The Influence and Countermeasures of the Era of Network and Digital Technology on the General Education of Medical Students

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Abstract. Based on the influence of the current development of network and digital technology on the education model, the author puts forward some problems existing in the current medical undergraduate education, and thinks about the application of general education in teaching so as to promote the all-round development of students and improve the teaching quality.

Introduction

The era of network and digital technology not only provides a powerful impetus for the development of innovative China, but also has unprecedented advantages in information collection and processing, for it has gone beyond the restriction of time and space. Just exactly as the Chinese saying goes, "the scholar does not step outside his gate, yet he knows the happenings under the sun." It seems like that young generations are more advantageous and efficient in seeking and acquiring knowledge than teachers. In other words, the gap between teachers and medical students in some respects is narrowing. It is very possible for the latter to catch up with the former, which is pressuring visionary teachers. I remember a teacher who teaches Math Competition, a kind of general education, told me, "There is a lot of pressures on teachers in current days who cannot answer all the questions raised by the students even taking them a few weeks to prepare for a class.” On the contrary, the network and digital technology may also provide a convenience for the irresponsible teachers to slack off. For example, they pieced together for the class or even downloaded other power point directly from the Internet. All these drawbacks are due to the lack of correct understanding of the use of digital technology. Internet and digital technology is a double-edged sword, which can be a huge boost for the improvement of teaching quality, and a convenience for providing opportunistic and negative energy of teaching. Facing the tide of teaching quality reform, we need to reflect seriously and conform to the trend, which makes the general education enter a new stage [1].

The Re-understanding of General Education under Modern Network and Digital Technology

General education which enables students to collect information and think about from an interdisciplinary perspective so as to solve problems efficiently when they faced with difficulties. Moreover, general education is also one kind of education providing the educated with abundant knowledge and multiple values in modern society [2]. Nowadays, network and artificial intelligence have changed the way of knowledge distribution. Our life also has changed a lot compared with the past. Jack ma, founder of Alibaba, once said that a mobile phone can do a lot of things. These changes also reflect the contemporary concepts of learning and life, which will inevitably permeate into our general education [3-4]. The younger generation's curiosity about new things and passion for active exploration, as well as the pursuit of digital technology and artificial intelligence, have
triggered a change in the traditional education model, broken the inherent model of the classroom and made it more diverse and flexible. These changes have shocked teachers and made teaching more challenging [5]. In this case, we have to think about whether teachers are well qualified for their job and general education reflects its value well? Taking information collection as an example. Although there are various means of information collection, there is a mingling of good and evil, which also makes it difficult to search useful information. Sometimes trying to find something on the worldwide web is like trying to find a needle in a haystack. According to Internet Data Center and other Internet data platforms, the number of emails per day in 2019 will reach 293.6 billion. Facebook generates 4 Petabyte of data every day, including 10 billion messages, 350 million photos and 100 million hours of video views. Teachers seem to have two attitudes towards this situation, one is to spend a lot of time in the ocean of information to collect useful information seriously in order to improve the quality of teaching, the other one is just to scratch the surface, lacking a sense of responsibility for teaching. For example, some teachers download teaching plans randomly from the Internet and directly used in classroom teaching, no matter whether they are suitable or not, and do not distinguish the true from the false, which will damage the quality of teaching. There is a massive open online course called MOOC in China, information after many times of dissemination and processing turns out to be wrong although the content of this website is rich. I had a similar experience when I attended a national academic conference with my tutor a few months ago and listened to a well-known scholar's academic report. She said that there were more than 72 million disabled elderly people in China. I doubted the data after the meeting, because according to her, the disability rate of the elderly in China would be as high as 28.91%. My practical experience told me that it is impossible! So I checked with the National Bureau of Statistics of People's Republic of China, which put the figure at 20.647 million, what a striking difference. I fully appreciate the fact that we should verify authenticity of information before using especially in the era of information explosion.

Discussion

There is no doubt that the Internet and digital era has brought an extraordinary revolution to all education including general education which will innovate and reconstruct the relationships and methods of teaching and learning [6]. I believe that after this revolution, the relationship between students and teachers will be more diversified, no longer just the teacher as the leader and the students accept the knowledge passively. I have this view for the following reasons. Because of the development of the Internet and digital technology, such as the wide use of mobile phone, iPad, MOOC and other multi-functional electronic devices, teachers are no longer simply teaching but providing students with tasks and idealized scenes to help them build knowledge frameworks. Students can collect relevant information by themselves in various ways. At the same time, students will take the initiative to learn the knowledge they are interested in through the Internet in their spare time, which often brings new inspirations to teachers. The relationship between teachers and medical students has become more actively and they learn from each other in class. In a nutshell, the connectivity and creativity of networking and digital technologies have created a new model of teacher-student relationships [7-8].

I think the problem that the new model whether it means the weakening of the status and roles of teachers should be viewed from both positive and negative aspects. The key to the answer lies in the teacher's attitude towards teaching. Teachers need to get rid of the rigid and fixed teaching models and perfunctory teaching attitude, actively keeping pace with the times and attaching great importance to the innovation of knowledge creation and communication methods brought by network and digital technology. Applying actively these advantages into teaching methods to improve teaching quality and promote students' development in various aspects [9]. In this regard, we personally put forward the following suggestions.

