

## *Retraction*

# **Retracted: Analysis of the Characteristics of British Medieval Monastery Education Based on Network Data Mining**

### **Wireless Communications and Mobile Computing**

Received 25 July 2023; Accepted 25 July 2023; Published 26 July 2023

Copyright © 2023 Wireless Communications and Mobile Computing. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

### **References**

- [1] Y. Wang and X. Wu, "Analysis of the Characteristics of British Medieval Monastery Education Based on Network Data Mining," *Wireless Communications and Mobile Computing*, vol. 2022, Article ID 3909276, 10 pages, 2022.

## Research Article

# Analysis of the Characteristics of British Medieval Monastery Education Based on Network Data Mining

Yi Wang<sup>1,2</sup> and Xia Wu<sup>2</sup>

<sup>1</sup>*Institute of World Medieval History, Northeast Normal University, Changchun Jilin 130024, China*

<sup>2</sup>*School of Foreign Languages, Northeast Normal University, Changchun Jilin 130024, China*

Correspondence should be addressed to Yi Wang; wangy625@nenu.edu.cn

Received 18 June 2022; Revised 9 July 2022; Accepted 12 July 2022; Published 30 July 2022

Academic Editor: Kalidoss Rajakani

Copyright © 2022 Yi Wang and Xia Wu. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

To a large extent, the history of education in the Middle Ages in Western Europe is a history of church education. The church dominated and participated in the whole process of education, which is very rare and peculiar in the history of world education. The Middle Ages is synonymous with darkness and ignorance in everyone's original cognition. Through the unremitting efforts of historians, people's evaluation of the Middle Ages has gradually changed. The original purpose of monastic education was to train missionaries so that missionaries could take the faith of Christ to places where they were still in ignorance and save mankind on the basis of glorifying God. Due to the need of mission, in the process of education, missionaries also continuously integrated the ideological culture belonging to paganism and barbarians. In this paper, the monastery development index obtained based on data mining technology and the British medieval development index have a fit of more than 90%, indicating that monasteries have a certain role in promoting the economic development of the British Middle Ages. The development of the economic function of the English medieval seminary had a profound impact on the restoration of economic production and the establishment of an orderly life.

## 1. Introduction

Before and after the fall of the Western Roman Empire, the political map of Western Europe underwent major changes due to the great migration of the Germanic peoples. In North Gaul, the Franks owned the area around Paris and the Rhine River in the east, and the Visigoths occupied southern Gaul and Spain. The Ostrogoths controlled all parts of Italy, while the Anglo-Saxons ruled the British Isles across the Channel. This is an era in which heroes compete and nations compete, and it is also an era in which various cultures in Western Europe collide and begin to breed a new civilization. Christianity, which was born out of Roman society, won the conversion of barbarians with its unique charm in response to the times [1]. When the church spreads the gospel, it is also the beginning of its teaching and edification of barbarians. The need for mission makes it consciously or unconsciously assume the responsibility of education. We have seen that in the history of nearly a

thousand years, the church has created the civilization of Christendom with its unique education method [2].

Monastic education activists and thinkers had a major influence on the development of Western European education. Well-trained and tenacious monks shouldered the mission of evangelism and missionary in the chaotic years and became mentors to lead the barbarians to civilization [3, 4]. However, as soon as the seeds of learning are sown, there will be unexpected harvests. Reading the Bible makes the study of Latin a necessity and the deliberation and interpretation of the language produces a desire to learn and imitate classical writers. The monastic movement originated from the Christian worldview and outlook on life. In the eyes of Christians, baptism is a kind of repentance, which means a break with previous sins and rebirth [5]. Taoist abbeys are like pieces on a chessboard scattered across the land of the United Kingdom. Whether it is the British mainland or the islands of England and Ireland, monasteries have been established on these lands. The Isle of Iona off the west coast of

Scotland and the Isle of Lindisfarne off the east coast of England are both off the beaten track [6]. The establishment of these monasteries is inseparable from the hard work of missionaries. They braved the severe cold and endured the sweltering heat, marching alone on the country road where the gospel was preached.

The original educational administrative system of the Roman Empire has disappeared because of the demise of the empire, and the intellectual and cultural level of the barbarians is still in a savage and uncivilized state. At that time, the society urgently needed people with cultural knowledge to reshape the original cultural knowledge system. The books of knowledge preserved by the church are incalculable due to the destruction and loss of the barbarians, but some books that were carried with them were preserved through the unremitting efforts of the priests. It was these monks who worked tirelessly and actively to spread the gospel, which prevented localities from becoming isolated islands of civilization due to the decline of culture [7]. The Christian faith is expressed through the text of the Bible, which in the eyes of Christians is the word and revelation of God. To be able to avoid this situation again, the monastery needs to educate the monks in reading and writing. In this way, the monastery not only promoted the development of local culture but also promoted the rooting and sprouting of Christian culture throughout the Western world. With the continuous development and improvement of the monastic system, Christian monks began to pay attention to the redemption of the whole mankind while paying attention to their own redemption. Their job is to prepare for the second coming of Christ [8].

*1.1. Chapter Arrangement.* Chapter 1 introduces the research on the development of monasteries by relevant scholars; Chapter 2 introduces data mining technology and algorithm principles; Chapter 3 analyzes the teaching characteristics of monasteries based on modern universities; Chapter 4 analyzes the influence of the characteristics of monastery teaching in history; the sixth chapter is a summary of the full text.

*1.2. Innovation Point.* Education is an important way for human beings to pass on cultural transmission and production. The British medieval monastery education adhered to this purpose, and through this measure, many monks and scholars with both religious belief and secular knowledge were trained. Based on data mining technology, this paper analyzes the relationship between the monastery and the development of the Middle Ages in England and the contribution of the monastery in cultivating talents.

