Original Paper

Construction of Online Platform for Management of English Major Dissertation in the Context of Mass Online Teaching

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Abstract

Most of China' online platforms for the management of graduation dissertations restrict its function to checking the timetable and final scores. Based on a detailed description of each type of users, an online platform for the management of English major dissertation should achieve the following functions: management of Users' Information, review of dissertation topics, mutual selection of dissertation topics and supervisors, management of online instruction, management of documents, formative evaluation system, auto-revision of grammar and format, and management of literature. The construction of such an online management platform may improve the efficiency of management, facilitate the communication between supervisors and students, strengthen the process management, facilitate the archiving, preservation and extraction of required documents and various data, and ensure an objective evaluation of the performance.

Keywords

English Major Dissertation, Construction of Online Platform, Online Management

1. Introduction

Graduation dissertation is an indispensable component of the practical training in the curriculum of colleges and universities, and is designated to evaluate the quality of undergraduate teaching. It is also an important method to train students to master certain research methods and cultivate innovative abilities. At the same time, it can test students' mastery of their basic knowledge and ability improvement during the whole learning process. To complete the dissertation, students have to comprehensively apply all the professional knowledge they have learned. In doing so, students hone their ability of analyzing and solving practical problems. To some extent, this is the final, most critical and most comprehensive assessment for students in the undergraduate stage.

Traditionally, students accomplish this task under their supervisors' instruction. Their performance will be assessed both by the quality of the final thesis and the efforts taken in drafting. However, the dramatic development of online teaching brings both opportunities and challenges to the management of thesis writing.

European and American universities started the construction of informatization early. Most universities have their own graduation-thesis management system, and have a stable technical team to offer technical support and daily maintenance, such as Brightspace of University of Huddersfield (UK). These platforms are designed to meet the demand of teaching, self-study, as well as dissertation management. Being generally implemented based on PHP, JSP, ASP, UML and other technologies, they facilitate the daily management. These systems are generally convenient and flexible, ensuring that instructors and students submit and download papers anytime, anywhere, and some systems can also achieve online communication, which is convenient for both supervisors and students to communicate in time.

In China, however, most of the online platforms restrict its function to checking the timetable and final scores. Jinan University has launched a graduation thesis management system, which can realize the functions of dual-selection between supervisors and students, students' selection of topics. Shanghai Jiaotong University, Jiangsu University and other universities use the "Change Graduation Design Intelligent Management System", which can realize the process management and online communication of graduation thesis.

In addition, some researchers explore new management systems from the technical aspects. Liu Fei (2017) designed and built a Web-based university graduation thesis management system to avoid stagnation from different roles. By adopting the network software architecture B/S, Yuan Xuelin (2017) used SQL Server as the database support and took advantages of NET and the three-layer development mode of MVC to simplify the development of the system and to achieve the functions required in the process of thesis writing. Zhao Qianfeng (2018) studied the application and development of the ASP.NET MVC framework and workflow technology in the graduation thesis management system. Liao Yan and Li Xin (2019) designed a system of graduation thesis process management based on B/S structure of Web technology developed by PHP programming. By using YII2 framework, Zhang Liang et al. (2019) developed an online Quality Management System to implement module design of system functions, strengthening the supervision and management. While exploring the technological basis for the construction of an online platform for the management of dissertation writing, these attempts failed to take into consideration the specific expectation of different users and the characteristics of English majors.

As an unexpected consequence of the pandemic, online teaching reforms happen in all aspects of teaching and learning. To adapt to this irresistible trend, this paper intends to discuss the necessity and framework of constructing a multifunctional online platform for the management of dissertation writing.

2. Deficiencies in Current Management of Dissertation

To achieve the expected goal of dissertation writing, it is necessary to establish a scientific and systematic management mechanism to ensure the quality. Many specific requirements have been put forward on the dissertation in formulating curriculum, which systematically regulate the operation of each step. In practice, the implementation is not always smooth and efficient. According to an interview of academic administrators, supervisors and students, the following prominent problems in the management of dissertation writing are presented.

