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Building Intellectual Staff of Science – Technology Industrialization and Modernization Promotion in Vietnam: The Case of Vinh Long Province

Le Thi Hong Nhien
Vietnam National University Ho Chi Minh City, University of Social Sciences and Humanities
Corresponding Author: Le Thi Hong Nhien 22922900209@hcmussh.edu.vn

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A B S T R A C T

In every era, intellectuals have always been the foundation of social progress, the core force of knowledge creation and dissemination. Today, along with the rapid development of science and technology, intellectuals have become a particularly important resource, creating the strength of each country in the development strategy. Accordingly, building and developing strong intellectual staff to meet the country's development requirements in the new context is a matter of both urgency and strategic importance. In Vietnam, our Party determines that building a team of intellectuals is a common responsibility of the whole political system and of the whole society, in which the Party and State play a decisive role. Thoroughly grasping the above viewpoint of the Party, in recent years, Vinh Long province has actively implemented the contents of the Party's guidelines, the State's policies and laws on building a contingent of intellectuals into practice to build a team of intellectuals in Vinh Long. In general, the work of building a team of intellectuals in general, and science-technology intellectuals in particular in Vinh Long has achieved very important results; However, besides the achieved results, there are still certain shortcomings and limitations that require further improvement of the system of regulations and policies to improve the quality of this team to meet the requirements of economic development socio-economic of the province in the coming time.

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INTRODUCTION

The world is currently undergoing a significant shift from an industrial economy to a knowledge-based economy. This transition involves moving from an economy primarily reliant on capital and natural resources to one driven by human knowledge. Such an economy considers the utilization of knowledge as the primary driver of growth and wealth creation. The proportion of wealth with a knowledge component is increasingly rising. The role of scientific and technological intellectuals is becoming increasingly crucial in the development of each nation and society. Alongside the rapid advancement of modern science and technology, intellectual resources have become a particularly important asset, shaping the strength of each nation in its development strategy. Vinh Long is a province of Vietnam, throughout the process of industrialization and modernization, the scientific and technological intellectual workforce has actively contributed to the socio-economic development, yet there are still limitations that need to be overcome. The article analyzes the results, and limitations and proposes solutions to improve the quality of building a team of scientific and technological intellectuals in Vinh Long.

LITERATURE REVIEW

The issue of knowledge and scientific-technological knowledge has been of great interest to many scientists and scholars both domestically and internationally, explored through various works published as books, articles, scientific topics, dissertations, etc. Here are some representative research works on knowledge and scientific-technological knowledge: The book "Respecting Knowledge, Respecting Talent" by Tham Vinh Hoa and Ngo Quoc Dieu, translated by Nguyen Nhu Diem in 1996, deeply analyzes the thoughts of Dang Tieu Binh on knowledge. Through this, it highlights Dang Tieu Binh's important viewpoints on talents, organizations, and national development through the training and utilization of talents. This work clarifies how Dang Tieu Binh's ideas have been applied in building and developing talents in China in recent years. The article "From Ancient Critics to Modern Intellectuals" by Long Bien (1968), Document of the National Center for Social Sciences and Humanities, Hanoi. In this article, the author Long Bien points out the characteristics of critics and intellectuals. In particular, the author delves into the concept of intellectuals. Specifically, the author argues that: "Intelligence is the ability to reason, judge right from wrong, understand not only people but also the objects around them. Consciousness is awakening, and self-understanding. Intelligence belongs to knowledge, consciousness belongs to wisdom. Intellectuals are those with intelligence, wisdom, and moral integrity. According to Long Bien, those lacking wisdom and moral integrity, no matter how high their qualifications or talents, are not intellectuals; they are only considered educated individuals, working with their intellect".

"The Intellectuals and Socialism" by Friedrich August Hayek (1949), published in The University of Chicago Law Review, contributes significantly to our understanding of the definition of intellectuals. According to Friedrich August Hayek, intellectuals are understood as professional secondhand dealers of ideas, such as journalists, educators, current affairs experts, radio

commentators, writers, artists, etc. With this definition, he distinguishes intellectuals from original thinkers as well as from specialized scholars. Intellectuals act as bridges between the ideas of original thinkers and specialized scholars with the wider public. Friedrich August Hayek also argues that it is the intellectuals, not anyone else, who determine the political future of a nation because "They wield this power through influencing public opinion."