## 2. Related Work

In the middle ages of England, the monastery became the cultural center of the medieval British society due to its unique function and assumed many social missions and responsibilities. The educational function was one of them. The recovery and development of the British social commodity economy in the middle of the Middle Ages urgently needed the support and guarantee of knowledge and skills;

in terms of cultural exchanges, the Arab translation movement that emerged at that time promoted the dissemination and generation of knowledge. The living needs of urban residents also stimulated the rise of medieval universities on the one hand. All these provided good external conditions for the rise of medieval universities in England [9].

Watson believes that the medieval university in England borrowed the teaching and debating method from the monastery and made it the main teaching method and teaching form in the university. Part of the activities in the monastery are carried out through the interpretation of the Bible and the mutual debate of the members, so as to spread the spirit of Christ and the gospel of God to the world [10]. Wallis' research found that since the 10th century, the population of Western Europe has increased year by year, and the developed land, especially the cultivated land, is increasingly unable to meet the needs of society, and the problem of population and land has become acute. At this time, just in time for the reform of the seminary, the newly emerging Cistercian seminaries chose to build their academies away from the busy forests or swamps. More and more wasteland was developed into residential areas, attracting a large number of farmers or landless. The feudal rulers also consciously used the establishment of the monastery to launch an immigration and reclamation movement. The economic function of the monastery had a huge positive impact [11]. Coppack believes that the seminary, as a product of the social and historical development of Western Europe, its pious regulations, and timely economic functions have deeply affected the development of society and history and will inevitably be eliminated with the progress of the times [12]. After the 13th century, Bailey and Lucas, the development of the Western European commodity economy, believed that the medieval monasteries were far away from the noisy cities, which provided a quiet environment for those who worshipped God. Coupled with the vast real estate and wealth of the monastery, this provides a stable life guarantee for those Christians who are willing to become monks. Finally, the rich collection of books in the monastery library makes those scholars who are committed to academic research willing to gather here, and then, these scholars made their own ideas widely disseminated through lectures and preaching, and then, these academics made outstanding contributions to social and cultural development and ideological evolution [13]. Heale et al.'s research found that the emergence of monastic hospitals broke with the family-centered tradition of ancient medical activities. In the relatively independent "public space" of the hospital, the interaction between doctors and patients is more direct, frequent, and in-depth, and the separation of diagnosis, treatment, and nursing in family medical activities no longer exists. This objectively provides conditions for doctors to supervise and control the medical process and disease behavior [14]. Richardson's research found that monastic schools actively absorb and integrate secular knowledge on the basis of religious belief education, in order to enable monks to better spread the gospel. With the development of society, the monks not only participated in the teaching and discipline setting of the university but also cultivated a group of scholars with profound

knowledge for the Christian church. As the city gradually moved from depression to prosperity, the monastic education system was constantly being improved and developed. The number of convent schools and the cathedral schools of the cities and their students gradually increased, and their groups were gradually established [15]. As the most basic organization of the Christian church, according to Hepple, the monastery has assumed to have more social responsibilities due to the special times in which it lives. It was the cultural and educational center, the economic center, and the political center to a certain extent of the British society at that time and had an important influence on the British society at that time. As a rare and well-equipped organization in British society at that time, it not only became a place that people yearned for at that time, but more importantly, it accumulated culture and institutions [16]. Warren's research found that in the turbulent social environment, the monastery became the sanctuary of the ancient culture on the verge of destruction and preserved a large number of classical works for later generations. The monastery thus became the place of culture in the Middle Ages. For women, the monastery was also a major center of learning and education. The famous British nun Leoba in the 8th century lived in a monastery since she was a child. She received an excellent education in classical culture and could write six-tone lines in Latin, which is very rare among noble men. Her knowledge is particularly striking [17]. Choi's research found that in the Middle Ages in Western Europe, like men, noble women also hoped to receive spiritual education. While the life of church men was centered on the study of biblical dogma, early wealthy mothers, widows, and virgins also had the leisure and financial resources to enrich their spiritual lives [18]. Danylova and Hoian pointed out in research that the personal salvation of monastic prayers through prayer and other services also applies to others, both living and dead. This notion of the ascetics purifying his own soul and adapting the souls of others to the kingdom of heaven was accepted by the nobility [19].

The monastery had an important influence on the rise of medieval culture in England. The rise of medieval education in England is an event of great historical significance. The cultural level of British society and the cultural quality of the public have been greatly improved since then. Medieval universities played an important role in the dissemination of social and cultural knowledge and the popularization of education. Based on network data mining technology, this paper analyzes the teaching characteristics of medieval monasteries in England and studies its talent training model.

### 3. Network Data Mining Technology

**3.1. Decision Tree Algorithm.** The decision tree algorithm is based on the classic ID3 decision tree algorithm and is proposed to improve some of its shortcomings. After the improvement, not only the classification accuracy is improved but also the speed is faster. It has become the most popular decision tree algorithm. The concept of information gain rate in information theory is used as a selection method. Information gain is the difference between the unconditional entropy

of the category attribute in the dataset and the conditional entropy after the attribute divides the dataset, as shown in

$$\text{Gain}(A, B) = \text{Entropy}_A(S) - \text{Entropy}_B(S). \quad (1)$$

The unconditional entropy value of the category attribute is shown in

$$\text{Gain}(S) = \sum_{i=1}^M S_{\beta} \log_2 \frac{S_i}{n}. \quad (2)$$

Descriptive attributes enhance the ability to classify categorical attributes, so the information gain is always positive. The calculation formula of the information gain attribute is shown in