2.1 Blindness in Choosing Projects and Supervisors

As a result of repeated revisions of the curriculum, many English majors have cancelled courses concerning about the teaching of dissertation writing. Students are in lack of knowledge and practice of selecting projects and unfamiliar with supervisors' research direction. As Sun Zhengang et al. (2018) discovered, there is a mismatch between students' and supervisors' interests. They prefer to choose those with whom they are familiar to be their supervisor. There must be an extreme situation where many students choose the same supervisor while some supervisors have no student. As a supervisor can only instruct a specific number of students, there must be students who have to take a second turn or even many turns to finish this simple task. This not only wastes a lot of time and unnecessary labor, but may eventually lead to a large number of serious problems in the future.

2.2 A Lack of Process Instruction

As is regulated by the curriculum, students are required to accomplish the dissertation before the end of the last semester, which lasts from March to June. In fact, students are very busy in this period of time. They may prepare for the postgraduate entrance examination, take internship, hunt for a job, take Civil Service Exam, and get ready for graduation and leaving school. Supervisors and students lack the opportunity for face-to-face instruction and can only communicate through online instruments. According to a survey conducted by Chen Yang (2017), a lack of communication between students and supervisors is one of the shortcomings that existed in the process of dissertation writing. Whether students take the dissertation in a serious way or not depends on their self-consciousness. It is impossible for the school and supervisors to grasp students' actual performance. Moreover, the related records and materials are easily lost, making it even more difficult to evaluate the writing process of students in a fair way.

2.3 Low-level Construction in Informatization

Online platforms are widely applied in the management. However, the current educational administration management system can only fulfill some basic tasks, such as the declaration and review of projects, students' selection of the projects and score management. Critical and complicated tasks, namely process management, dissertation guidance, defense review, and summary of the whole work, have to be done in the traditional way of manual statistics. School administration, supervisors and students are all involved in the entire process, but information cannot be shared through the platform. Therefore, it is difficult for any party to get access to the required data in a timely and comprehensive

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manner, resulting in a lot of repeated labor. The inefficiency in the application of information apparatus makes the platform a "white elephant".

2.4 Redundancy and Inefficiency in Inspection and Filing

To inspect the operation, filing required documents and statistics, and making a summary of the process are required for an efficient management of the entire task. "These works, including a lot of repeated statistics, have to be done by supervisors" (Ma Yingming et al., 2018, p. 45). However, dissertation writing spans a long period of time, and many inspections and statistics have to be carried out in many different stages. If relying on manual records and management, it will inevitably increase repetitive labor. Moreover, once the person who is responsible for a certain task changed, almost all the work must be carried out from the beginning. In addition, the need to provide paper copies for inspection and filing also creates unnecessary waste of resources.

2.5 Specific Issues for English Major Students

Because English is the required language in writing, the dissertation of English major is a comprehensive investigation of both language ability and professional knowledge, which is a great challenge for every undergraduate student. As a second language learner, a lack of proficiency in using English is inevitable. If the instruction and supervision are available, many language and format errors will be dealt with in a timely manner, and the supervisors and students themselves can pay more attention to the structure and argumentation of the dissertation. However, in actual operation, due to the above-mentioned reasons, many questions are backlogged to the final review and defense stages. The supervisors have to spend a lot of time dealing with language, grammar and formatting issues, unconsciously overlooking the content and academic requirements.

These problems have not been effectively resolved for a long time, owing to some objective reasons such as insufficient teaching resources, a lack of funding and support for software and hardware, and the heavy burden on teaching, as well as subjective reasons such as the adherence of relevant participants to compliance and lack of reform ambition. However, these problems have resulted in the decline of the quality of dissertation. Students are attaching less and less importance to the writing of their dissertation. As a result, academic misconduct has spread to the undergraduate stage. To some extent, a poorly managed dissertation brings more harm to students than the so-called "bird courses" do.

3. Design and Construction of Online Management Platform

The design and construction of such an online management platform has to conform to the requirements of different users and the specific characteristics of English major. Based on a description of different users, this section will introduce the functions designated by the construction of the online platform, as well as the difficulties in constructing it.

