

Research on the Changing Trend of Teacher's Knowledge Authority in the Post-MOOC Era*

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Abstract—With MOOC sweeping the whole educational circles like a digital tsunami, the knowledge authority of teachers changes with the development of teaching technology and teaching method. Under the open logic of MOOC, teachers' knowledge authority has been diluted and impacted as never before. Yet with the return of physical campus and classroom teaching in the post-MOOC era, the knowledge authority of teachers has not collapsed, but has gained the opportunity to generate and extend again. Under the protection of cultural factors, teachers' knowledge authority still stand firm in the turbulent waves of future MOOC development.

Keywords—*post-MOOC; MOOC; teacher's knowledge authority*

I. INTRODUCTION

MOOC has been a digital tsunami across the education sector, and the knowledge authority of teachers sways with the changes of teaching technology and teaching method. Delve into the concept of authority and one can find it "enveloped in bickering and confusion".¹ From many interpretations of authority, the nature of authority can be clarified, that is, authority is a relationship of will submission based on legitimacy. In the open context of post-MOOC, does this will-obedience relationship still exist? And does the knowledge authority of teachers collapse under the unprecedented impact of post-MOOC era?

II. THE STRUCTURAL CONCEPT OF TEACHERS' AUTHORITY

Teacher authority refers to a dominant force that can be consciously accepted by students, influence and change students' psychology and behavior under a certain historical and social background, relying on the educational power

granted by the state and society and personal factors. In most cases, teachers' authority is regarded as a kind of ability in the academic circle, and the research attaches great importance to the construction and expression of authority. Generally speaking, teacher authority can be divided into four ways of expression, that is, traditional authority, statutory authority, impelling authority and professional authority². Among them, traditional authority and statutory authority are group authority derived from the educational system and defined as the institutional authority of teachers. The impelling authority of personality and professional authority of knowledge belong to a kind of individual authority, which is derived from the personal factors of teachers and defined as the personal authority of teachers. Teacher authority is the result of the interaction of these four paths or the resultant force of these four paths.

Teachers' traditional authority and legal authority originate from the educational system and have relative historical stability. Impelling authority is closely related to teachers' individual personality and personal charm, and has distinct individual tendency. These three kinds of authorities are less affected by the specific teaching mode and teaching mode reform, and have relatively independence. The teacher's knowledge authority that this article focuses on is the professional authority derived from knowledge, including explicit knowledge and tacit knowledge. Throughout history and at present, teachers' knowledge authority rises and falls amid the development of media technology and the change of teaching methods. The author tries to give consideration to the two-way effect of impact and response, and describes the complex and vivid realistic picture of the change of teachers' knowledge authority as comprehensively as possible.

III. TEACHER'S KNOWLEDGE AUTHORITY IN THE PROCESS OF MOOC DEVELOPMENT

According to the communication scholar Meyrowitz, "Authority is based on information control, and high-status roles usually depend on the access and control of the main

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¹ Hannah Arendt, *The Origins of Totalitarianism*, San Diego, New York, London: Harcourt Brace Jovanovich, Publishers, 1975, p. 465.

² Zou Xiaoting. The transformation of the connotation of the authority of university teachers in the new era. *Modern Education Management* 2011, (3) p. 101. (in Chinese)

information channels at that time." ³ The strength of teachers' knowledge authority depends on the "control" scope of professional information, that is, professional knowledge. The peak period of teachers' knowledge authority is exactly the communication era with oral communication and printed text as the main information carrier. In essence, it comes from the teacher's monopoly of knowledge, that is, the teacher's possession of knowledge is earlier than, wider than and better than that of students, so as to create the image of "omniscient and omnipotent" knowledge authority.

The rapid development of information and network technology has changed the original mode of knowledge dissemination. From traditional classroom teaching, to distance teaching such as correspondence teaching and television, to online teaching, MOOC and other network teaching, the differentiation and integration of teaching scenes constantly give birth to new educational scenes and shape a new educational ecology. As an emerging education model, MOOC has gone through the initial stage of MOOC education and entered the "post-MOOC" era after the development of cMOOCs, xMOOCs and hMOOCs. SPOC (Small Private Online Course), DLMOOC (Deep Learning MOOC), DOCC (Distributed Open Collaborative Course), and PMOOC (Personalized MOOC), MOOR (Massive Open Online Research) are online education modes in post-MOOC era, all carrying the MOOC genes of "free, open and online", and they are also the new exploration and innovation of online education.

