



Some solutions to develop science and technology at Tan Trao University

Duong Thi Ngu

Ph.D., Tan Trao University, Tuyen Quang, Vietnam

* Corresponding Author: **Duong Thi Ngu**

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Abstract

Promote research, transfer, and firmly apply the achievements of the fourth industrial revolution to all areas of social life, including higher education as a driving force for growth. The article studies the current situation and proposes solutions to develop scientific research on the Tan Trao University, Tuyen Quang province, Vietnam case study in the current period.

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1. Introduction

At present, globalization has become an indispensable and objective trend of development. In the field of education and training, globalization is the process by which countries truly compete by prioritizing investment in resources, based on the advancement of science and technology, to develop a team of teachers as well as a scientist. The university's teaching staff will have the main task of training qualified human resources and presiding over the research directions of the critical scientific fields and branches of the country. It is the faculty in the university that is an important factor in accelerating the socio-economic development of the country. Creating a breakthrough in the fundamental and comprehensive innovation of education and training, developing high-quality human resources, and attracting and appreciating talents.

In the field of education and training, the Communist Party of Vietnam identifies Education and training as the top national policy, a decisive factor for economic growth and social development. Education development is the responsibility of the entire Party, the people, and the whole society, in which the contingent of teachers and educational administrators is the core force, playing a decisive role in ensuring the quality of education. With that spirit continued to be emphasized at the X, XI, and XII Congresses of the Party, continuing to affirm that people are the center of development and steadfastly developing comprehensive Vietnamese people, the 13th Party Congress affirmed determined: " All policies of the Party and State must aim at improving the people's material, spiritual and happy life "; implementing " promoting the human factor, taking the People as the center; promote the role of culture - the spiritual foundation of society, the goal and the driving force of development " ^[4].

Tan Trao University, formerly known as the Primary School of Pedagogy, was established on October 13, 1959. In 1999, it was upgraded to Tuyen Quang Pedagogical College. On June 30, 2011, Tuyen Quang Pedagogical College was renamed Tuyen Quang College. On August 14, 2013, Tuyen Quang College was upgraded to Tan Trao University. Since then, Tan Trao University has become the first university in the revolutionary homeland, the capital of the liberated zone, and the capital of the resistance war. However, cooperation in the field of training and scientific research with domestic and foreign partners is still limited and unsustainable. The number of state-level and ministerial-level projects is still small; The content of transferring science and technology applications into production practice and life is not rich. Many training courses and refresher courses for individuals, production, and business households have not been opened yet. Human resources for international cooperation are still limited in both quantity and foreign language ability.

2. Content

2.1. Reality

Scientific research plays an important role in improving the scientific qualifications of lecturers, has a positive effect on the quality of training, and at the same time affirms the "brand" of the educational institution in the integration period international. Scientific research is always considered the leading criterion to evaluate the achievements of each lecturer. However, at Tan Trao University in particular and in Vietnam, in general, today, many universities have not paid much attention to this issue. As a result of scientific research works, from 2018 up to now, Tan Trao University has produced 1506 scientific products, of which: 163 scientific research topics at all levels; 1003 articles published in domestic and foreign scientific journals (including 81 articles in a list of ISI/SCOPUS); 146 scientific articles participated in domestic and international conferences; 128 monograph textbooks and reference materials, 66 provincial and school-level experience initiatives. There are also 79 scientific research topics for students.

Out of the total number of science and technology human resources at Tan Trao University today, the number of lecturers is large at 78.8%, the rest is staff, workers, and officials in different departments, specialized committees, centers... (Accounting for 21.2%). In this, the number of lecturers with postgraduate qualifications (master's, doctorate, associate professor, professor) tends to increase. In 2022, the teaching staff with a master's degree or higher has increased to 211 people (accounting for 73.8% of the total number of lecturers), so the percentage of lecturers with a master's degree or higher directly teaching in All fields reached 100%, the number of lecturers with Doctoral degrees and Associate Professors increased to 52 people (accounting for 28%) [Statistical source: Political Organization Department - Tan Trao University]. This is a fairly reasonable rate in the higher education environment, when the teaching staff plays the most central role, reflecting the prestige, training quality, and endorsement of the school's brand.

