Exploration and Empirical Analysis of the Teaching Ability Evaluation Model of Physical Education Teachers in Higher Vocational Colleges Under the Background of Big Data with Integrated Collaborative CAD

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Abstract. As a compulsory course, physical education(P.E.) is vital in strengthening physical fitness, improving health, and cultivating and transporting practical talents with high sports literacy for society. In this situation, constructing a P.E. curriculum, exploring teaching modes, and setting teaching content in higher professional learning poses a challenge to the teaching ability of P.E. teachers in higher professional education. Compared with the traditional data storehouse application, big data analysis has the characteristics of a big amount of data, complex query and analysis, etc. As a solid force in China's higher education, higher professional learning is one of its vital components, and it undertakes the essential task of cultivating professional and technical talents. This paper analyzes the basic concept of big data. It makes a simple comparison of its main applications. Hence, this paper aims to study and analyze P.E. teachers' ability to achieve higher professional learning based on the research setting of big data. This paper combines the big data algorithm to study P.E. teachers in higher professional education. This research has laid the foundation for future research on P.E. in higher professional learning.

Keywords: Big data; Physical education; Collaborative CAD; Teaching ability evaluation model
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1 INTRODUCTION

In recent years, with the rapid expansion of the Internet, Internet of Things, cloud calculating, triple play, and other I.T. and communication technologies, the rapid growth of data has become a severe challenge and precious opportunity faced by many industries, so the message society has entered the era of big data. In recent years, data storehouse has become a hot field of data management research. The main reason is that the current demand for data storehouse systems has undergone fundamental changes in data sources, data services, and hardware environments.

Traditional data mining methods face severe challenges in the era of big data with rapidly expanding data scales and heterogeneous data sources. Driven by social networks, mobile calculations, and other services, big data technology has established an ecosystematic. While promoting technological change, big data puts forward higher and higher requirements for the concurrent access, storage, and expansion of massive data. Higher professional education is a vital part of China's higher education. With the expansion and Innovate of China's education and the strong support of the state for higher professional education policies, higher professional education has developed rapidly, accountant for more than half of China's higher education in terms of quantity and scale, and at the same time, it has delivered a big number of talents to the society. P.E. in higher professional learning is not only the last phase for students to receive P.E. in schools but also the key period for teachers to train students to form lifelong P.E., which plays a vital role in developing a healthy lifestyle after they take up their jobs in the future. Therefore, PE teachers in higher professional learning must constantly amend their teaching ability and professional level [5]. At this time, feedback on the evaluation system of P.E. teachers' teaching ability in higher professional learning is particularly vital. Under the new situation, we must highlight the basic principle of taking students as the main body when promoting the innovation of P.E. teaching in higher professional learning. When teaching new knowledge to students, we should Focus on cultivating students' sports specialties and interests. The teaching skills of P.E. teachers in learning and universities greatly influence students' physiques. The professional skills of P.E. teachers play a vital role in promoting college students' healthy and stable expansion. The amendment of P.E. teachers' teaching skills is crucial to cultivating college students' comprehensive quality [17]. In this process, to further promote the effective expansion of P.E. activities in China, it is requisite for learners and universities to strengthen the construction of an evaluation index systematic for P.E. teachers' teaching skills in higher professional learning, thus promoting the standardization of P.E. classroom teaching, further improving the quality of classroom education, ensuring the amendment of P.E. teachers' teaching way and attitudes, and promoting the acquisition of all kinds of teaching benefits.

