Providing General Training in Official Statistics to Large Groups of Users in China by Means of Internet

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Abstract: In recent years, network training has achieved good momentum of development and has demonstrated its competitiveness in China's statistical system. However, network training is not versatile. We should be clear about its boundary and limits and understand what it can do and cannot do.

Network training needs a friendly external environment, but the mentality constraining the development of network training can not be changed in short term. Network training has many advantages in terms of training content coverage and the number of trainees, but, in statistical system, the expansion of training scale is restricted by many factors. Network training should focus on training demand, but can not just consider the demand; otherwise, we might find ourselves at loose ends. Network training should pay due attention to effect, however, too much focus on effect might yield less fruit. Network training should make full use of its advantages in expressing form, but the form can not guarantee the success of training. The key to the success of network training is the training content.

Presenting Questions

In the past years, the statistical system of Chinese government has established and improved its network training system. By far, the number of in-service employees participating in network training has exceeded 10,000, accounting for 10% of the total staff. The training contents include courses on basic knowledge of statistics and the technique courses on computer applications. The training software includes text format software with ordinary visual effect and high-tech streaming media software.

In China's statistical system, it is not only possible to let all staff benefit from network training, but the problems that trouble statistical training can be readily solved.

First, network training breaks through the time and space limit of learning. Trainees can study either at home or in the office, in daytime or at night. Therefore, the dilemma or conflict between working and learning can be solved or relaxed to a certain degree.

Second, with network training, the employees are able to determine independently their learning contents, processes and schedules. It helps to materialize the transformation from collective education to individual education, from module learning to individualized leaning, and arouse the self-awareness of trainees. The issues concerning training targets can be solved to a certain degree.

Third, thanks to the unique learning environment and methods of network training, the in-service trainees can conduct free exploration and independent thinking while receiving the training, in particular, the exploration on and thinking of career-related issues. In this way, it can help to improve the relations between learning and working. However, before that, people often complain about too little intersection between learning and working.

Like a coin has two sides, network training has its own merits and problems.

Firstly, network training needs a large amount of initial investment, including human resources input and capital investment in networking construction, teaching software development and training software production. However, up till now, the expansion of training scale hasn't reached its expected targets and the cost-effectiveness of network training hasn't explicitly emerged.

Secondly, there are uncertainties in guaranteeing and measuring training effect. Although network training has many advantages, such as time and space free, separated trainer and trainee, separated teaching and management, it depends too much on the self management and self encouragement of trainees. Besides, it lacks face-to-face interpersonal communication and group interaction.

Herein, one problem occurs. What can we expect from network training?

In order to answer this question, we'd better firstly understand what the network

training can do and what it cannot do.

Ideology and Resource

In China, the moment of speaking of network training, people will think of to build a network, to develop teaching platform and to produce training software. It is true that the construction of training resources is of great importance. However, in China, the issues concerning training ideology are more urgent than resources construction, since currently there are three ideological concepts prevailing in China.

The first is network training skepticism. The concept of "classroom training" is deeply rooted in the minds of some people. To them, training is based on the interpersonal communication between teacher and student, student and student. Without or with less interpersonal communication and group interaction, the training can hardly yield in real effect. To them, network training is like "burning money". They propose that it would be better to conduct more classroom training, which people are more familiar with and more accustomed to.

The second is network training simplism. To some people, network training simply means to shift training from classroom to network platform. There is no much difference between classroom training and network training in other respects. They hold that network training is simply the extension of classroom training, without much fresh contents incorporated. If we use a metaphor to describe training content as vehicle and the training method as road, then the vehicle remains the same, while the road to support the vehicle is changed from country road to express way.

The third is the imitating concept. In China, the majority of supporters of network training hold this viewpoint. To their belief, western countries have experienced a long time exploration in the field of network training. They have formed mature ideas and developed high level technologies in this regard. We can draw on their experience, so as to reduce cost and buy more time for ourselves. This sort of advantage is remarkable. However, few people would think about whether or not those taken from western countries match Chinese situations.

While it is safe to say the above ideas are reasonable to a certain degree, they are not

absolutely right. Network training needs to "burn some money", the outcome of which can be re-utilized extensively. Such a multiplicative effect is incomparable by classroom training. Network training needs to learn from traditional education. But, if it only takes traditional education as a reference, its true value can hardly be realized. The huge gap between Chinese cultural tradition and educational concept with those of Western countries determines we can not totally accept all Western experiences. We cannot follow them blindly just because they march ahead of us.

As a matter of fact, to discuss the issue and to take actions are two sides of a coin. It is impossible to change in one day this sort of mentality, which needs to eliminate the inertial effect. Meanwhile, the development of network training is similar to the evolvement of other systems. There are various technical, economic and social constraint conditions. It does not go in the way, as we can imagine, that "constant effort yields sure success".

Therefore, in China, comparing to establishing training resources, it is more difficult to develop educational concept and ideology applicable to network training. In short term, we might be able to make some achievements in resource building. However, we can not place too high anticipation to ideological restructuring.

