

Research Article

The Training Strategy of Professional Core Competencies of Talents in Competitive Intelligence

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Abstract: Competitive intelligence is the natural product of modern economic development. As the rapid development of competitive intelligence sources, new techniques and methods are required in competitive intelligence system. Enhancing the techniques of data mining, business administration and applied economics is adopted, in order to promote the professional core competencies. In the light of this, knowledge structure and ability structure of talents are improved for the benefit of development of competitive intelligence.

Keywords: Competitive intelligence, core factor, professional competency, talent cultivation

INTRODUCTION

Competitive Intelligence refers to all intelligence on competitors and the competitive environment the main competitor needs to maintain the competitive edge. In the broad sense, this also contains relevant intelligence activities (Miao and Ni, 2001). The study results of experts indicate that in years 2002-2008, the number of competitive intelligence related degrees being granted increased year by year; however, this had collapsed drastically from year 2009. All indications suggested that the popularity of competitive intelligence among students dropped (Long *et al.*, 2011a). With the rapid growth of competitive intelligence sources, the shortcomings of traditional competitive intelligence system become increasingly prominent, such as the not high enough automation degree of intelligence gathering and analysis can no longer meet the needs of times development. New techniques and methods are required to be applied to the competitive intelligence system. In this study, it is proposed to enhance the core competitiveness of intelligence personnel training by upgrading the technology content of data mining.

This study shows that competitive intelligence is the inevitable product of modern economic development. The rapid growth of competitive intelligence sources requires the application of new techniques and methods in competitive intelligence system, the use of principles of economics to enhance the technical content of data mining and the use of project management concept to promote the core competitiveness in competitive intelligence personnel training and perfect the knowledge structure and ability structure of competitive intelligence personnel, so as to

promote the development in the field of competitive intelligence.

AN OVERVIEW OF THE PERSONNEL CAPACITY OF COMPETITIVE INTELLIGENCE PERSONNEL

General knowledge structure and ability structure of competitive intelligence personnel: Competitive intelligence personnel are a kind of multi-disciplinary versatile talent who need to have:

- **Knowledge about information intelligence:** Conduct information collection, collation, processing and analysis so as to obtain valuable intelligence for scientific decision-making
- **Knowledge of business management:** Competitive intelligence, industry (business) strategy, industry (enterprise) development goals are closely related. Only a person who understands process management, competitive strategic objectives and development direction may grasp the intelligence required for scientific decision-making
- **Industry background:** Different industries have different paths and also different rules to obtain intelligence. One can only gather valuable information and understand and analyze that information thoroughly. Intelligence of an industry obtained by a group of competitive intelligence personnel from different disciplines may be more targeted
- **Basic skill mastery:** Language is an essential tool to collect intelligence of a wider range. Excellent language competence plays an important role in

intelligence feedback. As English is an international language commonly used, one may give immediate feedback from international tracking after browsing related information in English in a relatively short time. Meanwhile, the importance of information technology improvement to commercial statistical software applications, data warehouse, data mining and other techniques has received growing concern

- **Expression, communication and coordination skills:** Competitive intelligence emphasizes on human network. To grasp the internal and external information, intelligence personnel have to understand industry (enterprise) culture thoroughly, give full play to the role of various channels of information, so as to obtain a variety of information sources and analyze and provide intelligence in a timely manner
- **Insight, analysis and bearing capabilities:** Sensitivity to intelligence doesn't merely rely on talent. Ordinary systematic training is more important. Strong professional sensitivity is vital to proper collection and analysis of information. Due to ever-changing social development, a good mentality should be maintained while dealing with complex information in complex environment
- **Professional ethics and legal consciousness:** To obtain intelligence, competitive intelligence personnel have to use technical method and paths that conform to ethics and professional standards. They should not only have a scientific and strict professionalism but also conduct legitimate operation in accordance with related practices and procedures (Xu, 2008).