In the research of big data algorithms, whether traditional data analysis or high-dimensional and high-complexity algorithms are used for big data analysis, three goals must be met: accuracy, high efficiency, and adaptability. As the application side of the algorithm, it is requisite to select the relevant algorithm and design the machine learning framework based on correctly understanding the business scenarios and problems. On the other hand, the big data industry still needs basic mathematicians to prove the correctness and feasibility of these algorithms in theory. For example, the mathematical basis of fuzzy clustering analysis includes fuzzy equivalence relation and fuzzy similarity matrix [19]. With the emergence of new message publishing ways such as blogs, social networks, and LBS, as well as the rise of cloud calculations and the Internet of Things, data is growing and accumulating at an unprecedented speed, and the era of big data has come. Academics, industry, and even administration agencies have begun to pay close attention to big data and have a strong interest in it. With the increasing popularity of the network, people have entered the message age, and Internet and I.T. technologies have been widely applied in all kinds of domains. It has had a positive impact on the Innovate in the field of Internet education. In recent years, the boost of quality education and the expansion of curriculum and textbook Innovate have put forward higher goals and requirements for the teaching skills of P.E. teachers in learning and universities.

This paper uses several research methods to study and analyze it. Using big data technology in educational research has created fresh opportunities to improve the precision and impartiality of teaching evaluations. In this study, we harness the capabilities of big data to delve into the diverse aspects of teaching abilities among physical education teachers. Moreover, including integrated 2D and 3D image fusion introduces an innovative dimension, facilitating a more thorough assessment of instructional practices. In the research of big data algorithms, several simulation models and

algorithm formulas are established for study and analysis. In the research on P.E. teachers' teaching in higher professional learning, a corresponding data map is established to analyze and study it.

The innovation of this paper lies in the following:

1. This paper researches and analyzes P.E. teachers in higher professional learning based on big data research.

2. In this paper, the ability of P.E. teachers in higher professional learning is studied in combination with big data algorithms.

2 RELATED WORK

The teaching work of P.E. teachers in learning and universities shows that a scientific and reasonable evaluation index of teachers' skills can help learn and universities understand the situation of P.E. teaching and also help to amend the teaching enthusiasm of P.E. teachers, which can ensure college students to participate in physical exercise to a certain extent. However, the existing evaluation system for the teaching skills of P.E. teachers in higher professional learning is not perfect enough, which affects the expansion of P.E. in higher professional learning. Compared with the traditional teaching mode, P.E. teaching under the new curriculum standard focuses more on improving P.E. teachers' teaching ability. It gives P.E. teachers more rights in curriculum setting and teaching arrangement, which significantly expands the space of P.E. teachers and effectively amends the flexibility of teaching arrangement while giving P.E. teachers more sufficient teaching resources. Higher professional learning pays Focus to the study of student's skills, which will quickly lead to a dull learning attitude. All kinds of P.E. courses can enrich campus culture and cultivate students' interest in learning. After entering social work, when faced with the pressure of life, I can also have a positive attitude and perseverance to deal with problems. This poses a challenge to P.E. teachers' teaching ability. The essential teaching ability that P.E. teachers should possess is how to carry out P.E. teaching activities according to students' expanded characteristics and interests. Generally speaking, a scientific and practical evaluation index systematic of teaching skills can comprehensively and fairly reflect teachers' actual teaching level, abilities, and qualities in construction and implementation. However, in the actual evaluation process, there is a phenomenon that the school fails to provide timely feedback on the final results to teachers after the overall evaluation, which makes it difficult for teachers to amend their teaching according to the evaluation results, thus making the evaluation results unsatisfactory.

In the research, Meng Xiaofeng thinks that "ability" is a kind of ability and psychological characteristic each individual possesses [15]. This study holds that "ability" is an individual's psychological characteristic, which is a guarantee when carrying out certain activities and tasks, and it is different and influenced by many factors. It is requisite to master specific theoretical knowledge, show it through practice, and constantly transform and amend it. Md Assunacao, Calheiros R N, and Bianchi S think that P.E. teachers' teaching ability refers to the ability of P.E. teachers to guide students to exercise in physical activities on the playground. Teachers follow the pre-designed teaching content, and students carry out activities according to the tasks arranged by teachers, which can stimulate the process of physical and mental load [1]. Pity and worship think that a teacher's ability is a special kind of ability, which includes many abilities, etc. The level of a teacher's teaching ability is the key to the quality of teaching, and it is also the main factor that restricts students' learning interest and learning efficiency [16]. Therefore, it is requisite for teachers to comprehensively amend their comprehensive quality, understand and study students, and promote their all-round expansion. LOS believes that the level of P.E. teachers' teaching ability will affect the level of school P.E. quality, paying Focus to the cognition of P.E. and the ability to operate the teaching process [13]. The cognitive ability of P.E. includes the design of