"The Orientation of Vietnam's Intellectuals Development in Industrialization and Modernization" edited by Pham Tat Dong (2001), published by the National Political Publishing House, Hanoi, provides comprehensive explanations of the fundamental roles of intellectuals, specifically in three areas: the role in the development of the productive forces; the role in cultural creativity, promoting national identity; and the role in leadership, management, and operation of the country's industrialization and modernization efforts. The author emphasizes the second role, seen as the unique mission of the intellectual team. The author argues that in the current context of globalization, cultural exchange, and borrowing are inevitable, but each nation needs to preserve and protect core spiritual values as the foundation for its development. To achieve this, intellectuals play a crucial role in intelligently and selectively "imitating" cultural values based on foreign cultural values, bringing practical benefits to the nation. While the author's discussion of the roles of intellectuals in these three areas contributes to an overview of the significant role of Vietnam's intellectual team, the author's separation of the role of state management into a role equivalent to the other two roles and the emphasis on the role of intellectuals in culture seem somewhat purposefully biased. In the current context, not only state management or cultural creativity play important and prominent roles, but there are also other roles such as: the role of intellectual creativity and knowledge transfer; human resource development and talent nurturing; social critique... For these roles, the author has not invested in in-depth analysis.

"Prioritizing Technological Human Resource Development in Vietnam's Industrialization and Modernization Period" by Dang Ba Lam, Tran Duc Khanh (2002), Education Publishing House, Hanoi. In this work, the authors analyze and clarify the concepts of technological human resources, scientific and technological human resources, and the role of scientific and technological human resources in the process of industrialization and modernization in Vietnam. Through a comprehensive approach to the role of scientific and technological human resources, the authors also propose some solutions to further enhance the role of this human resource in the future. Although the content of the work focuses on the issue of technological human resources, it also provides valuable insights and directions for the author's dissertation in approaching the issue of scientific-technological knowledge in the future.

"Experiences of Some Countries in Education and Training Development, Science and Technology Linked with Intellectual Team Building" by multiple authors (2010), National Political Publishing House, Hanoi. This book consists of 8 chapters. Chapter 1 discusses an overview of the experiences of some countries in education and training development, science, and

technology linked with intellectual team building. In the contents of chapters 2,3,4,5,6,7, the authors present issues of education and training development, and science and technology linked with intellectual team building in countries such as Germany, South Korea, the United States, Japan, Singapore, and China respectively. Chapter 8 focuses on the issue of education and training development, science, and technology linked with intellectual team building in the period of promoting industrialization and modernization in Vietnam. This is a specialized reference book compiled based on meticulous research by scientists from research institutes and central departments. The reference book focuses on analyzing the experiences of the United States, Japan, the Federal Republic of Germany, South Korea, Singapore, and China in building the intellectual team; thereby drawing lessons learned for Vietnam.

"Building an intellectual team during the period of industrialization and modernization by the ideology of Ho Chi Minh", Nguyen Khanh Bat, Tran Thi Huyen as co-editors (2013), National Political Publishing House, Hanoi. This is a deeply researched work on intellectuals from the perspective of Ho Chi Minh's ideology. The authors have outlined the basic contents of Ho Chi Minh's ideology on intellectuals, clarifying the creative application of our Party and State in building intellectuals, while also evaluating the contributions and limitations of this team in Vietnam's revolution. Based on this, the authors delve into analyzing the solutions for building the intellectual team in our country from 2011 to 2020 to meet the requirements of industrialization and modernization.

The current situation and solutions for building the intellectual team in Vietnam in the country's renovation process, edited by Associate Professor Doctor Duc Vuong (2014), National Political Publishing House, Hanoi. This book clarifies the concepts and definitions of intellectuals, presenting concepts and definitions of intellectuals in Mexico, the United States, Russia, Singapore, and Cuba; Encyclopedia, Philosophy Encyclopedia; concepts and definitions of intellectuals by C. Marx, Ph. Engels, V.I. Lenin, Ho Chi Minh, Vietnamese and international scholars. From there, the author provides their definition of intellectuals. Especially, backed by credible data and scientifically based explanations, the book presents an overview of the current situation of Vietnam's intellectual team; the strengths and limitations are analyzed based on scientific evidence. Based on reflecting the current situation of Vietnam's intellectual team during the years of renovation, the book presents directions and solutions for building Vietnam's intellectual team from 2011 to 2020; and forecasts the trends and development potential of Vietnam's intellectual team during this period. Especially, the author also emphasizes that the direction of building Vietnam's intellectual team from 2011 to 2020 needs to be closely linked with the development of education and training, science and technology, and intellectual economy, as these issues are closely related to each other. It can be said that this is a relatively comprehensive research work on Vietnamese intellectuals. The content of the book provides readers with a fairly comprehensive view of the landscape of Vietnam's intellectual team. However, the solutions proposed by the author, although very specific, are not yet

comprehensive in our opinion. The author has not addressed solutions that are practically significant for building the intellectual team, such as mechanisms, policies, utilization, rewards, and recognition of intellectuals.