$$\text{Split}E(S) = \sum_{i=1}^v \log_2 \frac{S_j}{S_i}. \quad (3)$$

The information gain rate is used as the denominator, so that the larger the number of attribute values, the larger the split information, and the lower the yield, which offsets the influence of the number of attribute values to a certain extent and improves the breadth and uniformity of attribute division data. Scan the item sets in each transaction, respectively; if the item set exists in the transaction, it is recorded as 1; otherwise, it is recorded as 0. In the process of mining and modeling, the detection of outliers should be completed first. If it is not data, the type is the number of attributes, and the probability-based distance is used as a measure function, as shown in

$$\hat{E}_{vk} = \left( \sum_{i=1}^v \frac{1}{2} \log (\hat{s}_j + \hat{s}_i) + \sum_{i=k} S_{vk} \right), \quad (4)$$

$$S_{vk} = \sum_{i=1}^v \frac{N_{vk}}{N_{ij}} \log (\hat{s}_j + \hat{s}_i). \quad (5)$$

In general, data mining techniques can be applied to various types of information repositories. Such as relational databases, data warehouses, transactional databases, data storage files, and a large number of data streams, the process of which is shown in Figure 1.

The success of the data mining process depends to a large extent on the quality of the data, so the data preprocessing technology plays an important role in the prediction and generalization ability of the model. In fact, raw data often have missing values, noisy data, incomplete data, abnormal data, etc. These abnormal and dirty data will affect the execution efficiency of the data mining process, which is very unfavorable for model training and may even lead to deviations in experimental results. Therefore, preprocessing this data before mining it, including data cleaning, data integration, data reduction and data transformation, makes the process of seeking knowledge and discovering the value of information more meaningful.

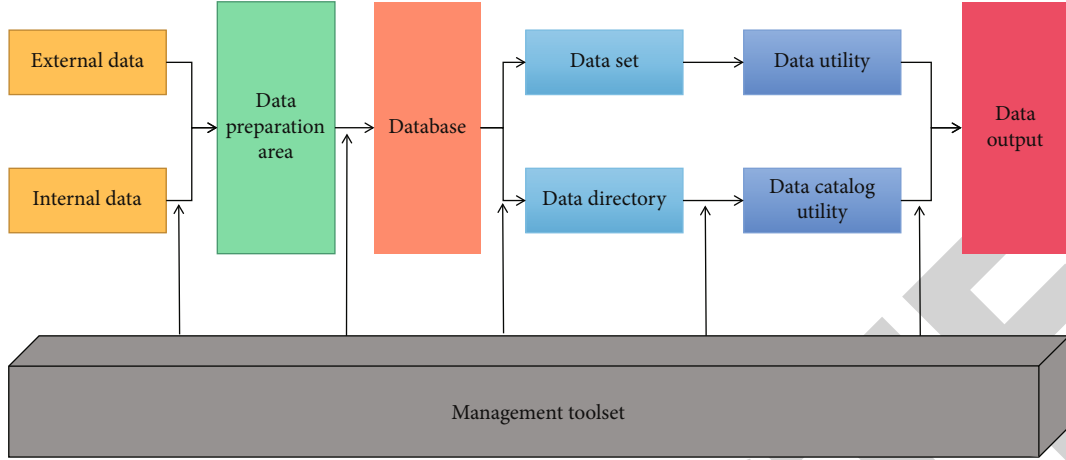


FIGURE 1: Decision tree flowchart.

**3.2. Fuzzy Neural Algorithm.** Fuzzy neural algorithm is also a kind of data mining technology. Fuzzy neural network is a combination of fuzzy logic and neural network, so that the new system not only has the self-organization and adaptive learning ability of neural network but also has the fuzzy processing ability and fault tolerance ability of analog fuzzy logic. The system overcomes the shortcomings of neural networks, enabling the system to directly deal with uncertain and irregular parameters, and at the same time overcomes the shortcomings of fuzzy logic, enabling the system to have the ability to learn, continuously adjust parameters, and learn by itself. The structure is shown in Figure 2.

After data cleaning and integration, integrated and good quality datasets can be obtained. However, massive-scale datasets contain many redundant attributes that are not related to data mining, and these attributes are not all analyzed and experimented, and even data mining time is wasted. Therefore, it is necessary to reduce the data scale through technical means. The data after reduction is still close to maintaining the integrity of the original data, but the amount of data is relatively small, so the performance and efficiency of mining will be greatly improved. The main strategy of data reduction is to effectively compress the original data through principal component analysis or singular value decomposition, or to attribute attributes through feature extraction. Fuzzy the input. The number of fuzzy vectors is determined according to the value of the fuzzy language, and the output result is the fuzzy variable value of each evaluation index after the membership function, as shown in

$$U_{ij}^2 = N_{ij}^2(x_i). \quad (6)$$

The final fuzzy judgment needs to judge the final input according to the relevant fuzzy rules and operation methods. The output obtained at this time is the final output of the network, and its function is shown in

$$U_{ij}^4 = U_{ij}^3 (i = 1, 2, \dots, n, j = 1, 2, \dots, m). \quad (7)$$

For the fuzzy neural algorithm, it mainly provides decision support for users based on data clusters. Since it only reads the data in the warehouse, there is no need to modify the content of the fuzzy neural algorithm, and the database will have read and write operations on the data. The data in the fuzzy neural algorithm is subject-oriented to the user; that is, the user can only extract information related to their own decision-making. Since the information in the fuzzy neural algorithm is divided by attributes, it is irrelevant and hinders the use of data. Most of the data in the fuzzy neural algorithm is the same as the traditional database, but for the fuzzy neural algorithm, the data must undergo data preprocessing before importing, because the unprocessed data will be processed during mining. Making data analysis confusing is an important step in the construction of fuzzy neural algorithms.

