

# *Interpretation of the Function View of Modern University*

—Reviewing Flexner's Modern University Idea

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**Abstract**—Abraham Flexner is a famous American thinker of higher education. His "Universities: American English German" has become a great work in the field of higher education since its first publication in 1930. His idea of university is rich in content and complete in system. He deeply analyzed the development trend of university, the relationship between university and society, and what should be done and what should not be done. Flexner summarized the functions of modern universities. He believed that the functions of universities were scientific research and talent cultivation; the relationship between universities and the outside world was that universities could study social problems and make suggestions, but not be responsible for their actions; university education should be a liberal and rational activity. Explaining Flexner's view of modern university function and revealing the characteristics and essence of Flexner's thought and practice of modern university can help us to take history as a mirror and reflect the past and the present. Reviewing Flexner's idea of modern university is of great practical significance to the healthy development of higher education today.

**Keywords**—Abraham Flexner; modern university idea; university function; enlightenment

## I. INTRODUCTION

Abraham Flexner is an American scholar highly respected by the Chinese higher education research community. He made three speeches at the University of Oxford, England, at the invitation of the Rhodes Trust more than 80 years ago. On this basis, he wrote the critical work "Universities: American English German". This work is the same as John Henry Newman's "The Ideal of the University" and Clark Kerr's "The uses of the University" in the United States. It explains the concept of university development in different historical stages. Its outstanding experience has lasted for many years and has deeply influenced the process and direction of the development of higher education in the world. Today, China's higher education is taking the connotative development road,

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accelerating the construction of "Double First-Class" initiative, and striving to become a powerful country of higher education in the world. Reviewing Flexner's university thought will help us to further clarify our thinking and gain useful enlightenment.

## II. WHAT IS A UNIVERSITY

Originated in the Middle Ages, universities have been in the process of development and change. They have a unique ability: it can go in different directions and still hold its place [1]. Each era and every country have its own unique and specific needs and purposes. There is no unified university model applicable to all times and countries, but many philosophers have common understanding of universities.

University is a unique organization, and its uniqueness makes it irreplaceable. In Flexner's opinion, universities are first and foremost an organism. He said, A real university is an organism with lofty and clear goals and unity of spirit and purpose [2]. Therefore, he attaches great importance to the role of the university concept. He holds that universities are the same ideas or ideals, not the living organisms formed by administrative forces [2]. He was very dissatisfied with American universities at that time, and thought that these universities, even the best ones, were obviously not an organism. They are just administrative aggregates, and management itself is so changeable, multi-level and complex that management has become budget, student accounting, advertising and so on. Such aggregates, even if they are called universities, do not have scientific or educational policies, let alone ideals. They are middle schools, vocational schools, teacher training schools, research centers, business and other institutions, but not universities [2].

Burton Clark once said that in any society, academic work is organized around special intellectual materials [3]. Similarly, Flexner believes that university is the center of learning, and academic nature is the natural birthmark of university, which goes hand in hand with university. He pointed out: Universities are the center of learning, dedicated to preserving knowledge, improving systematic knowledge, and cultivating talents on top of secondary schools [2]. In this sense, universities should

reject mediocrity and secularity. John S. Brubeck also points out in his works that knowledge is either at the junction between the known and the unknown, or that although it is known, it is difficult to grasp the wisdom of ordinary people because it is too profound and mysterious [4]. Therefore, the real university attracts the most capable scholars and scientists and the sincerest students to study and explore knowledge.

He opposed turning a university into a public service institution, believing that if the University was a public service institution, then the university would become a different thing. This thing may have its own use, but it is certainly no longer a university [2]. According to Flexner, no university at that time conformed to his idea of university. Therefore, he uses a new term, school or Institute of higher learning, to name the University in his mind. To demonstrate the idea of a real university, a new term, perhaps a school or Institute of higher learning, is needed to automatically exclude low-level activities unrelated to such an academic institution, he said [2].

In Flexner's view, the university is not a fixed thing, but changes with the development of the times. He said: Universities, like churches, governments, charitable organizations and all other human institutions, are within the social network of a particular era, not outside the social network. It is not something that is far away from reality, history, and difficult to yield to new pressures and influences. On the contrary, it is both a product of the times and an impact on the present and the future [2]. As a product of history, universities have undergone comprehensive changes, which are in line with the direction of their social evolution as part of them [2].

