

"DT" IC on the New Energy Research & Development

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Abstract: to enhance the quality of education and the level of running schools in colleges and universities, especially in applied technology oriented universities, we need a team of "DT" ("Double Teachers") with profound the oretical knowledge and rich practical experience. Therefore, the research & development of a set of scientific and rational IC (Identification & Cultivation) for the "DT" in the new energy research and development "DT" should have the ability and quality of the standard, of great significance! In this article, from the four aspects: the "DT" qualification definition/ "DT" standard cognizance/ "DT" rating/cultivation for "DT" ability & quality, it has been carried out in-depth research, and , put forward the "DT" must have" ingenuity and true skill and genuine knowledge "the corresponding views and ideas with colleagues in order to initiate communication.

Introduction

To enhance the educational quality and scientific research level of universities, especially the applied technology undergraduate engineering colleges, we need a team of "DT" ("Double Teachers") with profound theoretical knowledge and practical experience. Therefore, it is of great significance to research and formulate a set of scientific and reasonable ability to examine, evaluate, identify and train "DT" in applied technology universities. And the criteria for "DT" must be positive guidance, positive excitation, positive energy and operable.

The author from the four aspects (namely "DT" qualification definition; "DT" standard cognizance; "DT" rating and the "DT" team construction training and culture) were studied, and the research results published in the form of a paper, to exchange with colleagues, in order to cast a brick to attract jade.

Definition for "DT" Qualification

Author think: "DT", as the name implies, double tutor, refers to the two aspects of the teacher, one must have qualified teachers (mentor) ability; on the other hand must related trade / enterprises/ industry/occupation rich practical experience and skills of skilled instructors; its core is above the "double quality teacher", referred to as the "DT". In a word, "DT" is a "mentor, true skill and genuine knowledge and ingenuity" and "DT" is a professional teacher.

Standard Cognizance for "DT"

Application oriented universities must be oriented to the construction of national economy (especially local economy), must be based on actual production must be oriented to trade/enterprises/ industry/occupation job specific technical requirements (i.e., the "three oriented" as the goal), cultivate the ingenuity of the application technology, with true skill and genuine knowledge the type of high-end talent, social service. "DT" should have the foundation and standard of cultivating high-end talents of applied technology.

Status Quo for the Identification on the "DT". Up to now, there are no standards, rules, requirements and methods for the qualification of "double qualification" at home and abroad. Therefore, domestic universities and colleges all set their own standards to identify "DT". Therefore, there are different opinions and different ideas, but generally they can be classified into three following categories.

A. Theory for "Double Evidence". The "double certificate" theory holds that any person holding a teacher's qualification certificate and an enterprise title certificate is "double division" ^[1] ^[2]. Obviously, the theory of "double evidence" emphasizes the requirements / course / qualifications of the academic and practical knowledge that the "DT" should possess. But in fact, people who hold "double certificates" are not always worthy of the name of "DT". The main reason is that the "certificate" system and rules are still not scientific / imperfect or perfect. On the one hand, "card" and the real ability / level / quality is consistent, questionable; on the other hand, the "card" range is far from covering the relevant trade / enterprises/ industry/occupation and unit / school; and the running mechanism of school enterprise integration / system / legal system are not perfect. ^[3]

B. Theory for "Double ability". According to the theory of dual ability, the key factor of "DT" lies in the dual ability of teachers, that is, the competence of qualified teachers, and the ability to qualify for qualifications related to professional trade / enterprises/ industry/occupation technicians. The theory of "double energy" emphasizes the overall and overall efficacy of the dual "ability" of "DT", ^[4]^[5]. However, the "DT" is not a simple overlap of the above two "teachers". It is the integration of theoretical knowledge, practical experience, skills, abilities, perseverance and quality accomplishment.

C. Theory for "Double Special". The "dual Special" theory that the "DT" formulation "in a specific time / space" to be meaningful, the so-called "specific time/space background" refers to the current university despise practice teaching, or teaching leads to a lack of financial resources are not sufficient/lack of experimental training / practice teaching facilities/equipment, or lack of the lack of practical teaching experience/teachers / or with the integration of social interaction is not closely related to other venues, no practical teaching base, resulting in only the main theoretical teaching, practice teaching and not enough / or intensity of teaching practice or practice teaching of understatement and to explain away. Therefore, to take the "DT" method, "the application of technology-type universities" formulation measures such as correcting "dual" phenomenon. ^[6] left the "dual" background, "DT" was no longer meaningful.

Cognizance Problem for "DT". As mentioned above, "double certificate" is a "DT", because there is a problem of "professional title card" evaluation is not perfect, that is, "professional title certificate" is not always consistent with "actual ability level". ^[7] Therefore, the qualification certificate as "DT" is a standard for discussion.