## 4. Characteristics of Teaching Development in Medieval Monasteries in England

**4.1. The Influence of Monasteries on the Rise of Libraries and Student Dormitories.** The library is the main symbol of the modern university, and the library of the medieval university is inherited and borrowed from the monastery. After the barbarian invasion, the social and public facilities of the Western Roman Empire withered. The cultural bloodline of the city is broken, and cultural genes are hard to find. This includes important libraries. The ancient libraries were completely destroyed in the war and looting, and those precious books that recorded the history of human social civilization were also scattered everywhere, and the fire of traditional culture was very small [20–23]. Monks preserved the fire of classical culture in a special way. In order to complete their own tasks, they tried their best to collect relevant books and store them in the monastery, so the monastery has a library. These libraries are not only the library of scriptures but also the place for copying classics and studying Christian works, and their status is becoming more and more important. As the mother of medieval universities in the United Kingdom, the University of Paris, its Sorbonne College Library, and later the Merton College Library and

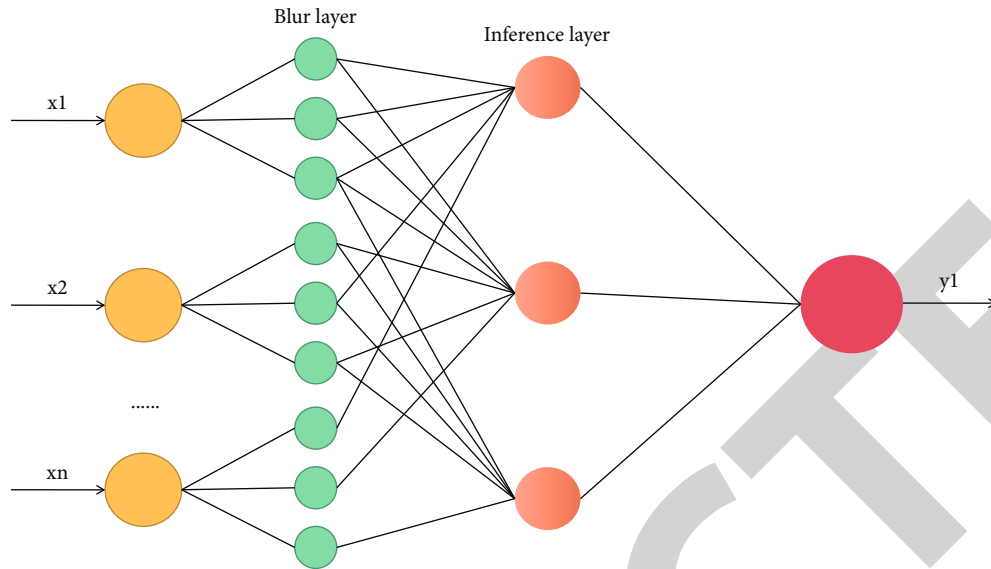


FIGURE 2: Fuzzy neural network structure.

the New College Library of Oxford University, the collections are mostly donations from the founders, which broke the church to a certain extent. In the 13th century, public libraries were rare. Most libraries are attached or housed in monasteries. Even the academic library that appeared later, from the content of its collection, is inextricably linked with the monastery. This paper analyzes the simulation of changes in the library's teaching scale index for monasteries through data mining technology, as shown in Figure 3.

Figure 3 shows the functions of the collection and offering of books in the monastery library, as well as the rules and serious and responsible professional attitudes that monks and nuns follow when copying and writing books. Knowledge is the way to gain wisdom, and inquiry into knowledge is the only privilege of a rational person. From the perspective of taxonomy, he divided knowledge into four categories: theology, practice, machinery, and logic. The reason for this division is that theological knowledge is beneficial to the understanding of truth and practical knowledge is beneficial to the practice of virtue and mechanical. The knowledge of which contributed to the improvement of livelihoods provided a useful experience for the establishment of medieval university libraries and the production, publication, and preservation of books in later societies. On the one hand, the church provided personnel support to the medieval university. At the beginning of the birth of the medieval university, teachers generally had the status of teaching. In the world-famous University of Oxford, in the Middle Ages, its teachers must be clergy of the church. On the one hand, because the medieval church monopolized all cultural knowledge and education, only priests possessed knowledge and the ability to engage in teaching and research.

As a religious place, the main function of a monastery is to provide a place for monks to live and study. From the structural design and layout of the monastery, it is not difficult to find that it provides a convenient environment for monks to integrate board and lodging. This boarding func-

tion greatly influenced the medieval university. In medieval universities, the place that assumed the function of student dormitory life was the student dormitory. With the advent of student dormitories, students in medieval universities had a place to live. It not only facilitates student accommodation but also facilitates the management and supervision of students by the school. Medieval universities generally appointed a headmaster to manage and supervise the students in the accommodation. In the monastery, the major affairs of the monastery are in charge of the abbot. After the establishment of the student dormitory, a corresponding charter was also formulated to facilitate student management. The impact of student dormitory on teaching was analyzed through data mining technology, as shown in Figure 4.