Flexner agrees that the adjustment of the university should try to keep up with the pace of social development, but this adjustment has certain preconditions, that is, rational analysis and values, not just relying on habits to drift with the tide and cater to fashion, because "universities are not vanes, they cannot cater to what is popular." Universities must always give society what it needs, not what it wants. Otherwise, universities will make absurd and even catastrophic mistakes [2].

### III. UNDERSTANDING THE FUNCTIONS OF UNIVERSITIES

Flexner specifically analyzed the functions of modern universities. He pointed out: If we could smash all the existing universities into pieces and rebuild them according to our ideals, what kind of institutions would we build? We're not going to build them all the same --- like British, French, American or German universities. However, no matter how much room is left to consider the differences in national traditions or personalities, we will notice that scholars and scientists will mainly care about four things in a suitable way: preserving knowledge and ideas; interpreting knowledge and ideas; pursuing truth; and training students to inherit careers [2]. According to Flexner, the preservation of knowledge and ideas has always been one of the main functions of a university, sometimes even considered the only function of a university. No matter how the University changes, it cannot be stripped of this function. But nowadays, with the emergence of new ideas and the widespread use of human knowledge, it is not enough to preserve knowledge and concepts. Knowledge and concepts

should also be interpreted. Universities should not only preserve and interpret knowledge and concepts, but also shoulder the responsibility of developing knowledge (scientific research) and talent cultivation (teaching and educating people). He said, Modern universities should wholeheartedly and unreservedly promote the development of knowledge, study various problems and train successive talents, all of which should be done with the utmost efforts [2].

#### A. *Scientific Research in Universities*

Late 19th century to early 20th century, a large number of American educators studied in Germany. After returning home, they followed the model of German universities, reformed American higher education and introduced scientific research into universities. Especially in private universities, the research atmosphere has formed the momentum to compete and catch up with German universities, such as Hopkins University, Harvard University, Stanford University and the University of Chicago [5]. Scientific research is the most important function of universities, but Flexner points out that in the past decades, the number of scientific researches in universities has increased, but the standards have decreased. He criticized the prevailing practice of replacing research with questionnaires. He believed that questionnaire survey is not a scientific research, but a cheap, easy and fast way to obtain information, a so-called research, only accumulated measurement results, data and facts, is a meaningless waste of time, energy and money [2]. He said, In the most suitable environment, it should be the most important function of modern universities to study all kinds of physical, social and aesthetic phenomena and constantly explore all kinds of related things [2]. Therefore, as an organization, the value of a university lies in providing a suitable environment for scientists and scholars who devote themselves to academia to explore profound knowledge in it.

It is worth noting that the scientific research he said is a purely scientific study without utilitarian color. Learning should foster curiosity. The less they are disturbed by immediate utility, the greater their contribution to human welfare and intellectual life in modern society, he said [6]. The research advocated by Flexner is "pure research" or "basic research". What does he point out as research? Research is a painstaking and painstaking work carried out quietly, aiming at the search for truth. Although research does not exclude academic cooperation, it cannot be done by employing others, which is the most difficult thing that people can do with the help of all the equipment and resources. Research topics must be serious or have serious implications; the purpose of research is not to make profits; no matter how directly the results of research affect wealth, income or desire, researchers must maintain an objective attitude [2]. According to Flexner, the subject of "pure science" research "must be serious or have serious implications; the purpose must be selfless; no matter how much the research results affect wealth, income or material desire, researchers must maintain an objective attitude". To stick to "pure science" research, we must stick to the "loneliness" of scholars. This kind of loneliness is that the university and the society maintain an appropriate distance, and the second is to ask the scholars to have a feeling of indifference and transcendentality. This kind of effort aimed at

obtaining truth is the most difficult thing that the human mind can do with the help of all available equipment and resources.

Flexner believes that the existence of research institutions and graduate schools can effectively play the role of university scientific research. The core of the university is the Graduate School of Arts and sciences, solid-based professional colleges (mainly medical and law schools in the United States) and some research institutes, he said [2]. He even thought that undergraduate education impaired science and academia and hindered the university's serious goals. Therefore, the ideal university should be a graduate school-like university, which is called school or institute of higher learning. This will be a free group of scholars who pursue their academic goals in their own way, inspired by their academic goals [1].