MOOC in essence belongs to the category of network course, therefore the author makes comparison among traditional classroom teaching, the first generation of network courses (here the online courses like micro class, open class and excellent course are referred to as the first generation of network courses), MOOC and post-MOOC. And through the dependence degree of teacher knowledge, the control of knowledge information and the role of teacher knowledge, the author presents the change of teacher knowledge authority.

According to "Table I", the first-generation online courses, MOOC and post-MOOC can make up for the limitations of the number and types of courses in traditional classes, break the time and space limitations of learning and support large-scale autonomous learning. In addition, MOOC and post-MOOC are popular for their online and offline two-way interaction, positive learning feedback mode, diversified evaluation mechanism, cooperation with prestigious universities, credit certification and other functions. It is particularly noteworthy that, with the development and research of MOOC, the online education model in the post-MOOC era starts to gradually return to the physical classroom, and the two dimensions of dependence on teacher knowledge and teacher's control of knowledge information also show a "V" shape of "strong — weak — gradually strong". The knowledge authority of teachers changes in this process.

TABLE I. COMPARISON OF TRADITIONAL CLASSROOM, THE FIRST GENERATION OF ONLINE COURSES, MOOC AND POST-MOOC

	Traditional classes	The first-generation online courses	MOOC	Post-MOOC
Tuition fee	Yes	No	No	No
Number of course	Limited number of courses	unlimited	unlimited	unlimited
Types of courses	specialized courses, public courses	unlimited	unlimited	specialized courses, public courses
Place and Time	designated site + designated time	unlimited	periodic topic discussions and assignments	designated site + designated time
Period	about 45 minutes	about 45 minutes(expect for micro class)	about 2-20 minutes	about 2-20 minutes
Students scale	Small scale	Support large scale	Support large scale	Fixed scale or small scale
Registration certificate	Students of the school	No need for registration	Registration as member	Students of the school; registration as member
Study rhythm	Controlled by the teacher	Controlled by students	Controlled by students	Controlled by teacher + students
Course content	fixed	fixed	generative	fixed + generative
Teaching mode	Teacher-centered	Teacher-centered	student-centered	The community of teacher and students
Interaction online and off-line	Mostly teacher-student interaction	No interaction	Interaction between teacher and students and between students	Interaction between teacher and students and between students
In-class Exercise	Limited to some courses	no	yes	Yes
Learning feedback	Solved in class	no	Both in class or off class	Both in class or off class
Evaluation mode	usual performance + final-examination, teacher assessment	no	Online assignments, tests; teacher assessment + mutual assessment between students	Online assignments, tests; teacher assessment + mutual assessment between students
Inter-school cooperation	Basically no	no	yes	yes
credit certification	yes	no	yes	yes
Dependence on teachers' knowledge	strong	weak	weak	Gradually stronger
Teachers' control over information	strong	strong	weak	Gradually stronger
Teachers' role in knowledge	disseminator	disseminator	guide	Guide + tainer

³ He Mengyi. Media situation theory: a restudy of Meyrowitz's communication thoughts. Modern Media, 10th issue, 2015, p. 15. (in Chinese)

IV. THE DILUTION OF TEACHERS' KNOWLEDGE AUTHORITY BY THE OPEN LOGIC OF MOOC

"Massive", "Open" and "Online" are the core of MOOC (massive open online courses). It breaks through the physical limitations of traditional classroom teaching, such as the size of students, the number of courses and teaching scenes, and supports the large-scale sharing and dissemination of knowledge information with open logic. The top-down knowledge control required by authority and the parallel information transmission capability brought by the development of MOOC are destined to be a pair of irreconcilable contradictions. Therefore under the open logic of MOOC, the knowledge authority of teachers is diluted and weakened.