Finity and Infinity

A survey shows that in statistical system, about 30% trainees are skeptical toward network training, most of which are employees above 45 years old or with an academic degree lower than junior college. Since the network coverage exceeds 90% in statistical system, we hold that the number of employed trainees who do not reject and can participate in network training accounts for more than 60% of the staff of statistical system.

In another word, the 60% stands for the space of network training.

The space has the following features.

First, the feature of trainees' roles. People belonging to this space are adults with self-awareness. They play their own roles in statistical system and understand their

roles. Taking into consideration that China's statistical affairs are troubled by two problems—conflicts between increasing demand and relatively finite supply in training scale; conflicts between increasing demand and relatively low level supply in training structure, their participation in the training, consciously or unconsciously, is closely related to the improvement of statistical capability and better satisfying the demand of governmental decision-making departments, enterprises, academia and international communities. To them, the impetus for learning comes not only from regulations of governmental departments but also from their own responsibilities and missions.

Second, the feature of trainees' background. Among the trainees, there is an age gap: some are freshly graduated, while others are to be retired. There is job difference: some take the leadership, while others do specific work. There is difference in educational background: some are post-graduates while others have never received higher education. Even those received higher education, their professional background varies. In addition, there is duty difference. According to work flow, statistical work can be divided into statistical design, statistical survey, and data processing and analyzing. If divided according to job field, the statistical work has the following varieties: industry statistics, agriculture statistics, business statistics, investment statistics, population statistics, social statistics and science and technology statistics. Employees of statistical system as all they are, there is huge gap either between their personal backgrounds or between their jobs.

Third, the feature of trainees' capability. Those engaging in statistical affairs are in-service employees. Most of them have formed relatively stable mental structure. They are better in understanding but poorer in memorizing with regards to learning. What's more, their training is blended with work, and the training time they can afford is limited. Therefore, it is required that the content of network training should be mission-oriented, practical, and closely related to their work.

The first feature limits the space of network training, that is to say, network training can cover with most of the in-service employees. But the second feature may result in "infinite supply" of network training. For one specific person, the training content

suitable for him is finite; for one course, the number of participants is limited. The third feature determines that network training should focus on the content that needs understanding, such as working methods and code of conduct, rather than the professional statistical knowledge that needs memorizing.

Therefore, although network training has great advantage in the coverage of training content and number of trainees, the expansion of training scale is limited to a great extend. The infinite network may only fulfill limited training targets.

Requirement and Demand

Demand understanding has been the mostly used slogan in network training. Training should be based on demand understanding. However, too much stress on demand may end in two results: one, training is controlled by so called "demand", and a large amount of time and money is put into training demand survey, while the input for demand satisfaction is relatively insufficient; second, demand survey and demand operation are two separated processes. Training and demand are different in essence.

In October, 2006, a special survey was conducted on training demand of Statistic Bureau directors at county level. In the survey, directors were asked to answer questionnaires about their interested training contents. The result showed that, those who chose "knowledge" courses accounted for 65%, leaving only 35% chose "technical" courses. From the survey we recognize that what the directors of county statistic bureaus are most interested in are "knowledge" type training courses.

After the survey, we invited some participants to a seminar to further understand their expectations to the training. To our surprise, we drew a different conclusion: what they were mostly needed are the courses that could help them broaden their visual field, grasp the general trend of time, update their concepts and improve their capabilities, rather than the above mentioned "knowledge" courses.

To be frank, the term "demand" is a good one. The problem is too much emphasis on "demand" often misguides people to "individualization", because different people understand the demand in different ways. Under different circumstances, their demands vary. In particular, under the conditions of lacking job criteria in current

Chinese statistical circle, the so called training demand is very general and obscure.

To solve this problem, we propose two ways: start from job criteria, and work out requirements for each job position; establish training content based on requirement. In other words, it means to start from training requirement.

Second, start from the available training resources. It means to exploit abundant training resources to meet the individualized training demand. Metaphorically, it is like to establish a resource supermarket, and let the participants to choose independently. The process of choosing actually indicates the process of demand emerging.

In a word, whatever the way is, the key is not the demand but training requirement. To be more specific, if starting from requirement, we may find out ways to meet the demand, however if starting from demand, we might get lost.

Process and Effect

With traditional education as reference, people often, consciously or unconsciously, adopt the evaluation criteria used in traditional education to assess network training effect. Studies show that the evaluation criteria of traditional education can exert both "pressure" and "attraction" to network training.

"Pressure" refers to the doubts and criticism posed by traditional education to the reasonable existence and quality of network training. "Attraction" means network training deviates from its own features and competitiveness and approaches to traditional education. It is easy to see under the double action of "pressure" and "attraction", network training may lose its differentiated value of existence, and it would be hard to guarantee the training effect.