The first of all, teachers should develop the ability to tell the true from the false in the process of teaching. In the environment effects of information explosion, there are long-standing issues of fraud and misconduct in Chinese academia. Teachers should help students develop a correct attitude
towards scientific research and tell them that the precondition of distinguishing true from false is to establish a scientific, rigorous and positive self-consciousness. The specific approach is to help students strictly check the source of articles, author reputation, journal influence factors and literature citation frequency strictly in the early stage of paper writing. The second is to insist on critical thinking in teaching. We should keep in mind that textbook knowledge and Internet download should not be used without thinking but with skeptical attitudes and our own understandings. I think this is an important test of the quality of a teacher. At present, China's music industry almost overwhelmingly recognized that vocal music is divided into three kinds of singing methods, bel canto, national singing, and pop singing. When I listened to the lecture of famous Chinese singer Zhi Cheng, he questioned the classification of national singing and considered the definition of "nation" is not exact. He thought it's better to define it as folk singing. This example shows that teaching can be more personalized and profound by questioning and understanding of knowledge [10]. The third is to use teachers own sentiments and experiences in teaching. At present, network and digital technology can not reflect the advantages of changing teaching with the current environment. At the same time, everyone gets different experiences and insights because of people know things from different angles, methods and processes. Successful experiences come from people's repeated practices and summaries. Relatively speaking, teachers have more advantages than students in applying successful experience to practice. For example, the biggest problem of college students' technological innovation trainings and summer social survey activities in recent years is the lack of experience. Our group downloaded a questionnaire from the Internet and there was a problem in the community survey. Few people choose when they faced one of the questions was to understand the characters of the respondents, "are you very grumpy?". Then the investigation was carried out smoothly after my teacher changed the topic according to his experience to "when you didn't do anything wrong, would you be angry when others were mad at you?". The fourth is to attach importance to the connection of different knowledge and integrate them into teaching. The knowledge that networks and digital technologies currently provide is mostly modular and fragmented. Teachers should cultivate students' ability of flexible learning in the process of teaching. We should keep in mind that network and digital technology are just learning assistant tools. We can't rely too much on them and lose our independent thinking. Finally, the teachers must grasp the essence of education in a changing and developing teaching system. We are in an era of change, and education is no exception. The concept of education, the content of the course, the teaching methods and the requirements on students have all changed a lot due to the influence of the Internet. Of course, these changes are not all good and there are many failures. I believe that the responsibility of universities is to lead the development of society rather than blindly cater to it [11]. In fact, it is also clear to the people that no university has yet proved that the talents it cultivates are completely consistent with the demands of the division of labor in society today.

Conclusion

We should remain sober and focused in the diversity and constant changes of education. No matter how advanced the network technology and artificial intelligence, it is impossible to provide all the answers of the future once and for all. As the book Revolution in Learning says that all our education should be divided into two courses: teaching students how to learn, how to think, and I think should also add teaching students how to create! Which is the essence that our general education must hold fast and grasp.

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References

[1] Wall D. *Introducing New Tests into Traditional Systems: Insights from General Education and from Innovation Theory*. [J]. Language Testing, 1996, 13(3):334-354.

[2] Zhu Youling. *Collected Works of General Education* [M]. Jiangxi: Jiangxi University Press: 2013.

[3] Bertocchi G, Spagat M. The evolution of modern educational systems: Technical vs. general education, distributional conflict, and growth [J]. Journal of Development Economics, 2004, 73(2):559-582.

[4] Ferren A S. *New Life for the College Curriculum: Assessing Achievements and Furthering Progress in the Reform of General Education*. [J]. 1991.

[5] Guo Hua. *Modern College Student’s Humanistic Quality and Accomplishment* [M]. Jiangxi: Jiangxi Science and Technology Press, 2010.

[6] Zhang Yaqun. *What is a Good General Education* [N]. Guangming Daily. 2016-5-10(14).

[7] Huang Helang, Zeng Ni, Wu Lei, et al. *Study on the teaching strategy of the class II general education course in clinical medical undergraduates after the reconstruction*. China Higher Medical. 2018.07.

[8] Robertson K, Chamberlain B, Kasari C. *General Education Teachers' Relationships with Included Students with Autism* [J]. Journal of Autism & Developmental Disorders, 2003, 33(2):123-130.

[9] Billingsley B S, Cross L H. *Teachers' decisions to transfer from special to general education* [J]. Journal of Special Education, 1991, 24(4):496-511.

[10] Mobus G E. *Teaching systems thinking to general education I students* [J]. Ecological Modelling, 2018, 373:13-21.

[11] Huang Jizhi, Wu Lei, Huang Helang, et al. *Discussion the Exterior Restricting factor and Converted Strategy of Reform of Higher Medical Education in China* [J]. Northwest Medical Education. 2009, 17(16).