A. *The Delegation of Teachers' Knowledge Authority with the Break of Knowledge Channel Monopoly*

Before the emergence of MOOC, despite the existence of online courses and other teaching modes, the one-way communication mode only ensures that all knowledge is concentrated at the starting point of information transmission. Teachers are the monopolists of knowledge information and the "spokespersons" of knowledge. With the coming of the Knowledge Age, the logical starting point of all activities originates from knowledge. The commercialization of knowledge, the diversification of knowledge production institutions and the diversification of knowledge production subjects are making the channels of knowledge acquisition more convenient and diversified, and the knowledge authority of individual teachers is being eliminated by the contextual nature of knowledge society. With the development of network technology, MOOC teaching is held high by the banner of "massive, open and free". As knowledge resources become more readily available, teachers are no longer monopolists of knowledge ownership and right of explanation in the teaching process, which means that teachers no longer monopolize the hegemony of knowledge control. MOOC enables learners to have the right and access to knowledge, and teachers' power as the sole subject of knowledge authority is diluted to some extent. In addition, the synchronized teaching reform advocates the diversification and interaction of learning methods. Traditional knowledge teaching is being replaced by research learning, interactive learning, cooperative learning and other independent forms. The role of teachers has also changed accordingly. Teachers are no longer the only "voice" of professional authority. They have changed from the authority of knowledge to the sharer and user of knowledge. Therefore teachers have the possibility of "delegating authority" from their "dominant" status. More importantly, in the era of MOOC, knowledge authority is no longer rigid and needs an institutionalized information source. The knowledge authority of teachers formed within the closed hierarchical teaching system in the past is gradually losing its inherent survival soil.

B. *Open and Interactive Mechanism Endows Learners with Great Initiative in Information Selection, and Knowledge Authority Faces the Fate of Exile*

MOOC provide a loosely organized, efficient, rapid and unstructured way of knowledge dissemination, and give learners a great deal of initiative and autonomy in information selection, so that learners have a real dominant position. Learners can bypass the link of the traditional knowledge gatekeeper or knowledge elucidator — teacher and take the initiative to seek knowledge information and answer questions; discuss, criticize or reinterpret what they have learned in the MOOC space according to their own standards; be independent of the teacher's guidance to complete the online learning behavior or to teach each other with other learners; even reprocess and reproduce knowledge according to their own ideas and needs. With the convenience of mobile terminals and the open interactive mechanism of MOOC, the input of individual knowledge information is greatly increased, and the parallel interaction between learners is more frequent and closer than the vertical, top-down teacher-student interaction, which inevitably dilutes and impacts the knowledge authority of teachers. At the same time, in the teaching space of MOOC, learners have more opportunities to have access to the inconsistent information conveyed by teachers in the traditional classroom. The collision of multiple values, multiple narratives and multiple interpretations in the space directly challenges the respect for traditional knowledge authority, which is also facing the fate of exile.

C. *The Open Online Approach Gives the Audience the Illusion: There Is No Longer the Need for a Teacher*

The traditional teaching is based on the entity classroom, based on the teaching of teachers. Its way of knowledge transmission can be regarded as interpersonal communication, in which teachers and students have a real existence experience of each other. Although online courses provide video resources, they are still mainly taught by teachers, and learners mostly play the role of viewing and emulating courses, in the process of which they are unable to participate in interaction and prone to learning burnout over time. Although MOOC is essentially online courses, it provides a more three-dimensional way to transfer knowledge. Famous teacher effect, free and high-quality online learning resources, rich and diverse learning support services, diversified evaluation mechanism and timely feedback all provide unprecedented audience experience for learners. Knowledge information, teaching resources can be accessible anytime and anywhere with just a computer or terminal equipment. The fixed schools and classes disappear, the boundary of classroom situation is blurred, the real teachers no longer exist, and the institutionalized teaching forms are reconstructed. The open and online way of MOOC builds a three-dimensional way of knowledge transmission, which gives full play to the acceptance effect of learners, greatly generalizes their learning ability and confidence, and even produces an experience illusion for audience that "they no longer need teachers". The absence of teachers' real sense

of existence has led to the passive dilution of teachers' knowledge authority in the era of MOOC.

V. EXTENSION OF TEACHER KNOWLEDGE AUTHORITY IN THE POST-MOOC ERA

The convenient and free way of contact brought by the open logic of MOOC is gradually diluting teachers' knowledge authority, but this dilution is only the transfer of part of knowledge ownership in the era of MOOC. With the development and practical application of MOOC, the disadvantages of MOOC teaching mode emerge. Some new styles and new categories of online learning created in response to the shortage of MOOC are constantly derived, and the teaching mode tends to return to physical campus and classroom teaching. Online education has entered the post-MOOC era. If a teacher's knowledge authority is a wall, then under the impact of MOOC, it should be cracked or collapsed in one place, but strengthened in another. Teachers' knowledge authority can be further extended in the post-MOOC era.

