

# Developing the Education Administrators in Universities of Vietnam in the Context of the Industry 4.0

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**Abstract:** *An administrator either plays an important role in the activities of university or is a key factor in determining the quality of education in universities. In the context of the industry 4.0, university managers in Vietnam are required not only to complete their management functions but also to be leaders in implementing their duties of planning, making policy, managing and leading staff, lecturers, students in order to achieve the mission, vision and objectives. This article refers to the requirements for high education administrators in Vietnam in the context of the industry 4.0 affecting the higher education of Vietnam directly today and suggests the measures to develop them meeting these requirements.*

**Keywords:** administrators, development, the industry 4.0, university, Vietnam

## 1. Introduction

In the context of the industry 4.0, the education administrators consider the especially important role of "head" determining the universities' direction and speed of the innovation. University administrators have been working in the context of technology and digitization with artificial intelligence, changes of social human resources, and the variety of career structure in the curriculum that leads to change the mode of management in educational institutions. Therefore, the education administrators in Vietnamese universities need to focus on modern qualities and capabilities such as collaborative skills, critical thinking skills, problem solving skills, motivation and specially, they should have a broad vision, know how to analyze, contact, compare between the education of Vietnam and the other ones in the world. In addition, university administrators must have the expertise to concretize their policies and practices, to be proficient in management, to perform their duties in a professional manner, operate on the principles of transparency and efficiency.

## 2. The Impact of the Industry 4.0 on Higher Education in Vietnam

The concept of the industry 4.0 was first mentioned in 2013 in Germany in a government report. The industry 4.0 is the trend of automation and data exchange in manufacturing technology. The essence of the industry 4.0 is based on digital technology and integrates all smart technologies to optimize processes and production methods; Emphasizing the technologies that have been bringing the greatest impact are 3D printing technology, biotechnology, new material technology, automation technology, robots, etc. It includes internet-space network, Internet of things and cloud computing. Through this, people create intelligent plants with self-connected machinery, self-organization and management.

Also in the context of the industry 4.0, education is a model of intelligent education, linked primarily by the elements of

universities - administrators - entrepreneurs, facilitating innovation, creativity and Labor productivity in the knowledge society. This model also promotes the entrepreneurial spirit of faculty and students, facilitates the cooperation between higher education and industrial production. It combines with the regional and local economic development efforts... Education in the industry 4.0 helps the teaching and learning activities taking place all the time and everywhere, helping learners to personalize, and decide completely. In addition, in this context of the industry 4.0, education will change the thinking and approach to the university model. Universities are not only a place for training, researching but also a center for innovation to solve practical problems, bring value to society. Universities are not only framed in the walls of lecture halls, classrooms or laboratories, but must be expanded in conjunction with businesses, with the labor market to become an educational ecosystem.

One of the effects of the industry 4.0 on Vietnam's higher education is the quality of human resources that can meet the changing knowledge and skills requirements of the new working environment. This has great importance on Vietnam's higher education as it prepares the human resources to meet the development requirements of the country. It changes the education which equips learners with the knowledge and skills heavily with the capacity to foster innovation and creativity for learners, for citizens in the industry 4.0 eras.

In the context of the industry 4.0, in order to meet the needs and different learning abilities of learners, universities need to apply technological advances to be able to design their own learning pathways which are suitable for each specific case. The application of teaching software is necessary to adapt to each learner's ability and allow the learner to study at the pace that suits his or her needs. In addition, universities need to adopt adaptive learning software to replace each or every part of the curriculum in classrooms. With the flow of new learning models and the development of science and technology, traditional educational methods

will certainly face many challenges. This requires universities to require faculty to adopt cutting-edge, modern teaching methods that educate the learner how to think, how to evaluate situations, complex issues in life, through that, the capacity for problem solving is formed.

One of the issues that universities must be aware of in this time is the role of lecturers. Although critical technology develops strongly, it is said that nothing can replace the role of lecturers or make them become robots. Therefore, universities must equip faculty with the skills to utilize and master technology supporting and creating freedom, creativity in teaching instead of being dependent on technology or make technology substitutes the important role of trainers. Trainers enable learners to use computers that serve as personal assistants in classrooms with a variety of learning pathways.

