The Application of oTPD Models to the Teacher Professional Development in Shandong High Education

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Abstract. The information age has changed the learning and teaching pattern in Shandong high education and challenges the traditional teacher professional development. How to improve teacher training programs in an era of informatization is of great significance to the learning effects of the students, college and university development and high education innovations in Shandong province. By adopting the methodology of comparative analysis and data statistics, this paper introduces the American online teacher development models, analyzes their characteristics and advantages over Shandong high education teacher professional development programs. The research finds that in contrast to the sporadic, general, and inactive teacher training programs in Shandong high education, the American online teacher development models are continuous, major-orientated and interactive systems. They are of great referential value to the practice and innovation of Shandong high education teacher professional development.

Introduction

Teacher professional development is of great importance to student achievement in learning. It positively affects teacher improvement and classroom implementation. (Smith, kara, 2010). Informatization provides the teacher professional training programs with modern technical support. Originated in America at the turn of the twenty-first century, online teacher professional development (oTPD) has been a heated topic in the American educational research field. oTPD models refer to the interactive developing experiences with informatization technology as an assistance to support various aspects of teacher professional development, including the major teaching content, teaching and learning resources, interactive methods, etc. In the oTPD programs, teachers participate in the training process actively, gain the immediate support in their teaching context, shape their pedagogical belief, and eventually mature into senior professional teachers or educational experts in their teaching areas.

Research Background in China

In China, the earliest researches on teacher professional development of high education appear in the 1990s and developed soon ever since. Some researches introduce the foreign oTPD models and discuss the feasibilities for the application in China (Liu Yaowu & Fu Anquan, 2010; Hu Xinjian, 2013; Long Taoxian, 2016). Technological assistance is studies by Qin Jian (2012), Qian Xusheng & Gan Xiaoyun (2015). However, many of the researches are general and theoretical. Very few of them are based on the investigation into the oTPD programs and study the application of oTPD to the high education in a specific region.

China has been a highly informationized country in recent decades. Internet has changed the various aspects of the Chinese society, including high education. In the universities or colleges in Shandong province, courses on computer science and technology are compulsory or elective in the curriculum, students are required to attend these courses to pass the Provincial Computer Examination and obtain a certificate. Courses which are based on CAI (Computer Aided Instruction) and CAM (Computer Aided Manufacturing) are of the top heated choices among the university or college students. Meanwhile, the modern learning and teaching methods such as the interactive
teaching, multi-media teaching, E-learning, etc. are becoming fashionable and widely employed in
the college and university classrooms. What’s more, a new generation of students emerges as the
“electronic generation” in that the Internet has become their way of living. Whether be it shopping,
communicating with friends and families, or knowledge learning. Indulging in the ocean of digital
information, many of them master super informatization knowledge and skills. In 2011, high
education scholars conducted a survey on the informatization status among the Chinese college and
university students in Beijing. The result shows that 66.3% of students surf on line for over three
hours per day; 73% of students use the internet search engine to find the learning materials rather than
go to the library; 32.8% of them frequently solve their puzzles in learning by posting questions on the
web; 74.2% of students attend or plan to attend the IT certification training course outside the school.
The figure is representative in not only colleges and universities in Beijing, but also other part of
China. Changes in ways of learning and teaching call for the according adjust in traditional teacher
professional development.

Research Background in America

Referring to the related European studies, Frances Fuller, the well-known American scholar,
conducted systematic studies on entry-level teacher development, and made this topic a world-wide
academic concern in the 1970s. Coates & Thoresen (1976), Keavney & Sinclair (1978), Veeman
(1984) refined and furthered his research. In high education, teacher professional development is
critical for educational improvement (Dede, Ketelhut, Whitehouse, Breit, & McCloskey, 2009; Looi,
Lim, & Chen, 2008; Yang & Liu, 2004, 2008). Researches on oTPD originated in America at the turn
of the 21 century. Most of the researches are practically oriented, studying a specific academic aspect
in a particular region, university, or college, with a particular aspect of oTPD as a major concern.
Dede et al. (2009) is a conference-based study in Harvard Graduate School of Education.
Moon-Heum Cho & Gail Rathbun (2013) conducted the study in the oTPD programs organized by
the center for teaching and learning in a mid-west university in USA.

