



## Analysis on Training Model of Intellectual Property Personnel in an Enterprise

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Received 14 March 2014; accepted 10 May 2014

### Abstract

With the rapid development of the knowledge economy, intellectual property personnel training has become a national strategy. A new requirement was put forward to the enterprises during the “12th Five-Year Plan of IP talent”. However, now the quality of IP personnel has different levels, and the quantity of the IP professionals is always unqualified. The enterprises need the IP talents with a higher level of quantity and quality. This phenomenon is closely related to the current intellectual property personnel training. It is obvious that the problem’s solution just rely on the professional education in university is shortcoming. As the main part of IP talent demand group, enterprises should pay more attention to their own cultivation. Based on this background, the article from the enterprise’s perspective define the concepts which is related with intellectual property personnel training and analyze the current problems of IP personnel training, such as the sense, systems, resources and other aspects. At last, the article point out that the key to solve these problems is to build a systematic multi-level and multi-channel IP talent training model. It can meet the demand of enterprises about intellectual property professionals and that has a great significance to improve the level of personnel quality. And it also has a great significance for enterprises to enhance their capabilities of creation and application to intellectual property, so that the enterprises could be able to achieve the goal of the innovative development.

**Key words:** Intellectual property; Enterprise personnel training; Personnel training model

WANG Guojin, MA Jin (2014). Analysis on Training Model of Intellectual Property Personnel in an Enterprise. *International Business and Management*, 8(2), 214-219. Available from: <http://www.cscanada.net/index.php/ibm/article/view/4772>  
 DOI: <http://dx.doi.org/10.3968/4772>

### INTRODUCTION

The State Intellectual Property Office formally issued the “12<sup>th</sup> Five-Year Plan of IP personnel (2011-2015)” on November 22, 2010. This plan is an important deployment to implement the strategy of reinvigorating China through human resource development and the strategy of the national intellectual property. It is a requirement for the construction and development of the intellectual property at home and abroad, and it is also a major measure for establishing the advantage of the national IP personnel. November 14, 2011, the State Intellectual Property Office and other 10 ministries jointly promulgated the “National Intellectual Property development 12<sup>th</sup> five-year plan”, which once again proposed that cultivate a higher intellectual personnel group with sufficient quantity, structural optimization, rational layout as a main target of IP strategy in period of the 12th Plan. In the current era of the rapid development of the knowledge economy, intellectual personnel cultivation have risen to national strategies, but it also becomes an important part of process to build an innovative country. Enterprise IP personnel training have significance for national IP personnel group. The “12th Five-Year Plan of IP personnel” put forward the objective requirements that the quantity and quality of the IP personnel should be much higher than before clearly.

Currently, intellectual contributions have achieved

higher significant strategic position in the economic society and the protection and management of such intangible assets have been gradually extended from universities to businesses, governments and other institutions. Solving the problems of IP personnel just rely on the professional education in university is shortcoming. So, universities, government, enterprises and community organizations must be joined up and form a linkage mechanism to cultivate IP personnel. Enterprises as the main demanders of IP personnel, they should pay more attention to self-cultivation so that to form rational structures of management personnel to meet their own needs for IP personnel. It has great significance for enterprises to improve the ability of independent innovation and keep their competitive advantage.

## 1. RELATED CONCEPT DEFINITION

### 1.1 IP Personnel

There is no a certain definition of the concept of intellectual property personnel. Some scholars define it as "The personnel should have a multidisciplinary knowledge background. In addition to master the basics of law, it should also be able to understand the basic principles and cutting-edge arts, science, engineering, medicine, management and other disciplines and dynamic. So, it could be to the inter-disciplinary personnel who know the law, understand science and technology, economy, management" (Wu, 2007). However, the content of legal knowledge is profound; the subject of science and engineering is more; economic and management is complex. While, the ability of one person to learn is limited that is not able to fully grasp the whole knowledge and skills; solely from the perspective of cultivation, personnel training cycle is length and the cost is high. Li (2012) considered that inter-disciplinary intellectual personnel is not an individual concept, but is the overall concept, which itself also has different types and levels. And they require compound knowledge and skills should be implemented in different individuals, while not in the same individual that so-called "all-rounder". Therefore, based on the compound knowledge structure, view about IP personnel is an inter-disciplinary talent has basically reached a consensus in academic research.