teaching content and the establishment of teaching ideas. The teaching process operation requires teachers to discover the main contradictions in the teaching process and adjust the teaching content according to the students' expanded characteristics and interests in implementing P.E. classroom teaching. Hopkins M S believes that teaching P.E. courses in higher professional learning should be employment-oriented, reflecting the professional characteristics and future employment needs as the goal. Through investigation, some P.E. teachers in higher professional learning are unaware of this goal and lack training on students' physical quality according to their professional characteristics [9]. In terms of teaching content, although some higher professional learners are rich in content, all kinds of conditions can restrict them in actual teaching, and some corresponding courses can't be widely carried out, so students' interests and hobbies. Traditional teaching methods such as demonstration and explanation are the main ones, so it is difficult to mobilize students' autonomy and participation, and classroom regulation is inflexible and innovative. Li G, and Cheng X proposed " forming a unique discipline including mathematics, statistical basis and computer algorithms" [9]. The plan also emphasized that big data technology has a bearing on the national security of the United States, affects the pace of scientific research, and will also lead to changes in education and learning. This means that the sovereignty of online big data has risen to the national will, directly affecting the stability of the country and society, and is related to national strategic security.

3 BIG DATA RESEARCH AND ANALYSIS

3.1 Research on the Concept of Big Data

Big data itself is an abstract concept. Speaking, it represents the massive scale of data. A country's data sovereignty in cyberspace will be another big country's game space after sea, land, air, and sky. Being backward in the field of big data means losing the commanding heights of industrial strategy, which means that digital sovereignty has no danger to defend, which means that there will be loopholes in national security. Big data will directly affect national and social stability, and it is a strategic issue related to national security. Therefore, China should study and formulate its big data strategy as soon as possible. The breakthrough of network big data in science and technology will probably give birth to strategic emerging industries such as data services, data materials, data pharmaceuticals, etc. The breakthrough of network data science and technology means that people can sort out the complexity of data interconnection, master the uncertainty caused by the double characteristics of data redundancy and missing, and control the emergent properties caused by the high-speed growth and cross-interconnection of data so that they can dig out the message, knowledge and even wisdom contained in network data according to actual needs, and finally achieve the end of making full use of the value of network data. Big data has caused academic circles to re-examine scientific research methodology, triggering a revolution in scientific research thinking and way. At first, scientific research only had experimental science, and then came theoretical science, which studied all kinds of laws and theorems. Because theoretical analysis became too complicated to solve complex problems on many issues, people began to seek simulation, which led to computational science. And the emergence of big data gave birth to a new research model. In the face of big data, researchers only need to directly search, analyze, or mine the required message, knowledge, and wisdom from the data, and they need not directly contact the object to be studied [7],[6]. Therefore, corresponding model diagrams have been established in the research to study and analyze it, as shown in Figures 1 and 2.

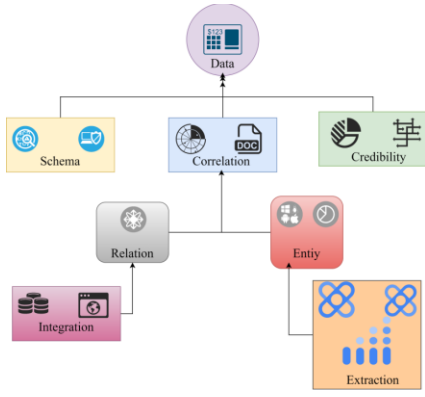

Figure 1: Schematic diagram of big data application.

