



## DEVELOPING DIGITAL INFORMATION RESOURCES AT THE CENTER INFORMATION – TAN TRAO UNIVERSITY LIBRARY.

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### Abstract

In the current period, Information - Library activities are increasingly being respected and developed, the problem for libraries is to have the right orientation in developing information resources, especially is a digital information resource to quickly, promptly and accurately meet the information requests of library users. In this article, the authors present research on the current status of digital information resource development at the Information and Library Center of Tan Trao University. Evaluate the development of digital information resources at the Center, on that basis propose some solutions to develop information resources at the Information - Library Center of Tan Trao University.

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## PHÁT TRIỂN NGUỒN LỰC THÔNG TIN SỐ TẠI TRUNG TÂM THÔNG TIN - THƯ VIỆN TRƯỜNG ĐẠI HỌC TÂN TRÀO

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### Từ khóa

*Nguồn lực thông tin, thư viện,  
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### Tóm tắt

Giai đoạn hiện nay, hoạt động Thông tin - Thư viện đang ngày càng được coi trọng và phát triển, vấn đề đặt ra cho các thư viện là phải định hướng đúng trong công tác phát triển nguồn lực thông tin, đặc biệt là nguồn lực thông tin số nhằm đáp ứng được nhanh chóng, kịp thời và đúng đắn yêu cầu thông tin của người dùng tin trong thư viện. Trong bài báo này, nhóm tác giả trình bày nghiên cứu về thực trạng công tác phát triển nguồn lực thông tin số tại Trung tâm Thông tin - Thư viện Trường Đại học Tân Trào. Đánh giá công tác phát triển nguồn lực thông tin số tại Trung tâm, trên cơ sở đó đề xuất một số giải pháp phát triển nguồn lực thông tin tại Trung tâm Thông tin - Thư viện Trường Đại học Tân Trào.

### 1. Introduction.

Entering the 21st century, along with the strong development of science and technology, is the information explosion, the era of the knowledge economy, information plays an important and decisive role in everything. aspect of social life. In the past, when talking about Libraries, people only mentioned the number of books, newspapers, and magazines contained within four walls, terms such as: "Electronic Library", "Digital Information" or "Digital Information". "Database" is still unfamiliar to many people, but now, the need to search for information from non-print publications and electronic sources is becoming popular and becoming an indispensable need for people. use information [1]. Digital information

resources at libraries are receiving strong attention and investment. Therefore, university libraries in general and Tan Trao University libraries in particular have direct decisive significance in the teaching, learning and research process of staff and lecturers in the school. Located in the general library system of the country, university libraries have a very important position and have a great influence on the education and training of our country today. Information - Library Center (TTTTV), Tan Trao University is where the school's main digital information resources are concentrated. That's why the Center always tries to build high-quality digital information sources, satisfying the information needs of readers, especially in the current period, a period of great challenges for Vietnam before the

revolution. In the 4th industry (industry 4.0), the role of digital information resources in the learning, teaching and research process in schools is very important. Researching the current status of digital information resource development at the Center is necessary, thereby proposing feasible solutions to improve the development of digital information resources at the Center, meeting training requirements. Scientific research and creation of the University today.

## 2. Research methods.

### - Data collection:

Collect secondary information: Analyze and synthesize documents on digital information resources of Tan Trao University library published on the Website, summary reports, and collect data about readers through data accesses. From there, we can identify strengths and weaknesses in order to propose some solutions to develop digital information resources of Tan Trao University.

### - Online survey based on questionnaire:

Survey participants will fully answer the questions posed by the researcher. focuses on a group of issues: human resources, library facilities and equipment, network infrastructure, library's electronic documents... this method aims to evaluate the current state of digital information resources of the library. Tan Trao University Library, thereby proposing feasible solutions to develop digital information resources of Tan Trao University's Information Center.

## 3. Research results

### 3.1. Current status of library management facilities and software.

Identified as one of the Centers with a very important position in the school, the TTTV Center receives close direction from the Party Committee and Board of Directors such as: creating favorable conditions to promote the connection between the School and the School. school libraries with libraries at universities across the country to share common data sources; Equipped with relatively complete facilities, the reading room is designed to be friendly with essential items for activities such as tables and chairs, computers, air conditioners [8]...

