# Some Solutions about Infrastructure and Facilities for Face-To-Face Learning in the "New Normal Period" After the Covid 19 Pandemic at Thai Nguyen University of **Technology.**

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Abstract: This article analyzes some solutions about infrastructure and facilities service learning for TNUT students in the state to come back new normal after closing the school period for two years continuous to prevent expanded infection of Covid epidemic 19 at Thai Nguyen University of Technology (TNUT).

Keywords: Solutions, Infrastructure, Facilities, New normal, Learning, After, Covid19.

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#### I. Introduction:

The Covid epidemic appeared in 2019, then it rapidly spread globally. Caused harmful human health and have died about 5.6 million people (WHO), When vaccines are in the process of research and testing, social distancing and limiting crowds are effective ways to prevent disease outbreaks, Billions of students at home as Covid 19 school closures expend UNESCO) are affected, to keep learning and knowledge acquisition continues to be reasonably optimal and safe, online method is the only way to use.

However, when the vaccine is successfully tested and vaccination is implemented on a large scale in all walks of life, covid is no longer a dangerous disease, dangerous to the health of individuals in the majority. For the masses, the reopening of schools is a necessity to bring things back to normal after the pandemic, Time for closing school to online exists for 2 years, when going back to school, they will face problems, which is the deterioration of learning equipment after a long time of not being used besides the natural degradation over a set time. Some difficulties need to be overcome to maintain good learning activities.

Learning in tnut is according to modern, learner-centered teaching methods

(Mihyar Hesson, Kaneez Fatima Shad et al., 2007), Students have to self-study and self-study, the theory is reduced instead of self-study, self-research increases, to form in students the habit of self-study, selfdiscovery of knowledge and independent work... Through activities that are typical of modern learning, students' learning activities include both classroom activities and extracurricular activities, classroom activities have contact and interaction between teachers and students. Extracurricular activities Students self-activate activities to complete assigned tasks, and acquire relevant scientific knowledge, skills, techniques, and other ways to form the required psychological qualities of a professional. future career field.

Students learning activities are typical of future careers, not only occupying general and fundamental knowledge but also occupying the knowledge, skills, and attitudes about the profession, forming professional qualities. of experts, one of the must-have requirements for students in the modern training system is to have knowledge, skills, and a serious attitude in learning, approaching, and mastering the theoretical basis as well as orientation for design training, organization to acquire knowledge, apply learned knowledge and skills to develop professional capacity, have the right attitude, be responsible for self and family society has a passion for the chosen profession.

Therefore, the University needs to pay attention to ensuring the learning conditions for students, this is one of the important components, a material premise to carry out the learning task, changes in activities, teaching action when applying modern teaching, that is multiple media learning processes (C Namitha 2018) leading to a change in the requirements for facilities and financial services, an increase in the time and content of self-study, leading to the demand for space for self-study, for reference materials and for learning about the subjects. Technical means for training, especially audio-visual media and the internet, flexible teaching plan

requires rebuilding financial regulations for teaching, on the other hand, students do not learn by session. The regulations also require the application of a process to manage classrooms with equipment to avoid overlapping schedules and in accordance to ensure conditions for students' activities, which is to ensure synchronous teaching facilities and equipment, modern, contributing to improving the quality and effectiveness of training and helping students to manage their activities achieve higher results, building equipment, facilities, and equipment with adequate conditions suitable to the teaching content. Teaching creates favorable conditions for students to get acquainted with the working environment in the future, associated with learning and practice, creating a high-quality workforce for society.

Strengthen the management of effective use, fully exploit and optimize the use of equipment such as textbooks, reference materials, large classrooms... discussion rooms... laboratories, practice workshops, and practice rooms. The use of computers will facilitate students' learning activities, besides not only learning specialized cultural subjects, but the system of facilities and equipment of the gymnasium also serves the students. Sports, cultural, exchange, and recreational activities to improve health and fitness also need to be focused to train future engineers with enough intellectual, physical, and aesthetic qualities to improve the quality of life. High quality of the school's training, can not ignore the effect of physical education with its effects on the health and mental health of students, Physical activities have been associated with cardiovascular health and fitness, muscular strength and endurance, reduction in depression and anxiety and positive association with academic achievement (Strong et al 2005), It is difficult to absorb learning well if the health is not good, so it is necessary to make proper investment in facilities to serve this subject in addition to learning culture.