A. *Deep Cultivation: the Natural Extension of Knowledge Authority*

MOOC has attracted tens of thousands of learners since it swept the world in 2012. The hunger in the MOOC market has led media, schools and businesses to jump on the bandwagon of the online learning revolution. A large number of MOOCs were quickly produced and put on shelves, with varying levels of quality. However, from the perspective of practical application effect, the high dropout rate of learners and the doubt on the learning effect of MOOC make rebound phenomenon appear in MOOC. In response to this "lame" status quo, the post-MOOC Meta-MOOC, DOCC (Distributed Open Collaborative Course), and MOOR (Massive Open Online Research) have all started further exploration. Meta-MOOC synchronizes the teaching time with face-to-face teaching, and sets up many divided classes. Teachers from three schools teach at the same time and share materials, thus forming a learning community. DOCC is not limited to a single expert teaching, and the expert background is diverse and distributed in various universities, emphasizing the collaboration in the digital era to avoid students' passive learning. MOOR focuses on providing a channel for students' transition from learning to research, so that the focus of teaching turns from the replication and dissemination of knowledge to the proposal and solution of problems. These new styles rearrange and package the conditions of course entry and course depth, and tend to return to teacher-led classroom teaching or research-based learning and collaborative learning led by experts. The deep participation of teachers or experts strengthens the control of course planning, course design and the whole process. Teachers and their professional knowledge can be deeply cultivated in the online education in the post-MOOC era, and more "knowledge discourse" will naturally extend the knowledge authority.

B. *Secondary Construction: the Re-emergence of Knowledge Authority*

The constructivist learning concept of MOOC advocates transforming the external input of knowledge into the internal generation of knowledge. MOOC enables learners to actively seek knowledge based on their own interest points and discuss freely in the discussion area, so as to establish a broad learning community for collaborative learning, which is in itself the construction of knowledge at the learner level. If in the era of MOOC, teachers are more "silent objects" in the face of learners' knowledge construction, then in the post-MOOC era, the teaching mode based on the unity of teachers' guidance and learners' independent construction will be practiced in the process of education. In the post-MOOC era, independent learning, collaborative learning and inquiry learning are more and more advocated, and teachers are less and less transferring knowledge and more and more stimulating thinking. Through their own knowledge experience and knowledge reserve, teachers construct a knowledge communication system that can adapt to the characteristics of the post-MOOC era. This is the first construction. On this basis, by relying on the accumulation of teachers' own teaching ability and the improvement of teaching comprehension, a methodology system on how to motivate learners to think and generate knowledge world independently is constructed for the second time. And through the re-organization and re-implementation of teaching activities, it has a new impact on learners' learning activities and effectiveness of teaching behavior and teaching objectives. As shown in "Table I", after the secondary construction, teachers have become "trainers" who help learners better and faster transform external input of knowledge into internal generation. Teachers encourage learners to generate and construct their own knowledge world independently, instead of passively accepting external information. Teachers' introspection, transcendence and breakthrough of the original mode of knowledge dissemination provide an opportunity for the further development of endogenous teachers' knowledge authority.

C. *Tacit Knowledge: the Invisible Extension of Knowledge Authority*

Despite the ferocity and fanfare of MOOC, the high dropout rate is jaw-dropping. To a certain extent, the large-scale, open and online MOOC makes it more like a "self-study classroom" in the digital era, which needs to rely on learners' self-discipline to ensure learning efficiency and quality. Compared with classroom teaching, the stickiness between learners and curriculum becomes fragile due to the reduction of teachers' participation. In the era of MOOC, the original advantages of teachers are offset in terms of the content and time of acquiring knowledge, that is, the prominent advantages of teachers in explicit knowledge no longer exist, but the tacit knowledge of teachers remains stable. The emotion, wit and appeal implied by the teacher's educational philosophy and professional knowledge, as well as the teacher's teaching attitude, demeanor and cultivation, can make tacit knowledge explicit and better coordinate with explicit knowledge by virtue of more diversified ways of expression, more liberal scene setting and wider

communication channels in the era of MOOC. Especially in the post-MOOC era, the return of teachers and classroom teaching gradually reinstates the real sense of existence of teachers. Although the role of authority has changed from absolute authority to "chief among equals", they can still become the double-sided glue between learners and courses by virtue of tacit knowledge. In the new environment, tacit knowledge of teachers can gain the features of MOOC (i.e. massive, open and online), which not only extends knowledge authority from offline to online, but also greatly expands the extension space of knowledge authority in the post-MOOC era.

VI. THE FUTURE TREND OF MOOC AND THE PROTECTION OF TEACHERS' KNOWLEDGE AUTHORITY

Although MOOC and post-MOOC have taken a big leap forward from traditional online courses, they are as experts say: "their imagination is still extremely limited. Just as when we first went from radio to television, people thought television was about broadcasting to the camera. But television can do so much more."⁴ In addition to the clear understanding of the development potential of MOOC, the dependence of future MOOC education on teachers and knowledge and the protection of teachers' knowledge authority by cultural factors have emerged.