It can be seen from Figure 4 that the impact of student dormitories on the teaching of monasteries is very obvious. No matter in terms of appearance structure or functional management, the infrastructure of medieval universities is closely related to monasteries. It is either imitated or directly used. Its inheritance and construction of monastery facilities in terms of hardware facilities made the medieval university gradually grow into a large scale and possessed the basic elements for forming a university. The monastery is not only a place for living and labor but also a place for pursuing spiritual beliefs and creating spiritual life. The closed room, library, copy room, and chapel in the monastery are the main places for monks to carry out ideological activities. The corridor in the monastery, called the reading corridor, is equipped with long stools to facilitate the study of monks. The quiet environment characteristic of the monastery provides suitable conditions for study and research activities. A university is a major place for academic research activities, so it also needs a peaceful study atmosphere. The infrastructure of the medieval university was closely related to the monastery, either in form or in functional management, either imitated or used directly. Its inheritance and

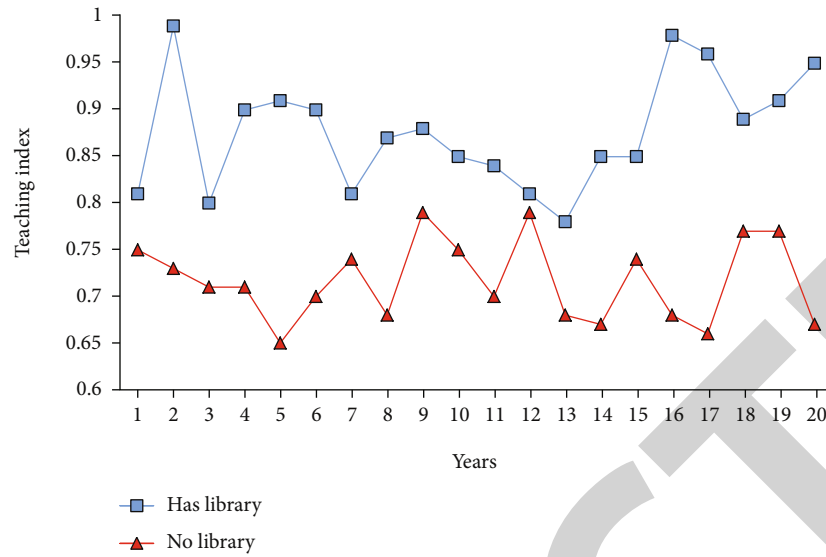


FIGURE 3: The influence of the library on the teaching of the monastery.

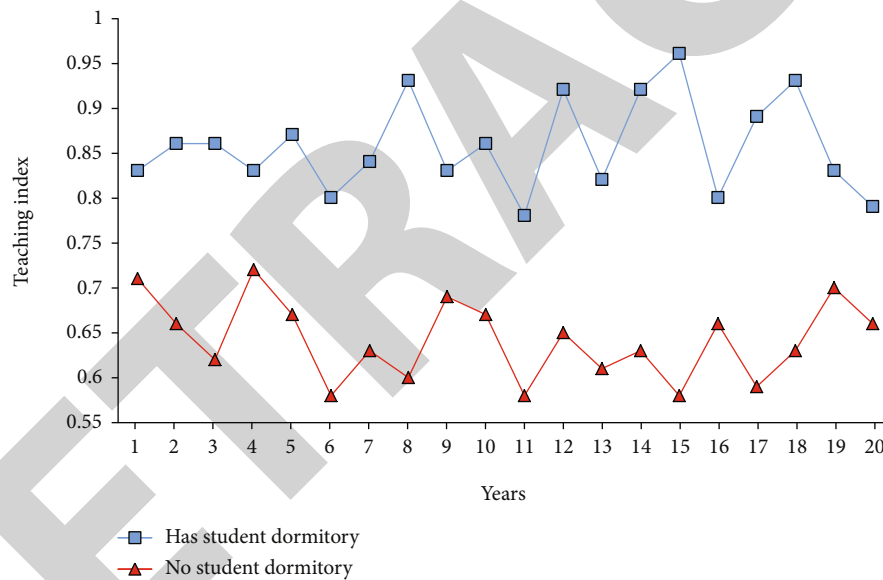


FIGURE 4: The impact of student dormitories on teaching.

construction of monastery facilities in terms of hardware facilities made the medieval university gradually grow into a large scale and possessed the basic elements for forming a university.

**4.2. The Influence of the Monastery on the University Discipline Setting.** The establishment of universities is of epoch-making significance in Western Europe. Since the establishment of universities, cultural education and knowledge dissemination in Western Europe have entered a new era. From the point of view of knowledge dissemination, anthropology arises from the need to disseminate knowledge, and knowledge dissemination advances and develops in a deeper and wider direction due to the existence of universities. Based on data mining, this paper first analyzes the

teaching situation without subject setting and uses the data mining algorithm to separate the teaching data migration matrix of four class hours of technology A, B, C, and D, as shown in Tables 1 and 2.

Faculty and students are members of both the college and the university. Colleges are also the most important branches of monasteries and other universities imitating the monastic model. However, due to differences in the size, tradition, and training objectives of each university, the composition of the colleges in the university is also different. The monastery has the most complete colleges, with four colleges of literature, medicine, law, and theology. Universities in southern Italy are mostly influenced by the University of Bologna or the University of Padua. Only the Faculty of Arts, the Faculty of Law, or the Faculty of Medicine has been

TABLE 1: Matrix analysis of professional theory courses from the perspective of teachers.

Analyze content	A	B	C	D
Teacher language ratio	68.44%	58.82%	78.94%	73.25%
Percentage of teachers asking questions	5.84%	21.44%	33.42%	18.25%
Open to all questions	100%	83.64%	84.34%	93.41%
Percentage of sexual problems	0%	16.36%	15.66%	6.59%

TABLE 2: Matrix analysis of professional theory courses from the perspective of students.