Intellectual Property is a comprehensive discipline with the background of the knowledge of other disciplines, such as legal theory, politics, management, economics and technical sciences. The content of the discipline itself covers a wider scope, so the opinions on classification of IP personnel are divergent, which has no uniform standard. In this paper, based on the nature of intellectual property rights belonging to the different units, it can be divided into government IP personnel, corporate IP personnel, university IP personnel and other social institutions IP personnel. The Intellectual

property in different units has their own characteristics. In order to meet the demands of different organizational units, personnel allocation and institution setting are also different. IP personnel in companies who engaged in intellectual property creation, operation, management and protection, such as the R&D staff, patent engineers, intellectual property managers. According to the content of intellectual property in enterprise, IP personnel involve R&D IP personnel, IP legal personnel, IP management personnel, IP strategy personnel.

### 1.2 Personnel Training Model

Personnel training mode is a completely system with a lot of relevant factors, including training objectives, training contents, training methods, training mode, management system, evaluation system, etc. The mode could be divided into four parts as training objective, training system, training process and training evaluation (Xia, 2009). Some scholars have pointed that in the period of development of personnel training model in enterprise has two major types which are compensatory education mode and job adaptive mode. Compensatory education mode started the early reform and opening up in China and that is an additional educational programs and services in order to make up for the deficiency of the ability to work and education. As improving the personnel's ability of adaption to the position, Job adaptive education model has been emerging (Chen, 2013). Otherwise, there are scholars believe that enterprise training model from the educational theme to points, can be roughly divided into the school system in enterprise and education system on the outside. These two ideals for building enterprise IP personnel training model provide important thought in this paper research.

Currently, research of the intellectual personnel training focused on universities and with less regard for the enterprise perspective. University's cultivation is the foundation and enterprise's cultivation is enhancement. Starting with the characteristic of enterprise and knowledge structure of IP personnel, we should set clear training objective, scientifically select training content, improve the training evaluation system and establish a reasonable relevant system and optimize internal and external training environment so that to build a systematic multi-level and multi-channel IP personnel training model.

## 2. THE CURRENT SITUATION OF INTELLECTUAL PROPERTY PERSONNEL TRAINING IN ENTERPRISES

With the deepening integration of the world economy, the number of domestic and foreign enterprises' transactions, involving patents, trade secrets and other intellectual property rights, continues to increase in the global market competition. Enterprises gradually realized that intellectual capital is the productive forces for the enterprise to achieve

rapid development. And legally protecting, creating and using the company's core resources that require the enterprise must have a specialized, high-level IP personnel group. But the current situation of IP personnel training in enterprise is not optimistic.

## 2.1 Lack of Cultivating Strategic Consciousness

At present, most tech companies only focus on increasing tangible assets and ignore the creation and protection of intangible assets. Especially in some small and medium sized technology companies, because of lacking the systematized intellectual property strategic plan, their technical secrets could not be protect effectively, and scientific and technological achievements conversion rate is low so that their economic growth mode transform slowly. Construction of IP personnel training system is important to support the implementation of the Intellectual Property Strategy in enterprises. As the intellectual personnel training started late in China, compared with external advanced enterprises, the domestic not pay enough attention about it.

This lack of awareness is mainly reflected in the following aspects: First, the structure of IP personnel quality does not match intellectual property institutions which have been set in enterprise. It means that the unreasonable job design and the value of human capital have not been fully reflected. The root cause of this problem is that the enterprises pay less attention to understand knowledge of the IP field. Second, IP personnel cultivation in the majority of enterprises only reaches to the level of "training", which is a short or one-time event. They do not regard it as a sustained, strategic, planning and institutionalized human resource management activity. Third, Internal training activities are the lack of enthusiasm. There is no initiative to seek multiple ways to improve personnel knowledge structure and enhance the quality of personnel outside the enterprise.

## 2.2 Lack of Systematic Training Process

No Pertinence. Pertinence means IP personnel training should start from the enterprise actual (adjust measures to local condition and on-demand teaching). However, the current professional orientation cannot gap in the demand of the enterprise and the position of personnel training target is inaccurate. Because different enterprises have different natures, scales and product attributes, theirs intellectual property strategy will be various. In addition, several government-led external cultivations' time is short and contents are broad that cannot meet the professional and personal demands in enterprises. This requires a clear training objective and pertinent cultivating plan of IP personnel.