"Vietnamese Intellectuals in the Historical Process of the Nation", edited by Nguyen Van Khanh (2020), Knowledge Publishing House, Hanoi. Based on selectively chosen documents, this book clarifies theoretical issues regarding intellectuals: the structure and function of intellectuals; the formation and development process of Vietnam's intellectual class through historical stages: feudal era, colonial period, and from after the August Revolution of 1945 to the present. Drawing from the practical activities of intellectuals in the historical process, the book highlights the position and role of Vietnamese intellectuals in general, the current situation, and the role of the social sciences and humanities intellectual team in the industrialization and modernization of the country. Especially, the book also elucidates the prominent contributions of the Vietnamese intellectual team during the country's renewal period. Although the book has contributed to affirming the role and significant contributions of intellectuals in the nation's building and development process, its limitation lies in the author's failure to provide a systematic set of viewpoints and solutions to further leverage the role and significant contributions of this team to the country's renewal process.

The Social Mobility of Scientific, Technological, and Innovative Human Resources in Vietnam in the Context of the Fourth Industrial Revolution, edited by Doan Thanh Truong (2020), National Political Publishing House, Hanoi. This book is structured into 5 chapters. The content revolves around theoretical and practical issues of social mobility and its impacts on the development of science and technology, and socio-economic aspects of the country; it offers policy solutions to manage the flow of social mobility of scientific, technological, and innovative human resources to develop science and technology, prevent brain drain, and enhance development resources for Vietnam in the context of the Fourth Industrial Revolution. In Chapter 1, the author provides an overview of the research direction on policies to manage the social mobility of scientific, technological, and innovative human resources in the context of the Fourth Industrial Revolution. Chapter 2 presents the approach, methods, and research design process regarding the social mobility of scientific, technological, and innovative human resources. From a sociological perspective, Chapter 3 analyzes the forms of social mobility of scientific, technological, and innovative human resources, clarifying the internal relationships of each type. Chapter 4 delves into policy analysis with its role as the subject and agent of social mobility streams of scientific, technological, and innovative human resources, and Chapter 5 integrates ideas on managing the social mobility flow of scientific, technological, and innovative human resources towards maximizing benefits and minimizing risks; proposing policy solutions to manage the social mobility flow of scientific, technological, and innovative human resources in the context of the Fourth Industrial Revolution.

Building the Architectural Intellectual Team in the Renewal Process in Vietnam today, Doctoral Dissertation in Philosophy by Le Quang Quy (2005),

Ho Chi Minh National Academy of Politics, Hanoi. In this work, the author presents the concept, characteristics, tasks, and roles of the architectural intellectual team in Vietnam. Based on this foundation, an investigation and survey of the current situation of this team in the renewal process are conducted, thereby providing forecasts on its trends, and development, and proposing some key solutions to continue building this team in the future.

Building the Intellectual Team in Ho Chi Minh City in the Industrialization and Modernization of the Country, a Doctoral Dissertation in Philosophy by Truong Van Tuan (2014), Ho Chi Minh City University of Social Sciences and Humanities. Based on clarifying several theoretical issues regarding intellectuals and building the intellectual team, the author evaluates the current situation of constructing and developing the intellectual team in Ho Chi Minh City in terms of quantity, quality, structure, principles, and policies for construction and development. Consequently, the author proposes several key solutions to continue building this team, emphasizing mechanisms, and policies; planning, training, nurturing, and utilizing the intellectual team; investing in developing material and technical infrastructure to support research, scientific application, and technology transfer; and expanding domestic and international cooperation.

Building and Developing the Intellectual Team in the Process of Industrialization and Modernization in Tra Vinh Province Today, a Doctoral Dissertation in Philosophy by Le Thuy Hang (2018), Ho Chi Minh City University of Social Sciences and Humanities. Starting from clarifying certain theoretical issues regarding the intellectual team, industrialization, and modernization, the dissertation analyzes the current situation of the building and developing the intellectual team in the process of promoting industrialization and modernization in Tra Vinh Province. It proposes some directions and solutions to develop the intellectual team in Tra Vinh in the near future.

Vietnamese Intellectuals in Some Eastern European Countries: Current Situation and Role in the New Context, coordinated by Associate Professor Nguyen Canh Toan (2010), State-level scientific research topic, Vietnam Academy of Social Sciences. The research topic provides an overview of the formation and development process of the Vietnamese intellectual community in some Eastern European countries. It analyzes the viewpoints and policies of the Party, State, and host countries regarding the Vietnamese intellectual community in Eastern European countries in the new context. It also proposes solutions and recommendations to enhance the role of Vietnamese intellectuals in some Eastern European countries.