3.1 Description of Users

The online management platform is designed to meet the practical demands from various users, including students, supervisors, heads of English major, deans of School of Foreign Languages and academic administrators. The differences in the role and responsibility among these different users determine the specific function and limits required by each of them. Therefore, a detailed description of each type of user is fundamental to the design and construction of this platform. To meet the needs of online management, the role and responsibility of each user can be summarized as:

3.1.1 Students

Students are required to use the platform to complete all tasks related to the dissertation writing. Following the guidance of the curriculum, they can login the platform with their unique ID (students' number), select the dissertation topic and choose their supervisor, submit and revise the proposal, review references and submit the literature review, submit the draft and make revisions, submit the final thesis and revise after dissertation defense, review the comments and the score of the dissertation, and download all the documents. Moreover, students can discuss with their supervisors on questions and difficulties in their dissertation by using the online message system embedded in the platform.

3.1.2 Supervisors

Supervisors take the responsibility of instructing their students and reviewing other students' thesis. To instruct their students, supervisors declare the topics, confirm students, review students' proposals, review and make comments on drafts and the final thesis, and evaluate the students' performance. As a reviewer of other students' thesis, they must have access to other students' database, and different reviewers' comments can be generated by the platform automatically as the final assessment of a student's performance. All comments, students' revision and records of discussion will be saved in the platform, enabling supervisors to evaluate students' performance on a solid and visible basis.

3.1.3 Heads of English Major

Heads of English major take charge of the management of the entire process of dissertation writing. Following the arrangements of the university and School of Foreign Languages, heads of English major lay out a timetable to ensure that every task is completed on time. They may or may not instruct students, but have access to all students' and supervisors' database in order to monitor their progress in the process. An essential task for them is to arrange the dissertation defense, including grouping students and reviewers, nominating a leader of each review group, reviewing the final scores, filing all the documents and summarizing the whole process.

3.1.4 Deans of School of Foreign Languages

As the leader of School of Foreign Languages, the deans do not instruct students' dissertation and are not in charge of specific management of the process. Instead, they mainly focus on the supervision of the process, such as setting the deadline of each stage, making regulations on the instruction, checking students' and supervisors' performance, reviewing the proposals and theses, reporting the achievements and shortcomings to upper academic administration.

3.1.5 Academic Administrators

Academic administrators are in charge of managing the daily operation of the platform and database. They input the general information about students and supervisors, assign different rights to different users, release various notices, upload or download required documents, and gather related data to summarize the process.

3.2 Description of Function Modules

The descriptions of different users illustrate that both general functions and specific functions should be taken into consideration in the design and construction of the online platform, so as to fulfill their respective requirements. The process of dissertation writing can be divided into five main stages: topic selection, guidance, review, defense and filing. Each stage is composed of detailed specific tasks. Based on an interview and questionnaire investigation of different users, the following basic functions are required to be embedded in the platform.

3.2.1 Management of Users' Information

The platform must have basic functions of inputting, maintaining and inquiring the general information of students, supervisors, English major and Scholl of Foreign Languages. Academic administrators are permitted to import, delete, update, change and edit the basic information of the other users, while supervisors and students only have access to the inquisition and edition of their information by logging in their respective accounts.

3.2.2 Review of Dissertation Topics

The supervisors are firstly asked to submit several topics with a brief introduction to the platform. Heads of English major and deans of School of Foreign Languages will review the topics and make changes if needed. As the previous topics are all saved in the database of the platform, repeated topics can be identified and filtered out, while modification can be made by referring to previous topics.

3.2.3 Mutual Selection of Dissertation Topics and Supervisors

Once the topics are approved, students are allowed to choose the topics according to their interests. Within a specified period of time, each student can only choose one dissertation topic at a time, while a topic can be selected by different students. While selecting the topic, students must attach a short statement to explain their understanding of the topic. After students' selection, a supervisor selects and confirms students according to the students' choices and their statements. Students who are not selected will be selected for the second time until they are selected by the supervisor. Heads of English major have the right to appoint a supervisor to instruct a student, on the condition that a student cannot find a topic or refuse to choose a topic.