In scientific research, the most popular question for the public and scientific research managers is whether the research is useful or useless. Indeed, with more and more modern universities receiving project funding and social donations from government and business institutions, the public seems to have reason to know what scientists are doing and the social functions of these actions. On the other hand, our age is an era of materialism, in this era of materialism, people pay more attention to the extensive distribution of material interests and secular opportunities [6]. As a result, the utility and utility of scientific research create a great tension between "useless" knowledge and "useless" research. This tension makes an increasing number of students leave their father's research to study equally important and pressing social, economic and government issues. In dealing with the question of usefulness or uselessness, Flexner put forward a penetrating view. He believed that throughout the history of science, it had been proved that most of the truly great discoveries beneficial to mankind were not driven by practical desires, but by the desire to satisfy curiosity. Whether Maxwell, Hertz, Faraday, Gauss or Einstein, their research did not initially aim at practicality or usefulness, but their contributions were most useful to mankind, and the spirit of exploring "useless" knowledge has been consistent since the Galileo, Bacon and Newton times.

### *B. Talent Cultivation in Universities*

While emphasizing the university's development of scientific functions, Flexner did not deny the university's role in talent cultivation. He said, Research is indeed the main function of graduate school, but teaching and research are the duties of university professors [7]. In his opinion, although scientific research as one of the functions of a university is very important, no talented person can accomplish his career, so he must train the successor, and a well-organized and well-equipped university can help him develop the talent, talent cultivation has become an important function of the university. It can be seen that the scientific research function is the most important, and the function of cultivating talents is the second most important function derived from the scientific research function.

So how should the university perform its talents cultivating functions in a reasonable way? Flexner's view of talent is elitist. The contribution of the United States to civilization does not depend on the entire population, but on a few talented, sincere

and cohesive people, he said [2]. Therefore, university education is to cultivate such elites. Elite talents are leaders of all walks of life. They should have rich knowledge and experience, interest in exploring problems, ability to adapt to society and ability to promote various specific affairs. He especially praised the "enviable civilized gentleman" trained by Oxford University and Cambridge University. He believed that these people's knowledge, culture, expressive ability, personality and etiquette developed in a balanced way, and could assume the responsibility of life with dignity, representing an ideal personality. From this view of talent, Flexner opposed the practice of training journalists, entrepreneurs, businessmen and other practical workers in the United States, and clearly pointed out that universities should not train practical workers, which is not the task of universities [2].

To cultivate a social elite, you need to pass the professional education of the university. What is professional education? To understand this problem, we should first understand the meaning of "professional". Flexner pointed out that specialty is an academic specialty, which has a cultural foundation and contains some ideal criteria; in the long process of development, specialty has formed the main academic characteristics of research issues [2]. In Flexner's view, specialty means "a highly knowledgeable specialty, which does not exist without knowledge". Professionals that do not contain knowledge, which is self-contradictory in itself, can only be regarded as professions [2]. From this point of view, Flexner advocates distinguishing professional education from vocational education. Professional education is based on deep knowledge and emphasizes theoretical accomplishment, which is a liberal and rational activity. Vocational education is not based on deep knowledge and pays attention to imparting technology. Universities should confine themselves to activities of intrinsic intellectual or spiritual value. They should not cater to every taste, need and fantasy [8].

The drawbacks in American University education, especially the confusion of courses brought about by free elective system, the premature specialization of students' knowledge and the lack of systematization, have caused the dissatisfaction of Flexner, who strongly advocated liberal education. College students lack common intellectual interests and backgrounds, he points out [9]. Flexner argues that such courses lack consistency of goals. Since the bachelor's degree can be obtained by collecting enough credits at the end of four years, the responsibility of universities in enlightening wisdom has not been fulfilled, and the humanistic and scientific spirit of students has not been cultivated. He advocated setting higher academic standards, strengthening academic courses, restricting non-academic courses, abolishing major, minor and credit system, and improving the quality of talents cultivating.

Flexner highly respects the academic freedom of German universities, which includes both freedom of teaching and freedom of study. He believes that the difference between college students and middle school students lies in their maturity, ability to take care of themselves and take responsibility for their actions. Therefore, the university is to create a suitable environment for students, to provide students with a variety of conditions, so that students can develop freely.