According to survey results, lecturers and students are satisfied with the Library's facilities and equipment, an average rate of 90% or more. As follows:

**Table 1: Level of satisfaction with the Library's facilities and equipment**

Numerical order	Content for comments	Satisfaction rate (%)
1	The Library's reading room is arranged reasonably, meeting space requirements	92,8
2	The Library's information technology equipment system is used effectively and meets requirements	91,8
3	The Library's website has rich, diverse and easy-to-use content	92,3
4	Easy-to-use document lookup software	91,2
5	There is complete data about readers and Internet access on the Library	90,9

With the highest choice (92.8%) of the reading room location, it is arranged reasonably to meet space requirements. Currently, the reading room is located on the 4th floor of Building C of the Library with a total area of over 100m<sup>2</sup>. Quiet space, rich learning resources, facilities and equipment ensure to serve readers. The Library's website has the second highest satisfaction rate (92.3%) after the reading room. Content and information about books, textbooks, reference materials, newspapers, and magazines are constantly updated to provide the most timely information to readers. Quick, convenient, and easy to access information. However, the Library - Information Center needs to pay more attention to updating and circulating data about readers on the Library management software system to look up and serve readers quickly and effectively. than. In addition, it is necessary to upgrade the Internet connection to increase efficiency for staff, lecturers and students in the school.

### 3.2. Current status of digital information resources.

Digital information resources include two main components: Digital documents and Databases [2]. Digital documents are documents in which the structured information is packaged or stored on media that users can read and access via electronic devices, computers, or Internet. The advantage of this type of document is that it stores information per unit of area, does not require a lot of storage, and can be accessed quickly. Today, with the development of science and

technology with the support of information technology and electronics and telecommunications, this type of document is increasingly developing. Libraries are tending to develop information resources of this type. However, price and language barriers make this type of document not available to all libraries [3]. Currently, the Center has 5,614 digital documents and 2,170 electronic documents. Database is a collection of data about objects needed for management. Stored simultaneously on electronic computer information carriers and managed according to a unified mechanism, to help access and process documents easily and quickly. Currently, the Center has installed Elib software (programmed by Thai Nguyen Learning Resource Center). Elib thoroughly applies information technology, automating all operating cycles of a current library. modern, providing the necessary features for a library to be ready to integrate with the National and International Library system, as well as manage electronic publications. Elib has the ability to support all library activities and link with external resources, through which readers coming to the Center can easily find the appropriate documents they are looking for. sword. eLib library management software also has the ability to store a large number of records and is highly customizable, helping the library operate in a modern and professional manner. Elib is standards-compliant, creates access points from metadata, and then assigns metadata to each document. Besides, the software also supports accessing the server from outside, helping outsiders to also access the software through the Z39.50 library protocol [5]. ELib library management software has a search function, supporting readers in finding documents flexibly. They can search by common access points, browse by category, and browse by hierarchical structure. ELib library management software supports multimedia, allowing the Center to manage popular digital document formats, can support many different file formats and document types, providing digital documents to customers. all types of users. Currently,

library archives can be released on the entire internal system, the Internet or exported to discs, the process of releasing library archives is quick and simple.

Currently, the Center has built a book database: 71,323 records. This is a directory containing all bibliographic records for Vietnamese books for training majors of Tan Trao University. This entire database is a directory containing level 2 information, that is, bibliographic data, not the original documents. It includes bibliographic data such as: author, title, publication elements, data characteristics... classification indexes, abstracts, annotations, keywords... database Bibliographic data includes searches for original documents, along with instructions to help users obtain original documents at the Center [4]. The directory database allows users to directly and immediately access information - directories in the data warehouse and the information they need is displayed right on the screen. On the other hand, it allows the creation of many intermediate products as output products of the database, which are publications such as new book announcement directories, sets of index cards... Records in the database. The database is pre-processed on the declaration by the Center, which designs a template according to international standard bibliographic description rules, then the declaration is imported into the computer to build a database to look up and serve readers. After completion of construction, the database will be transferred to the service departments through the Center's intranet, and at the same time they will also be posted online to the Center's Website to serve the purpose of looking up and searching for documents. reader's data.

In February 2023, the center conducted a survey on the level of satisfaction of lecturers and students with the learning resources (traditional documents and digital documents) of the Library Information Center, with 872 people responding. Participating, over 90% of lecturers and students are satisfied with the learning resources in the Library, specifically as follows:

**Table 2: Satisfaction level with the Library's learning resources.**

Numerical order	Content for comments	Satisfaction rate (%)
1	Learning materials (textbooks) in Vietnamese and foreign languages meet learning requirements	91,5
2	Reference documents in Vietnamese and foreign languages meet study requirements	91,2

Numerical order	Content for comments	Satisfaction rate (%)
3	Documents in the library's optional reading rooms are neatly arranged, easy to find, and the search information is complete and clear.	92,6
4	The Library's electronic documents meet user needs	90,6
5	The Library's electronic documents meet user needs	91,6
6	The number of textbooks and reference materials in the Library ensures the learning process	91,1
7	The content of the source material fully meets and matches the school's training major	91,3

The above results show that the effectiveness of the information processing process has been demonstrated by practical results, such as: Helping the Library classify, organize, manage and serve documents according to approved sectors. body, science; Providing users with products and services that help them have better access to the Library's information resources, specifically: Online bibliographic search service with many new access points to help users Information lookup is quick and accurate; Consulting and providing information upon request; Providing multimedia services: helping users access the Library's full-text databases. However, the Library's information processing activities still have some limitations: there is no consensus in cataloging, classifying, identifying keywords, making summaries, annotations, and data entry; The bibliographic records that have been created have not been checked, edited, or verified for quality.