Student language ratio	A	B	C	D
Passive in students speaking	5.68%	4.26%	7.22%	3.11%
Speaking ratio	66.28%	79.21%	90.88%	100%
Students take the initiative in speaking	28.52%	20.71%	0%	0%
Speaking ratio	12.03%	38.98%	8.81%	26.95%
Student discussion ratio	58.28%	26.64%	38.38%	55.37%

established in the university, which is equivalent to today's single-subject university. In fact, by the end of the 15th century, very few English universities could set up four colleges like a monastery, and most universities consisted of only one or two colleges. The monastery is dominated by theology. It was not until the mid-to-late 13th century, after the decree of the Pope of the Christian Church or the regulations of the Medieval University's white body revision regulations, that the courses of the medieval university gradually tended to be unified, generally divided into theology, law, and medicine and literature for this four-person teaching course. The liberal arts are low-level colleges, that is, basic preparatory colleges, and the three subjects of law, medicine, and theology are high-level colleges. According to the recognized hierarchy of knowledge, theology is the dominant discipline in the school, and this discipline is also prepared for a very small number of people, and its prestige and objective influence in society are indisputable. Figure 5 shows the relationship between the number of disciplines set up in medieval monasteries and the impact of trainees in society.

It can be seen from the figure that as the number of monastic disciplines increases, the influence of the trainees in medieval society increases with the years. With the development of urban industry and commerce, and the strength of the citizens, they, as the peasants of the new advanced forces, demanded to get rid of all feudal shackles and form new values and began to pursue personal liberation and the realization of human values. The introduction of Greek and Roman cultural classics has aroused the enthusiasm of European academic circles to study classical culture, and the rational scientific spirit has been germinated. For a long time, the Christian Church and theology-oriented ideology have controlled Western European universities. From the following changes in the disciplines of traditional colleges and universities, the process of humanism escaping into humanism was not smooth, and many emerging disciplines were still born and independent disciplines.

## 5. Analysis of the Historical Status of Monastic Education

*5.1. The Revival of Monastic Scholarship and Education.* In the late Middle Ages, independent disciplines such as mathematics, physics, astronomy, geography, zoology, and botany began to appear, but what we call science today was called natural philosophy in the Middle Ages. Since the 17th century, professors have begun to introduce and try to use Descartes's dualism, transcendentalism, Newton's mechanism, and other modern scientific ideas and theories in university courses to investigate knowledge and study natural problems. At the same time, in physics and in science and medicine courses, old subjects that are not suitable for the development of the times are constantly discarded, and emerging subjects such as dynamics, optics, mathematics, and even chemistry are set up.

This phenomenon is not only a denial of religion and church domination of university courses but also a call for humanities and scientific knowledge to enter the higher education system. The secularization of university courses means that the knowledge system that universities value has undergone great changes. The gradual secularization of university courses is carried out against the background of the shift of Western society from the dark Middle Ages to the modern society advocating science, rationality, and pragmatism. With the help of the secularization of the curriculum, the knowledge imparted by the university can be updated, and the higher education institutions have obtained better opportunities and space for survival and development and also effectively promote the progress of the society. The unique role of universities in the spiritual field and scientific research is increasingly valued. The university is no longer a dispensable institution; it must carry a certain mission and responsibility. The secularization of the university curriculum has accelerated the connection of the higher education system to the outside world. Compared with the religionization process of medieval religion and the supremacy of the



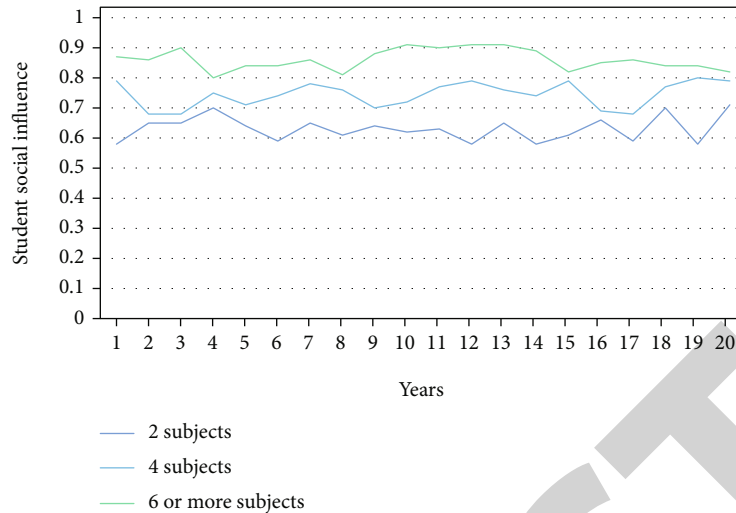


FIGURE 5: Analysis of the social influence of students under the teaching of different numbers of subjects.

church, which made people get rid of their dependence on the church and the gods, the British reentered the secular life. British medieval universities are the direct source of modern universities and have a prominent position in the history of higher education. Although higher education institutions appeared in ancient societies, whether in Western Europe or China, medieval universities in England are qualitatively different from them. It makes the dissemination of high-level knowledge the primary function of the institution and allows itself to undertake the mission of continuously dissecting and systematizing knowledge. During the same period, the development index of various disciplines in British monasteries is shown in Figure 6.

As can be seen from the figure, with the development of the times, the development of natural philosophy has gradually surpassed theology, which is a trend of social development. History is a mirror of the present and the future. If we want to know the nature and future of something, a very important means is to figure out its past. Only by knowing the history of the monastery can we know where we are and what we should do. Only then can we know the path the monastery should take in the future.

**5.2. The Socioeconomic Functions and Teaching Characteristics of Monasteries.** The monks spend their time in prayer, labor, and reading the Bible. The monks should use their own lawfulness and penance to resist the chaos and materialistic flow of reality, use poverty to eliminate luxury, use deference to eliminate crime and crime, and rely on their own labor to live. Such regulations are unimaginable for modern people, but the early monks strictly followed them. According to historical records, the monks all wore coarse linen clothes, worked six hours a day, read and prayed for eight hours, and fed themselves with rough food. Among them, labor is endowed with a sacred color. Basil emphasizes the value of labor and believes that labor is one of the ways to perfect the soul, which is more meaningful than penance. Benedict believes that if the monks want to keep Christ's poverty, they can only rely on their

own hands to labor and live, and laziness is the soul of the soul. Enemies, and labor can keep people humble, and participating in labor is one of the monastic ways to save souls. Compared with the excessive asceticism of the eastern monks, the British seminary emphasized the organization and discipline of the monks. It became a basic organization under the jurisdiction of the Christian church, and its way of life was regarded as the living standard of Christianity, especially the priests. The development of monasteries and the social and economic growth of medieval England are shown in Figure 7.