In Flexner's own words, it is to make lazy people lazy, serious people serious, creative people can create [2]. In teaching methods, Flexner opposes cramming teaching. His most admired teaching principle is the combination of teaching and research, his most admired teaching method is seminar teaching.

### *C. Social Services of Universities*

Flexner believes that the role of universities in modern society cannot be ignored. He pointed out that with the development of science and technology, the deepening of the industrial revolution and the implementation of democratic politics, social life has become extremely complex. The knowledge and concepts of the past can no longer explain modern society. Therefore, the progress of society depends on new knowledge and wisdom. But this responsibility cannot be entrusted to politicians or the press because they are either undereducated or biased. The only thing to be trusted is the university. Universities must provide shelter for thinkers, scientists, inventors, teachers and students and promote their development, so that they can avoid the disturbance of practical customs, explore various phenomena in social life and try to understand their true meaning [2]. If universities can't accept this challenge, what other institutions can or will accept it? In this turbulent world, where else can theories emerge besides universities? Where else can we analyze social and economic issues? Where can we connect theory with practice? Where can truth be taught regardless of whether it is popular or not? Where can we cultivate people who explore and teach truth? Where else can conscious, purposeful and reckless thinkers entrust the task of reshaping the world according to our own will? The wisdom of mankind has not yet devised any institution comparable to that of universities [2].

Flexner has strong reservations about the social services that emerged in American universities at the end of the 19th century and the beginning of the 20th century. When he uses the word "social service" or "social service function", he always carries quotation marks. In Flexner's opinion, on the one hand, universities should maintain close ties with the real world, on the other hand, they should not assume specific responsibility for action. They must study natural phenomena and the objective world scientifically and avoid participating in the actual affairs of legislatures, community public, municipalities and various commercial banks. Universities mainly study how to solve the problem from the theoretical and academic level, and how to implement it is the matter of other institutions. He pointed out that the function of universities is to promote knowledge and cultivate talents. If the contract and responsibility of social services go beyond a certain scope, they will be harmful to universities and therefore to society [2].

Flexner pointed out that there are many dangers in the process of modernization. One of the most important ones is that universities have too many interests and cannot distinguish between primary and secondary. They want to develop theories and solve various specific problems. They find that they have complicated the tasks they undertake. They find that they have done a lot of unimportant things and wasted energy and funds. He pointed out that the pursuit of science and academia is the task of universities, but technical education, secondary

education, popular education and vocational education are not the responsibilities of universities. Of course, these are all very important. Society must establish appropriate institutions to do them, but universities should not be disturbed to do these things [2]. If universities do not distinguish right from wrong, have no standard of conduct, and are busy with all kinds of affairs, culture cannot flourish in the feverish atmosphere of social services [2].

So, how should universities serve the society? Flexner pointed out that universities can do some service work, but such service work must be carried out without affecting the university's duty and mission of exploring advanced knowledge. That is, universities should not sacrifice rationality and integrity, but at the same time, put forward suggestions and observe the consequences from the purpose of experiments. To illustrate this point, Flexner took Pasteur, a French chemistry professor, as an example: France at that time was threatened by many problems, including silkworm disease, difficulties in producing wine and beer, chicken plague and rabies. Pasteur put aside his work and concentrated on solving the above problems. When the problem was solved, he returned to his university laboratory without consulting silkworm farmers, wine brewers, beer brewers or chicken farmers. There is no doubt that he does provide services, but he provides services like a scientist, and his services are just enough, which is the real university services. Thus, in Flexner's eyes, only the service that embodies the academic and spiritual nature of the university is the real social service. On the other hand, in Flexner's view, many service jobs, which are different from the above activities, are "not engaged in proper work" and "should not be involved in by the university", and such service work was very common in the Universities at that time. Especially in the United States. These include training and continuing education for adults, various correspondence classes and promotion classes to increase income, and low-level research work to solve the technical problems of companies and enterprises, etc. Why do some universities go into service work, even claim that they are public service organizations? One important point is that universities have to prove that they are "useful". Get government grants by proving that you are useful; get donations from alumni, people, or communities by proving that you are valuable. In fact, these reasons are all for "marrying money", which is far from the university's proper purpose and deviates from the direction of university service function. He further warns that if the public treats the university mainly as a service institution, in the long run, the public will incur losses rather than benefits, whether in the field of social science or natural science, it will understand the science of phenomena. In terms of academic work, universities do not care about the effect and usefulness of truth. Now industry has found a way to use pure scientific research, so it does not need the practicality of universities.

