

Methods to Enhance Technological Innovation Ability of Grassroots Technology Leading Personnel in Power Enterprises

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Abstract: In order to accelerate the establishment of a world-class power grid and world-class enterprises to provide talent support, this paper developed the science and technology periodical thesis writing skills course aiming at the needs of the leading talents of State Grid Power Company. Based on the actual writing cases, the quality and ability possessed by innovative, engineering and international forward-looking science can provide an effective way to systematically and rapidly enhance the overall quality of grassroots technology leaders in power enterprises.

Keywords: state grid talents; leading talents; grassroots technology leaders.

1 Introduction

Since the reform and opening up, the scale and equipment of China's power industry have been at the international advanced level. China's power system is one of the largest man-made systems in the world. However, in the developing China's power industry, there are still many areas that are in a passive position in the world, such as operation and maintenance technology, power electronics technology, large-scale wind power generation technology, solar power generation technology and distributed power generation technology and so on. There is a need for a group of leading scientists in science and technology, both nationally and internationally. State Grid Corporation has always attached great importance to personnel work. Since 2012, it has carried out the selection and training of professional leading personnel. A large number of high-end talents have been reserved for the development of the Company, and great contributions have been made to the management and technological innovation of the Company. The channels of talent development are unblocked and the growth of individuals and facilitated the transmission of knowledge and skills are accelerated.

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However, the vast majority of grass-roots unit technological innovation is still a very small number of people, the lack of backbone of technological innovation and excellent leadership talent. Most employees do not grasp the key links of technological innovation such as theory, method, process and concrete practice of technological innovation, which are not clear or unfamiliar, leading to the failure to carry out technological innovation. Parts of the young motivated people are struggling to find solutions in technological innovation and are unable to exert their talents in a broader scope.

In order to cultivate a large number of grassroots technological innovation backbone of power enterprises and promote technological innovation, it is urgent to develop a training course that systematically and rapidly enhance the scientific and technological innovation ability of the grass-roots technology leaders of power enterprises and further improve the evaluation system of the leading talents of State Grid Corporation.

2. Evaluation index of technology leader talent in State Grid Corporation

In order to implement the spirit of the company party group on development of qualified personnel and the "Twelve Five" human resource development planning, since 2012, the selection and training of professional leading personnel has been implemented. Selection is made every two years and the selection mechanism is improved and innovated. Professional leaders must establish the concept of lifelong learning, brave practice, bold innovation, learn practical and play a leading role in taking the lead. Professional leading talent evaluation indicators are:

① Outstanding performance-oriented. Increase the proportion of performance evaluation score, improve the score of high-level innovation achievements, pay more attention to the selection of performance-oriented and fruitful talents.

② Prominent grass-roots orientation. The grass-roots work experience as a basic condition for the selection and strict implementation of front-line comrades long time to give extra bonus points, widened the rank and talent growth path.

③ Academic level requirements. Requirements for the Bachelor degree or above, with senior professional titles or senior technician vocational qualification, in the professional with 5 years and above work experience, had achieved achievement award, monograph, standard system, competition in recognition of work performance.

3. The ability to write high-level scientific papers of technical leaders

Researchers should have the basic ability of independent scientific research: Scientific research papers are papers that summarizing, study, discuss and express scientific research achievements in the field of science. Writing research papers is the last link of scientific research, but also the main form of output of scientific research and academic exchanges. For the vast number of scientists and technologists, whether they can publish papers in high-level magazines (such as SCI/EI journals) is an important indicator for evaluating scientific research capabilities and academic standards.

Science and technology personnel should have the following capabilities:

①Get information / the ability to read the literature;

②Experimental design ability / creative thinking ability;

③Experimental operation and analysis summary ability;

④Thesis writing and posting ability;

⑤Fund application capacity.

4. SCI/EI periodicals writing techniques^[1-5]

4.1 SCI/EI on the manuscript content and academic standards

- 1) Mainly include papers of high theoretical and innovative academic theories in mathematics, physics and chemistry;
- 2) National Natural Science Foundation funded projects, scientific and technological projects, 863 high-tech projects;
- 3) Thesis has reached the international advanced level.

