Research on Phased Undergraduate Tutorial System plus Technique Club Implementation-Taking School of Software Engineering of Chongqing University for Example

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Abstract. The mode of Phased Undergraduate Tutorial System plus Technique Club is created by School of Software Engineering of Chongqing University of Arts and Sciences. In this mode, undergraduate study is divided into 3 phases. In different phase, undergraduates have different characteristics, require different types of tutors to guide. Technique Clubs which established by the tutor teams with similar research direction, are corresponding to the second phase. Different clubs have different technique direction, have different training methods, meet the different needs of undergraduates in second phase. The paper study the working mode of Phased Undergraduate Tutorial System and Technique Clubs from operation mechanism, evaluation mechanism, operation effect and so on. The paper also analyses the problems in the implementation process, and puts forward some improving measures.

Introduction

Background

School of Software Engineering tried out the full-time tutorial system in all undergraduates in 2010, in order to promoting their comprehensive ability and achieving their personality development.

In the trial process, owing to tutors and undergraduates can’t chose in two-way, the undergraduate to teacher ratio is too large and the function positioning of tutor is not clear, and so on, School of Software Engineering reformed the full-time tutorial system, and implied Phased Undergraduate Tutorial System, in 2013. In the same time, to guarantee implement of the Phased Undergraduate Tutorial System, School of Software Engineering updated the Graduates Office &Venture Office established in 2008 to Technique Clubs. So far, the mode of Phased Undergraduate Tutorial System plus Technique Club have been formed.

Connotation

Due to the undergraduates’ personality growth and professional development are phased, So Phased Undergraduate Tutorial System divides the undergraduate study into three phases: Enlightenment Phase (freshman), Growth Phase (sophomore and junior) and Mature Phase (senior).

In different phases, undergraduates’ psychological and academic needs have different characteristics, while the work and duty of tutors vary. So the tutors are divided into Enlightenment Tutors, Technique Club Tutors and Project Practice Tutors.

Technique Clubs are founded by the teachers with similar research direction. Now we have six Technique Clubs with different technique directions. The responsibility of the Technique Club is to attract outstanding undergraduates (sophomore and junior) to join in, and carry out training base on project, enhance undergraduates’ professional practice ability.

Phased Undergraduate Tutorial System plus Technique Club is a perfect combination of Phased Undergraduate Tutorial System and Technique Club. It defines the work of tutors as three phases
("1+2+1" mode) and three categories: freshman (Enlightenment Tutor), sophomore and junior (Technique Club Tutor), senior (Project Practice Tutor).

All freshmen and the senior undergraduates have their tutors, while only excellent sophomores and juniors can be selected into Technique Clubs, guided by Technique Club Tutors.

**Operating Mechanism**

**Guidance Process**

In the first phase, all freshmen will be assigned to Enlightenment Tutors as soon as they enter university campus. The Enlightenment Tutors will help the freshman quickly adapt to the campus life, help them go through a period of transition from the middle school to the college, cultivate their professional interest, build their sense of belonging to their majors.

In the second phase, the sophomore students and the junior students may apply to join a Technique Club according to their own foundation and interest, but only excellent ones can be selected. In this phase, Technique Club Tutors will develop undergraduates’ practical ability and innovative ability.

In the last phase, each senior undergraduates will have a Project Practice Tutor. Project Practice Tutors will guide the senior undergraduates’ graduate practice, graduate design and employment training, enhancing their professional ability, employability and comprehensive literacy.

**Enlightenment Tutor**

Enlightenment Tutors are selected by School of Software Engineering. As an enlightenment tutor, in addition to dedication and responsibilities, he has to achieve master’s degree or at least have a lecturer title, so that he can comprehensive understand the Personnel Training Program and have deep love for the undergraduates’ growth.

The Enlightenment Tutor should communicate with freshmen, understand what they are thinking and feeling, explain the Personnel Training Program to them, guide them to know the prospect on the industry. According to the freshmen’s individual differences, the Enlightenment Tutor should customize different training programs for everyone, help them set personal professional goals and make study plans, guide them to choose elective subjects. Besides, The Enlightenment Tutor should hold professional skill or literacy training such as elocution, PPT presentation, computer maintenance, programing and so on. At the end of freshman year, the Enlightenment Tutor recommend excellent freshmen to join the Technique Clubs.

**Technique Club Tutor**

A qualified teacher or engineer can apply for establishing a Technique Club, according to his own research direction and specialty. When the Technique Club is approved by School of Software Engineering, the applicant will become the director. The other teachers and engineers who have qualifications can apply to the directors of Technique Clubs for becoming a Technique Club Tutor. Each teacher or engineer can only join one Technique Club, and each Technique Club should have 2-5 tutors (including the director). Technique Club Tutors should guide the members to study, to do some practice based on project, to declare issues, to apply for a patent, to take part in professional competitions; to organize lectures for all college students.

