

Is vocational education extremely urgent?

Vocational education is a way of education that prepares people for specific trades, crafts and careers at various levels. Increasingly, vocational education can be recognized in terms of recognition of prior learning and partial academic credit towards tertiary education (e.g., at a university) as credit. Recently, a large number of ordinary colleges and universities have begun to make the transition to the vocational education in undergraduate level.

The role of Public Elementary Courses (PECs) in quality education is mainly reflected in the cultivation of the qualities of culture, ethics, willpower, and ability on the part of students. The PECs also need professional staff with high-quality and therefore the Vocational education of teachers in universities is on the agenda.

Vocational education is inclined to blur the boundary between the teachers specialized in PECs and the ones in processional courses. It tries to help achieve the goal that a teacher is good at many things and expert in one. To do that, some efficient strategies can be showed in the following: first, investigating the actuality of teacher's team and analyzing the existing problem; second, evaluating the necessity of teachers' professional development; third, making the strategies from the perspective of colleges and universities.

Now the education administrative authority requires your team to consider the following problems.

Reasonable allocation

The departments and subjects of some university are demonstrated in Tabs. (1) and (2).

Table 1 the list of subjects and the number of teachers

Subject	The number of full-time teachers	The number of external teachers
Ideology and politics	4	10
English	6	12
Math	5	15
Language	2	5
Physical education	4	4

The math teachers have already been allocated into the departments (Bridge 2 teachers, Computer 2 teachers, Management 1 teacher). Now all the teachers specialized in PECs (except the math teachers) need be allocated into different departments. When making the allocation strategy, you need to consider these factors: the coverage of departments obtaining the teachers (especially the full-time teachers), whether the PEC of the teacher assigned to one department is close to the job that the students in this department work on. Please show the reasonable allocation that your team make.

Design a questionnaire

Please investigate the current situation of teacher team working on the PECs (teacher structure, vocational ability, specialization level, cultivating and training, job burnout and so on). Besides, the requirement of the universities for the vocational ability of teachers need to be considered. Design a questionnaire which is comprehensive, reliable and convincing.

Table 2 Department

Department	Major	Employment unit	Job	Future occupation
Bridge	Road and Bridge Engineering	SHEC MBEC	Engineering surveyor	Investigation of the designer
	subterranean tunnel		construction crew	
	project cost		Cost Members	office director
Mechatronics	Automobile application technology	BMW TOYOTA DPCA	Inspection maintenance division	senior technician
	Mobile Technology Service & Marketing		sales manager	department manager
Computer	The Internet of things	IOT company	Assembly and maintenance	department manager
	computer networks	internet company		
	Electronic technique	stereo company		
Management	logistics management	logistics company	base course	department manager
	tourism management	airline company	airline stewardess	Purser

design	industrial design	unlimited	Exhibition venues designer	designer
mathematical modeling (Preparation)	mathematical modeling	unlimited	R&D Assistant	R&D Engineer

Research project

Please draw a research plan and the corresponding appropriation budget (the total time: one year, the total funds: 4500 RMB). Your plan consists of three stages: earlier stage, middle stage and later stage. In addition, your plan can refer to Tab. (3).

Table 3 appropriation budget

Item	Money	Reason
Scientific research service charge		Book, questionnaire
Travel survey fee		
Review charge		
Printing fee		printing
other		paper publishing
total	4500 RMB	

Report

Please write a feasibility report about the research of the professional training of the teachers specialized in PECs. This report need to design the method of professional training.