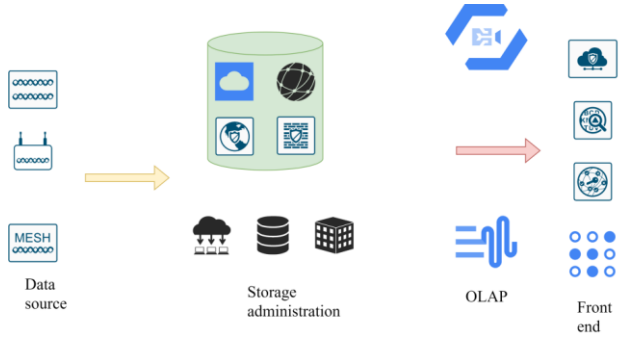

Figure 2: Schematic diagram of data storehouse.

From database to big data, it seems to be just a simple technological evolution, but finding the essential differences between the two is not difficult. The emergence of big data will subvert traditional data management. Data has changed from a simple processing object to an essential resource. How to better manage and utilize big data has become a general concern. The scale effect of big data has brought significant challenges to data storage, management, and analysis. The change of data management mode is brewing and happening. Complexity makes storing, analyzing, and mining network big data difficult. The complexity of extensive data networks mainly includes the complexity of data types, data structures, and internal data patterns. The complexity of data structures. Traditionally, data objects are structured and can be stored in relational databases. However, with the diversification of data generation modes, Such as social networks, mobile calculations, and sensor technology, unstructured data has become the mainstream form of big data. Unstructured data has many formats, including text, documents, graphics, videos, etc. Unstructured data contains rich knowledge, but its heterogeneous and variable nature also brings more significant challenges to data analysis and mining. Unlike structured data, unstructured data is messy and contains more useless messages, greatly complicating data storage and analysis.

3.2 Research and Analysis of Big Data Algorithms

Data mining is an interdisciplinary and comprehensive research field, including clustering, classification, association, and other technologies, as well as many interdisciplinary technologies such as machine learning, artificial intelligence, neural networks, probability and statistics, high-

performance calculation, and pattern recognition. The amount of data. It has risen from the T.B. level to the P.B. level and continues to explode. The increase in data volume has not reduced the requirements for database performance but has amended them. Therefore, more Focus should be paid to this content when designing the system. The inaccuracy of original data, granularity of data collection and processing, application requirements, data integration and display, and other factors make the data uncertain in different dimensions and scales. The traditional processing method focuses on accurate data, which makes dealing with massive, high-dimensional, and multi-type uncertain data challenging. Specifically, new ways are needed in data collection, storage, modeling, query, retrieval, and mining. No SQL technology came into being with Internet Web 2.0, which belongs to a distributed, non-relational database that does not provide SQL and does not comply with ACID. This technology opposes relational databases, and at the same time, it supplements relational databases in expansibility, flexibility, and performance. No SQL can meet the requirements for massive data storage by adopting metadata, simple data models, weak consistency, application data separation, and other technologies [7],[2]. According to its research, the corresponding formula is established as shown in formula (1).

$$D_j = (d_{j1}, d_{j2}, \ldots, d_{jn}) \tag{1}$$

The matrix's transpose transformation is shown in formula (2) if there are many big data numbers.

$$D = (D_1, D_2, \ldots, D_X)^r \tag{2}$$

By mining the total matrix set, when it is a single attribute, the correlation degree is shown in formulas (3) and (4).

$$Freq(x, X) - Freq(x, s)| \le \theta \tag{3}$$

$$|s| \ge (1/2\theta^2)/In(2/\delta) \tag{4}$$

In the feature set, formulas (5) and (6) can be used to express their big data feature association, as shown in formulas (5) and (6).