Next, it is the change in university governance. The university management is implemented in a systematic manner in which all members of the university must participate actively because of the overall quality of the university. This comes from the full, clear understanding of each individual. In addition, the administrators must be professional and highly creative, with modern training methods with application of information technology strongly. The industry 4.0 sets the requirements for university managers to improve the future effectiveness of the university with three directions: globalization (promotion of global knowledge), geography (individual strengths, identity and local tradition), individualize (promote personal ability of learners).

### 3. Requirements for the administrators in universities of Vietnam in the context of the industry 4.0

University administrators have the role of administering a large and complex system as well as implementing flexible and diverse educational policies to solve proactive and creative problems, new emerging issues such as decentralization of management, social responsibility, resource mobilization, democratization of education, managerial computerization, etc. University administrators play a decisive role in ensuring successful implementation of the education policies and improve the effectiveness of educational activities. One of the most important requirements for them in Vietnam's universities is to be trained to meet the requirements of the industry 4.0.

Firstly, administrators must use skills in defining the university's vision, strategies and policies proficiently. University administrators should be equipped with the knowledge, skills and attitudes to determine the location, role, vision, mission of the institutions, from which it can be built. Strategies and policies for educational development and educational institutions. University managers must have the capacity to innovate; capacity to adapt and integrate; cooperation capacity; evaluation capacity; firmly grasping the law of education and understanding of relevant laws. They must have analytical skills, kindness, honesty, humility,

as well as industrial style. If university administrators in the past oriented to stability and order, university administrators in the context of the industry 4.0 should be oriented towards the innovation and development.

Secondly, education administrators must be knowledgeable and competent in the management of human resources of the university. Administrators at universities must apply theories and legal bases to implement the contents of the human resources management of the university from recruitment, job placement, assignment, evaluation, reward discipline, treatment policies, etc.

Thirdly, university administrators must be able to analyze and solve situations, identify opportunities, and challenges; propose solutions that take advantage of opportunity and concentrate resources to solve critical problems; have the ability to determine the right direction of the university. University administrators must have a holistic and systematic vision to ensure that the universities' curriculum is aligned with national development goals and reaches the region and world's quality standards.

Fourthly, university administrators must have superior leadership skills, use transformational approaches to meet the roles and responsibilities of university leaders and keep up with the goal of the universities' renovation. In the informational age, the role of managerial staff has not been decreased but has the opportunity to increase, it requires the administrators to have skills in using information technology; to master the information technology environment; to apply information technology to effective management, and to prepare psychologically for a fundamental change when adding and updating specialized knowledge and management skills and they will face an increase in the number of learners, therefore the administrators must instruct lecturers to teach more learners, to be more diverse in different modern methods and technologies.

Fifthly, university administrators must be able to develop learner-centered learning, which creates the conditions for learners to strive to achieve the highest and most innovative results. In the face of the new demands of academic society, administrators not only exhort people to study regularly but must be models for the team to learn regularly as long- life study. University administrators previously controlled by command, while university administrators in the context of the industry 4.0 must create a consensus in the staff and institutions.

Sixthly, university administrators must be persistent, determined on the comprehensive education of learners, create conditions for learners to develop their capacity to solve problems in life, have active living skills and future career skills in order to participate in the high quality human resources of the country in the international integration phase.

Seventh, university administrators must have the capacity to link the national vision with the university and the change process. University managers must have an overview, objectivity and comparison between the education system of

Vietnam and the education of the world, from which there are reasonable development orientation for the university.

Lastly, university administrators must have different skills in managing and solving tasks such as: organizing work, methods, processes, daily work processes, combine immediate and long-term work. In addition, the manager must know how to work with people, cooperate and create an environment that encourages people to work to promote personal creativity; to check, evaluate and properly use the capacity of each person; detects general and detailed problems, identifies motivational factors.