The Teacher Professional Development Status in Shandong High Education

Shandong provincial educational governments attach great importance to teacher professional
development in high education considering the fact that the professional teachers function
significantly in the regional education development. High education teaching attracts many novice
teachers join this profession. According to the Statistical Bulletin for Shandong Education
Development, the number of the teachers in high education rises continuously in recent years. Table 1
offers a description of the increasing numbers and rates of the novice teachers in the structure of
professional teachers in Shandong high education in recent three years.

| Table 1. Novice Teachers in Shandong High Education in Recent Three Years. |
|-----------------------------|-----------------------------|-----------------------------|
| Overall                     | 2014                        | 2015                        | 2016                        |
|                             | 101,380                     | 104,725                     | 107,748                     |
| Novice                      | 2,695                       | 3,344                       | 3,025                       |
| Rate of Increase            | 27.31%                      | 32.98%                      | 21.50%                      |

As is shown in Table1, the recent three years witness a continuously sustainable rise in the number
of both the overall professional teachers and the novice ones in Shandong high education. In the year
of 2014, there were 101,380 professional teachers in high education institutions in Shandong
province, among whom 2,695 were novice teachers. The overall number of professional teachers
exalted to 104,724 in the following year of 2015, with 3,344 being novice teachers. The number
continually increased in the year 2016 to 107,748 among who 3,025 were novice teachers. The high
increase rates of around 20% and 30% suggest that among three or four high education professional
teachers, one of them is a novice one. The teacher professional development is of great significance to
all teachers, especially to the novice ones.
The regional educational governments pay great attention to teacher professional development in high education because it affects directly on the learning effects of the students, college and university development and even the regional high education reform. There are pre-service training programs for novice teachers and in-service professional development for teachers at all stages. Pre-service training is a short-term gather-training held annually during summer vacations, with the content mainly being the knowledge learning of pedagogy and psychology. The candidates are obliged to attend courses for several weeks. Those who pass the final examinations will be granted certificates as proofs to be novice teachers. As far as in-service development is concerned, diverse activities are organized annually by the regional education governments, such as advanced teaching forums, senior teacher classroom exemplifications, micro-course contests, domestic or abroad visiting scholar programs, etc. These programs provide teachers opportunities to improve their teaching and academic ability.

The American oTPD Models

The American oTPD models are like interactive connective knots with certain socialization function. Online learning community is its major communicative method. The community involves senior teachers, experts, and program promoters as the "tutors". The dialogues between a tutor and a teacher, a senior teacher and a novice teacher, an expert and a teacher and so on are its basic learning patterns. Directing and conducting dialogues are the major learning mechanism.

In America, many high education institutions implement diverse teacher professional development programs, however, one of the main concerns is teachers’ lack of active participation (Dede et al., 2009; Looi et al., 2008). Borko (2004) also pointed that the American teacher training programs offer “fragmented, intellectually superficial” seminars. Nonetheless, America started the oTPD researches as early as at the turn of the 21 century and pioneered the theories and practices in this field. Many successful oTPD models are well developed and mature enough to be applied in the practice of teacher professional development.

In his book Online Professional Development for Teachers: Emerging Models and Methods, Chris Dede explores ten models of oTPD, including EDTech Leaders online, the WIDE World teacher professional development program, eMentoring for Student Success Project, etc. The models were chosen on the basis of the quality and maturity of the program. Unlike the traditional TPD model, oTPD models are teacher-centered and offer teachers opportunities to “hear their voice” in the training process. It also provides practical knowledge in their particular teaching areas.