$$\mathrm{sim}(X, Y) = min[\, confidence(X \Rightarrow Y)] \tag{5}$$

$$\mathrm{sim}(X, Y) = confidence(Y \Rightarrow X) \tag{6}$$

By calculating the centroid of the big data transmission channel, the mining results of the big data location correlation degree can be obtained, as shown in formulas (7) and (8).

$$(\overline{X}, \overline{Y}) = \sum_{i=1}^{N-1}(x^2{}_{i+1} - x_i^2)\,/2\sum_{i=1}^{n-1}(x_{i+1}^2 - x_i^2) \tag{7}$$

$$(\overline{X}, \overline{Y}) = \sum_{i=1}^{N-1}(y^2{}_{i+1} - y_i^2)\,/2\sum_{i=1}^{n-1}(y_{i+1}^2 - y_i^2) \tag{8}$$

The correlation degree of big data direction refers to the angle between transmission directions in a big data set, as shown in formulas (9) and (10).

$$\cos(s_1, s_2) = s_1 s_2/(|s_1||s_2|) \tag{9}$$

$$sim(dist) = agv(|s_1||s_2|)[1 - cos(\, s_1, s_2)] \tag{10}$$

The most significant advantage of a parallel database lies in its performance. This is mainly due to the research achievements of the database field in recent decades, which include many advanced technical means and algorithms, such as indexing, data compression, materialized views, result buffering, I/O sharing, optimized data connection, etc. However, in the era of big data, as mentioned in the preface, the implementation of data movement will affect its performance. The uncertainty of data requires a new model method for data processing. And be able to grasp the balance between the expressive power and complexity of the model. In modeling uncertain data and systematic design, the most commonly used and simple viewpoint is the "possible world model." With the increase of data scale, the characteristics of describing and depicting data will inevitably increase, and the internal patterns of data composition will increase exponentially. First,

the diversity of data types determines the diversity of data patterns. It is a prerequisite not only to be familiar with all kinds of data patterns but also to be good at grasping their interactions. This multi-mode learning-oriented research must comprehensively utilize all knowledge aspects (such as text mining, image processing, message networks, social studies, etc.). It is the key characteristic of emergent properties's network data that is different from other data. Emergent properties's difficulties in measurement, judgment, and prediction make it challenging to control network data. The emergent properties of network data are mainly represented by emergent properties of mode, emergent properties of behavior, and emergent properties of wisdom. SQL interface is facing significant challenges. The advantage of SQL comes from its encapsulation of underlying data access. However, encapsulation affects its openness to a certain extent. The user-defined functions provided by parallel databases are mainly designed based on single database instances, so they can't be executed in parallel on clusters, which means that the traditional implementation method is unsuitable for processing and analyzing big data [8],[11].

4 RESEARCH AND ANALYSIS ON TEACHING OF PE TEACHERS IN HIGHER PROFESSIONAL LEARN

4.1 Research on P.E. Teaching in Higher Professional Learn

In the actual teaching process, learning and universities in China have strengthened the expansion of P.E. to promote further the all-around expansion of students and the achievement of all kinds of benefits. However, most higher professional learning takes a long time to evaluate the teaching skills of P.E. teachers, usually once a school year. During the evaluation process, the physical quality of college students constantly changes, affecting the authenticity of P.E. teachers' performance evaluations. Under the influence of the traditional teaching mode, when constructing the content and systematic of P.E. courses, higher professional learners can only passively obey the arrangement of education departments, experts, and scholars or even mechanically carry out related teaching activities according to the pre-established teaching plan. This form makes P.E. teachers lack elemental decision-making power and participation in curriculum content design and systematic construction. The PE activities are only limited to superficial forms, which can't highlight the creative thinking of P.E. teachers. Based on innovation in education and teaching, the current P.E. teaching system has the characteristics of wide coverage and all kinds of subjects, which puts forward higher requirements for the professional theoretical knowledge reserve of P.E. teachers. Only by systematically learning the knowledge of other disciplines and integrating them can P.E. teachers better meet the needs of P.E. teaching Innovate. In addition, higher professional learners do not have the essential organizational ability in the process of sports scientific research and do not actively do the preparatory work before sports scientific research activities are officially carried out, which makes P.E. teachers lack systematic guarantees and standardized control measures in the process of scientific research, and even can't get scientific and effective business guidance. P.E. resources in higher professional learning include the directly applicable resources such as P.E. content, teaching materials, teaching management, teaching objectives, teaching activities, evaluation mechanisms, and the vital teaching elements in P.E. courses such as sports ideas and sports consciousness. Under the rapid expansion and popularization of Internet message technology in the new era, the construction of excellent P.E. courses in higher professional learning has gradually achieved remarkable results, and the informatization expansion of P.E. teaching in higher professional learning has become increasingly rapid. P.E. teachers and students can obtain the required sports resources through internet links, websites, forums, Weibo, and other platforms in their daily learning process and use social software for real-time communication [4],[3]. Therefore, in the research, the corresponding data graphs are established to analyze and study them, as shown in Figures 3, 4, and 5.