Key knowledge structure for training of competitive intelligence personnel: Research results of Long *et al.* (2011b) indicate that: Most of the competitive intelligence personnel should be university degree holders or above. This doesn't mean it is undemanding for the research ability of competitive intelligence personnel. In positional level, the basic level personnel for competitive intelligence gathering make up the majority of competitive intelligence personnel. However, for middle level competitive intelligence analyzers and high level competitive intelligence planners and decision-makers, masters and doctors are generally demanded or preferred. The existing knowledge structure weights in descending order are as follows, the required distribution of specific specialties> Information Management>Business Management> Economics>Informatics> Marketing ... (Long *et al.*, 2011b). The key knowledge structure can be summarized as follows:

- **Basic knowledge:** Basic knowledge of management, economics, marketing, mathematical

statistics, operations research, computer, information resources management, psychology and other subjects are required

- **Professional knowledge:** Technical support including business enterprise information management, financial statement analysis, financial investment, information retrieval, business market research methods and techniques, information analysis and forecasting, advanced business statistical software applications, data warehousing and data mining, consumer behavior, research report writing is required by competitive intelligence
- **Industry background:** Business operations management, applied economics and the process design capabilities of the operating process are analysis elements to be groped in work on the front line in different enterprises of different industries. These are nodal points in specific working process and key knowledge for the development of core competitiveness of enterprises of various industries.

Key capability structure for training of competitive intelligence personnel: Long *et al.* (2011b) also found that: there was a great demand of applied talents in the market while the demand for high end research-oriented professionals is less. In particular, in terms of skills, there are very high requirements for basic skills and competitive intelligence professional abilities. Meanwhile, great importance has been attached to the candidates' qualities (Long *et al.*, 2011b).

According to the key knowledge structure of competitive intelligence personnel, key competencies are mainly reflected in the following aspects:

- **Professional competence:** For competitive intelligence personnel, information gathering and insight, competitive intelligence analysis capability, competitive intelligence presentation capability, competitive intelligence tool application capability, competitive intelligence system planning and innovation capability, ability to expand knowledge, ability to transform science and technology, ability to find and solve problems, inquiry and reflection capabilities and other professional capabilities are necessary.
- **Project-related capabilities:** Competitive intelligence personnel should have excellent project communication skills and control and guidance abilities to plan, organize, coordinate, manage and operate competitive research projects and also the comprehensive management capabilities to control projects flexibly in a complex environment.
- **Computer application skills:** Application of Office, foxmail, SPSS and other office and analysis softwares, search engine, database retrieval,

preparation of summary information, being familiar with the competitors, market and information, policies, latest trend of the industry, a deep understanding of customer demand and products, insightful views and planning ability about industry competitive trend and development trend, sharp market insight, as well as sensitivity to the market are necessary technical capabilities of competitive intelligence personnel in their work life.

ANALYSIS OF THE CORE COMPETENCIES OF COMPETITIVE INTELLIGENCE PERSONNEL

According to analysis of experts (Gong and Luan, 2009), among the top 40 key words with highest frequency, those with highest speed acceleration rate in 2009 in terms of annual frequency acceleration percentage are: competitive intelligence system 2.9%, enterprise 2.0, anti-competitive intelligence 1.6, technical competitive intelligence 1.2 and data mining 1.2%, respectively. From this it can be seen that apart from common words related to competitive intelligence, the deep connotation of career development of competitive intelligence personnel includes enterprise and data mining (Gong and Luan, 2009). The core element can be summarized as: data mining technology, business management and economics application.

Data mining: Data mining refers to the process of using various analytical tools to construct the data analysis model and extracting knowledge people are interested in from a large scale database (or data warehouse). With competitive intelligence obtained through data mining, we can dynamically track and analyze data, improve enterprises' decision-making ability, environmental monitoring and risk prediction and predict future trends on the basis of empirical models. Automatic search and classification with data mining techniques may reduce the time spent by intelligence analysts on intelligence gathering, enable intelligence analysts to spend a lot of time in intelligence analysis process and thereby better guarantee the reliability of analysis results (Li and Cheng, 2011). In details:

- **Environmental monitoring:** All activities should be market-oriented. In order to seize the market, we should at first predict the market environment changes, take precautions and plan for future changes. Among the various departments who are engaged in different business, it is prone to departmental barriers. Such problems may be resolved by using data mining technology to analyze all relevant data and visualize the results
- **Analysis of competitors:** The purpose of analysis of competitors is to understand each competitor's

strategies and goals assess their strengths and weaknesses, as well as competitive reaction modes, so as to develop their own competitive strategies

- **Strategy formulation:** Competitive intelligence work is a continuous process of intelligence analysis. Original information from market demands, strategic alliances, competitors and the competitive environment is converted to the relevant accurate and practical strategic knowledge. Such knowledge may help decision-makers to better understand the operation and management environment and develop competitive plans (Li and Cheng, 2011).