No hierarchy. Hierarchy refers that all the kinds of IP personnel in enterprises should be different in cultivation to accommodate different levels of jobs. Rely on the demands, personnel is also divided into the senior, intermediate and junior in business. Distinguishing the

levels of IP personnel training in business is not obvious like other professionals. Multi-level intellectual personnel training on the one hand can enhance the overall level of IP personnel; on the other hand it has a great significance for the enterprise to coordinate the operation of innovation and development.

## 2.3 Lack of Perfect System Guarantee

Lack of system security mainly reflects in incentive mechanism, training evaluation system, cultivation of risk prevention mechanism system, etc. Firstly, IP personnel as a knowledge worker group, when the corporate's training plans conflict with their interests; they have negative resistance or lower participation. Effective incentive mechanism such as salaries and welfares, a system of promotions combined the effect of training can induce employees initiatively to participate in training activities that could be conductive the organization to form a positive atmosphere for learning and working. Secondly, training evaluation as one part of the final training activities did not cause concern for the majority of enterprises. The results of evaluation can reflect the full range of problems arising in the training process and measure enterprise's inputs and outputs which have made in IP personnel training whether achieved the desired effect. By correcting the problems to adjust training objectives, training content, let assets and human resources optimized use, and make personnel training activities more scientific so that achieving the company's long-term interests and goals. Thirdly, scarcity of IP personnel leads to higher employees' floating rate. That takes risks for the enterprise's investments in personnel training, such as behavior of job-hopping after one's ability improved. It easily cause the training has input but no output. On the base of the entire training process, it requires enterprise to establish a risk prevention system. From the personnel demand analysis, training content and path selection to the final performance evaluation, the company should sign a training agreement with the staff who will be accepted cultivation that in order to prevent training personnel for competitor to happen.

## 2.4 Lack of Training Resources

Relevant investment is not enough. As an emerging Talent Project in China, IP personnel training in enterprises now on primary stage that need more investment and funds to support. As the main demand subject of IP personnel, enterprises should always send personnel to participate in various training activities. But for most companies, especially SMEs, it is a very extravagant spending on education. Because these activities involved training expenses, travelling expenses, accommodation expenses and information fees which are huge payouts. So, enterprises may not have enough ability or even unbearable to bear these costs (Qian, 2012).

Training institutions is less. At present, the training

institutions enterprises could be chosen are colleges and universities, various types of social training agencies and corporate universities or other internal training departments. Now, in China, the numbers of organizations like college or university with large-scale engaged in IP education and personnel cultivation are not more than twenty and these are mostly engaged in theoretical research. Various social training agencies are chaotic. Due to lack of management policies and laws in this area, a real little has the training qualifications. Furthermore, not all companies have conditions to establish corporate universities. All of these may limit the enterprises to cultivate intellectual personnel.

Faculty is limited. Currently, the faculty mainly comes from universities and social training agencies. Most existing scholars or professionals are engaged in the cultivation of IP legal personnel and IP management personnel, and the cultivation of IP R&D personnel and senior strategic personnel is clearly insufficient. If the quantity and quality of faculty is limited, it will cause IP theoretical education disconnects with personal development or enterprises' demands.

### 3. ENTERPRISES INTELLECTUAL PROPERTY PERSONNEL TRAINING MODEL

The quality of intellectual property personnel determines one enterprise's innovation and development ability. The construction and optimized choice for enterprise's intellectual property personnel training model is the key to self-solve personnel training issues. Meanwhile, it is also an important way to strengthen the construction of IP personnel group. Completing intellectual property personnel training model not only include the various elements of the pattern, but also training paths enabled the system to effectively operate.

#### 3.1 The Structure of Enterprise Intellectual Property Personnel Training Model

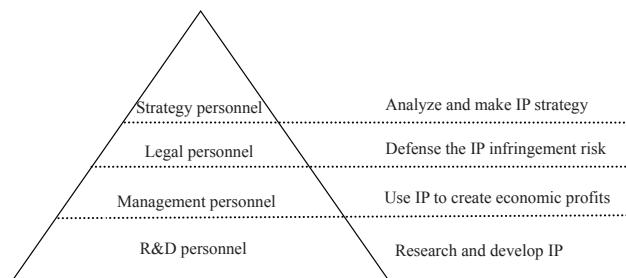
Based on the composition of personnel training model, the structure of enterprise intellectual property personnel training model includes three parts: training process, training evaluation, internal and external environment. As the core of this model, training process is constituted by training targets, training objects, training contents and training methods. And training evaluation is the feedback. Internal and external environment is the guarantee. These three elements are interdependency and consist of a unified whole.