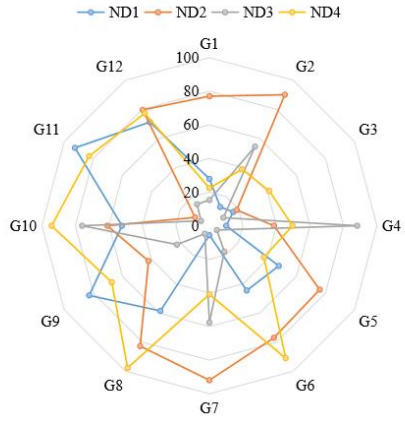

Figure 3: Research map of P.E. teaching in Higher professional learning.

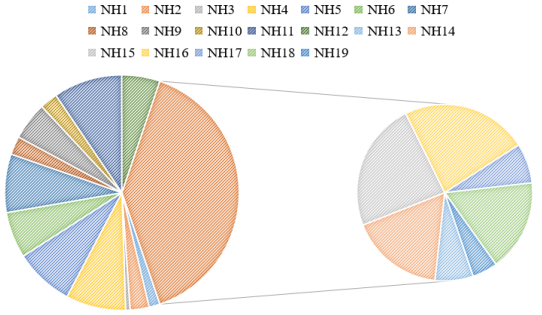

Figure 4: Research and analysis of P.E. teachers in higher professional learning.

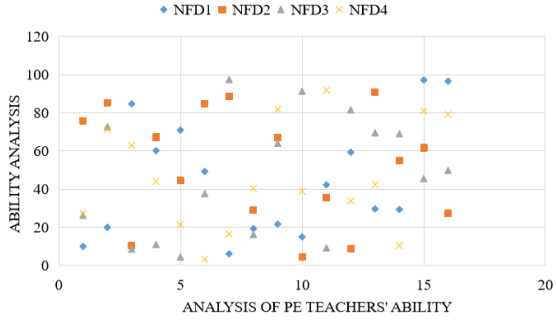

Figure 5: Research on P.E. teachers' ability in higher professional learning.

Figure 5 shows that some external and internal factors influence the ability of P.E. teachers to engage in higher professional learning, and the influence is about 23.34%. The knowledge and skills of P.E. teachers in higher professional learning determine teachers' classroom teaching level and, to a certain extent, affect teachers' choice of teaching way. In addition, in the process of P.E.

teachers' later teaching and expansion, it is also necessary to further strengthen the construction of evaluation systematic for P.E. classroom teaching skills to guide the expansion of P.E. teachers [18]. In the study of teachers' assessments, the corresponding data tables are established to study and analyze the assessment questionnaires, as shown in Tables 1 and 2.

Category	*Very good*	*Good*	*Generally good*	*Bad*
Weight	*3*	*6*	*2*	*0*
Percentage	*32.4%*	*42.5%*	*23.9%*	*0*
Percentage	*24%*	*46%*	*24.8%*	*0*

Table 1: Validity analysis of questionnaire content.