The Advantages of oTPD over Shandong High Education TPD

Started at the turn of this century, after developing for nearly twenty years, with wide and adequate practices and researches as its foundation, the American oTPD models offer mature experiences and are of significant value of reference both in practice and theories in teacher professional development. With the modern informatization as its technical support, the diverse oTPD models enjoy obvious advantages compared with the traditional teacher professional development in Shandong high education.

Continuity vs. Discontinuity

The teacher professional development in Shandong province has many limitations in that it is sporadic, loosely connected, and unsystematic. This kind of system is unable to provide ongoing support for teachers as they attempt to implement new curricula or pedagogies. (Barnett, 2002). The summer training programs are not adequate in that the training period is brief for transforming novice teachers to professional ones. The concept of being a teacher involves many qualities, the cultivation of which requires long-period joint endeavors. Several-week training is obviously inadequate in preparing a newly graduated student to be a qualified teacher, professionally or psychologically. The annual activities organized by the regional education governments as in-service development, such as advanced teaching forums, senior teacher classroom exemplifications etc. are self-systemic and have
no coherence to the pre-service training. Overall, the high education teacher professional development in Shandong province suggests a characteristic of sporadicity and discontinuity in both its pre-service trainings and in-service activities.

It is well acknowledged that the teacher professional development is a sustainable lifelong process. oTPD models in America have marvelous qualities of integrity, systematicness and continuity. In the oTPD models, teachers obtain renewed ongoing resources from the online learning community. In addition, teachers develop longstanding social and professional relationship with other participants and experts from whom to gain sustainable professional support. The oTPD models further allow teachers to develop a community of learners over time (Cosner & Petereson, 2003; Roger & Latchem, 2004). This potential is a precious feature and has a remarkable function in the lifelong career of the teachers.

**Generalization vs. Major-orientation**

Another limitation of high education professional teacher development in Shandong province is that the training programs or the activities are not major-oriented. Take the pre-service training as an example, the summer training includes two parts of pedagogy and psychology, which is limited and general compared with the complex qualities required to be professional teachers. The training programs are arranged for all novice teachers regardless of the disparity of their educational and academic backgrounds. No specific teaching area is treated. For example, there is no training section like foreign language teaching pedagogy or medicine teaching psychology. The sensitivity to the major background is discounted in the training. Even a novice teacher obtains the certificate, but there is still no guarantee that he or she will consequently be a qualified college or university teacher in a specific teaching area.

In contrast, the American high education faculty has developed into a stable scale of teacher communities which has reached a high degree of specialization and demonstrated obvious school-based characteristics. The online teacher professional development community shows the same characteristics. There are diverse sections divided according to learning subjects or academica majors. Teachers may conveniently find the sections of their learning and teaching field where groups of senior teachers, experts, and tutors from the same or similar academic or teaching background share knowledge, teaching experiences and offer professional guidance to one another.

**Autonomy vs. Non-autonomy**

Autonomous teacher professional development refers to exploring a specific developing model and implementing appropriate strategy on the basis of individual development with full considerations of personal factors which affects the teachers. Teacher professional development should be driven by internal motivations which derive from their career ambitions and life goals rather than external requirements imposed by authorities. It is common that many college or university teachers especially the novice ones lack the teaching practices, and the autonomy required to be qualified professional ones. How to build autonomous conception, establish teacher community and construct autonomous platform is crucial to teacher professional development.

Due to the limitations of funds and individual conditions, only a minor percentage of teachers enjoy the opportunities of the in-service professional development, such as attending to advanced teaching forums, enjoying the domestic and abroad visiting scholar programs etc. These activities or programs establish systems of their own and have few connections with one another. A gap, as a result, is produced in the time between the pre-service training and the in-service programs. The first few years, the so-called “survival period”, is left unattended. This period is crucial and challenging for teachers as a transition from novice teachers to professional ones. Unfortunately, the majority of teachers are passive individuals and there are no programs or activities arranged for them to obtain advices or guidance from the senior teachers or experts. They have no choice but learn how to adjust by themselves. Confronted with the electronic generation of students, pressed by the urgency of employing modern teaching approaches, the teachers need advices awfully but are isolated as if they were on an island amid the vast ocean. There is no channel for them to connect with the other senior
teachers or educational experts to communicate and obtain timely guidance. As a result, many of them feel more and more isolated, less and less confident and even quit their teaching job to pursue higher degrees or apply for other professions such as civil servants, etc. Table 2 is an illustration provided according to the Statistical Bulletin for Shandong Education Development of the decrease in the number of professional teachers in Shandong Adult High Education in the recent three years.