##### 3.1.1 Training Process

The Determination of training targets. Training targets are the requirements and standards of intellectual property personnel training and point out the clear direction for the effective functioning of the entire system. It is divided into general goals and specific objectives. The general

goal is to enhance the ability to create and use intellectual property and give full play to the value of human resource; specific objectives means different types of intellectual property professionals need to adapt to the position or complete role reversal in order to orderly and effectively complete their own tasks and service for the achievement of the enterprise's integral goal and interests.

The classification of Training objects. IP personnel training should be comprehensive and multi-level. Different levels of training objects should accept different training contents and methods; therefore, achieved targets are also varied. The classification of IP personnel and their obligations have shown in Figure 1:



**Figure 1  
The Classification of IP Personnel and Their Obligations**

The set of training contents. Training content must be comprehensive and specific. It not only promotes their professional skills in different fields, but also supplements the knowledge of law, economics, management, etc. so that perfect personnel's knowledge structure and achieve a good convergence for various departments in different parts of work. Setting contents contain the course design for personnel training system. The features and contents of courses, lesson plans should be combined with the situation of company's current development. The tuition fees should be appropriate to the enterprise's capacity.

The choice of training methods. Training methods are the channels of intellectual property personnel training in enterprises. From the overall perspective, it divided into two ways: "going out" and "bringing in". "Going out" is that the personnel are transported out of the enterprise to continue to re-education, getting experience and exchange of learning. "Bringing in" is the enterprise introduce external resources to cultivate internal talents. The choice of training methods is closely linked to training paths, which will be specifically addressed in the next section.

##### 3.1.2 Training Evaluation

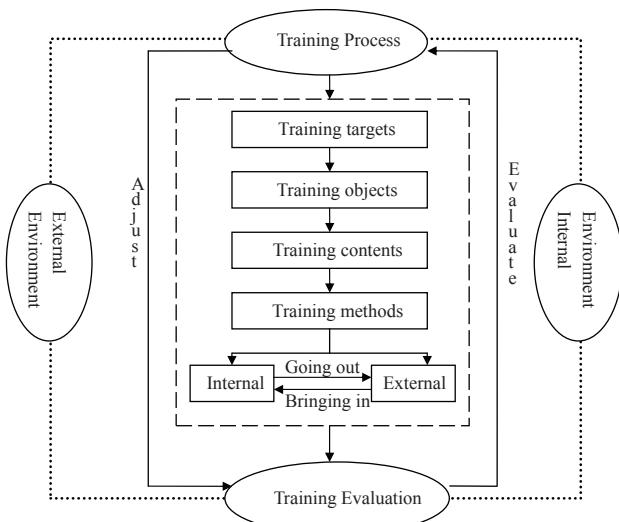
The training evaluation is using scientific and reasonable method to evaluate IP education activities and teaching achievements, and it is also the most easily overlooked aspect on the all system. The training process is closely contacted with the personnel's working practices. The training effect express in the form of job performance. According to analysis of the evaluated data, the enterprise could detect and feedback in time that whether the whole training process is adapted to the external environment

and be able to meet the multiple demands for professionals and the pursuit of business interests. While, training evaluation also provide an important basis for the content and method to adjust and improve.

### 3.1.3 Internal and External Environment

Training environment is the guarantee for the training model to construct and operate. It includes external environment and internal environment the two parts. External environment involve in national strategic environment, government policy environment and market demand environment. The model must conform to the requirements of the national IP strategies and must be supported by government's policies. And relevant activities have to obey the laws and regulations; beside that, it must consider and investigate the current demand conditions of talent market. Internal environment includes structure, systems and culture of enterprise. Enterprise structure is whether perfect may impact IP personnel to use their capabilities inside and effect personnel training and exchange outside; Its effective functioning need incentive system and risk defense mechanism to guarantee; Forming a corporate learning environment is more conducive for business professionals to pursue self-worth.