Category	*Very reasonable*	*More reasonable*	*Generally reasonable*	*Unreasonable*
Weight	*2*	*8*	*3*	*0*
Percentage	*24.4%*	*57.5%*	*17.8%*	*0*
Percentage	*24.8%*	*48.7%*	*26.5%*	*0*

Table 2: Questionnaire structure validity analysis table.

Generally speaking, P.E. classroom teaching skills have strong flexibility, openness, and creativity in the process of expansion. To promote the construction of a reasonable and adequate physical fitness evaluation index system for P.E. teachers, operators must strengthen the optimization of the index content and authority of the system in the actual operation process. To further promote the scientific and rational evaluation of P.E. teaching, operators are required to strengthen the organic integration of P.E. teaching in the actual operation process and promote the effectiveness of this work. The new curriculum syllabus re-plans the P.E. curriculum to the three-level curriculum category, which also means that the P.E. teachers in higher professional learning not only have the decision-making power of P.E. curriculum setting and teaching arrangement but also can freely choose P.E. textbooks that are in line with the actual teaching situation of their schools in combination with the teaching characteristics of P.E. courses in different regions. Any process of systematic construction is relatively complicated and tedious. First, through consulting a large number of documents and guidance of instructors, we make a preliminary selection of indicators, and then through interviews with instructors and experts, we gradually screen and modify indicators at all levels. Finally, after two rounds of questionnaire evaluation, we determined the evaluation indicators of the teaching ability of P.E. teachers in higher professional learning.

4.2 Research and Analysis of P.E. Teachers' Ability Based on Big Data Setting

Generally speaking, a scientific and effective systematic evaluation index of P.E. teachers' teaching skills can fairly and comprehensively reflect teachers' teaching level and their quality and ability in construction and implementation. However, in the actual process of assessment, there are often schools that fail to inform teachers of the results in time and effectively after the evaluation is finished, which leads to teachers' inability to amend their teaching according to the assessment results and the effect of the assessment results is greatly reduced. Evaluation is routine work. According to the requirements of evaluation, the subject of evaluation is not only limited to leaders, peers, and experts, but also the proportion of teachers and students needs to be increased. However, in the actual operation process, teachers and students have low enthusiasm for participation and lack the right to speak, so there is a phenomenon of coping with evaluation, which leads to the shift of teaching evaluation objectives. Therefore, if the teaching evaluation finally becomes "one-word," then the role of teaching evaluation will be significantly reduced, and the evaluation function will be affected accordingly, thus losing the fairness of evaluation results.

The design, production, and expansion of teaching resources is the key environment to promote the expansion of excellent courses and the establishment and use of message-based teaching platforms, and it is also the primary measure to amend the quality of message-based disciplines of P.E. teachers in learning and universities. Constructing PE teaching resources is a long-term project, so we should focus on accumulating resources in the usual teaching activities. Teachers should have strong message sensitivity and can use and make message materials and resources to promote the long-term expansion of the subject. The selection of evaluation indexes of the teaching ability of P.E. teachers in higher professional learning should have overall awareness and concept and must be hierarchical from top to bottom. After the first-level indexes are determined, the second and third-level indexes are selected and determined on this basis. There is a strong logical relationship among the indexes, forming a close connection. The research establishes corresponding data graphs to study and analyze them, as shown in Figures 6 and 7.

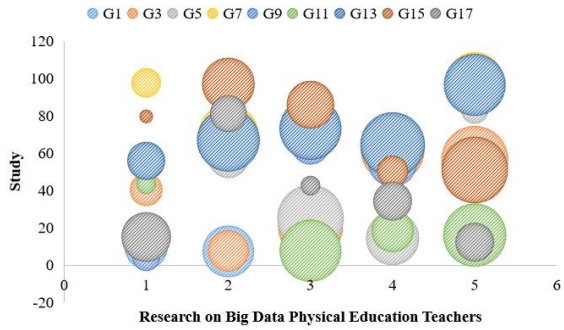

Figure 6: Research map of P.E. teaching under big data.