Project management: Domestic competitive intelligence discipline is often offered in study of library and information specialty. However, foreign competitive intelligence discipline is closely related with business colleges. The ultimate goal of competitive intelligence is to serve the economy. At present, any challenging economic activities are bound to project-based management. Thus, very good results may be achieved by integrating the concept of project management into related professional courses of the competitive intelligence specialty. For example:

- **Intelligence planning:** Conduct information need assessment, information flow assessment and high-level interviews; define the intelligence needs, figure out which intelligence is to be collected and analyzed, the purpose of use, time needed, range requirements, costs to obtain intelligence etc.; determine the direction of intelligence and the collecting schedule of critical intelligence and develop the collection and analysis plans and contingency plans for some information services
- **Intelligence gathering:** Determine intelligence-gathering channels, such as news study, magazines, industry research reports, Internet information, specialized databases, customers, competent departments, internal business and management systems, etc.; perfect intelligence-gathering means and integrate the Internet information source collection (web information), document information source collection (collect information after digital processing), relationship database information source collection (information about internal production, business, technology, research and development, management and other aspects), digital processing of resources (scanning, taking photograph, image processing, recognition, PDF electronic document generation, etc.), Mail information collection (mail server information) and other aspects into an integrated collection system
- **Information processing:** Combine manual and automated intelligence processing, utilize

intelligence processing, digital processing of resources, information editing and indexing and quality control (after automatic collection of intelligence information, complete information indexing, filtering, validation, issuing and other information processing operations) to complete automatic intelligence classification, indexing, filtering and automatic generation of article key words and summary information

- **Intelligence analysis:** Regularly develop and generate the intelligence briefing, topics, hot intelligence and other intelligence products and provide high-quality and in-depth information services according to users' hot demands. Meanwhile, write reports and conduct in-depth analysis in forms such as SWORT analysis, critical success factor analysis and value chain analysis by relying on a large number of intelligence materials, write analysis reports on critical intelligence topics and provide leaders with decision-making support services
- **Intelligence sending:** Pass the intelligence to end intelligence users in appropriate means including the release of intelligence, intelligence services, user right certification, intelligence statistical analysis, evaluation and feedback, provide users of all levels with service entrance to obtain and share intelligence information and provide personalized information services. Meanwhile, in the intelligence distribution stage, the intelligence generation and data access statistical analysis should also be considered so as to use such intelligence as a decision-making basis for competitive intelligence-gathering scope or content.

Economics application: The emergence of competitive intelligence is mostly because of the generation of various operating activities in the industries (enterprises). Activities such as business management, financial management, marketing and so on are related with economic analysis. To analyze the economic benefits and social benefits of economic activities of various fields and non-economic activities with the basic principles of economics, the ability of competitive intelligence analysis may be promoted to a deeper level. For example:

- **Game theory:** It is an interactive decision-making model. When faced with interaction issues, the decision-makers may have initiative to choose strategies if the game theory could be simulated in advance by intelligence personnel and therefore have a clear insight into the possible ultimate benefits from different future actions of both parties, resolve problems by taking actions in the interests of their own, determine the optimal

solution and put it into practice (Zhou and Han, 2010)

- **The Market for Lemons:** Due to information asymmetry of the market, product sellers have more information about product quality than buyers. Thus, consumers may think that commodities on the market are of poor quality. They remain skeptical about good commodities of higher price and choose bad commodities, in order to avoid being cheated. Intelligence personnel should clearly realize that market opening could not solve all the problems. Information is valuable. Make use of "adverse selection" to analyze proceeds of the other party and the home side, assist decision making or help the cooperative alliance to achieve optimal profit distribution
- **Statistical analysis:** Economic statistical analysis has been playing an increasingly important role in economic management and got much attention from management authorities and managers of all levels. On the one hand, economic statistical analysis may be conducted to collect systematic and complete statistical data in a timely and accurate manner; on the other hand, it may be conducted to provide high quality competitive intelligence analysis report and provide the decision-making departments and decision-makers with valuable information required for decision-making. The statistical analysis method is an important factor for determining the quality and level of statistical analysis
- **Monopoly and competition:** Commodity prices are determined by the value of commodities. In a perfectly competitive market, competitive enterprises are the price takers while the monopoly enterprises are the price makers. As product prices of competitive enterprises are established, they only determine the production quantity (supply quantity) so that the price is equal to marginal costs. Prices set by monopolists are greater than the marginal costs. They have to face the potential entrants, substitute products companies, suppliers, buyers and other stakeholders, analyze the challenges and threats from all sides, plan on trust, cooperation, pricing and other factors among the relevant stakeholders and conduct research, development and technology introduction to guide new technology and product development of enterprises

