

## **A New and Old Approach to Educational Research: The Roles-grafting Research**

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The roles-grafting research is an approach to educational studies intended to graft five roles of supervisors, graduate students, teachers, principals and administrators. The approach is divided into four chained and cyclical aspects: drafting research blueprint, revising research blueprint, executing research blueprint and assessing performances. The approach maintains five basic principles: principles of inheritance, innovation, practicality, scientific basis and grafting. It is a paradigm of innovative research that has been developed in China that is worth a thorough investigation and extensive analysis.

*Key words* : roles-grafting research, educational research, cooperation, China

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## Introduction

The issue of disconnection between theories and practices in education has long been an impeding factor in educational development of China and other countries. As psychologists who are deeply concerned about educational development of China, we have endeavored to explore effective approaches to fill the gap between theory and practice. We have been able to devise and conduct the roles-grafting approach in educational research. The most remarkable feature of the approach lies in its property of cooperation among educational theorists, practitioners and administrators.

### Definition and Principles of the Roles-grafting Research

Before defining the concept of the roles-grafting research, it is necessary to define the concepts of roles and grafting. The concept of roles in roles-grafting research is borrowed from sociology. In sociology, a role refers to the behavior generally expected from one who occupies a particular status, and a status refers to a socially recognized position within a social system (Kammeyer, Ritzer, & Yetman, 1990).

Grafting is an agricultural technique, in which a section of a stem with leaf buds from a tree is inserted into the stock of another. The two components are combined to create a new

tree. The section from the first tree is termed *scion*, while the stock of the second tree is called *rootstock*. When the grafting is successful, the scion is inclined to survive favorably in the rootstock. With time, the new tree is quite different from both the scion and the rootstock. The new tree thrives and yields plentiful and substantial fruits.

The grafting technique is able to reproduce and renew without changing the stock plant and its existing environments. The technique has important implications for preserving shapes and properties of plants, for increasing the quantities and qualities of plants, for strengthening adaptation and resistance to disease of plants, and for reproducing excellent strains of new plants. It has the advantage of being low-cost and of being able to utilize the original plants to reproduce and renew plants. The grafting technique is extensively applied in modern agriculture and forestry.

In 1927, Dr. Tao Xingzhi advanced the famous proposition that the “acquisition of knowledge is analogous to the grafting of trees” (1985) and the concept of grafting in agriculture was transplanted into the field of education. We introduced this proposition into the psychology of memory and advanced the model of grafting memory and the pattern of grafting memory (Li, 2006). Currently, we are introducing the concept of grafting into the field of educational research, and advancing

the concept of the roles-grafting research.

The roles-grafting research could be adopted to investigate the problems in the theories and practices of education by grafting five roles of supervisors, graduate students, teachers, principals and administrators into a larger framework. While the supervisors are analogous to rootstocks, the graduate students to scions as well as to rootstocks, the teachers are analogous to scions, and the principals and the administrators to grafting tapes. When all the five roles are able to successfully implement their work, substantial fruits of research could be expected.

In order to assure that the grafted tree yields substantial fruits of research, the roles-grafting research emphasizes five basic principles: principles of inheritance, innovation, practicality, scientific basis and grafting.

First, the principle of inheritance emphasizes a systematic search and review of previous research. Great thinkers in Chinese history have emphasized the principle of inheritance. Confucius pointed out that “if a gentleman learns extensively from literatures and abridges them with ritual, then he is not going to be deviated” (Qian, 2002). Xun Zi (298 BCE-238 BCE) advanced the perspective that “a sage is nothing more than an accumulation of other men” (Wang, 1988). Subsequent Chinese scholars have emphasized the doctrine of “extensive learning from literatures” in their studies. The main purpose

is to inherit and absorb previous works. The roles-grafting research emphasizes inheritance from and development of the traditional principles espoused by Chinese scholars.

Second, the roles-grafting research emphasizes innovation consistent with great thinkers in Chinese history. Confucius indicated that “unless he is able to produce new ideas when reviewing the old experiences, he is not qualified to be a teacher” (Qian, 2002). Han Yu appealed to his students to reach the level of “naturally constituting a new speech style of their own when speaking and writing about their thoughts and feelings” (Yan, 1998). When analyzing and discussing his abilities “to produce new ideas when reviewing the old experiences”, Zhu Xi put forward the perspective that “he is not qualified to be a teacher because he is not able to produce new ideas when reviewing the old experiences” (Li, 1986).

Third, the roles-grafting research emphasizes the principle of practicality. Confucius clearly pointed out: “Suppose he is able to recite three hundred poems, however, he failed to make any achievement when he was empowered as a politician; also, he failed to give proper responses when he was appointed as a diplomat; what good is it for him to have memorized so many poems?” (Qian, 2002). Zhang Zai advanced the proposition that “the value of learning is its usefulness” (Yan, 1998).

