An Improved Method for Physical Education Guiding Paradigm by using Computer Assisted Multimedia Technology

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Abstract
With the popularization of Internet modern college students to obtain knowledge has undergone significant changes in the way, the network has become an important way for college students to acquire knowledge and a variety of information. In this paper, the author makes an improved method for physical education guiding paradigm by using computer assisted multimedia technology. The new method is focused on the multimedia tools and the applications on the PE teaching, the testing result shown in the simulation sub-part proves the effectiveness of the proposed method. Computer teaching is the combination of the abstract theory and practical operation to improve its teaching effect we must use various means to stimulate students' interest in learning, and pay the attention to the advantages of multimedia teaching.

Keywords: Multimedia Technology, Teaching website, Data transmission

1. INTRODUCTION

With the popularization of Internetmodern college students to obtain knowledge has undergone significant changes in the way, the network has become an important way for college students to acquire knowledge and a variety of information. This kind of change has a profound impact on college students' values, learning styles and way of thinking and behavior patterns. It brings new opportunities and challenges to higher education.The informationization level has become weighs a national and the general local international competitive power, the modernized degree, the comprehensive national strength and the economical growth ability important target, the informationization relates overall situations and so on economy, society, culture, politics and national security that has become the future national development the strategic commanding point. (1) Information industry is the basis of the general national economy and national security and strategic industries. Represented by the Internet information network is the infrastructure of the modern national economy, network and information security is an important content of national security. (2) Information industry as the main component of high-tech industry group is to take the lead in other high-tech industries take off the industry; information industry continues to expand, information technology to the continuous penetration of the national economy that will create the new industry categories. (3) Information industry is the pillar industry of national economy. Information industry in national economy in the forefront of the industry has developed into the largest industry, the direct contribution to the national economy continues to improve and the indirect contribution rate steadily.

Increasingly along with the network popularization, the lnternet in modern distance education in the process of information transmission is widely applied. Its basic form is by creating core project on the Internet teaching website to provide rich learning content and for learners to access to achieve the purpose of learning knowledge. This model is the most prominent feature of strong interactivity and wide coverage. Based on the review, current multimedia based learning pattern can be organized as the follows. Through the long-distance teaching master station data system, sound/digitized informations and so on video frequency resources, correlation data as well as other courseware resources which teaches the teacher scene to the satellite system and Internet transmission, the student in the far-end may through the Internet, the video frequency conference, the courseware selection and broadcast, the satellite system and so on four way gain data, carries on the study, and realizes and teacher's two-way exchange. Through the Internet, the student may visit the distance learning website directly, non-real-time carries on the two-way exchange with the teacher. Using the Internet transmission function, as through the video frequency conference system, the student may realize and real-time bidirectional sound/video frequency exchange between teacher's and the far-end minor stop may download the data on the Internet, or through data receive card gain through satellite transmission data.

Computer teaching is the combination of the abstract theory and practical operation to improve its teaching effect we must use various means to stimulate students' interest in learning, this requires teachers in the use of multimedia technology teaching at the same time and pay more attention to the development of the educational theory, at any time with advanced educational theory to guide their own multimedia teaching practice to pay attention to the general advantages of multimedia teaching. The relationship between multimedia and traditional teaching, the relationship between teaching content and the teaching form should be properly handled. In figure one, we show the computer-assisted multimedia education guiding system.