CORE PROFESSIONAL CAPACITY-BUILDING STRATEGY OF COMPETITIVE INTELLIGENCE PERSONNEL

Based on the analysis of the professional capacity core elements of competitive intelligence personnel, we mainly require graduate students and may recruit

undergraduate students of different discipline backgrounds and take a mode similar to MBA teaching so as to make the core competitiveness of the talents in the field be recognized by the society and fully utilize human resources.

The main way to train professional capabilities of competitive intelligence personnel:

- **Sharing of subject research and development:** Study new contents and share information sources by seeking the knowledge gaps that exist in area of the subject. Through studying the expansion and optimization of information sources, information sources may be modified and supplemented on the basis of communication in the long run, thus ensuring the novelty, the continuity and validity of the information
- **Sharing of analysis methods:** Competitive intelligence analysis requires the use of multiple intelligence research methods such as quantitative analysis, Delphi method, brainstorming and so on. Sharing of good methods is conducive to the standardization construction of intelligence construction and improvement of the quality of consulting services
- **Sharing of expertise:** Competitive intelligence analysis and consulting services experience includes the problems encountered in the intelligence consultation process, problem-solving approaches, problem-solving process, the results of problem solving, post-assessment and impact, as well as experience, insight, lessons learned and so on throughout the whole process. Such knowledge can promote learning from each other among all talents in the institution and realize knowledge innovation based on experience of predecessors
- **Sharing of technological achievements:** Information and skills are often implicit. However, cooperation and exchange among technical personnel may help to improve the efficiency of competitive intelligence analysis and knowledge and skill transfer among talents and achieve knowledge and technology improvement and innovation.

The teaching system for training professional capabilities of competitive intelligence personnel: Competitive intelligence is a discipline and specialty with high requirements for application capabilities. In order to perfect the corresponding curriculum system, we should not only complete logic and reasonable distribution of knowledge related to teaching plans, curricula, teaching materials and so on but also develop

a large number of practice teaching activities, such as case reviews, field surveys, visits, competitive intelligence expert lectures and so on. Apply the learned theories to actual cases so as to deepen understanding. For example: practice (organize students to undertake intelligence work in enterprises for a period of time and understand the process of enterprise competitive intelligence work), visit (organize students to visit some enterprises and understand their competitive intelligence work flow and understand the situation of enterprise intelligence work), case studies (conduct case studies so as to make students as being personally on the scene and improve the ability of practical work and application), survey (collect competitive intelligence information and understand competitive intelligence activities through investigation of one or more enterprises) and so on, thereby enhancing students' career development ability.

The teaching evaluation of professional ability training of competitive intelligence personnel: Teaching evaluation is the assessment of the teaching system and may also give feedback about training effect of competitive intelligence personnel. Taking classroom teaching for example, evaluation will involve specialty construction, personnel training orientation, teaching plans, outlines, lesson plans, teaching materials, teaching attitude, methods, assignments, examination methods etc. Systematic analysis of evaluation quality standards, the main factors affecting the quality of teaching, the evaluation index system and other factors may help to enrich and perfect the theory system of teaching quality evaluation in training of competitive intelligence personnel. Moreover, strengthen the feedback tracking of talent usage of employers, review the goals of schools and industry (enterprises) and demands of schools and enterprises, conduct evaluation activities by relying on the project dynamic bibliographic database, set up a communication platform for organizers and stakeholder groups of projects, promote innovation of competitive intelligence personnel training programs, strive to cultivate talents according to social economic development trend and meet the labor market needs (Zhou *et al.*, 2010).

CONCLUSION

Competitive intelligence is the inevitable product of modern economic development. The rapid growth of competitive intelligence sources requires the application of new techniques and methods in competitive intelligence system, the use of principles of economics to enhance the technical content of data mining and the use of project management concept to

promote the core competitiveness in competitive intelligence personnel training and perfect the knowledge structure and ability structure of competitive intelligence personnel, so as to promote the development in the field of competitive intelligence.

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