Analysis and Proposals on Operation Condition of Innovation Studio of Large-scaled Companies

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ABSTRACT

Along with the proposal of ‘Double Creation’ strategies, large-scaled companies set up slews of innovation studios to propel innovation works at the production line. To analyze operation condition of the innovation studios, this article takes SGCC as an example. It carries out research analysis on innovation studios affiliated to State Grid Corporation of China via such means as seminar, one-to-one interview, questionnaire research and data collection and has reached conclusion through analysis that innovation studios under SGCC have obtained an array of ample fruits, but they are still anemic in backup of technological innovation and promotion of innovative results. On this basis, this article draws out a set of operation system on innovation work for workers at the production line and has attained interrelation, mutual support, mutualism and mutual win among teams at the production line, innovation studio and center on conversion of innovative results.

INTRODUCTION

‘Double Creation’ strategy is a strategic decision proposed by the country from the perspective of global economic development pattern and domestic economic development demands. It is also transformation and upgrading attained by companies. Against the macro-setting of industrial revolution, innovation of staffs at the production line compose the basic guarantee for corporate development [1-2].

With innovation studio as the carrier, slews of activities on improvement and technical innovation with posts as the business such as rationalized proposal, QC project, ‘five smallness’ and technologically addressing are extensively carried out among companies [3-4]. Taking SGCC as an example, millions of staffs from hundreds of thousands of teams in SGCC have got involved in the studio activities. But these studios are not connected via network platform. On the one hand, many staffs at the production line can’t get involved in activities of the innovation studios and hence most
optimal cooperation of human resources can’t be attained; on the other hand, promotion of innovation studios is weak and hence plenty of resources are wasted [5-6].

On this basis, we got to carry out research analysis on operation condition of innovation studios, conduct research analysis pertinent to its operation conditions, mainly analyzes insufficiencies during the operation process and comes up with a set of operation system for innovation studios applicative to innovation carried out by workers at the production line.

**RESEARCH ON STATUS QUO OF THE INNOVATION STUDIO**

As a company bestriding 26 provinces in China and covering several overseas grid companies in the Philippines, Brazil, Australia, Spain and so forth, SGCC ranks atop among energy companies worldwide. SGCC pays high attention on technological innovation activities among its staffs. It has obtained bountiful attainments since it proposed set-up of innovation studios at all levels in 2010.

In order to roundly get to know operation condition of innovation studios in SGCC, the research team adopts such means as seminar, one-to-one interview, questionnaire research and data collection. All samples adopted by the research are from teams at the first production of varying types covering transmission, power transformation, distribution, marketing and so forth subordinated to SGCC.

A tally of 10 seminars are convened and 345 people are interviewed during the research process. Synchronously, 300 questionnaires are delivered to staffs in 30 teams randomly extracted from SGCC, 274 of which are recovered including 261 valid questionnaires. The effective rate reaches 95%. The research results objectively embody operation condition of the innovation studios at present.

Different organs give vigorous backup to set-up of innovation studios in terms of capital, field, device and staffers. They give financial backup on initiation, implementation and promotion of innovation projects from initiation to promotion and spur and facilitate continuously enhanced innovative impetus among their staffs.

![Figure 1. Participation in technological innovation projects by staffs at the production line.](image)

The questionnaire is indicative that all companies are actively engaged in organization of team staffs to participate in technological innovation projects (see figure 1). A ratio of 34.8% of staffs at the production line universally would join
technological innovation projects, 43.5% of them would organize staffs to get involved and the extra 21.7% of them failed to comprehensively take part.

By drawing on the innovation studios in the past five years, SGCC has launched innovation results to the tune of over 125,000 and converted and applied a tally of 60600 of them. An array of its attainments have obtained national patents and incurred ostensible economic profits. 3 results including Robots for Obstacle Clearance in Overhead Lines independently researched and developed by workers at the production line respectively won the second prize for National Award for Science and Technology Progress in 2009, in 2011 and in 2014.

With respect to whether innovation studios display effect in backup of technological innovation of staffs, the research results are seen in figure 2.

