and in light of has been referred to in the students literature, the researcher recommends the following: 1- Electronic teaching is a precious requirement for teaching circles, but its high cost and its many requirements prevent its complete application in the teaching process, in a way that it is possible to apply one of its types such as blended learning or remote learning or open learning.2 - Reconsidering university programs,

curricula and their implementation strategies for the sake of coping up with electronic and technological concepts, combining them with high quality instructional ways, presenting them to student in a way that achieve the requirements of invention and creation and meet the need of individuals and society.

3_ Confirming the importance of blended learning and its possibility in the teaching process as it combines more than one method of teaching and meets the requirements of teaching situation.4_ Confirming the importance of using technology in teaching together with information technology.

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