## II. Solutions:

1. Strengthening facilities and equipment to serve students' activities.

Strengthen the management and effective use of teaching equipment to create favorable conditions for teaching activities to achieve high results, contribute to improving training quality, invest heavily, and fully exploit the facilities. Quality for teaching activities and training management is considered a priority solution in special training according to modern teaching.

University leaders need to determine the goals and development plans of the school, and prioritize the construction of additional facilities such as lecture halls, libraries, and practice rooms in a synchronous and modern manner, focusing on investing in software. Teaching management, modern teaching facilities, and equipment, technology transfer, Teachers need to be trained regularly on the innovation of teaching methods, mastery in using new equipment, applying technology in teaching and student management; standardization of conditions for teaching and learning materials, teaching equipment is an important means and condition for training in modern teaching. It is necessary to set up a project committee to build and upgrade public facilities to serve the University's training. The Project Board is responsible for conducting surveys, investigations, budgeting projects, and setting up procedures by regulations to submit to the Board of Directors and competent authorities for approval.

Ensure the minimum usable area meets the standards for student learning (large lecture halls, small classrooms, group discussion rooms...); consolidate, upgrade and perfect the system of lecture halls, libraries, specialized classrooms, function rooms, etc., with enough area to organize teaching and learning activities; planning and organizing thematic classrooms such as foreign language classrooms, informatics, Funds can be mobilized to build more and renovate small classrooms with a capacity of about 30 students for group study or graduation guidance, where teachers meet with students to approve outlines, assignments, information exchange. Using Edusoft software so that the classroom is used with the highest frequency and most effective; equipped with computer equipment in classrooms (multi-function projector, microphone, other devices,...). Build a multi-purpose classroom so that teachers and students can perform their OS most effectively with the support of modern teaching equipment and techniques; Prioritize the construction of practice rooms and practice rooms... Ensure the use of library facilities, and access to a complete and diverse source of materials so that students can easily access databases and book references.

Libraries and classrooms and lecture halls need to connect to the internet so that students and teachers can access information at all times, serving teaching and learning activities;... Every year, the library must make a plan to review the list of lists. List of books, newspapers, and magazines to manage the quantity and quality of books and have a plan to supplement the missing documents, books, and newspapers. The school needs to have a regular budget plan to supplement textbooks, reference materials, and newly published publications. Libraries need to have close relationships with publishers and universities to update catalogs, collect documents, timely equip books, and ensure students have access to new knowledge. Building and continuing to perfect the electronic library system to meet teaching and learning requirements.

- To ensure the conditions for the innovation of teaching methods in the direction of positivity, it is necessary to have a plan to invest in teaching facilities and widely deploy information technology applications. The classrooms have enough technical facilities, multi-function classrooms, rooms equipped with projectors, computers... are requirements for the innovation of teaching methods. Develop a plan to purchase and supplement the equipment, especially modern equipment, and apply new technologies for teaching activities. Develop rules on the use and preservation of teaching equipment, and regulations on the use of teaching equipment and require teachers and students to strictly implement; the equipment use plan must be managed and monitored by the responsible technical staff; encourage and create favorable conditions for teachers to actively research and use equipment in the teaching process to avoid the situation of "vegetarian teaching", "monologue".

Ensure the conditions of laboratory equipment, and practical exercises in the laboratory. Specialized faculties need to have a specific experimental schedule, widely notify students, and register. Consumables and testing chemicals should be provided in full and promptly. Through these activities, students gradually form the necessary skills for future careers.

It is necessary to mobilize resources to develop the land fund, infrastructure for teaching activities, need more space and construction area for students' activities, due to the forms of learning organization in small classes, discussion groups, waiting rooms for students between classes, reading room, a place to perform exercises, prepare topics, office for teachers, academic advisors to work with students, services Student.