Studying the Current Situation and Proposing Solutions for the Development of Vietnam's Intellectual Team in the New Context, led by Dr. Le Quang Thanh (2019), Ministerial-level scientific research project, Institute of Strategy and Policy on Science and Technology. This project analyzes and evaluates the current situation of the intellectual team in terms of quantity, quality, and contributions since the implementation of Resolution 27-NQ/TW until now. It also examines and evaluates the current situation of building and

implementing policies for the development of Vietnam's intellectual team, reviews the experiences of some countries in developing their intellectual teams to draw implications for Vietnam, and proposes some key solutions for developing the intellectual team that are suitable for the new context.

International Experience in Developing the Intellectual Team and Policy Suggestions for Vietnam, led by Dr. Phung Ngoc Tan (2021), Ministerial-level scientific research project, Vietnam Academy of Social Sciences. This project provides an overview of policies and the current situation of intellectual team development in some countries such as South Korea, China, and Singapore. It examines the experiences in building and implementing policies for developing the intellectual team in China, South Korea, and Singapore, summarizing lessons learned for Vietnam in developing its intellectual team. It proposes solutions and policies for developing this team in Vietnam for the period 2021-2030.

In the article "Enhancing Policies for Intellectuals in the Field of Science and Technology: Current Situation and Key Solutions" by Dr. Nguyen Thanh Trung and colleagues (2023), published in the Communist Magazine, issue 1013, the research results shed light on the current situation and existing shortcomings in the scientific and technological activities in Vietnam. According to the author, there is currently an imbalance in the structure and organization of scientific and technological institutions in Vietnam, which is identified as one of the bottlenecks hindering the transfer and application of technology for the country's socio-economic development. The consequence of this practical issue is the dispersion of social resources among scientific and technological organizations. Social resources, including those from enterprises, invested in scientific and technological activities remain limited. This is the fundamental cause of imbalance in terms of quantity, quality, and structure of the scientific and technological workforce within enterprises. Therefore, it is necessary to further enhance policies for intellectuals operating in the field of science and technology, such as: raising awareness in research, development, formulation, and implementation of policies for scientific and technological intellectuals specifically, and policies for overall improvement of the science and technology development framework; reviewing and evaluating the system of policies, laws regarding science and technology; diversifying forms and methods of training, recruitment, and incentives for the scientific and technological workforce.

The article "Upholding the Spirit of Dedication, Igniting the Prosperous Development Aspirations of the Scientific and Technological Intellectuals" by Prof. Dr. Tran Sy Phan (2023), published in the Journal of Political Theory, issue 542, emphasizes one of the major directives set forth by the 13th Party Congress to lead the country into a new development stage: "Upholding the spirit of dedication for the nation of all Vietnamese people," including the intellectual workforce. The article clarifies the necessity of fostering the spirit of dedication, igniting the developmental aspirations for the nation among the scientific and technological intellectual workforce in Vietnam, and proposes solutions to promote this spirit, igniting the aspirations for the prosperous and happy

development of the nation, in the process of intensifying industrialization, modernization, and international integration.

METHODOLOGY

It can be seen that in the leadership process, our Party always appreciates the role of intellectuals in general, and scientific-technological intellectuals in particular. Therefore, there have been timely viewpoints and policies to build a team of Vietnamese scientific and technological intellectuals and intellectuals to meet the requirements of each revolutionary period.

In 1981, the IV Politburo issued Resolution No. 37-NQ/TW on Science and Technology Policy (up to this point in the Resolution still using the term "science and engineering" but not using the term "science and technology"). The Resolution clearly stated: “Since the unification of the country, the scientific and technical potential has been supplemented with intellectuals and technical workers in the newly liberated areas. They are patriotic and enthusiastically participate in the construction of the Fatherland” (Communist Party of Vietnam, 2005, p.120). The resolution also pointed out that: “Scientific research findings and valuable technical advances have not been widely applied in production and daily life, causing waste of human and material resources.... The work of training, fostering arranging and using scientific and technical staff has caused spontaneous and scattered situations. Leading cadres and experts with high qualifications in scientific research and teaching are few, and qualified staff in organization and management are still lacking” (Communist Party of Vietnam, 2005, p.122).

It can be said that Resolution No. 37-NQ/TW of the IV Politburo on science and technology policy has left a profound impression. This is the first time since its establishment in 1981, that our Party has had a thematic resolution on science and technology policy, covering quite fully and comprehensively the field of scientific and technical development of the country.

After the VIII Party Congress, the Party Central Committee also issued Resolution No. 02-NQ/HNTW on strategic orientations for science and technology development in the period of industrialization and modernization and pointed out tasks until 2000. The resolution stated: “Social sciences and humanities have contributed to supplementing and explaining the Party's views on the path to socialism in Vietnam. The contingent of scientific and technological cadres has matured and been assembled” (Communist Party of Vietnam, 1997, p.52-53).