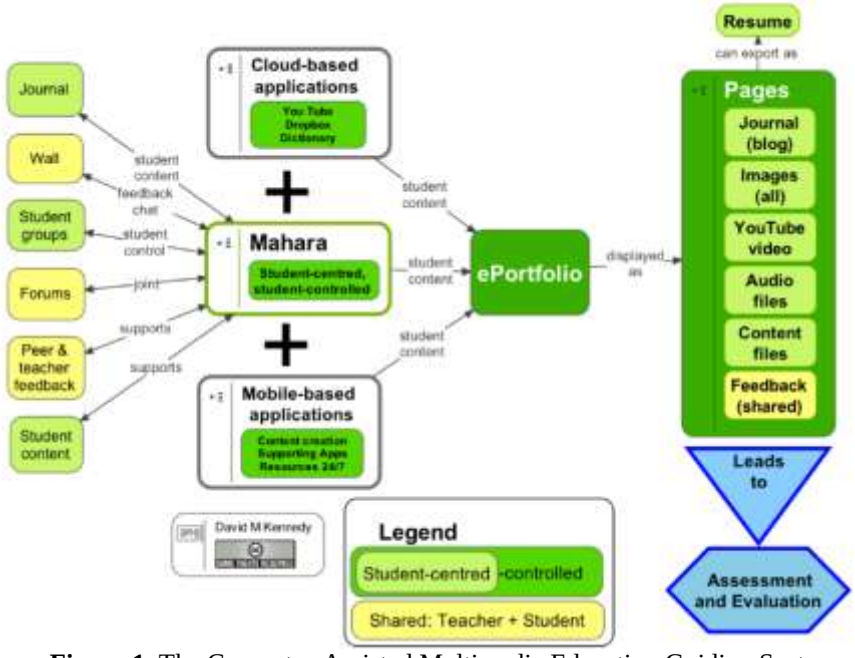

Figure 1. The Computer-Assisted Multimedia Education Guiding System

2. THE SOFTWARE BASED E-LEARNING SYSTEM ARCHITECTURE

With the continuous development of the Internet, the way of the education is no longer a traditional face-to-face book to teach, and now provide the online education website has gradually been accepted. The student and teacher depend upon the Internet to carry on the online conversation and to complete some the work which must complete in the classroom that is different through the student and teacher's jurisdiction establishment completes the student and teacher respective role increases the manager to manage the student and teacher provides the service which some users need to be responsible to manage the website the normal operation. Analysis by using the method of modelling is the purpose of learning activities: (1) Summarize the experiences of learning activity design, abstracts the essential of some learning activities and make in-depth analysis; (2) Seek to communicate learning activities in a reasonable, described the design method; (3) The analysis of the various learning activity design, and explains the existing foundation for these basic activities design reuse and optimization. Learning activities to build strategy from the perspective of the pragmatism, through the model to represent the learning context is closely related to the teaching practice of the important aspects to study the practice of abstract, especially for instructional designers useful certain elements and expect to have guidance to teaching practice.

Under this basis, the software based methodology is becoming the trend. ASP is located the server end the script movement environment, through this kind of the environment, the user may found and move the dynamic interactive Web server application procedure, like the interactive dynamic homepage, including uses the HTML form collection and the process information, uploading and downloading and so on. However, the actual use of EJB calls cumbersome, the lack of flexibility, mainly due to the following aspects.

- EJB depends on the communication port is not a standard system of port while in some of enterprise applications are faced with the challenge of the security policy if the deployment of the target unable to open the EJB port for a variety of reasons, and the EJB cannot be used in such an environment.
- Because EJB is a distributed object, each EJB method will be thrown out of a series of some remote anomalies, and as the Java language exception propagation mechanism requires each involved in the function or chain throws an exception or catch the general exception really reducing the Source code readability, but also increases the possibility of programmers committing logic errors.
- Provide a declarative exception handling system, makes the exception handling code is replaced by a configuration file just in the configuration file statement exception handling method without exception caught and thrown by the code.
- EJB is a remote object based on the Java mechanism of RMI-IIOP, which needs a lot of the additional information and the corresponding references.