Over the past years, the science and technology human resources of the university have made many important and practical contributions to the education, training, and scientific research of Tuyen Quang province in particular, as well as in the system. Vietnamese higher education system in general. On average, every year, staff and lecturers of the university research and implement hundreds of scientific and technological products, serving the development of industries and fields such as agriculture, forestry and fishery, natural resources, and the environment. School, health and education, application of information technology, social sciences and humanities... Received and applied many technological processes, and built many models of application of scientific and technological advances. chain link production in the field of high-tech agriculture and forestry. Prominent topics and projects: Producing acacia hybrid by tissue culture method based on benefiting from the results of the implementation of the ministerial-level science and technology project under the "Key program for development and application of technology". Biotechnology in the field of Agriculture and Rural Development" (acacia hybrid varieties BV10, BV16, BV33, eucalyptus varieties CT3, CTiv, acacia CLT7, CLT18, CLT26) to supply high-quality seedlings to the province. Tuyen Quang and neighboring provinces.; Successfully propagated cordyceps

under tissue culture conditions, launched cordyceps sinensis product lines transplanted on silkworm pupae and brown rice, creating a valuable and quality source of medicinal herbs to serve demand society.

In the medical field, Tan Trao University's general clinic with a full range of specialties (internal medicine, surgery, ophthalmology, otolaryngology, maxillofacial, obstetrics, and gynecology) has implemented several lifting models. improve the quality of life and take care of the health of cadres, workers, officials, and employees in the school, as well as serving the needs of the people: periodical general health check-ups for individuals and agencies, unions, companies; Periodic medical examination for students of schools; diagnostic test for Covid-19 infection; When the Covid-19 epidemic complicated and spread, especially in the southern provinces, on September 9, 2021, a lecturer at the Faculty of Medicine and Pharmacy - the university Tan Trao University together with doctors and nurses from Tuyen Quang province volunteered to help Binh Duong province fight the epidemic. This proves that the university's scientific and technological human resources not only have extensive professional knowledge and professional experience but also show a noble heart of medical ethics, a spirit of mutual affection, ready to unite with colleagues to fight the epidemic soon.

In international cooperation, cooperation relationship with nearly 30 universities, research institutes, and organizations of the world in ASEAN countries such as Thailand, Philippines, Singapore, Malaysia, Laos, and Indonesia, countries in Asia such as China, Korea, and countries in Europe such as Russia, Belarus, Poland and the United States in the fields of training, scientific research, publishing, and exchange of lecturers and students. As a result, not only creates opportunities for the school's teaching staff to study and improve their qualifications but also excellent students have the opportunity to experience, and continue access to a professional learning environment, increase communication ability, confidence as well as practical knowledge for future careers. The average employment rate of graduates is over 70%, with many majors reaching 100% such as land management, physics - environment, environmental science, literature - communication, accounting, and management travel and tourism.

With the initiative, positivity, and creativity of the science and technology human resources and many achievements in education and training activities, Tan Trao University has been awarded the Education Accreditation Center under the authority of the Center for Educational Quality Assurance. The Vietnam Association of Universities and Colleges (an independent accrediting agency) decides to recognize the accreditation standards of higher education institutions. In particular, the school is one of 121 universities in the country that have been granted a certificate of standardization (out of a total of 133 schools that have been officially surveyed), the evaluation result of 93.69% is the highest score. in the system of accredited universities so far and is one of 10 schools recognized as meeting standards in 22 schools surveyed and evaluated according to the new set of criteria issued by the Ministry of Education and Training., effective from 2019, equivalent to the Standard for Accreditation of the Southeast Asian University Network (AUN-QA). This is an important factor recognizing the quality of management activities, university administration as well as the quality of training and scientific research of Tan Trao University, which is a

necessary condition for the school to continue to improve improve the quality of human resources in science and technology.