In addition to the achieved results, the Resolution also pointed out limitations in the field of science-technology development and building a team of science-technology intellectuals. The resolution affirmed: "Our country's science and technology is developing slowly, which is not commensurate with the available potential and has not met the development requirements in the period of industrialization and modernization, and still inferior to many countries in the region. Although the number of scientific and technological staff has increased in number, the percentage of the population is still low compared to other countries in the region, the quality is not high, and there are still many leading officials and experts, especially in the field of science and

technology. The majority of highly qualified cadres are still old and are in danger of a shortfall in cadres. Many science and technology cadres move to other jobs or quit their jobs, causing a serious waste of brain power" (Communist Party of Vietnam, 1997, p.54).

The 10th Party Congress (April 2006) paid special attention to the issue of using scientific and technological intellectuals, and respecting talents, specifically: "Implement the policy of respecting talents and leading scientists in the industry, general engineers, chief engineers, skilled technician and skilled technical workers (Communist Party of Vietnam, 2006, p.212). At the 7th Plenum of the Party Central Committee, Term X, the Central Committee issued Resolution No. 27-NQ/TW on building a contingent of intellectuals in the period of accelerating industrialization and modernization of the country." It can be said that since the founding of the Party, this is the first time our Party has had a separate resolution on intellectuals. Accordingly, the intellectual issue is comprehensively mentioned, clarified, and put on a par with the issue of workers and farmers. This is a landmark step in both theory and practice in intellectual research and problem-solving. In the spirit of frankness, Resolution 27 assessed the current situation of intellectuals and the construction of intellectuals of our Party and State in the years of renovation; which pointed out the advantages and strengths, limitations and weaknesses of the intellectual team and the work of building a team of intellectuals as well as science - technology intellectuals.

RESULTS AND DISCUSSION

The Practice of Building a Contingent of Scientific and Technological Intellectuals in Vinh Long Province

In the spirit of thoroughly grasping the Party's viewpoints and guidelines, Vinh Long province's leaders have also detailed programs and action plans, which can be mentioned as: Action Program No. 21-CTr/TU dated November 3, 2008 of the Provincial Party Committee on the implementation of Resolution 27-NQ/TW of the 7th Conference of the Party Central Committee, term X on "Building a team of knowledge in the period of accelerating industrialization and modernization of the country"; Action Program No. 09-CTr/TU dated November 8, 2011 of the Provincial Party Committee "On developing and improving the quality of human resources for the period 2011-2015 and orientations and tasks for the period 2016-2020"; Decision No: 1855/QD-UBND dated August 12, 2009 of the Provincial People's Committee "On the promulgation of the Project on building a contingent of intellectuals in Vinh Long province to 2020"; Decision No. 1706/QD-UBND dated October 22, 2013 of the Provincial People's Committee "On approving the implementation plan of the scheme on planning, training and fostering intellectuals of Vinh Long province to 2020"... As a result, the construction of Vinh Long intellectuals in general and science - technology intellectuals in particular has achieved very important results.

Firstly, the intellectual team of Vinh Long province is increasingly developing in both quantity and quality, with a relatively reasonable structure,

basically meeting the requirements of the country and local realities. In terms of quantity, along with the process of industrialization and modernization, Vinh Long intellectuals in general and science-technology intellectuals in particular have grown quite rapidly in number (compared to the population and force of the Vietnamese government province's labor force) (See: Table 1).

Table 1. Number of Science and Technology Intellectuals in Population and Working Age in Vinh Long Province

Year	Number				
	Population	**Working staff**	%	**Intellectuals in science and technology**	%
2012	1.033.577	630.454	61,0	16.353	2,59
2022	1.029.015	612.369	59,5	30.217	4,93

Source: Vinh Long Statistical Office; Vinh Long Department of Home Affairs Vinh Long Union of Science and Technology Associations

The statistics show that, in 10 years, the population and labor force of Vinh Long province has decreased; in which the population decreased by 4,562 people, and the labor force of working age in Vinh Long decreased by 18,085 people.

While the population and labor force of Vinh Long province tend to decrease, the number of scientific and technological intellectuals tends to increase very clearly. For example, in 2012 the number of science and technology intellectuals in Vinh Long was 16,353 people (accounting for 1.58% of the population and 2.59% of the labor force), by 2022 Vinh Long had 30,217 people (accounting for 2.98% of the population and 4.93% of the labor force). Thus, in the 10 years from 2012 to 2022, science and technology intellectuals in Vinh Long increased by 13,864 people and by 1.84 times; On average, Vinh Long adds about 1,380 people every year. This is considered one of the outstanding achievements in building and developing intellectuals of the Party Committee, government, and people of Vinh Long province.