Execute is transmits the data the method, when WEFClient by customer transfer transmission request, it on limits completely IRequest chooses the name passes to AdapterFactory, by obtains a IAdapter realization, then WEFClient on gives the IRequest object it to transmit realizes concretely which one kind as for IAdapter is responsible by AdapterFactory to decide.It can search the current request in own disposition information to have the definition transmission agreement as if has defined and the returns defines transmission agreement adapter

realization while had not found, returns default transmission agreement adapter realization. In the figure two, we define the sample software based system sample code demonstration.

```
public static void main(String[] args){
    for(int i = -5; i < 33; i++){
        System.out.println(i + ": " + toBinary(i));
        System.out.println(i);
        //always another way
        System.out.println(i + ": " + Integer.toBinaryString(i));
    }
}

/*
 * pre: none
 * post: returns a String with base10Num in base 2
 */
public static String toBinary(int base10Num){
    boolean isNeg = base10Num < 0;
    base10Num = Math.abs(base10Num);
    String result = "";

    while(base10Num > 1){
        result = (base10Num % 2) + result;
        base10Num /= 2;
    }
    assert base10Num == 0 || base10Num == 1 : "value is not <= 1: " + base10Num;

    result = base10Num + result;
    assert all0sAnd1s(result);

    if( isNeg )
        result = "-" + result;
    return result;
}
```

Figure 2. The Software Based System Sample Code Demonstration

From the above study, we can see that it is feasible to analyze the learning activities with the method of the core modeling, and the elements of learning activities can be defined by general means. Learning model can be structured, also called on the semi-structural. Each element in the framework is arranged at a certain level or in a non-hierarchical structure. Even if the construction of learning activities in various models of learning theory on the expression of this or that difference, but their framework is still of the great generality, and all models in the similar aspects of the vocabulary can be constrained to the certain extent, this is determined by the nature of the learning activities, for the software based service, we can summarize the architecture as follows.

- Agent layer, function of the WEF agreement has nothing to do, is responsible for the return agreement related data format for the user to define the input data, submitted to the WEF for processing, and then return the data according to the original format for packaging returned to the presentation layer.
- Processor engine, where the implementation of business logic EJB packaging for the realization of the EJB business logic to provide pre-and post-processor and query positioning call service.
- Simulation of container unlock application package to read DD, then these configuration files into the WebUniverse memory can identify objects by using DOM XSLT technology, and then transformed into the meta data object J2EE as generated container instance. After the container and service are specially customized according to the simulation object, the business object component is released, and the final publication is successful or throws an exception.
- It will move in other application server J2EE application procedure deployed in WebUniverse in will not make the modification or only makes the few modification in the situation, will enable it the normal operation.The entire deployment is carries on general automatically does not need to modify the J2EE application procedure again the code and the basic description document, WebUniverse can distinguish automatically comes from and loads in the different server platform J2EE module it to the vessel in.

The InputManager and OutputManager have similar structures that construct a decorator queue based on the configuration file for each type of request that a user might issue. When WEFEngineBean gives control to them, they invoke decorators in the decorator queue to process the request or response in turn, depending on the type of the request.In practice, we can then put the fast changeable business logic in the front or rear processor for implementation, and put the business logic of the relatively stable process ProcessorBean as such quickly switch by hot replacement can implement the business logic and upgrade as when the WebLogic Emulation Container finds components that contain EJB-jar. The core Xml and weblogic-ejb-jar. Xml call the WLXmlFileLoader class to convert the DD to basic DOM object understandable by the WebUniverse, and then use that object to initialize the EJB, and as finally WLEJBDeployDeployer for the EJB generated Stub and Skeleton, loaded into the EJB pool to complete the deployment as if the basic weblogic-cmp-rdbmsjar.xml is also included, the DD is converted by the JDBCXmlFileLoad class, and generated DOM object is passed to basic JDBCStoreManager class forWebUniverse entity bean deployment. In the figure 3, we show architecture.