3.2.4 Management of Online Instruction

The submission, reviewing, edition of proposals, different drafts and the final theses will be accomplished on the online platform. At each stage, students have to submit the required documents to their supervisor before the deadline, and the supervisor will make comments and give suggestions for improvement; students will edit and submit again until the supervisor permitted to move to the next

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stage. Both students' documents and supervisors' instruction will be checked randomly by Heads of English major and deans of School of Foreign Languages in the process. As all the information is recorded by the platform, academic administrators can also check the progress of students' writing or supervisors' instruction by the statistical data automatically generated and analyzed.

3.2.5 Management of Documents

During the process of dissertation writing, all documents will be auto-saved by the platform for further analysis and queries. Once the supervisor confirmed a student, a specific database will be generated in the memory equipment. Detailed information, such as submission time, edition records, supervisor's comments, online time, login times, and other actions that may be taken into the evaluation, will be saved. Supervisors' accounts also record the work related to the instruction, which will be used to evaluate a supervisor's performance. Moreover, records of reviews and inspections conducted by heads of English major and deans of School of Foreign Languages are also traceable. Therefore, the evaluation of different users can be done automatically and objectively by the platform. Since all documents are saved in the database, different types of statistical analysis can be carried out by searching and filtering mechanism.

According to many studies (Ma Changyou, 2018; Liang Shengbin et al., 2018), these six basic functions are available in most platforms which are widely used at present. As have been illustrated in section 2, these traditional functions cannot meet the urgent needs of online teaching reform. Taking the specific requirements of English major students into consideration, more functions should be integrated into the platform.

Firstly, the evaluation should be conducted on a more objective basis. Fang Hui (2015) said that the evaluation is an important part of the management of undergraduate education, guaranteeing the quality of graduation dissertation. Since the whole process of dissertation writing has been divided into several stages, students should also be evaluated by their performance in different stages. It is unfair to evaluate a students' dissertation by the final thesis only, or by the performance in the defense. As "the dissertation should meet a series of requirements, including academic proficiency, academic norms, and the ability to provide a reliable method for solving a certain problem" (Yao Shibin et al., 2016, p. 98), formative evaluation should be adopted by the platform. At each stage, supervisors will give students a score and the final result is the sum of scores of different stages.

Secondly, an auto-revision module is needed. Compared with other non-language majors, the graduation dissertation of English major is an evaluation of both English proficiency and professional knowledge. In practice, students and supervisors have to spend most of the time correcting grammar errors and revising sentence structures, overlooking the argumentation and structure of the thesis. Supported by AI technology and big data, grammar revision software or webs, such as Grammarly and Pigai, made great progress in accuracy and fluency. Wang Hongfu and Zhang Weiping (2011) have already illustrated the realization of automatic check and revision by adopting XML technology. These instruments can be integrated into the platform to facilitate students' self-revision of their thesis. Thus,

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supervisors have enough time to focus on the supervision of the content. Moreover, to revise the format also wastes a lot of time and energy. The platform also offers a format generation program to automatically generate a final dissertation in the required format.

Thirdly, a literature management module should be integrated into the platform. In writing a graduation dissertation, students have to complete a literature review by referring to a lot of previous studies on similar topics. However, this is a big challenge to students as they cannot find useful resources and seldom read them in a comprehensive way. In the online platform, a module of literature management is designed to solve this problem. Supervisors can recommend and upload several useful references for each topic. Students have to read them online, take notes or make comments on the references. By checking the information recorded, supervisors can give students targeted instructions and give them an objective assessment. Moreover, students can also upload more references and share resources with other students working on related topics. Gradually, a corpus of references concerning a specific topic will be generated and enriched, benefiting both students and supervisors.

3.3 Key Difficulties in the Construction

The construction of online management platform intends to match the requirements of dissertation writing of English major with the feasibility of current information technology. At present, the following difficulties should be addressed for further improvements.

(1) The Design of Critical Systems. This includes how to achieve fairness in the topic selection system? How to ensure the adaptation of students' interests, abilities and topics? How to realize the truthfulness and objectivity of process monitoring without infringing on the basic privacy of individuals? How to prevent data fraud and academic misconduct?