In terms of quality, in general, over the years, the quality of science and technology intellectuals in Vinh Long province has also been gradually improved, especially in terms of professional qualifications (See: Table 2).

Table 2. Number of Science and Technology Intellectuals in Vinh Long Province by Level in the Period 2012 – 2022

Training levels	In 2012		In 2022	
	Number of people	%	Number of people	%
Bechelor	15.808	96,67	28.257	93,51
Master	527	3,22	1.784	5,91
Doctor	18	0,11	176	0,58
Total	**16.353**	**100**	**30.217**	**100**

Source: Vinh Long Statistical Office;Vinh Long Department of Home Affairs Vinh Long Union of Science and Technology Associations

In Vinh Long, out of the total number of scientific and technological intellectuals, intellectuals with university degrees account for the largest number and account for over 90%. In 2012 science and technology intellectuals with university degrees were 15,808 people (accounting for 96.67%), in 2022 there were 28,257 people (accounting for 93.51%); in 10 years, the number of intellectuals with university degrees increased by 12,449 people. Next are intellectuals with a master's degree. In 2012, intellectuals with master's degrees were 527 people (accounting for 3.22%), 1,784 people in 2022 (accounting for 5.91%); the number of intellectuals with a master's degree increased by 1,257 people. The number of intellectuals with a doctorate degree in 10 years also increased by 158 people; in which, in 2012, there were 18 people (accounting for 0.11%), in 2022 it was 176 people (accounting for 0.58%). In addition, the number of intellectuals with associate professor degrees has also increased. In 2012, Vinh Long had 4 associate professors, 16 people in 2022.

Regarding the implementation of science and technology tasks, in 05 teams of science and technology intellectuals of Vinh Long have implemented or coordinated to implement 162 scientific projects, on average, the province has done about approx. 32 topics (See: Table 3).

Table 3. Number of Scientific Projects at Provincial and Grassroots Levels in the Period of 2017 – 2021

Number of projects	**Year**					
	2017	**2018**	**2019**	**2020**	**2021**	**Total**
Provincial level	6	16	6	3	13	44
Base level	30	29	26	15	18	118

Source: Vinh Long Department of Science and Technology, 2022

In Vinh Long, in the 5-year period from 2017 to 2021, the province has carried out 162 scientific research projects; in which provincial science projects are 44 topics (accounting for 27.16%), grassroots scientific projects are 118 topics (accounting for 72.84%).

In terms of structure, specifically gender structure, in general, there is no big difference between men and women. Out of a total of 30,217 science and technology intellectuals, 15,316 male intellectuals, accounting for 50.69%, 14,901 female intellectuals, accounting for 49.31% (Vinh Long Statistical Office, 2022). This reflects the efforts of women to overcome difficulties and barriers and constantly rise up, especially in the context that the society still has the ideology of "respecting men, despise women". There is not much difference in the structure of qualification (university) between male and female intellectuals. If the proportion of men with a university degree is 50.69%, then the proportion of women with a university degree accounts for 49.31%. For master's degree, out of a total of 1,784 science - technology intellectuals with master's degree, 978 are male, accounting for 54.82%; Women are 806 people, accounting for 45.18% (Vinh Long Statistical Office, 2022).

Secondly, the training and fostering of science - technology intellectuals has received great attention, thereby creating positive changes in improving the capacity and qualifications of this team. In the past years, the Standing Committee of Vinh Long Provincial Party Committee has organized enrollment training courses organized by Ho Chi Minh National Academy of Politics, Region IV Political Academy and other training institutions in the region and outside the province to carry out intellectual training. From 2008 to 2022, the province sent 10,080 intellectuals who are cadres, civil servants and public employees to participate in undergraduate and postgraduate training. Regarding political theory, 9,145 comrades were trained, in which: advanced training, bachelor's degree in political theory for 2,275 officials, accounting for 24.88%; Intermediate political theory for 6,870 officials, accounting for 75.12%.

Projects under the province's target program such as Vinh Long 100 Project, Vinh Long Provincial Human Resource Development Project to 2020 have contributed to rejuvenating and changing the quality of the contingent of civil servants officials in the province, adding many qualified, capable, dare to think, dare to do and be able to take on important responsibilities in the socio-economic development of the province. Vinh Long 100 project was promulgated by the Provincial People's Committee in August 2006, aimed at training high-quality human resources of the province, divided into two phases (phase I: 2006-2012; phase II: 2013-2018). Up to now, 75 candidates have graduated, 73 masters and 2 doctors have been trained with a total of more than 20 majors. Currently, there are 50 people working in agencies and units in the province, thereby contributing to improving the quality of human resources, improving the operational efficiency of the province's state administrative apparatus (Vinh Long Provincial Party Committee, Report summarizing 15 years of implementation of Resolution No. 27, 2022).