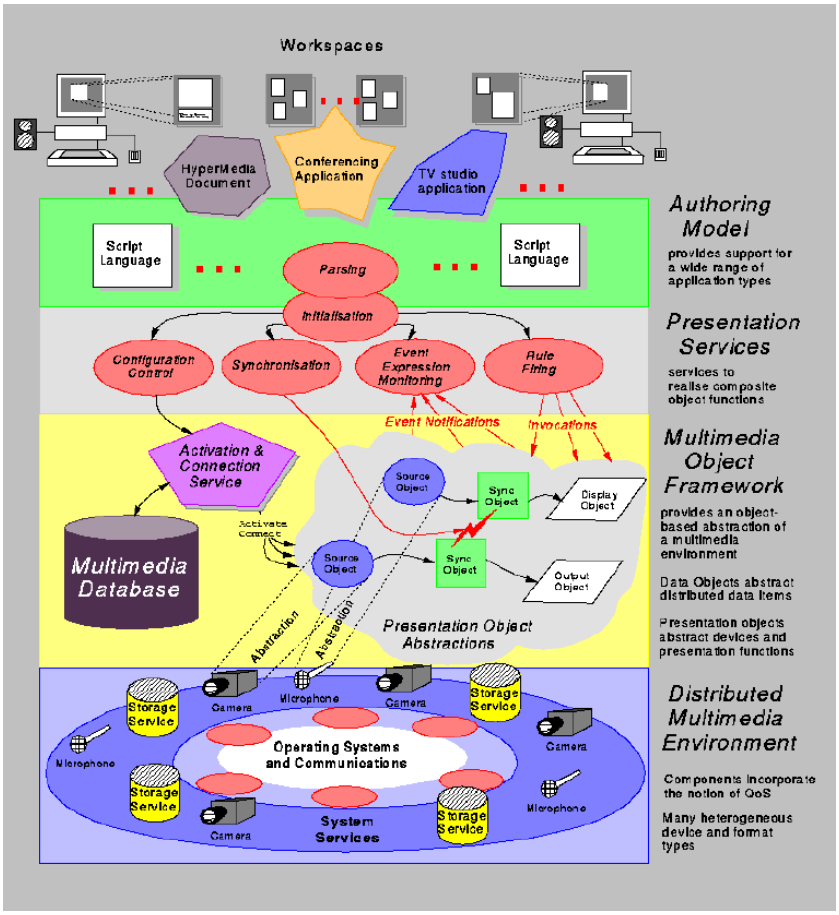

Figure 3. The Architecture of the Proposed E-Learning Environment

3. THE MULTIMMEDIA DATA STREAMING TRANSMISSION

The current video compression coding technology adopts the motion compensation, prediction, and variable length coding techniques to remove large amounts of time and space correlation of video sequences, as well as reduce the transmission bandwidth requirements makes the encoded video data error resistance is very fragile. Therefore, according to the characteristics of video coding and channel, to control the error transmission error is a kind of very important technology in video communication, is also one of the hot research topic in the field of the video communications in recent years.In general, all the data of a macroblock are stored together to form a stripe. The data partitioning makes the macroblock data in a stripe reassemble, and the semantically related coded data is divided into a segment and the H.264 video coding standard uses three different types of the data segmentation from the following aspects and components.

- The A division is the information division, including the great block type, the quantification parameter and the movement vector, this information is most important, if does not have the A division other type division data not to have the use.
- Type B segmentation is divided into frame information, including frame CBP and the coefficient of the frame, type B data segmentation requirement given stripe type A effective segmentation, information, relative to the frame to frame information can better prevent drift effect, so it is more important than split between frames.
- C-type segmentation is the inter-frame information division, including inter-frame CBP and inter-frame coefficient, in many of cases it is the maximum segmentation coding band. Inter-frame segmentation is the least important, and its use requires type-A segmentation to be effective.

This article aims at is the unit analysis situs model vector curve data, in the advance analytic curve and that establishes the monotonous linear BLG tree structure.It is smaller than the sub-node regarding the BLG tree existence father point deviation quantity to be unusual and this article agrees the father point deviation quantity revises for the sub-node value which should follow the listed guidelines and references.