As is shown in figure 2, teams where 42.1% of staffs are employed to have innovation studios and only a paltry 15.7% of staffs reckon that their teams’ innovation studios have good conditions with guaranteed resources. 26.4% of staffs hold that their innovation studios have ordinary conditions that only cover superficial work and fail to give play to their effect in technological innovation by staffs.

Figure 3 above shows that 44.1% of leaders hold that the innovation studios beget many innovative attainments since their establishment and thus form a good way to prod innovation. But 44.1% of leaders reckon that only a handful of staffs are actively involved in innovation whereas the rest show low participation level and that
mechanism needs to be worked on. 11.8% of leaders hold that innovation studios are prone to form a circle culture and beget segregation effect on other team members.

Results shows are shown in figure 4 with respect to promotion of attainments obtained by the innovation studios.

![Figure 4. Promotion of innovative attainments achieved by innovation studios at all levels in Hunan Province.](image)

Also embody that through promotion of innovative attainments can reach a ratio as high as 90.9%, yet 64% of innovative results are restrained to within the teams in terms of promotion range, a scarce 21% of them are promoted at the provincial level, and a paltry 6% of them are promoted in SGCC.

The bulk of innovation studios are also taken as exhibition platforms to showcase innovative attainments that are devoid of utilities and facilities needed by technological innovation or of special budge to bolster preliminary research of innovation projects, which leads to shortage of basic working conditions needed for technological innovation. It can indicate that innovation studios can’t fuse or coordinate with one another in terms of innovative resources, motivation system, innovation atmosphere and so forth, which lead to incompetence to fully express innovative genes in the genetic vector.

**DESIGNING OF OPERATION SYSTEM OF INNOVATION WORK FOR TEAMS AT THE PRODUCTION LINE**

To redress the aforementioned issues, the author has drawn out a set of operation system of innovation work that integrates innovation teams, innovation studios and conversion center of innovative attainments into a whole. It is called operation system of innovation work for teams at the production line.

The structural model of ‘Three Creation’ platform is an innovative network organization platform that puts innovative teams as the core and innovation studios and conversion center of innovative attainments as two wings.

Teams at the production line are responsible for such work as promotion and implementation of innovation knowledge, forging of innovation atmosphere, fostering of innovation talents. Each staff in teams at the production lines is required to accomplish a rationalized proposal before extracting high-quality QC project and forming a new pattern characterizing participation and innovation of all based on appraisal of rationalized proposals.
The innovation studios are responsible for integration of multi-dimensional resources, management of multitask teams and formation of borderless free chain. Corporate-level public innovation projects and innovation initiatives are screened out among QC projects extracted from teams at the production lines. Core problem-solving teams take form in accordance with individual specialties in a bid to realize multi-dimensional integration of resources (see the figure 6). All problem-solving teams are under the charge of innovation studios. Innovation teams put tasks as the center and would be dispersed once the tasks are accomplished. New tasks mean re-organization of teams. Integration of resources helps destroy organizational boundary and bring innovation talents at the production line to realize their self-worth.
Conversion center of innovative attainments is responsible for promotion, application, provision of test conditions and attainment conversion of innovative attainments. With conversion center of attainments as the platform, facilities with the whole set of intellectual properties are actively promoted.

CONCLUSIONS

This article carries out research and analysis on operation condition of the innovation studios affiliated to SGCC via such means as seminar, one-to-one interview, questionnaire research and data collection. By banking on the innovation studios, SGCC has launched innovation results to the tune of over 125,000 and converted and applied a tally of 60600 pf them. A batch of its attainments have obtained national patents and incurred ostensible economic profits. But investigation has found that the bulk of innovation studios are also taken as exhibition platforms to showcase innovative attainments that are devoid of utilities and facilities needed by technological innovation nor special budge to bolster preliminary research of innovation projects, which leads to shortage of basic work conditions needed by technological innovation. On this basis, this article draws out a set of operation system on innovation work for workers at the production line and has attained interrelation, mutual support, mutualism and mutual win among teams at the production line, innovation studio and center on conversion of innovative results.

REFERENCES