Thirdly, Vinh Long Provincial Party Committee is always interested in directing the implementation of policies to attract and treat science and technology intellectuals in Vinh Long. In the past time, Vinh Long Provincial Party Committee and government have also paid great attention to the implementation of policies and regimes to attract intellectuals, especially science and technology intellectuals in the medical field. The People's Committee of Vinh Long province has issued Resolution No. 53/2022/NQ-HDND on Regulations on development policy of health human resources in the period of 2022-2030 in Vinh Long province. Accordingly, the subjects are entitled to the one-time attraction policy after the recruitment decision is made, specifically: Professor 200 times the base salary/person/time. Associate Professor 150 times the base salary/person/time. Doctor, Specialist II is entitled to 100 times the base salary/person/time. Resident doctor 90 times the base salary/person/time. Master, Specialist I receive 80 times the base salary/person/time. General practitioner 50 times the base salary/person/time. Bachelor of Nursing, Bachelor of Laboratory Science, Bachelor of Medical Technology, Bachelor of Midwifery, University of Nutrition: 40 times the base salary/person/time.

In addition, the Party committees and authorities in Vinh Long province have issued and organized many remuneration policies in training and fostering science - technology intellectuals. In addition to the standard funding for staff training and retraining being implemented, the Provincial People's Committee has deducted funds from the annual budget's savings to supplement the training and retraining of staff intellectuality. On July 28, 2011, the Provincial People's Council issued Resolution No. 14/2011/NQ-HDND, on regulations on training and retraining expenditures for cadres and civil servants subject to the provincial resource planning, which was approved by the provincial People's Committee. the sending agency to study through the Department of Home Affairs, the Organizing Committee of the Provincial Party Committee, on 11/8/2011. In addition, cadres and civil servants are also supported with funding for practical research, graduation thesis and especially after graduation, they are also supported with 35 million VND for master's and 50 million VND for doctorate and equivalent. For cadres and civil servants who study under the Vinh Long 100 Project, they are provided with all study expenses including accommodation, transportation, basically meeting a part of the students' living and studying conditions.

Besides the achieved results, the work of building a team of scientific and technological intellectuals of Vinh Long also has certain shortcomings and limitations such as: The attraction of highly qualified intellectuals to work in the province is not really effective; in some industries, there is a situation of "brain drain", especially in industries and fields that require highly qualified human resources such as: healthcare, science – technology, etc; the working environment of science and technology intellectuals in some places is not yet guaranteed, democratic and open for intellectuals to freely express their creativity; the structure of the intelligentsia is unevenly distributed among industries and regions, with some unreasonable levels of qualifications, occupations, age and gender; lack of good experts, leading experts in some key fields of science and technology, health, environment, etc.; the work of training and fostering intellectuals is mainly standardized in terms of professional qualifications, not paying due attention to in-depth professional training according to the requirements and standards of each planning title. A part of cadres and civil servants go to graduate school spontaneously, the training major is not suitable for the field of study that has been trained at the university level or is not suitable for the current position; although there is a policy of recruiting and attracting intellectuals, the arrangement, arrangement, and use of intellectuals is mostly not suitable with expertise, capacity, and forte. Since then, intellectuals have been attracted to lack of opportunities to assert themselves, even depressed, reduced motivation, do not want to join, or engage in new environment. Many good and talented intellectuals often rise with great difficulty, leading to a part of them being discouraged, with little hope of changing the situation.

Solutions to Improve the Quality of Building a Team of Science - - Technology Intellectuals in Vinh Long

To continue to build a team of scientific and technological intellectuals in Vinh Long, which is increasingly crowded in quantity, quality assured, and structurally suitable to gradually meet development requirements in the new period, in the coming time, Vinh Long province will focus on the following contents:

Firstly, we need to raise awareness at all levels, sectors, and people about the important position and role of science and technology intellectuals in the process of industrialization and modernization in Vinh Long. Practice shows that there will be right action once there is the right perception. Therefore, once all levels, sectors, and people are properly and fully aware of the role of scientific-technological intellectuals in the process of industrialization and modernization, there will be ways, reasonable and specific measures to continue and unceasingly promote the role and position of this team. On the other hand, raising awareness will help the team of science and technology intellectuals themselves understand properly about their roles and responsibilities, from which they will be active and proactive in promoting their talents.