- The work of compiling textbooks and lectures used in the school must be the first task in completing the teaching materials and teaching equipment. The Board of Directors needs to increase funding and direct specialized faculties and departments to organize curriculum writing by organizing seminars and consulting experts on professional issues to develop, improve and step by step standardize specialized curricula and reference books in the direction of basic, modern, and highly practical, avoid empty theory, ... need to supplement regimes, encourage teachers to write textbooks and documents such as increasing the level of education. Spending on supporting the writing of textbooks and documents, setting aside appropriate time for teachers who are capable and experienced in compiling textbooks and documents; cooperating with other units or universities and colleges to exploit resources to compile textbooks to serve staff and students in the university.

For physical education at tnut school with subjects such as football, volleyball, basketball, badminton, besides investing in building facilities such as yard, running track, multi-purpose gymnasium, If the ball, net, and racket are full, the regular inspection and maintenance of equipment and facilities when the live learning is interrupted due to the Covid-19 epidemic that has not been used for a long time will degrade quickly, ensuring The above facilities are always in the right condition, which is a necessary job to help students study smoothly, bring moments of comfortable and vibrant sports activities, and is an effective means of clearing the street and regenerating energy. learning capacity in the lecture hall is also a way for students to follow modern learning methods, learn through activities, and self-absorb knowledge and skills.

2. Invest in the application of information technology (IT) in the management of information technology and teaching.

One of the outstanding features of modern teaching is Multiple Media and Information Technology using and impacting on teaching and learning process, Teachers can teach students with more depth and efficiency (M. Vijayalaksmi et al., 2019). Therefore:

The Department of Training of the university needs to build teaching management data software, organize training, and guide staff and teachers to use this software fluently, at the same time Students must be instructed on the earliest use of information technology, provided with the necessary accounts to access school announcements, register for classes, view results, grades and exchange emails with teachers and others when deemed necessary for their learning.

The computer network at the faculties serving the administration, management, storage, and processing of academic data for the whole school in general, at the data processing center of the school in particular, needs proper attention and investment to unleash the power of this tool. To serve the administration, the school's training management needs to complete, upgrade the computer system and upgrade the network system enough to meet the requirements of this new method.

### Some Solutions About Infrastructure And Facilities For Face-To-Face Learning In The "New ...

The university needs to build a complete Internet and LAN system to serve the different requirements and goals of the university. In particular, the top priority of subscribing to several high-speed transmission lines is an important solution, because the Internet has a great impact, and has a good effect on learning, in the research of teachers. and SV. When switching to online learning during the time of social distancing due to the covid epidemic, one of the most common adverse factors in learners is internet congestion Wong, D (2006). Back to face-to-face learning after a long time of online learning, the problem in the lecture hall is to ensure the smooth operation of the projector system and internet connection.

Modern learning requires students to have a lot of time to study outside of class time, the IT environment allows students to have enough information to prepare documents, actively self-study, and selfresearch to gain knowledge. learning service. Therefore, it is required that the school needs to upgrade and perfect the infrastructure for the Internet and information technology applications, have an IT product to support management work, and have a software system with suitable functions. It is a system of scientific methods, means, and tools, including computers, communication networks, and a system of data warehouses to organize, store, transmit and effectively exploit and use information sources in all stages of the training and management process.

After a preliminary assessment of the evolution of the covid epidemic when the majority of the community has been vaccinated against covid that has a safe effect on the public, without the need for social distancing, activities including education It is necessary to return to normal as before the pandemic appeared, This article has pointed out the requirements in face-to-face learning activities in the new normal period after the covid-19 pandemic and provided the measures to ensure factors to serve students' learning activities according to modern teaching methods are most favorable, making learning activities comfortable for learners,

For the above contents to be effectively implemented, first of all, school leaders must determine the school's development goals; prioritize the construction of infrastructure, supplementing facilities and equipment; attach importance to new IT applications in teaching and learning; focus on investing in teaching management software of schools and teachers, modern and advanced teaching facilities; regularly transfer and effectively use modern equipment and new technologies. Flexibility in finding investment capital sources, building investment plans for facilities, and purchasing equipment for teaching following the goals, programs and development of the school.

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