A. *The Irreplaceability of Teachers in the Personalized Learning of MOOC in the Future Will Bring Instinctive Protection to Teachers' Knowledge Authority*

Otto Scharmer, a senior lecturer at MIT mentioned in his "MOOC 4.0: The Next Revolution in Learning & Leadership", After the one-to-many MOOC 1.0, one-to-one MOOC 2.0 and many-to-many MOOC 3.0, the future development of MOOC will enter the stage of many-to-one MOOC 4.0, which is to help individuals to perceive and realize the highest possibility of their future through the in-depth understanding of learners from the perspectives of multiple people. It can be speculated that in the future, MOOC education is likely to be differentiated into personalized education, focusing on personalized interpretation and thinking of learners, and providing personalized learning suggestions for learners. PMOOC (Personalized MOOC), run by Frederick m. Hurst, a professor at the University of Northern Arizona, have already tried this. PMOOC has made some changes to the personalized needs of online learners, allowing them to set their own pace of learning and choose their starting and ending time. The system can automatically track the progress of learners and give appropriate learning Suggestions to each learner. It can be seen that although most of the current MOOCs are standardized and impersonal, unable to teach students in accordance with their aptitude, or adapt to the needs of students' creativity and diversity of ideas, if properly designed, the future MOOCs are fully capable of realizing massive, open and online personalized learning. The core concern is that teachers and their knowledge,

including explicit knowledge and tacit knowledge, can provide "customized" services for learners. Personalized learning requires targeted knowledge acquisition, enthusiasm for learning and even deeper emotional experience, which cannot be provided by rigid online courses. In the future, the dependence of MOOCs on teachers and knowledge power still makes the key role of teachers irreplaceable, and also brings instinctive protection to teachers' knowledge authority.

B. *Cultural Factors and Ideology of Respecting Teachers and Valuing Education, So as to Provide Pattern Maintaining Function for Teachers' Knowledge Authority*

In the theory of action system, Parsons, a famous American sociologist, especially emphasizes the pattern maintaining function of culture, that is, any culture will form a relatively stable structure model after a long history of development, and this relatively stable cultural structure model is related to the self-protection function of cultural choice (i.e., the pattern maintaining function). Looking back at the history of education development, whether in the eastern or western context, one can see that teachers' knowledge authority has always been supreme. Although in the era of MOOC online education, teachers are no longer the only monopolists of knowledge, but the cultural tradition of respecting teachers and valuing education is still stable and continuing to be inherited. The pattern maintaining function brought by culture still plays an important role, and the knowledge authority of teachers is always under the protection of traditional culture. More significantly, in the third major report of UNESCO in 2015, "Rethinking Education: Towards a global common good?", it was mentioned that, while traditional university models face challenges such as "mobile learning" and "massive open online courses" (MOOC) and so on, they are not going away from physical higher education. "Although learning patterns have changed dramatically over the past two decades, the sources of knowledge have changed and the way we interact with knowledge has changed," the report says. "The importance of schooling has not diminished. School education is the first step for institutionalized learning to realize socialization outside the family, and an important part of social learning (learning to be human and learning to coexist)." The report also believes that, no matter how technology develops, the glorious, great and noble social occupation of teaching will not disappear. "The proliferation of information and knowledge requires individuals and collectives to adopt qualitative approaches to the transmission, dissemination and acquisition of information and knowledge. Given the potential of information and communication technologies, teachers should now act as guides for learners (from early childhood through the entire learning trajectory) to achieve development and progress by constantly expanding the knowledge base." It can be seen that despite the rapid development of MOOC, school education and teachers are still the foundation of education, which has become a global consensus. Teachers' knowledge authority is still protected internally in ideology.

⁴ Derived from network: <http://mooc.guokr.com/post/610588/> the MOOC: better and more modern education system.

VII. CONCLUSION

It seems that a relatively optimistic conclusion can be drawn. In the context of the development of MOOC, teacher knowledge authority has encountered unprecedented dilution and impact. However, with the return of physical campus and classroom teaching in the post-MOOC era, the knowledge authority of teachers has not collapsed, but has been further extended in a deeper field. More importantly, protected by cultural factors, the pattern maintaining function of teachers' knowledge authority still plays a role, making teachers' knowledge authority still strong in the stormy waves of MOOC development.

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