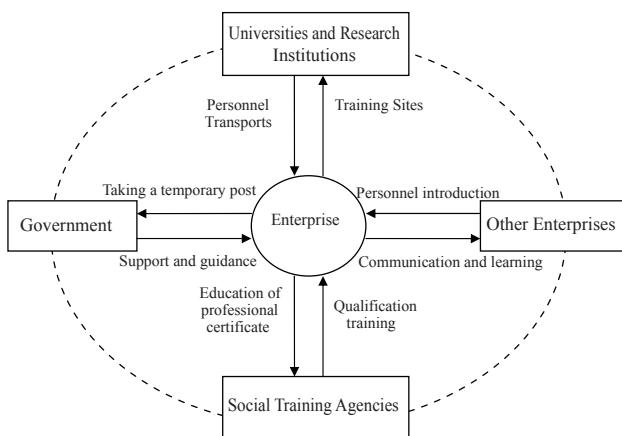
Through the above analysis, the structure of enterprise IP personnel training model has shown in Figure 2:



**Figure2**  
**The Structure of Enterprise IP Personnel Training Model**

## 3.2 The Path of Intellectual Property Personnel Training in an Enterprise

There are four paths for the enterprise to train IP personnel: universities and scientific research institutions, government, social training agencies and other enterprises (Figure 3). The arrows in Figure 3 represent the way of "bringing in" and "going out" for the training methods. Four paths play different roles and functions in enterprise's IP personnel training.



**Figure3**  
**The Path of Intellectual Property Personnel Training in an Enterprise**

The path of universities and scientific research institutions. Colleges and universities are the main places to cultivate intellectual property professionals. Academic education in colleges is to transport high-quality intellectual property creators, users and managers to enterprises. The "ordered talent training" or "joint-supervision" of school-enterprise cooperation is more able to meet the demands of the interests for the both sides. Excellent faculty in colleges and universities is the source of external training for the enterprise. Higher education and research resources of scientific research institutions or universities are unique conditions for the training activities.

The path of government. Government policies and financial support ensure the strategic planning of IP personnel to operate successfully. The relevant guidance documents made by every levels of government point a correct direction for enterprises' personnel training. As a medium, government should set up a service platform to optimize external training environment. IP departments such as Intellectual Property Office should support the popularity education of intellectual property in society and regularly hold high-level personnel training. Currently, IPR funding on personnel training has been one part of government budget that can effectively resolve the problem of funds shortage in enterprises. Public policies encourage the high quality professionals to government for testing exercise, which provided an opportunity for enterprises to improve the personnel levels and form reasonable personnel structures.

The path of Social training agencies. It can be in a short time to effectively relieve the pressure on the shortage of IP talents. Through training, the employees could get the qualification related intellectual property work. In the case of university teachers being shortage, the Social training agencies could meet the enterprises' demands. The training agencies and certification institutions who have achieved the nationally recognized qualification engaged in the activity of cultivation of IP

personnel make the trainers pass the exam and obtain the certification through Certificate Education, such as patent agent qualification certificate, copyright broker, IP planner and another certifications that recognized by the State Intellectual Property Office, Human Resources and Social Security and other relevant government departments.

The path of other companies. The company whose IPR protection is less weak conveys their personnel to learn and observe in the other companies with advanced management experience. The disadvantaged company introduces talents from the advanced to provide technical guidance and help it perfect the intellectual property strategic planning in order to encourage the disadvantaged to realize independent innovation. IP personnel training in the industry provides better chance to personnel exchanges and mutual learning among different enterprises. For example, “331 Enterprise Intellectual Property Training”<sup>1</sup> strategic cooperation projects build a platform for China’s SMEs to communicate with foreign-invested enterprises, and provides the most basic guidelines for them to increase the professionalism of IP personnel and corporate to establish and improve the system of intellectual property system (The Phase II signing event, 2012).

## CONCLUSION

The construction and Implementation of Intellectual Property Personnel Training Model provide the most professional and career-oriented IP personnel group for the innovative development of enterprises. As they have

diversity in nature, organizational structure and different stages of development, thus, IP personnel training model should have its own characteristics. Actually, the operation of the personnel training model needs the government, enterprises, universities, and other departments give the full play to their roles as the linkage, which is a long-term work. The article from the enterprise’s perspective discuss the IP personnel training model and related issues, and offer the assistance to enterprises for their intellectual property work.

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<sup>1</sup> “331 enterprise intellectual property training” is one of the most important activities cooperated by the IP supporting organization of MIIT (Ministry of Industry and Information) and enterprises in order to “promote the implemented plan of industry intellectual property strategy” in the industry. Through the cooperation of electronic IP center, Intel and Hisense, three units in the three years from 2008 to 2011 started to train the 1000 representatives of enterprises for intellectual property.