$$MSE = \sqrt{\frac{\sum_{x=0}^{W-1}\sum_{y=0}^{H-1}\left[f(x,y) - f'(x,y)\right]^2}{WH}} \quad (1)$$

$$(u,v)_{Quantization} = round\left(\frac{F(u,v)}{Q(u,v)}\right) \quad (2)$$

Where the $f(x,y) - f'(x,y)$ is the target objective function and the $\frac{F(u,v)}{Q(u,v)}$ is the reference term for the testing, InnoDB is designed to maximize the speed of operation to handle large amounts of data. Its processor efficiency is not rivaled by other relational database engines based on disk-based storage. Technically, InnoDB is completely behind the database placed under the MySQL. InnoDB's buffered data and indexes have its own buffer pool in main memory. InnoDB will be its tables and indexes stored in the table space, the table space may be composed of that some files. This is different from the MyISAM table where each table is stored as separate file. InnoDB tables can be created in any size, and can be built on file sizes that are limited to 2GB on top of the operating system which contains the following information.

- Timestamp, give out the first byte of the data submitted to the sampling time, but it doesn't specify the exact time interval, but depends on RTP, frame payload types. Receive can use timestamp to maintain real-time data reception, realize data synchronization and that RTP streaming data submitted to the restructuring, and in accordance with the correct rate of playback media stream.
- Serial number, including the serial number of the packet, the initial value is randomly generated, and as then each send the RTP datagram serial number will increase by one. The receiver can detect the packet loss, damage and out of sequence in the transmission process through the serial number.
- Source identifier, used to specify the source of data flow station, each source station must choose a unique identifier. Received before the only value generated by the sender to distinguish between the multiple data streams at the same time.

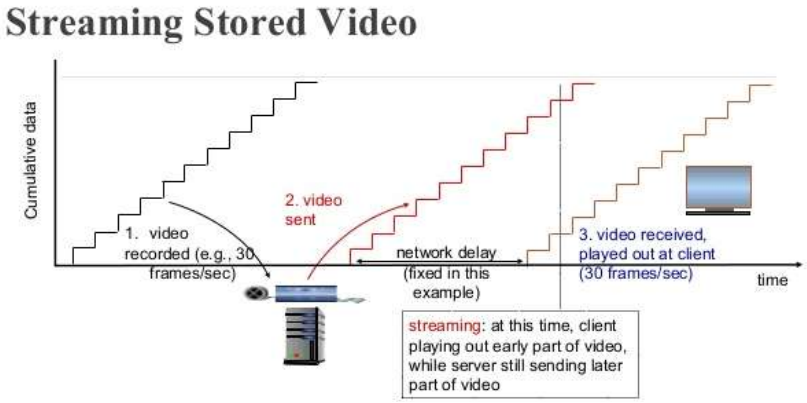

Figure 4. The Streaming Data Transmission

How does the logarithm occupy the selective management, uses the status management is an effective good method lets have the status information (data) to transmit in the network database, like this may display the teacher leading role fully, the teacher may have the goal to have the plan organization to manage the core issue information. Reduces the data for the general data transmission process in the transmission capacity, when the transmission reduces the data may reduce greatly transmits when data quantity, reduces the network the pressure and the burden, and additionally, we must consider the information security concerns. In the symmetric key encryption method, the same key is used to encrypt and decrypt the information. Commonly used the encryption algorithm is relatively simple, efficient, key short and very difficult to decipher. In the asymmetrical encryption system (i.e. public key cryptosystem), the key is one pair (i.e. a public key either encryption key and a special-purpose key or that deciphers by the decomposition key).This any all may take the public key to the key in core (encryption key) through the non-security way to other people public, but another took the special-purpose key (deciphers key).The public key uses in to the secret information encryption, the special-purpose key uses in to the encryption information decipher.

4. THE PROPOSED METHODOLOGY AND VERIFICATION

We knew that, the traditional sports teaching material imbalance to the movement skill explanation lacks to the sports culture elaboration, and the teaching material lacks interestingly. Along with time development, the people even more takes the sports also even more recognized sports as it is one culture but regarding cultural explanation, if pauses merely in the movement skill aspect, while then some could not satisfy social the need.

Therefore, the first choice in sports teaching mass-based, in line with the development of the times the best teaching materials, abandon the old teaching content.