### ***3.3. Development of digital information resources at the Center***

The work of developing information resources includes the following main processes: Accessing information resources, choosing forms and methods of supplementation. [2] Therefore, in order to develop information resources effectively, Information Centers - Libraries first need to have a policy for developing information resources. The information source development policy is a guideline for information source building activities, it provides necessary instructions for carrying out additional work, and it is also a tool for communication and coordination in an organization. library information agency system, making coordination between library information agencies easier.

*Additional areas of digital information resources: Documents serving research, teaching and learning*

*are:* textbooks, reference books, reference materials and specialized magazines. Documents serving the purpose of entertainment and improving the lives of readers are: socio-political books, literary books and newspapers and magazines published by central agencies [6]. Library professional documents serve librarians themselves: this is a small but very important part so that librarians can access and supplement new knowledge in the field of Library studies. Basically, the Center's supplementary work has so far been carried out in accordance with the correct orientation and content consistent with the school's training majors. Documents are digitized based on user needs, according to the correct process. However, the Center's additional work is mainly subjective experience, so a more scientific and appropriate supplement policy must be developed. Supplement process: when supplementing documents, librarians Based on the school's training field, the Institute selects documents with the following requirements: close to the curriculum and the latest documents.

*Digital information resource sharing work:* In October 2023, the Information - Library Center, Tan Trao University was officially connected successfully to the Digital Knowledge Center (TTTTTS) - Shared Digital Library, link <https://hub.idk.org.vn>. TTTTS is an initiative proposed by VNU-LIC to connect and integrate data of many independent TVS into a unified system, linking data through a centralized search system, providing quickly and accurately. Metadata and full text from the system's digital knowledge stores such as theses, dissertations, research results, books, textbooks in all scientific fields... depending on the policy and sharing level of each individual. participating libraries. With millions of digital knowledge units to be expanded and developed from participating libraries, TTTTS brings a series of values. With this



connection, the Center's digital information resources are increasingly expanding, the volume of digital documents is increasing, meeting both the quality and quantity of learning resources in training and scientific research. of lecturers and students in the school.

*Staff supplementing digital information resources:*

The capacity and qualifications of Library staff play a decisive role in the quality of library information activities. With the current information explosion, it is necessary to have a team of library information staff capable of solving complex tasks related to finding, analyzing and disseminating information. Digital librarians will ensure the best collection of documents. Therefore, the Center has established a Digital Library Team consisting of 3 members, the Team Leader is mainly responsible for supplementing current documents with professional qualifications in Mathematics - Information.

**3.4. Evaluate the development of digital information resources at the Center**

*The positives*

Firstly, with the close attention and direction from the School's leadership, the Center has made significant progress in its development process. The Center has built a rich source of digital documents in the fields of Science - Technology, Economy - Society; Politics - Culture. Digital resources are increasingly expanding, the volume of documents is relatively large, information resources have basically met the teaching and learning needs of staff, lecturers and students throughout the University. The Center has truly promoted its role as a place to provide documents in the school's training fields.

Second, the Center also makes an important contribution in training technical and professional staff to perform well its tasks in developing document capital in general and digitizing documents in particular. This is a human resource expert in the field of digital resource development to disseminate to readers and share experiences with library agencies inside and outside the higher education system. Therefore, the Center's human resources basically meet the requirements for developing information resources. These are important factors affecting the Center's document development activities.

*Limitations*

Firstly, although the Center has made many efforts in developing digital information resources, it has not

guaranteed to serve the needs of information users to the maximum. In the current era of "information explosion", the problem of updating information in documents is not timely. The selection of additional document sources is still limited, many documents are not really close to the curriculum, the phenomenon still occurs: bias, traditional document formats/paper documents account for a large proportion. mainly in the structure of document capital; Meanwhile, electronic documents are not significant enough to serve readers.

Second, the application of information technology achievements in the Center's digital information resource development activities is relatively slow. That is choosing the most suitable options, utility software, technological processes, and technical means to develop information resources. Modernizing all professional activities of the Center is currently in the testing phase. The reason why the Center has not yet developed a policy for developing news sources. For information resource development in general, the selection of documents is often subjective, not properly aware of the importance of information resource development, and not considered a scientific labor. real learning, so the Center's materials are often not really appropriate between different types. This is also an outstanding problem in the development of the Center's information resources, and a solution is needed in the near future.