Table 2. Decrease in professional teachers of Shandong Adult High Education in recent three years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Overall</th>
<th>Decrease</th>
<th>Rate of decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>1,479</td>
<td>385</td>
<td>19.25%</td>
</tr>
<tr>
<td>2015</td>
<td>1,520</td>
<td>51</td>
<td>3.52%</td>
</tr>
<tr>
<td>2016</td>
<td>1,109</td>
<td>412</td>
<td>27.15%</td>
</tr>
</tbody>
</table>

According to Table 2, in the year of 2014, professional teachers in Shandong Adult High Education colleges reduced in number by 385, with the rate of decrease as high as 19.25%, which indicates that among five professional teachers in Shandong adult high education, one of them quit his or her job. Although situation was improved in the following year of 2015, with only 51 teachers quitting their job, the year of 2016 witnessed a tremendous spring back to 412, the highest among the recent three years.

The American oTPD models, however, realize the maximized autonomy of the novice teachers. In the online learning community, there are various sections of different subjects and majors. The novice teachers decide on themselves which section to participate. They choose the topic and area which are relevant to their teaching practice and interest them most. They make their own plans according to their teaching agenda and professional development. They decide on their own training without the restriction of time and place. The individualized training provides teachers opportunities to gain better understandings of their specific teaching areas. In the online community, teachers are allied with a vast team of consultants of senior teachers, experts and tutors with similar academic or teaching background and with whom they may communicate fully about their frustrations or troubles in teaching and they gain rich and timely experience sharing and guidance which help them to transfer successfully from novice teachers to professional ones.

Inactiveness vs. Interactivity

In both pre-service trainings and in-service development programs in Shandong high education, teachers are least active. In the summer training classroom, for example, the novice teachers learn and accept passively the pedagogic and psychological knowledge. In the in-service development activities, the teaching models or the judges set the criteria of what is good and what is not good. However they are knowledgeable, in such prescriptive learning environment, the ideas of the teachers are concealed, and they can hardly hear their own voices.

In the learning community, opportunities are equal to all teachers at their professional stages. The oTPD programs are accessible to anyone who has a computer which links to the Internet. In addition to the basic one-to-one dialogue of the “senior tutor-novice teacher”, there are other communicative patterns, such as dialogues between an expert and a novice teacher, a tutor and a novice teacher, a tutor and an expert, and as well as the group discussions. Participants of different majors from the same or different teaching and academic backgrounds are provided equal opportunities of sharing their views together. Experts from other parts of the world may offer instructions and guidance. To facilitate the communication, they may employ fully the multiple informatizational methods, such as text files, audio files, video files, etc. In the learning community, the online communications are constructed across nations, cultures, and races.

Conclusions

The information era has brought both opportunities and challenges to the modern learning, teaching and teacher professional development. In contrast to the traditional pre-service teacher
training programs and in-service activities in Shandong high education, which are sporadic, general, and in which the teachers are passive and inactive, the American oTPD models are continuous, major-orientated and interactive systems. The models are teacher-centered. Teachers in the learning community shoulder their own responsibility, participate actively in the interactive communication, and develop over-time social and professional relationship with other participants and experts from whom to gain sustainable professional support. The American oTPD models are more advanced and enjoy many advantages over Shandong high education professional teacher development and are of great referential significance to its improvement and innovation. The application of the oTPD models is urgent and should be on the agenda of the high education institutions and governments in Shandong province.

References