4.2 Selection Requirements

The innovation of topic selection is the soul of the writing of scientific papers and is an important standard to measure the value of a thesis. It requires innovation in theoretical viewpoints, technical methods or application fields. Essay topics should pay attention to the following principles:

① Purpose: Scientific research is a highly objective work, the study objectives should be clear when select the topic.

② Scientific: Consider whether the topic has scientific value, whether the argument material can stand the test of practice, and at the same time to consider whether the way of collecting and arranging materials is scientific and reasonable.

③ Feasibility: Whether the experimental program is feasible, whether it has the hardware and software required for the experiment, and whether the time distribution in all stages of the research process is reasonable.

④ Practicality: Whether the results can be applied to scientific research and social practice, what practical problems can be solved, how much scientific value or social and economic benefits can be brought about.

⑤ Advancedness: The advanced nature of the thesis is to ensure that its scientific research has a leading position, thesis ideas are innovative premise.

⑥ Innovative: When choose a topic, we should base ourselves on innovative thinking, accumulate experience in the ordinary time, widely read cutting-edge essays and seize the moment's inspiration.

4.3 Essay framework-clarify the essay framework, highlight innovation

The conception and framework of the essay reflect the research and thought of the essay. The essay must be clear and logical, focus on the subject and highlight the bright spots of the essay. The main point of the dissertation is to talk about my own research work and creation, to highlight the innovation point of the dissertation. Based on the unique conditions in our country, discovering new phenomena and laws is often easily published in international SCI magazines.

The way to find innovation points is:

①Find a topic in the blank of academic research.

②On the basis of inheriting the achievements of their predecessors, they seek differences and strive to "preserve the differences and seek common ground."

③With the vision of "seeking differences", we can find out problems that others have not covered, deepen, develop and perfect their research work.

④Look for the differences of academic research, find the problems from these differences, find ways and means to resolve the differences, and then construct their own new ideas.

⑤Sporadic academic research to further adjust and expand, the formation of a new system framework.

4.4 Thesis Innovation and Originality -Thesis's Life

①Papers published in international core journals should in principle be new phenomena or experimental facts described for the first time in the world. The concepts and models first proposed and the methods first established also include a review of existing major observations (Experiment) the new facts of the generalization and the refinement of the new law.

②Papers published in international core journals are not only original, but the results must also be significant and contribute to the development of the discipline.

③Based on a full assessment of past work, the author should clearly point out his original contribution to his current job.

4.5 Paper's writing norms-clear and complete description of the paper's experimental process

①Each magazine requirements are different, read the instructions carefully before the submission, in strict accordance with the specifications of the paper.

②Outline the preparation of the program, write the title, abstract, key words and preface, especially the paper writing features.

③Data sources and experimental methods should be accurate and detailed; Standard citation label, any reference to the views of others, facts, data, must be clearly indicated.

④Writing a syllabus is very important for writing essay, preparing the reports and developing research plans to help you understand your thinking and master the overall plan.

⑤To elaborate on objective things, explanations and arguments should not be taken in a subjective way and should be treated with calmness, objectivity and fairness towards all people and all research results.

⑥References must read the full text, refining the essence of them, and be marked at the same time writing, shall not be cited second-hand literature.

⑦More references to domestic counterparts and their own research papers to improve the rate of citation, do not only cited their own papers.

5. Conclusion

The selection of innovative talents at grassroots level in power enterprises is closely related to their evaluation of scientific and technological capabilities. The publication of journal articles reflects the important links of scientific research conducted by scientific and technological workers and is the symbol of completing a certain research project in phases or finally. This paper focuses on the writing skills of scientific papers. Through participating in the necessary academic and technical exchange activities, promoting the development of electric power industry and technological progress are beneficial to discovering scientific and technological talents. It is also an important basis for assessing the scientific research ability of scientific researchers. As a science and technology worker, it is necessary to master the general methods of writing scientific papers, understand the editorial requirements of the quality of manuscripts, familiar with the relevant national standards, write a high level of papers dedicated to the readers.

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