Training should aim to its effect. This is not a problem. The problem is when facing "pressure" and "attraction", what criteria can be used to measure training effect? Who is qualified to evaluate the effect? Among the offered training courses, there is one course to which most trainers are satisfied with or generally satisfied with. However, to our surprise, the response from outside the training circle is far from satisfaction.

Through research, we find out one trainee is not satisfied with this course. Interestingly, this student loves to "voice his opinions" very much.

In our work, we would like to listen to the comments from different trainees in a variety of ways. But, in many cases, the comment of the minority dominates. The reason is that training effect usually follows a normal curve, most trainees are generally satisfied with the effect, leaving only a few very satisfied or dissatisfied. Those who are generally satisfied with the training seldom make comments, therefore, the comment of the minority often exerts guiding influence to the final evaluation of the training, thought it is far from comprehensive and objective.

Such a case is really a headache for trainers. To deal with it, some trainers conduct simple evaluation by tests and marks; some even do not carry out any evaluation. When the training course is over, trainees are dismissed immediately.

According to our experience, it is better to attach importance on training process than focusing on training effect. During the training, trainees account for the main body, having rights and ability to independently decide their training contents, procedures and schedules. They won't waste their time for an impractical course. Even having applied for a training course, they usually can not follow through. On the other hand, for a course with many participants who can also stick to it, it can not be taken for granted that the training effect is not ideal.

Therefore, we hold that too much emphasis on training effect might yield in less fruit. Just like a supermarket, instead of spending time in collecting customers' opinions toward each item of commodities, it is better to know the sales of each item, constantly adjust the placement of commodities based on sales, put the best sellers at the most eye-catching places while shelving off those with bad sale records. In this sense, the best way to seek training effect is to conduct process monitoring and the adjustment based on process monitoring.

Content and Form

Multi-media, such as integrated texts, sound, diagrams, videos, flashes, accounts for one feature of network training and the reason of its existence. As Chinese people

desire much more from network entertainment than people of other countries, the advantages of network training in expressing forms become more valuable.

However, the forms can not ensure the success of network training. The key to success is the training content.

Thus, what kind of contents should network training focus on?

The answer has been offered previously, i.e. start from training requirement.

As mentioned before, there are a lot of differences among the in-service employees in statistical system. Different people have different requirements to the training. For instance, according to each person's background, the mainstay employees with higher level professional knowledge should be required to further enhance their capabilities so that they can better play their leading roles. For those grassroots statistical employees with ordinary professional knowledge background, they should be required to make themselves more competent, that is to say, to gradually develop their capabilities to meet job requirements.

In fact, it is not difficult to solve the problem in this regard. We can confidently design the training contents according to their jobs. Under the preconditions of offering professional, mission-oriented and practical contents and according to the reality of statistical affairs, training content selecting should take into consideration of each trainee's specific needs. For leading cadres with higher level professional knowledge, the training contents should be more professional and in-depth, while for those grassroots employees, the training content should be simple and easy-to-understand.

The problem is, in addition to knowledge and techniques, many people hope that the training can attach certain importance to the code of conduct and attitude.

Training can help address the issue of code of conduct for members of an organization: what are the right codes of conduct, which are wrong ones? It is true that through training, we can guide employees toward "what to do" and "how to do", and gain practical effect.

As to attitude, it is far from optimistic to realize the training effect in this respect, as

attitude is the product of environment. It needs time to cultivate one's attitude, it needs the demonstration of leading models, and it needs the inspiration of organizations. So it is hard to change or shape one's attitude simply through one or two training programs. In this regard, an ancient Chinese saying can explain it: "A good craftsman can tell you the established practice, but can not make you skillful; a wise teacher can teach you knowledge from books, but can not shape your behavior."

To sum up, we should focus on both the form and content in network training. In particular, we should understand that some contents can be incorporated into the training, while others can not be expected in network training.

Conclusion

Network training has been launched in Chinese statistical system and gained its primary success. However, we can not accordingly place too much anticipation from network training. For some goals, the network training can fulfill, while for others, it can not do. What we can do is to keep on improving the network training, as "many a little makes a mickle". Try to avoid hindering the benign development of network training during the process of seeking "outstanding performances".

It is also necessary to avoid network training fatigue in the meantime of preventing network training worship. Do not lose confidence to network training simply because it is confronted with some problems and limits.

In 1911, Edison predicted that: "The motion picture is destined to revolutionize our educational system and in a few years it will supplant largely, if not entirely, the use of textbooks. It is possible to pass on each branch of subjects of human knowledge by motion pictures and our educational system will be totally changed in 10 years." More than one century passed, part of his prediction has been realized. The success achieved by open education in the past can prove it. However, the remaining part of his prediction is hard to be materialized, because up till now, textbooks haven't been supplanted. Likewise, we can not simply doubt about the value of classroom education because of the rise of network training, as traditional classroom education and network training have their own merits and demerits; nor can we turn a blind eye

to the virtue of network training just because it has some defects and is facing with difficulties. Network training has its own space, but such a space needs to be shared with other educational modes so as to achieve common prosperity.