#### **4. Some measures for developing administrators in universities of Vietnam to meet the requirements of the industry 4.0**

##### **4.1. To plan for developing administrators in line with the development trend of universities**

Universities should well-organize the planning and implementation of development planning on the number of management staff; By evaluating and classifying administrators, it is necessary to determine the need for the number of administrators on the basis of adhering to practical needs to forecast the training and scientific research plans for each stage, in accordance with the development of requirements of the local and region. In addition, universities should improve their organizational structure on the basis of defining the functions and tasks of the units and departments so that they can well implement planning the management staff.

##### **4.2. To renovate the recruitment and use in order to attract the contingent of good administrators along the direction of standardization**

Universities should specify the recruitment standards, based on the needs, structure and standards of the training profession of the university to recruit management staff, which fully implements the process: (1) recruitment planning, (2) application submission, (3) application review, (4) admissions and (5) assignment. In addition, universities should undertake the task of appointing managers in a transparent, coherent and consistent manner with the results of planning to ensure the quality and quantity of university managers.

##### **4.3. To attach special importance for training and retraining of the contingent of managerial officials according to the professional titles**

Universities need to develop training and retraining plans in order to improve the professional capacity of administrators and identify the right subjects for training and retraining. At the same time, universities need to publicly disclose information on training and retraining to administrators, organizations and individuals. The curriculum and training of administrators must be scientific, up-to-date and focused on the management of: (1) professional qualities and personal capabilities, (2) Strategic Management, (3)

Organizational Capacity and Team Development, (4) Management of Higher Education Functionality, (5) Capacity to create relationships and deliver university culture.

##### **4.4. To strengthen the inspection and evaluation to improve the professional quality of administrators**

In order to effectively supervise and evaluate administrators, universities should improve the method of examination and evaluation; overcome weaknesses of the current system of evaluation and inspection, the inadequacies in the management of management staff; Improve the management capacity of the university management system. In addition, the monitoring and evaluation of university administrators should ensure full accountability with high transparency of performance, results of work in front of the university, society and community.

##### **4.5. To develop a contingent of rational administrators in terms of structure actively, meeting the requirements and developing the objectives of the university**

A structure is considered reasonable when the structure achieves the specified rate between staff and lecturers, staff. Universities need to focus on the development of administrators as the core for the development of the university, in which the administrators must meet the standards in accordance with the conditions and in accordance with the real conditions of universities. In addition, universities should specify and implement decentralization and in decentralization in order to promote the capacity and strength of all administrators so that they have conditions to develop professional skills. In addition, universities should promote the application of information technology in the management as well as the implementation of reforming administrative procedures in a synchronized, scientific and modern way.

##### **4.6. To perfect the mechanism and policies, create an conducive environment to the contingent of administrators**

Universities need to improve the policy regime and create a working environment for administrators who have close relationships which poses a strong motivation for administrators to do well. Assignment of tasks asserting professional capacity in the process of performing assigned tasks. In addition, universities need to mobilize all resources to create sufficient financial resources to ensure the proactive implementation of university development strategies as well as the development of administrators.

##### **4.7. University management staff development to meet international integration requirements**

Universities need to focus on standards and criteria related to international integration requirements for staff managers during the recruitment and appointment process. Together with the prescribed criteria, university managers need to use foreign languages proficiently, such as English in term of

cultural differences in different contexts as well as understand the culture of the countries. Besides that, universities need to build and develop a team of managers who are foreigners working for them, to focus on the evaluation criteria of international university rankings in their recruitment process in order to simultaneously improve the ranking of the school and promote to attract foreigner leaders coming to work for them like other fields.

## 5. Conclusion

The university administrators in Vietnam must perform an important duty in implementing the policy on education and training successfully, which is a 'head' national policy, a factor that determines economic growth and social development. Over the past years, administrators in Vietnamese universities have developed in the direction of standardization, ensured sufficient quantity, uniformity in structure, quality improvement, paying special attention to raising high political ethics, ethical qualities, lifestyles, professional conscience and professional qualifications to meet the increasing demands of education in the industrialization and modernization of land country. However, in the context of the industry 4.0, university administrators in Vietnam need to be trained and fostered in a formal and informal way, and especially in self-training. To ensure the ability to work in a highly creative environment and self-responsibility.

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