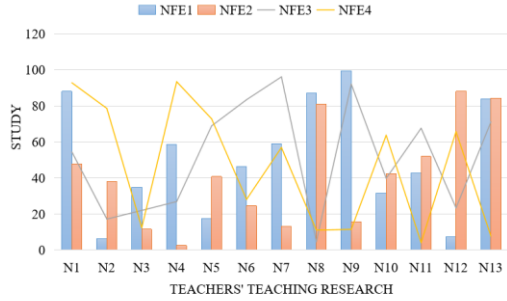

Figure 7: Big data analysis and research of P.E. teachers.

Figure 7 shows that under big data, the evaluation of P.E. teachers' ability in higher professional learning has been significantly amended, and the amendment's impact is about 46.42%. The goal of the teaching ability evaluation of P.E. teachers in higher professional learning is to comprehensively analyze and evaluate the comprehensive teaching ability of P.E. teachers in higher professional learning. Teachers reflect on and self-regulate the shortcomings of their teaching behaviors in the teaching process. By constructing the evaluation systematically, teachers can amend their professional level and ability by evaluating their teaching ability and achieve the goal of "promoting Innovate by evaluation and teaching by evaluation." The continuous expansion

of network technology has provided new structural concepts and rich technical ways for teaching P.E. in learning and universities, which are embodied in the formulation of teaching content and the implementation of teaching plans. The traditional teaching form allows students to complete their studies in a fixed place within a limited time. The teaching form is solidified, and the teaching mode is single. With the popularization and application of message-based teaching forms, students can choose online. With the advent of the message age, message literacy, an essential ability that teachers should possess, specifically includes obtaining, evaluating, and using messages reasonably. The expansion of science and technology based on message technology has promoted the rapid expansion of sports science and put forward many requirements for training sports talents. Complete self-regulated learning and eliminate time and space constraints to meet the needs of fragmented learning. Generally speaking, college P.E. teachers have high academic knowledge and rich professional theories and abilities. P.E. teachers in learning and universities are responsible for teaching and scientific research. Teaching innovation and management, academic article writing, application, and management of scientific research projects, etc., all depend on the support of message technology. It is also a prerequisite for college P.E. teachers to have a certain level of message technology to promote teaching and scientific research activities. The quality of the message technology of P.E. teachers in learning and universities has gradually been amended in the expansion of educational information. However, compared with other college teachers, the message quality of P.E. teachers has no advantage.

5 CONCLUSIONS

With the arrival of the message age, educational informatization has become the inevitable trend of expanding college education. Improving the informational teaching ability of college teachers has become a vital task in the current innovation of college education. Improving the informational teaching ability of college P.E. teachers has become essential in promoting the connotative expansion of P.E. With the expansion of cloud calculations and the Internet of Things, the data is exploding, and the flood of data surrounds people. The era of big data has arrived. The correct use of big data has brought great convenience to people's lives, but at the same time, it has also brought significant challenges to traditional data management. Encourage PE teachers to go to professional learning for further study, amend their academic level, expand their theoretical knowledge, and promote innovative basketball teaching methods. It needs to meet the requirements of the expansion of the times and promote the smooth expansion of P.E. in China, and it is requisite for the relevant departments to construct a systematic evaluation index of P.E. teachers' teaching skills in the teaching process. It needs to meet the needs of the times and promote the effective expansion of P.E. in China, and it is requisite for relevant departments to strengthen the construction of a systematic evaluation index for P.E. teachers' teaching skills in the teaching process. In this process, P.E. teachers in higher professional learning need to meet the requirements of the new curriculum, innovate, amend their teaching ability, and make full use of rich network resources to push higher professional learning forward steadily towards higher goals.

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