Moreover, we should be set up in line with student interest in sports, such as tennis, ballroom dancing, etc. as the school sports extended to later life.Colleges and universities should be placed in the process of teaching evaluation, desalt screening content and refine the evaluation content, learning attitude and some good progress. Students must or may take sectional assessment methods, according to some different students based on given different forms of the assessment. And should be in step index, health indicators are included in the evaluation index only in this way, in order to fully tap the potential of students to take care of every student to maximize the enthusiasm of the students.The biggest characteristic of modern sports is openness as can fully display the students' personality and excavate the potential of general students, for the cultivation of the college students' comprehensive abilities set up a broad stage, therefore and by the way of the competitive sports "extends" open teaching, mentoring programs as far as possible that take care of all the different specialized student to meet the requirements of their extracurricular exercise. With the rapid development of multimedia technology as with its own advantages that has unknowingly affected many aspects of our lives. The field of education is the earliest application of multimedia technology, is also the fastest growing and most promising area, computer multimedia as a teaching media, it is also used to store, transfer education and teaching information

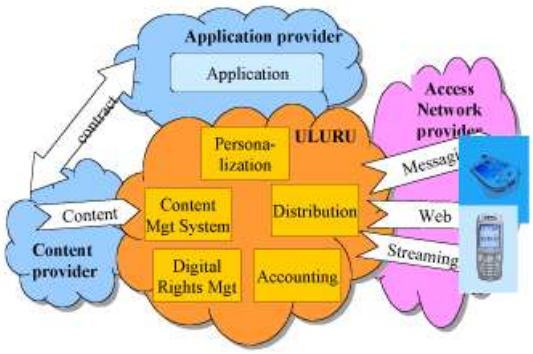

Figure 5. The Multimedia based Education System Demonstration

Multimedia technology and the technique of basic artificial intelligence (AI), in addition to reflect in the multimedia teaching system is introduced into the student model and knowledge reasoning mechanism as also suitable now try to make the multimedia intelligent navigation mechanisms of knowledge base.

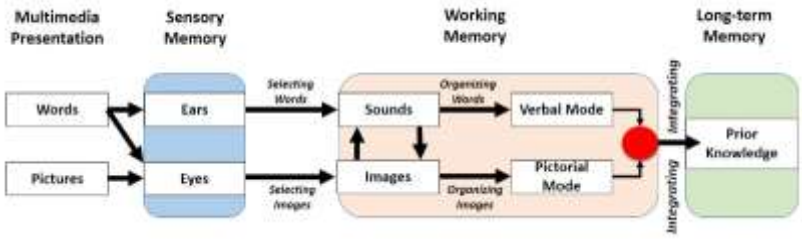

Figure 6. The Multimedia System of the Teaching Integration

Under this condition, we should therefore focus more on the following aspects. (1) The traditional computer multimedia technology has a strong visual performance, but the lack of the basic tactile, auditory and olfactory experience, which is an important factor affecting the practical application of technology. The application of the computer multimedia technology in the future, while through the comprehensive application of the integration technology, to achieve efficient and natural human-computer interaction, and virtual reality to show its realistic output as a symbol in the practical application. (2) In the development of computer multimedia technology, with optical fiber communication, satellite communication, Internet, bluetooth technology as a representative of core modern network technology to make it gradually into the network, it is the mainstream in the development of the computer multimedia technology in the future, is also the main way to realize the global information resources sharing.It can be seen from the above analysis and there is a complementary relationship between the multimedia teaching system and the intelligent assistant teaching system, which can be combined with the strengths to avoid weaknesses, which developed a new generation of the high-performance intelligent auxiliary

teaching system and the key to realizing the intelligent multimedia assistant teaching system is to construct the multimedia system suitable for the auxiliary teaching needs and to make the multimedia system intelligent.