Second, we should continue to strengthen the leadership of the Party and management of the State over the contingent of science and technology intellectuals in Vinh Long. The Resolution of the Seventh Conference of the 10th Central Committee of the Communist Party of Vietnam in 2008 on building a contingent of intellectuals in the period of accelerating industrialization and modernization of the country clearly defined: Building a team of intellectuals is common responsibility of the whole society, of the whole political system, in which the responsibility of the Party and the State plays a decisive role. The above point of view once again shows that the factor that plays a decisive role in the construction of intellectuals is the leadership of the Party and the management of the State.

The Party's leadership towards intellectuals as well as scientific and technological intellectuals is demonstrated by the Party's resolutions, guidelines, policies and directives. The State's management of scientific and technological intellectuals is first reflected in the concretization of the Party's guidelines, guidelines, policies and resolutions into laws, decrees and policies of the State. water. At the same time directing and organizing the implementation of those undertakings and policies. Governments at all levels, based on the leadership of the Party and the direction of the State, concretize and creatively apply the laws, guidelines and policies of the Party and State in their respective localities. It can be said that the leadership of the Party and the management of the State is an important factor to gather, unite and unify the team of scientific and technological intellectuals, which is the basis for this team to develop more fully, as well as increasingly promote intelligence, creative capacity and make effective and practical contributions to the national construction and defense as well as accelerating industrialization and modernization in Vinh Long.

Third, it is essential to actively renew and perfect the system of mechanisms and policies on building a contingent of scientific and technological intellectuals in Vinh Long. The system of mechanisms and policies for intellectuals plays a very important role, directly or indirectly affecting, creating motivational forces or hindering the development of intellectuals in general science and technology in particular. Therefore, in order to continue to build and develop intellectuals in Vinh Long, it is necessary to actively build and regularly study, adjust, supplement and perfect the system of mechanisms and policies to create a corridor for intellectuals favorable legal conditions for the development of this team to meet the requirements and tasks of the locality and before the impact of the industrial revolution 4.0.

Fourth, the increase in investment in material and technical facilities, funding for research, application and technology transfer should be promoted. Physical and technical facilities are part of the infrastructure bridge to serve the development of science and technology. Attention to investment in material and technical facilities to serve research, application and technology transfer activities is a very important requirement. For intellectuals, especially science - technology intellectuals, headquarters, factories, laboratories, machinery, equipment, money and other assets… have a direct impact on productivity, effectiveness and quality of their scientific research and even teaching. Therefore, if the facilities are not guaranteed, research activities as well as teaching activities will be affected in terms of quality.

Fifth, the attention to creating favorable conditions and environment for intellectuals to promote their creative capacity needs to be carried out extensively. As everyone knows, the operating environment has a great and important influence on the productivity, quality and efficiency of intellectual labor, and on the creativity of scientific - technological intellectuals. It includes: social factors, social relations, working conditions, working atmosphere... All of the above factors form the operating environment of scientific - technological intellectuals. An adequate and reasonable environment with characteristics of science - technology intellectual workers will be a positive factor, promoting scientific and creative activities with high productivity, quality and efficiency. On the contrary, an inadequate or inappropriate environment will negatively affect, destroy spiritual motivation, limit or even destroy intellectual creativity. Therefore, paying attention to developing and creating conditions for intellectuals to have a good working environment will help them feel secure in their work, be active in performing their tasks and be creative in the working process.

CONCLUSIONS AND RECOMMENDATIONS

During the renovation period, especially since the implementation of Resolution No. 27-NQ/TW of the Central Government and Action Program No. 21-CTr/TU dated November 3, 2008 of the Vinh Long Provincial Party Committee on "Building a team of intellectuals in the period of accelerating industrialization and modernization of the country", intellectuals in general and science - technology intellectuals in Vinh Long in particular are constantly

increasing in number, gradually improving about quality. However, the development of science - technology intellectuals in Vinh Long also reveals certain limitations and weaknesses: the policy of using and treating intellectuals has not really created the motivation for intellectuals to feel secure in their work and dedication; there is still a brain drain… Therefore, in order to improve the quality of building a team of scientific and technological intellectuals in Vinh Long, towards the province, it is necessary to synchronously implement solutions such as: Continue to raise awareness of all levels, sectors and people about the important position and role of science - technology intellectuals; continue to strengthen the leadership of the Party and management of the State; actively renew and perfect the system of mechanisms and policies on building a contingent of scientific and technological intellectuals; interested in creating favorable conditions and environment for intellectuals to develop their creative capacity.

FURTHER STUDY

This research still has limitations so further research on the topic still needs to be carried out "Building Intellectual Staff of Science – Technology Industrialization and Modernization Promotion in Vietnam: The Case of Vinh Long Province."

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