**4. Recommendations and solutions**

***The first, solution is to develop policies to develop digital information resources***

*Objectives:* determine immediate and long-term goals to build and develop information resources in each specific period.

The Center's information resources development policy needs to cover the following contents: Firstly, an overview of the Center's functions, tasks, and development orientation, stating the nature and scope of the Center's resources. information and documents that the agency intends to develop; Second, clearly indicate the direction of priority supplementation as well as the level of supplementation for each specific major; Third, provide criteria for selecting specific types of documents as well as criteria for filtering and removing inappropriate documents from the documents; Fourth, ensure consistency and continuity in the stages of information resource development (including in case of fluctuations or changes in personnel doing

additional work); Fifth, ensure balance and harmony between types of documents such as books, periodicals, electronic documents, and unpublished documents; Sixth, create favorable conditions for effective budget management[4].

To ensure information for training under the credit system, the Center needs to make efforts and urgently develop policies to develop information resources.

***The second, solution is to collect endogenous resources***

*Objective:* Develop information resources in general, enhance digital document resources in particular.

Currently, the endogenous digital documents that the Center collects include: theses, dissertations, scientific research topics, graduation theses, textbooks, lectures, course outlines; Exam set, review questions; Science research topic; Specialized Science Magazine; Articles serve according to training majors; Scientific research reports; Reports, proceedings of conferences, seminars... of staff, lecturers, and students in the school

Internal documents are submitted to the Library including hard copies and soft copies according to regulations. Specifically, the regulations require that school officials, lecturers, and students submit to the Center 01 copy of paper documents along with 01 soft copy (PDF file). The library must regularly have close relationships with academic faculties because the staff, lecturers, and students of the faculties are both places with high information needs and places where valuable information products are concentrated. value.

***The third, solution is to increase the addition of electronic documents and foreign languages***

*Objective:* Ensure completeness of content, diversity of types, consistent with the development trend of digital information resources.

Current reality shows that, at university libraries, more and more information users are searching for and using information sources in foreign languages, because the level of information users at the Center is increasingly higher and more specialized. deeper; Their information needs are also diverse in many fields [5]. Therefore, to satisfy the needs of information users (especially for credit-based training), the center needs to: Firstly, increase the addition of electronic documents such as: CD-ROMs, e-books electronic,... Then step

by step digitize the textbooks, learning materials, and reference materials of each subject; because this is an indispensable source of information for an online course when conducting credit-based training.

**5. Conclusion**

Information resources in general are the basis for operating libraries and information agencies. Without information resources, libraries and information agencies cannot operate. It is a valuable asset, the potential, and the pride of every library and information agency. In the current period, with the explosion of science and technology, the richer the digital information resources, the greater the ability to meet needs and the more attractive it is to users. Digital information resources are objects of daily work in modern libraries. Librarians are the ones who supplement, process, and organize them into appropriate records and warehouses to propagate and announce the country's economic, scientific, technical, and cultural achievements as well as world, political and social situation. Readers use digital information resources to gather knowledge to improve their professional qualifications, scientific research, self-study, entertainment... Therefore, if there is a lack of information resources in general and information resources, In particular, the Library cannot develop. Currently, when digital libraries have officially become a trend, the professional work in the Center must be more advanced, the qualifications of staff at the Center must also be improved in both quality and quantity, and the quality of serving people. Using information is also more effective. Reality has shown the extremely important and indispensable role of the Information and Library Center in the School's teaching and learning strategy.

**REFERENCES**

- [1] Chi, N.M. 2011. Completing the organization of endogenous document resources to meet the credit-based training method at Hanoi University of Science and Technology.
- [2] Duc, N.T. 2010. Developing information resources to serve credit training at the library information center of the University of Labor and Social Affairs.

[3] Monograph (2017), “*Building and developing Vietnam’s digital library Past - Present - Future*”, Library Information Center, Hanoi National University.

[4] Conference proceedings (2010): “Building and sharing digital local information resources for heritage preservation and economic and social development”, National Library of Vietnam.

[5] Son, N.H. (2011), “Digital libraries two decades of development in the world: Lessons learned and development orientation for Vietnam”, *Information and Documentation Magazine*, 2, p.2- 20.

[6] Proceedings of the scientific conference (2018), “Information - Library Professionals in the digital era”, University of Social Sciences and Humanities

[7] *Library Law* November 21, 2019.

[8] Summary of survey results of stakeholders’ opinions on facilities, environment, health and safety; IT infrastructure; Learning materials and service quality to meet management, training and scientific research requirements for the 2022 - 2023 school year