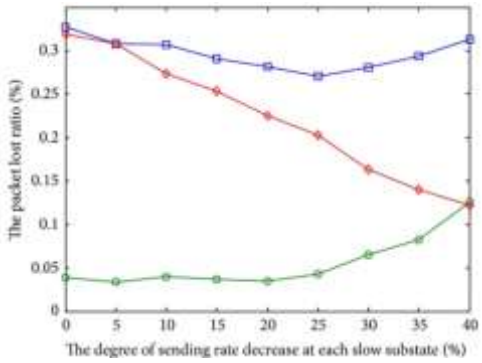

Figure 7. The Testing Result of the Propose System's Information Transmission Rate

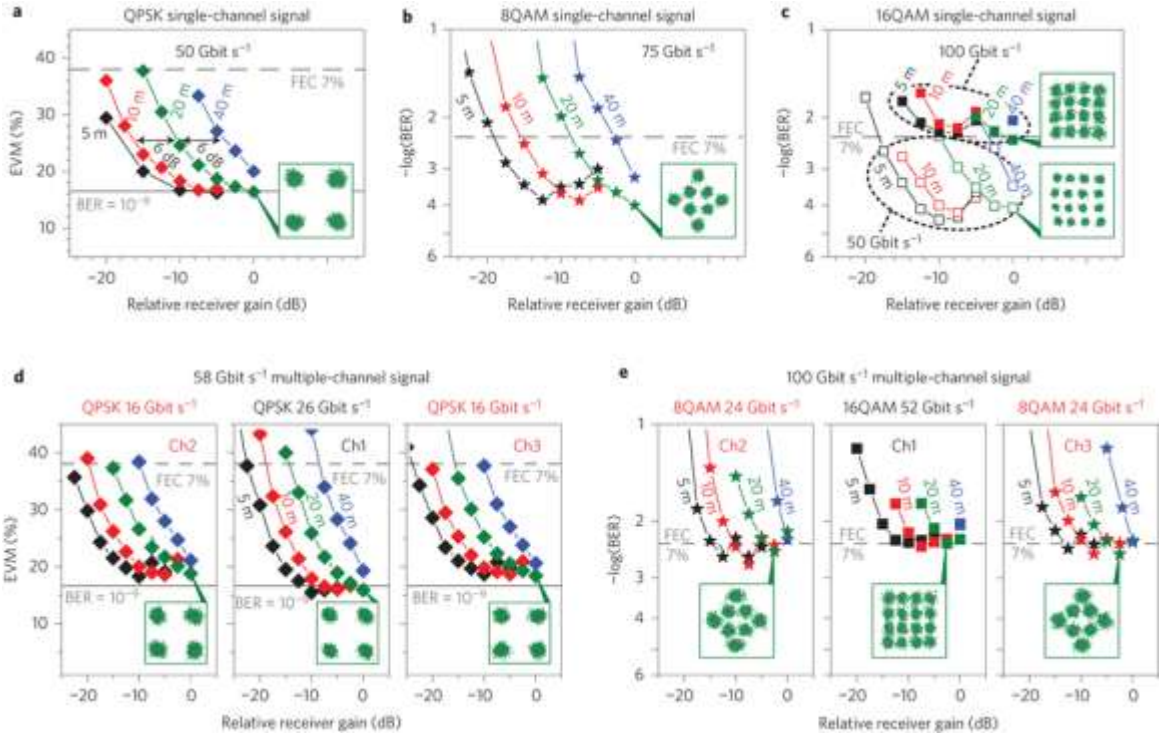

Figure 8. The Testing Result of the Transmission Rate under Difference Multimedia Conditions

5. CONCLUSION

Computer teaching is the combination of the abstract theory and practical operation to improve its teaching effect we must use various means to stimulate students' interest in learning, this requires teachers in the use of multimedia technology teaching at the same time and pay more attention to the development of the educational theory, at any time with advanced educational theory to guide their own multimedia teaching practice to pay the attention to the general advantages of multimedia teaching. Following this trend, this paper proposes the novel computer-assisted physical education guiding paradigm under Internet and multimedia environment. The new method is focused on the multimedia tools and the applications on the PE teaching, the testing result shown in the simulation sub-part proves the effectiveness of the proposed method.

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