## IV. CONCLUSION

Flexner lived in an age when utilitarianism prevailed. Starting from the internal logic of the university, he emphasized the intrinsic value of the University from another angle, and emphasized the scientific research function and academic mission of the university. It was undoubtedly a good

advice for American universities whose social service was almost fanatical at that time. Especially after Van Hayes took office as president of the University of Wisconsin in 1904, he put forward the idea that "the boundary of state is the boundary of university". He raised the status of the university's social service function. The "Wisconsin concept" which emphasized the function of social service of University spread rapidly. Even some research universities have joined the ranks of social services, technology promotion and promotion courses have emerged as the times require.

President Gilman has a decisive influence on Flexner's University thought. We can clearly see the shadow of Gilman's thought from Flexner's University view of focusing on academic research, advocating academic freedom and simplifying administration. Johns Hopkins University is the starting point of American higher education in the modern sense, admired Flexner [10]. His idea of "ideal university" or "real university" is actually the traditional research university, which was established by Humboldt in the early 19th century. Many of his ideas, such as emphasizing the scientific research function of universities, advocating academic freedom and the unity of teaching and scientific research, also originated from Humboldt's idea of universities. He adheres to the idea of German universities emphasizing academic and standard level, opposing the utilitarian social services in American universities, opposing the scientific research of academic bubble nature, opposing over professional and over professional university education, advocating serious academic research, and advocating the cultivation of high-quality talents with the unity of humanistic spirit and scientific spirit and knowledge, wisdom and inquiry spirit. There is no doubt that it is right. His criticism of some phenomena in American and British universities is also sharp and profound.

Flexner seems to be too conservative in his almost complete negative attitude towards the social service function of universities. The existence and development of university need to win the support of society, so she should provide direct, indirect and various services to society. It is undoubtedly of positive significance for him to advocate professional education to strengthen academic courses and realize the unity of curriculum system. But at that time, Flexner only stayed at the level of ideas, and did not propose feasible solutions due to the limitations of the times. Moreover, it is also worth discussing that he only includes a small number of specialties such as medicine and law into the scope of University

education, excluding some new disciplines from professional education, and excluding some practical courses.

Flexner is the defender of basic research. He attaches great importance to the exploratory nature of basic research and the potential value of basic knowledge, but almost completely ignores the characteristics of applied research, which has certain limitations. In fact, applied research and basic research have unique values. The development of applied research can make the scientific research of modern universities get the motive force and vigor of development. The development of modern universities cannot be separated from the organic combination of basic research and applied research.

It is self-evident that Flexner's idea of modern university is of great significance. Although he has been dead for 60 years, his idea of university is still of guiding significance to the healthy development of universities, especially research-oriented universities, in today's increasingly market-oriented universities. Reviewing his concept of University and differentiating his view of university function will help us reexamine and balance the appropriate proportion among the functions of various universities and find a way to develop different universities.

#### REFERENCES

- [1] Clark Kerr. *The Uses of the University* [M]. 5th edition, Harvard University Press, 2001.
- [2] Abraham Flexner. *Universities: American English German* [M]. New York: Oxford University press, 1930.
- [3] Burton R. Clark. *The Higher Education System* [M]. University of California Press, 1983.
- [4] Brubacher J S. *On the philosophy of higher education* [M]. San Francisco: Jossey-Bass Publishers, 1982.
- [5] Torsten Husen: *The Idea of the University: Changing Roles, Current Crisis and Future Challenges*, edited by, Zagh1oulMorsy & Philip. G. Altbach, *Higher Education in an International Perspective*, Garl and Publishing INC., New York & London, 1996.
- [6] Abraham Flexner. *The Usefulness of Useless Knowledge* [J]. *Harpers Magazine*, October, 1939.
- [7] Abraham Flexner. *A Modern University* [J]. *Atlantic Monthly*, October, 1925.
- [8] Abraham Flexner. *The University in American Life* [J]. *Atlantic Monthly*, Vol. 149, 1932.
- [9] Abraham Flexner. *A Modern College and A Modern School*, Doubleday, Page & Company, 1923.
- [10] Abraham Flexner. *I Remember: The Autobiography of Abraham Flexner* [M]. New York: Simon and Schuster. 1940.