(2) Formulation of evaluation standards. The evaluation is a subjective behavior and prone to controversy. Therefore, it is necessary to formulate visual and checkable quantitative evaluation standards, minimalizing the interference of some abstract and subjective factors such as teacher's guidance quality, student's writing input, process performance, etc.

(3) The balance between expected functions and computer technology. Limited by funds, capacity of cloud storage, copyrights of software, and other technical problems, the platform cannot fully realize all of the expected functions. It is reasonable to achieve a balance between functional requirements and technical feasibilities, and make adjustments gradually to perfect this platform.

4. Significance of the Construction of Online Management Platform

In recent years, education authorities at all levels have encouraged the creation of "Gold Courses" and actively advocated the development of mixed teaching model. In this regard, many universities have made many attempts and achieved gratifying results. At present, most universities can provide high-quality teaching resources, as well as strong policy support. Moreover, the information construction has made great progress, and the teachers' enthusiasm for exploring teaching reform is also high and actively encouraged. This is the best time to explore the reform of the management model

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of the graduation dissertation. Therefore, the attempt to build a systematic, standardized, and open online system of graduation dissertation that conforms to the characteristics of online teaching and management, may benefit both teachers and students. The significances of designing and constructing such platforms are:

(1) Improve the efficiency of management. The completion of an online platform for graduation thesis can improve the work efficiency of various links such as selecting supervisors and topics, reviewing and changing topics, checking the writing process, data statistics, online instruction, defense, filing, etc. With the help of this platform, the error rate of data statistics will be much reduced compared to manual collecting. Moreover, the application of such an online management platform can realize data sharing, and improve work efficiency.

(2) Facilitate communication between teachers and students. The online platform aims to effectively record, store, track, and integrate the basic information of the whole process of dissertation guidance. Supervisors and students can conduct online video and audio guidance on the platform, and all chatting records will be recorded by the database. The primary documents of process instruction during the dissertation writing will be kept intact to prevent process fraud.

(3) Strengthen process management and supervision. The whole process of the dissertation writing can be completed through the online platform, which is convenient for the monitoring of all stages in this process. Administrators of all levels can check the entire progress at any time, query the guidance records, and obtain various types of data. Not only can remind and urge students to complete the corresponding work, but also to effectively supervise the instructor in order to do a good job of macro-control.

(4) Facilitate the archiving, preservation and extraction of documents and various data. The database of the online platform automatically records all materials relating to the dissertation writing, sparing the supervisors from routine trifles concerning the collection of related data. Administrators can download backups at any time to reduce the duplication of labor caused by reporting data layer by layer. With the accumulation of data, teachers and students can also use the database to carry out relevant research, and the universities can also adjust relevant policies according to the changes in the data over time.

(5) Make sure the results of the thesis are objective and true. The online platform enables objective, systematic and fair process evaluation. Graduation dissertation is broken down into successive different stages, and detailed scoring standards are formulated. Being graded according to the respective standards of each stage and student performance, the final score is automatically generated by the platform, minimizing the interference of human factors to ensure objective, accurate and true results.

(6) Build a comprehensive platform for teaching, management and scientific research. The online management platform firstly improves the efficiency of the management of dissertation writing, and at the same time undertakes the teaching and learning of some useful knowledge and skills such as academic writing which are weakened in the current curriculum. Teachers and students can also use the database information provided by the platform to carry out research on teaching reform and academic study.

5. Conclusion

The great mass online teaching speeds up the reform in teaching and management of higher education in China and even all over the world. In this context, more efforts must be taken to construct corresponding facilities to support the reform. As for the management of graduation dissertation, the construction of an online management platform is an urgent need for practical work at present. However, as Wen Wenting et al. (2019) discussed, the application of a new platform may confront with the rejection from students and supervisors. Academic administrators at all levels should be encouraged to actively explore and work together to realize the transformation of the management model of the graduation dissertation as soon as possible.

This paper is an attempt to construct a platform for English major, but will also shed light on the design and construction of similar platforms for other majors. Moreover, this paper only outlines the design of such a platform, more experiments and remedies are required to make it a practical, scientific, and effective one.

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