**Technique Club Members**

At end of the freshman year, the Enlightenment Tutors will explain the main situation about each Technique Club to the freshmen, guide them to fill out the applicant form, and write references for them. The other teachers or counselors can recommend excellent freshmen to join Technique Clubs too, but the director of the Technique Club ultimately determines who can join. In each Technique Club, the teacher-student ratio should be no more than 1:10. The members of Technique Clubs are not static. Poor performance members will be eliminated, and other excellent undergraduates can join.
**Project Practice Tutor**

The teacher or engineer who has project experiences can apply for the position. Project Practice Tutor should communicate with senior undergraduates, know their employment plans and difficulties, guide graduation project, direct them to make career plan, enhance their competitiveness in the job market.

**Assessment Mechanism**

**Enlightenment Tutor**

The job requirements: the methods of guiding can be various, but the guiding frequency should not be less than once per 2 weeks, and the time of each guiding should not be less than 1 hour.

The working plan. The Enlightenment Tutor should make a practicable annual work plan according to the job requirements, and submit the electronic version to the Teaching Office.

Guidance records. The Enlightenment Tutor should record the process of each guidance carefully, and fill out the form of laboratory using record if he uses the laboratory. All the freshmen are required to sign at the guidance record at each guidance. The Enlightenment Tutor should write a summary of the work and hand it to the Teaching Office at the end of the guide work.

The contents of assessment include working plans, guidance records, freshmen’s grad, freshman retention rate, freshman satisfaction and so on.

Assessment indicators and weigh: full score is 100; the plan, records and summary accounts for 20%; freshmen’s grades accounts for 10%; freshman retention rate accounts for 10%; freshman satisfaction accounts for 50%; selected by Technique Club accounts for 10%.

If the score of evaluation is under 60, the Enlightenment Tutor will be disqualified and have no pay.

**Technique Club Tutor**

In the middle of spring semester, School of Software Engineering will assess the work of Technique Club.

The contents of assessment include skill training situation, undergraduates’ grades, professional competitions prizes, professional certifications, theses and patents, business projects, undergraduate evaluation, and so on.

Assessment indicators and weigh: full score is 100; work diary, project log and work summary accounts for 10%; undergraduates’ grades accounts for 20%; achievement of club members accounts for 50%, undergraduates satisfaction accounts for 20%.

**Project Practice Tutor**

School of Software Engineering will assess the job of Project Practice Tutor at the end of the eighth semester.

The contents of assessment include the attitude to work, the scientific feasibility of the method, the actual effect on the instructed undergraduates, and so on.

Assessment indicators and weigh: full score is 100; work plan and work diary accounts for 10%; the grades of graduate practice account for 20%; the grades of graduate design grades account for 50%; the rate of employment accounts for 20%.

**Result**

In recent years, Through the implementation of “Phased Undergraduate Tutorial System plus Technique Club”, our undergraduates completed 120 innovation and entrepreneurship projects, including 4 National College Undergraduates Innovation and Entrepreneurship Training Programs.
Our undergraduates won 54 competition prizes above provincial or ministry level, including 1 national bronze medal of "Youth Create" and 1 national bronze medal of "Internet Plus Innovation and Entrepreneurship Competition".

Our undergraduates obtained 31 software copyrights and patents, completed 10 business projects, incubated 12 micro-enterprise.

Stronger engineering practice ability, innovation and entrepreneurship awareness provide reliable guarantee for graduate employment. According to Michael's research report, the employment competitiveness, employment quality and salary of our graduates are the first in our university. In the China Youth Daily’s report "Internet plus, youth dance on the tuyere”, affirmed the performance of “Phased Undergraduate Tutorial System plus Technique Club”.

In 2005, the Technique Clubs upgraded to “E star makerspace”. In the same year, “E star makerspace” was awarded by both Chongqing Sci &Tech Commission and Chongqing Education Commission.

**Deficiency and Improvement**

In the mode of “Phased Undergraduate Tutorial System plus Technique Club”, only elite students (about 20%) can be selected into the Technique Clubs, and only Technique Club members have tutors to guide.

That is to say, only the undergraduates who “want to learn” have tutors, while most undergraduates who “be asked to learn” and “don’t want to learn” don’t have appropriate tutors to guide. The learning autonomy of the undergraduates who "be asked to learn" and "don’t want to learn" was poor. If they don’t get help from tutors, they will generate the idea like '' anyway, the college doesn’t pay attention to us". And then they will lose heart, even give up on studies.

In recent years, the exam-failed rate of non-Technique Club members is rising year by year.

To solve this problem. We should introduce Class Tutors who provide guidance for non-Technique Club members. Also, we should improve the Technique Club access, exit and activity mechanism, so that non-Technique Club members have the opportunity to participate in Technique Club activities or join the Technique Club.

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**References**