Fourth, the roles-grafting research emphasizes adoption of scientific principles and research. The scientific basis of roles-grafting research is embodied by the following aspects: (1) existence of causality; (2) objectivity and (3) precision (Goodwin, 1995). The principles of inheritance, innovation and practicality, are from Chinese traditions, while the principle of science is a Western influence.

Fifth, the roles-grafting research places an emphasis on the roles of supervisors, graduate students, teachers, principals and administrators.

The roles-grafting research intends to absorb important nutrition from the great Chinese scholars as well as to extract crucial energy from Western scientists. This combination could produce a new approach to educational research.

### Roles-grafting Research: The Process

The process of roles-grafting research is illustrated in Figure 1. It is divided into four chained and cyclical components: (1) drafting research blueprint (DRB); (2) revising research blueprint (RRB); (3) implementing research blueprint (IRB); and (4) assessing research performances (ARP). The research blueprint is the first component in roles-grafting research, and it further divided into: (1) reviewing literature (RL); (2)

identifying research questions (IRQ); (3) formulating research hypotheses (FRH); and (4) contriving research design (CRD).

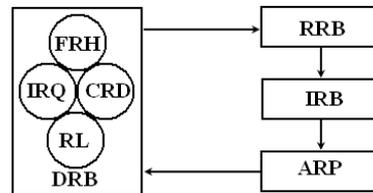


Figure 1. Model of Roles-grafting Research

In roles-grafting research, the review of literature is the systematic search, organization, introduction and criticism of the pertinent literature on educational studies. The review of literature is a crucial step for the following reasons: (1) to systematically and comprehensively grasp the history, current status and trend of the educational studies; (2) to identify theoretical and practical problems in the educational studies; (3) to formulate scientific and reasonable hypotheses; (4) to develop a novel, elaborate and feasible research design; and (5) to correctly analyze the research data and reasonably explain the research results.

With the existence of a large volume of literature, it is important to pay attention to two types of literature during the previous 10 years: (1) unpublished doctoral dissertations of high quality and published papers in prestigious journals in the international community and; (2) unpublished teaching

plans, materials, journals, summaries, photos, tape recordings, and video-tapes of elementary and middle school teachers, as well as unpublished homework materials of students. Educational researchers are likely to pay attention to the first type of literature, and are inclined to neglect the second type. The roles-grafting research emphasizes integrating information from both types.

The component of drafting the research blueprint is executed collaboratively by supervisors and graduate students, while the component of revising the research blueprint should be executed collaboratively by all of the five roles. When the first draft of the research blueprint written by the supervisors and graduate students is not congruent with the needs of the teachers, principals and administrators in their educational practice, the latter roles are likely to reject it. When drafting the research blueprint, it is important for the supervisors and graduate students to sufficiently consider the real interests and needs of the teachers at elementary and middle schools to be congruent with the interests and needs of the teachers at elementary and middle schools. When implementing the research blueprint, various types of research could be employed.

The most important component is assessing research performances. All products of the roles-grafting research should be the collective fruits of the supervisors, graduate students,

teachers, principals and administrators. Through continual process of the roles-grafting research, all five roles may obtain corresponding rewards: (1) supervisors could test, modify and refine theories; (2) graduate students could integrate knowledge from books with actual practice; (3) teachers could learn important educational theories, basic skills for scientific research, and enhance their proficiencies in teaching; (4) principals could new patterns of school management; and (5) administrators could develop a more efficient systems.

In a series of educational studies, we have been endeavored to carry out our perspectives on the dialectical combination of inheritance and innovation. In the past 20 years, we have conducted research projects, such as *Development and Cultivation of Elementary and Middle School Students in Mental Abilities*. With the emphasis on the dialectical combination of inheritance and innovation, we have obtained a great deal of cooperation for our series of educational research from many principals and teachers at elementary and middle schools, as well as administrators from educational departments at different levels of the government body in China (Lin, 2003).

## Conclusion

This article has focused on the roles-grafting research. It is an approach to

educational studies that grafts the five roles of supervisors, graduate students, teachers, principals and administrators into a larger framework, in order to develop innovative and scientific framework to investigate the problems in educational theory and practice. The roles-grafting research could be extended to other fields, such as political science, economic science, management science, sociology, anthropology and ethnology. The roles-grafting research could be adopted for mutual cooperation and support in the fields of education, agriculture, industry and commerce, between the rural and the urban, as well as among various professionals. In sum, roles-grafting research is a paradigm of innovative research that has been developed in China that is worth a thorough investigation and extensive analysis.

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