It can be seen from the figure that the monastery development index obtained through the analysis of data mining technology is more than 90% fitted with the British medieval development index. Among the many regulations of the monastery, the emphasis on labor and the establishment of an orderly social organization largely solved the problems to be solved in the regeneration of Western European social civilization at that time. Most of the early seminaries were built in the countryside or wild and barren areas. With the efforts of the monks, large areas of wasteland, woodland, and swamp were turned into fertile fields, and the seminary also became the economic and spiritual center of the rural area. A large number of landless people and poor people took refuge in the seminary. Although they had to engage in heavy manual labor every day, they at least ensured a relatively stable life. This gradually dispels the smog of contempt for workers that hangs over the road ahead of society. Moreover, most of those who entered the convent in the early days were bankrupt peasants or handicraftsmen, who preserved and developed the production technology in the Roman period and developed techniques such as wine-making and textiles. As a product of the development of British society and history, the seminary has deeply influenced the development of society and history with its pious regulations and timely economic functions. After the 13th century, with the development of the British commodity economy, the self-sufficient natural economy of manor agriculture began to disintegrate, and the closed life style of the

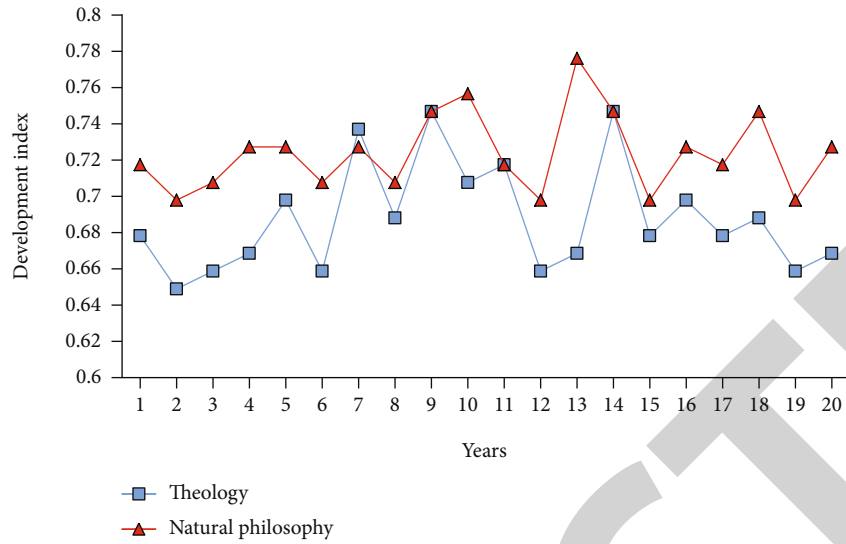


FIGURE 6: The development index of theology and natural philosophy.

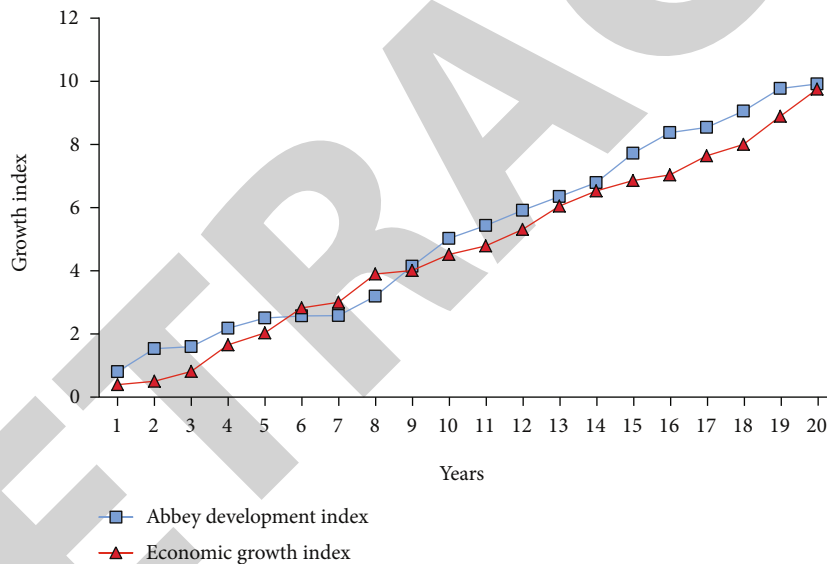


FIGURE 7: Fitting analysis of monastery development and economic development.

seminary became increasingly difficult. Its social influence and economic function are gradually declining and eventually fade out of the stage of social history, but there is no doubt that the development of the economic functions of the medieval seminary had a profound impact on the restoration of economic production and the establishment of an orderly life, which is a rich and colorful stroke left on the historical picture.

## 6. Conclusions

The early monasteries were generally located in remote places far from the city, but in the 19th century, they were completely surrounded by the world, such as many monasteries were built near castles or in places with convenient transportation. The monasteries are more and more favored

and concerned by the dignitaries, who not only donate property to the existing monasteries but also build their own monasteries. The monastery serves not only the Lord but also its founders, becoming their burial grounds and praying for the salvation of their souls. Various circumstances indicate that monasteries are no longer purely religious institutions. There are schools, libraries, transcription rooms, hospitals, workshops, hotels, vegetable gardens, orchards, barns, chicken pens, and stables for all kinds of livestock. The monks perform their duties according to their division of labor. Among them are the dean, the deacons who assist the dean, the supervisors who manage the property and the estate, and the life managers, teachers, scholars, writers, doctors, and tanners and winemakers, and other craftsmen. You can say that they are manor houses, schools or hospitals, and small societies with a strong sense of worldliness.