Cooperation in the field of training and scientific research with domestic and foreign partners is still limited and not sustainable. The number of state-level and ministerial-level projects is still small. The content of transferring science and technology applications into production practice and life is not rich. Many training courses and refresher courses for individuals, production, and business households have not been opened yet. Human resources for international cooperation are still limited in both quantity and foreign language ability.

Inadequate facilities and working conditions; Equipment and specialized software for quality assurance work are limited.

2.2. Solutions to develop scientific research at Tan Trao University

2.2.1. Strengthen cooperation in training and scientific research

a) Goals

- Help the teacher the school is associated with training and scientific research with prestigious universities and institutes in teaching and training. right major to train high-quality human resources;
- Linking with prestigious universities, academies, vocational education and continuing education centers in the province to create more jobs for VCs and employees.

b) Contents

In order to create momentum for development, the University should continue to expand and link training with prestigious universities and institutes in teaching and training. right major to train high-quality human resources capable of competing with human resources of universities; linking with vocational education centers - continuing education in the province to train short-term and long-term classes suitable to the actual capacity of the University; regularly open short-term classes, training courses, seminars, and workshops to exchange experiences between prestigious training institutions to learn from experience in building and developing human resources in all aspects. At the same time, it is advisable to take the initiative and create conditions for the University's lecturers to study at the master's and doctoral levels to improve knowledge and foster professional skills.

2.2.2. Strengthening facilities and materials for teaching and promoting scientific research activities in the University

a) Goals

Help VCs and employees of the University have adequate facilities and materials for teaching and scientific research to create a favorable working environment and conditions in order to encourage the dedication and creativity of the staff and employees.

It is also one of the necessary conditions to attract highly qualified human resources, good new graduates, etc.

b) Contents

Facilities, materials for teaching, and scientific research have a strong impact on lecturers, infrastructure, and teaching materials - scientific research is likened to an extension of the human arm doing teaching and scientific research. Teaching - scientific research without this condition, no matter how

good the lecturer is, he cannot perform well. In addition, this is a mandatory standard in the assessment of higher education quality as well as the university stratification standard. According to Circular 24/2015/TT-BGDDT dated September 23, 2015, on National Standards for Higher Education Institutions, standards for facilities and equipment in Clauses c and d of standard 1, Article 3, specifically: Having all necessary facilities and equipment to meet training and scientific research requirements; have practice facilities and specialized equipment according to quality assurance requirements for specific training disciplines and specialties; Whether the library and the learning information center have enough textbooks and reference books for training programs; have access to at least 1 international scientific database and at least 1 international scientific journal (print or electronic) for each training discipline.

The school needs to buy more books, scientific journals, and copyrights of scientific databases.... so that lecturers can access, learn and exploit these data sources to help them keep up-to-date. new knowledge, grasp development trends, have abundant reference materials for teaching and research, especially in-depth research, conducting research projects at the university level or higher, and even student topics.

There are mechanisms and policies to encourage and encourage teachers, lecturers, and scientists to actively research, etc., to consider it as a criterion for assessing the degree of completion of scientific research work of universities and lecturers pellets.

Coordinate to find financial resources to strengthen physical foundations and equipment for training The school needs to mobilize all resources to build the School, improve classrooms, develop teaching and learning materials, and invest in a multimedia teaching equipment system; The school regularly repairs replenishes and replaces old and broken equipment such as projectors, printers, speaker and sound systems, electric fans, environmental landscapes, and plans to purchase first investing in additional necessary equipment such as installing air conditioners, water systems, teaching equipment. In the current context of comprehensive international integration, teachers in all professional fields must have merit international publication of scientific research results.

3. Conclude

Improving the quality of lecturers meeting the standards of academic titles and degrees, sufficient quantity, quality standards, and reasonable structure is an urgent need for our country. Currently, 4.0 technology and digital transformation in all fields, at the same time, the impact of the Covid -19 pandemic (both a requirement and a condition) make the development of the digital capacity of the teaching staff at the university. Tan Trao University in particular and in Vietnam in general develops continuously in the field of training and scientific research.

4. Acknowledgement

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