As mentioned above, is not in accordance with the "dual" view that "DT" for "simple overlapping DT" not the teachers "capacity" and "ability", although the engineer "dual" theory emphasizes the "DT" theory and practice "ability" must be "fine" standard. ^[8] but the "ability" of "DT" is really "strong", and it is difficult to make a scientific / objective / accurate "measurement" and identification.

"DT" Rating

The author believes that "double qualification" teachers can be divided into three levels to formulate evaluation criteria, namely, advanced "DT", "intermediate DT" and "junior DT". We must pay ^[9] attention to the problems of too simple assessment methods, many qualitative indicators of evaluation system, problems such as few quantitative indexes and so on.

Primary "DT". The primary "DT" must have the following three conditions at the same time:

A. The qualifications of teachers with excellent moral standards and quality of educating people and having primary title.

B. Obtain the qualifications of the relevant enterprise junior professional title.

C. The Department of science and technology, won the two prize above.

Intermediate "DT". The intermediate "double division" must have the following three conditions at the same time.

A. The qualifications of teachers with excellent moral standards and educational qualities and intermediate titles.

B. To obtain the qualifications of the relevant enterprise intermediate title.

C. With more than three years

Senior "double division". The senior "double division" must have the following three conditions at the same time.

A. Good moral standards and quality of education and the qualifications of teachers with the title of the secondary high (including the secondary high).

B. To obtain the qualifications of the relevant enterprises (including the subtropical high) title.

C. With more than five years

Research on the training mode for "DT"

The "DT" high-end talent training mode: should be the best of the theoretical knowledge, experience in production, scientific research and practice and innovation ability and training combined with the integration of cultivating mode, this is a good way to promote the "DT" ingenuity literacy and the ability to use your hands.

The training mode of "production, learning and research integration" should be constructed from the three aspects of production, learning and research.

A. From the "industry" level to construct the "double" training mode. "research integration" training mode of "production", mainly refers to the design, the function mechanism of advanced products in a typical test, prototype manufacture, adjustment of production facilities and process planning, organization of training of "DT" further education. When cultivating "DT" in the "production" level, we should make "DT" fully practise "intellectual creation". In a word, in the "production" level, we can build a multi - dimensional training platform for the high - end talents of "DT".

B. From the aspect of "learning", we should build "double teacher" training mode. "learning" in the training mode of "industry university research integration" mainly refers to "self learning and teaching in doing", that is, "DT" do self learning and teaching in doing as much as possible. In a word, in the "study" level, we can also build a multi - dimensional training platform for high - end talents.

C. The training mode of "DT" is constructed from the level of "research". in the training mode of "production", in short, scientific research, mainly refers to research & development (especially innovative research & development). A handful of applied technology oriented universities emphasize the "applied skills" too much, and greatly weaken the theoretical basis and scientific research education course. This may go to the other extreme, and should also attract attention. It should be said that both the research universities or application oriented university, teaching and research is always two "the important battlefield more can not be avoided". Blind and excessive emphasis on "practical skills" may lead to inadequate teaching content or plain, old or deep breadth. Therefore, we must constantly enrich, update, enhance and improve the connotation of teaching content with scientific research results. Thus, the "DT" must actively carry out scientific research, to teaching them innovative fusion of advanced scientific research, so that the students can fully contact, infection, influence, and benefit from learning to practice and theoretical knowledge of advanced and practical, to learning effectiveness will multiplier significantly improve the sublimation! At the same time, it also makes "DT" constantly improve their progress. In a word, in the "research" level, we can also build a multi - level training platform for high - end talents.

To sum up, the training of "DT" should be trained with the following abilities.

a. The "DT" must be a good teacher and a good friend of the students.

b. The "DT" must have distinct professional expertise and outstanding professional practical skills.

c. The "DT" should have a solid and broad theoretical basis and a higher level of research & development, for scientific and technological innovation.

In a word, the "DT" should have the moral and educational quality, excellent quality of skilled and practical theory of speech teaching literacy quality, profound knowledge and humanistic knowledge literacy quality, strong scientific research and innovation ability literacy quality, distinctive professional skills and outstanding practical the excellent quality of literacy skills, in short, "DT" should be "the true skill and genuine knowledge ingenuity" elite.

Summary

"DT" should be the elite of "production, study and research", which plays an important role in the training of applied technical talents. Therefore, the construction of the "DT" team is imminent and urgent.

Application oriented university to develop a "double teacher" team training and management system, to create a suitable "double teacher" team environment, in order to bring up the establishment of a worthy of the name "Double Teachers" team, training more in line with the social needs of the application technology of high end talents.

Worthy of the name of "double division" itself is a class of high-end talents, is the elite of colleges and universities, especially local application technology undergraduate colleges, the elite of teachers. However, modern science and technology "progress every second", therefore, "double division" must keep pace with the times, constantly improve themselves, can be competent for the "double division" work.

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