Medieval monasteries, far from the hustle and bustle of the city, provided a tranquil environment for those who worshipped God. Coupled with the vast real estate and wealth of the monastery, this provides a stable life guarantee for those Christians who are willing to become monks. Finally, the rich collection of books in the monastery library makes those scholars who are committed to academic research willing to gather here, and then, these scholars made their own ideas widely disseminated through lectures and preaching, and then, these academics made outstanding contributions to social and cultural development and ideological evolution.

### Data Availability

The figures and tables used to support the findings of this study are included in the article.

### Conflicts of Interest

The authors declare that they have no conflicts of interest.

### Acknowledgments

The authors would like to express sincere thanks to the contributors of the techniques used in this research. This work was supported by the Education Department of Jilin Province: Research on the Design and Application of Peer Evaluation Strategy in Online Open Courses under the Background of "Intelligence +" (Project No. JJKH20221145SK).

### References

- [1] T. W. Smith, "First crusade letters and medieval monastic scribal cultures," *The Journal of Ecclesiastical History*, vol. 71, no. 3, pp. 422–431, 2019.
- [2] S. Kreis, "Early medieval monasticism," *Historyguide Org*, vol. 15, no. 26, pp. 185–190, 2013.
- [3] T. Dang and A. Tsering, "Status quo and thinking of the monastic education of Palyul Tartang monastery in Qinghai Province," *Journal of Tibet University*, vol. 6, no. 18, pp. 281–286, 2016.
- [4] T. Li and M. Salonia, "The regulation of religious communities in the late middle ages: a comparative approach to Ming China and pre-reformation England," *Religions*, vol. 11, no. 11, 2020.
- [5] E. Jamroziak, "Genealogy in monastic chronicles in England," *Medieval Texts & Cultures of Northern Europe*, vol. 16, no. 20, pp. 746–752, 2008.
- [6] M. Casson and C. Casson, "Modelling the medieval economy: money, prices and income in England, 1263–1520," *Palgrave Studies in the History of Finance*, vol. 44, no. 20, pp. 147–158, 2015.
- [7] T. Isaacs, "Assessment in education in England," *SA-eDUC*, vol. 4, no. 10, pp. 221–230, 2012.
- [8] J. Johns, S. Bradley, and A. Little, "Efficiency in the further education sector in England: a subject level analysis," *SSRN Electronic Journal*, vol. 1, no. 33, pp. 81–94, 2007.
- [9] M. Heale, "For the solace of their advanced years': the retirement of monastic superiors in late medieval England," *Journal of Medieval Monastic Studies*, vol. 8, no. 21, pp. 143–167, 2019.
- [10] S. Watson, "The culture of medieval English monasticism," *The English Historical Review*, vol. 512, pp. 166–168, 2009.
- [11] F. Wallis, "Computus, crusade, and construction: writing England's monastic past and future in Oxford, St John's College, MS 17," *New Medieval Literatures*, vol. 13, no. 14, pp. 221–238, 2011.
- [12] G. Coppack, "Late medieval monasteries and their patrons: England and Wales, c. 1300-1540," *Speculum A Journal of Medieval Studies*, vol. 95, no. 502, pp. 221–223, 2007.
- [13] M. Bailey and A. Lucas, "Ecclesiastical lordship, seigneurial power and the commercialization of milling in medieval England," *Technology & Culture*, vol. 57, no. 3, pp. 1015–1016, 2016.
- [14] M. Heale, R. Horrox, and S. Maclean, "Monasticism in late medieval England, c.1300-1535. Translated and annotated by Martin Heale," *English Historical Review*, vol. 52, no. 3, pp. 491–491, 2011.
- [15] M. Richardson, "Medieval education in ENGLAND," *History*, vol. 18, no. 69, pp. 31–32, 1933.
- [16] R. B. Hepple, "Medieval education in England: a reply," *History*, vol. 18, no. 70, pp. 54–58, 2010.
- [17] N. B. Warren, "Monasticisms medieval and early modern," *Journal of Medieval and Early Modern Studies*, vol. 42, no. 3, pp. 511–517, 2012.
- [18] E. S. Choi, "Contributions of the medieval monastery movement to the history of education," *The Journal of Moral Education*, vol. 32, no. 1, pp. 111–135, 2020.
- [19] T. Danylova and I. Hoian, "Medieval and renaissance philosophers on education," *Path of Science*, vol. 6, no. 10, pp. 5001–5005, 2020.
- [20] K. K. Reji and C. M. Indukala, "A study on university education of medieval European mathematicians," *International Journal of Pure and Applied Mathematics*, vol. 116, no. 22, pp. 265–273, 2020.
- [21] J. Wei, H. Cheng, B. Fan, Z. Tan, L. Tao, and L. Ma, "Research and practice of 'one opening-one closing' productivity testing technology for deep water high permeability gas wells in South China Sea," *Fresenius Environmental Bulletin*, vol. 29, no. 10, pp. 9438–9445, 2020.
- [22] W. Zhang, Z. Cheng, H. Cheng, Q. Qin, and M. Wang, "Research of tight gas reservoir simulation technology," *IOP conference series: earth and environmental science*, vol. 804, no. 2, 2021.
- [23] M. Rubin, "Lessons from the past: medieval universities and today," *International Higher Education*, vol. 67, pp. 78–83, 2015.