

## A Study on Schoolwork Management of Engineering Specialties in the Vocational Education System

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**Abstract:** Engineering specialties are faced with such requirements as industry upgrading, higher technical threshold, job mobility, and career development. It has become a must for us to identify and analyze the educated with different schoolwork backgrounds, so as to carry out education with clearer targets. The gist for schoolwork programming of engineering specialties is the “Solid Pagoda” vocational ability training system, with which we encourage the pursuit of excellence, practice classified cultivation, and advocate lifelong study. In terms of schoolwork standards, these ideas can be specified as the following: steeling of skill-training courses, instrumentalizing of theoretical courses, programing of practical courses, flexibilizing of general knowledge on culture and science courses. The innovation of credit bank mechanism is a path to the innovation of schoolwork management system in modern vocational education system. Under this mechanism, we can realize the openness of credit resources, expansiveness of credit storage, flexibility of credit exchange, and incentive of credit counting in schoolwork evaluation.

### Introduction

As a primary path to improving the quality of vocational education and achieving a substantial development,<sup>[1]</sup> building a modern vocational educational system has become an inevitable demand. In China a characteristic Chinese vocational education system, which is service and employment-oriented, secondary and higher vocational education coordinated, cultivating and training equally stressed, has began to take shape. This system has cultivated billions of workers and thousands upon thousands of technical talents, preparing a good provision of human recourses for the socialist and modernist construction; and it is expected that a world-standard and Chinese characteristic modern vocational education system will have been established by the year 2020<sup>[2]</sup>. On a macroscopical level, a comprehensive understanding has been reached for the five systems of structural system, management system, “overpass” system, teacher training system, and lifelong vocational education system<sup>[3]</sup>. On a microscopical level, there have been explorations of multiple methods, advanced practical experiences, and ample cases of achievements. On an intermediary level, the schoolwork management system is a crucial node for achieving the substantial development of modern vocational education system and improving the quality of talent cultivation, which is connected to state education guidelines and schools’ target of development from the upper reaches, and to the teachers’ teaching orientation and progress of students’ development from the lower reaches, therefore it deserves our full attention.

### Schoolwork Requirements

With the advancement of productivity, people have the will to release themselves from the heavy workload and receive higher levels of education, which has made it possible to build a modern vocational education system. But paradoxically, with people’s fulfilled desire of entering higher schools, they are losing the momentum to study; the conflicts between people’s appeal to be away

from being a blue-collar worker and society's demand for advanced technical talents are becoming more salient. It is now very urgent to answer such questions: Why should we stress the development of vocational education and not other education? What advantage will higher level and higher quality vocational education provide for people in order for them to meet the demands in their career development?

### **Requirements of Industry Upgrading**

Industry upgrading depends on technology progress to improve the labor productivity. The improvement of industry quality and efficiency, the information-based transformation of traditional industries into high-tech ones, all signify the improvement of the production and management quality, the rise in the proportion of knowledge-based and technology-based posts, the increase of technology content, the combination of R&D and production, as well as the integration of humanity and technology. Obviously, the industry upgrading relies on the improvement of workers' ability. To meet these demands for industry upgrading, it is the mission of modern vocational education system to establish a set of scientific mechanism so as to realize such ideal effect as increasing the learning motivation of the educated, getting the educators familiar with the actual industrial development, and helping employers get the qualified human resources.

### **Requirements of Technical Threshold**

The operation on the production lines is becoming increasingly complicated and specialized due to the application of advanced technologies such as the equipment integrated with optical, mechanical and electronic functions, the integrated processing technology, the combination of manufacturing technology and information technology, the connection of design and production, the precise controlling of product quality, the strict requirements of environmental protection and the severe guarantee of production safety, which greatly increases the threshold of vocational education. Meanwhile, workers should constantly learn new skills so as to meet the challenges of the quickening technical reform such as the technical standard, quality requirements, technological process, changes in production equipment and even production mode, all these bring challenges for modern vocational education system.

### **Requirements of Job Mobility**

Job pattern has been greatly changed due to the development of modern society. The disappearance and transformation of traditional careers and the emergence of new jobs are still in process. People change careers more frequently. Meanwhile, workers' demands for choosing new posts and getting promoted are becoming increasingly stronger due to their education accumulation and development potential. It is the task of vocational education to help workers get adjusted to different posts, careers and requirements.

### **Requirements of Human Development**

With the development of reform and development, our society tends to favor the beliefs that "individual's free development is the prerequisites of the human society"; "individual's social contribution should be in proportion to one's self-realization"; "individual's career contribution should be related to one's degree of happiness". The higher the technology level of the post, the more obscure the distinction between science and technology. The tight combination of production and management, the close integration between science and technology and culture all raise higher demand for practitioners' comprehensive quality. The cultivation target of high level vocational education should be changed from "tool man", which means cultivating workers specialized in some technology data, into "economic man", which refers to cultivate talents focusing on market objectives. And the ultimate goal of modern vocational education system is to cultivate "social being", who can try to pursue their life goal, and integrate the individual's comprehensive and harmonious development into their schoolwork programming. The cultivation of workers'

professional ethics, professional skills and professional quality should be stressed in modern vocational education so as to help workers develop comprehensively.

Since modern vocational education system is employment-oriented, employment requirements should be analyzed in order to conform to social, economic and industrial trends, and then be transformed into schoolwork requirements of different levels for the learners to select and to achieve.

### **Schoolwork Foundation**

The fundamental function of vocational education should not be sieve-like, but ladder-like<sup>[4]</sup>. In a society where educational resources are becoming increasingly rich, a two-way selection relationship between educational institutions and the learner has been established. Undoubtedly, for vocational education, the former has less initiative to select the latter no matter what level it is, at secondary or at tertiary level. However, the former should have the ability to analyze and evaluate the latter, and then provide them with correspondent education.

### **Learners with Linkage Education**

The so-called learners with linkage education are those who have received the preceding vocational education, and then access to a higher level institution to do further learning and training. Learners can link junior high vocational school with senior high vocational school, three-year vocational college with four-year vocational university, three-year vocational college with university. Furthermore, excellent vocational middle school graduates have access either to vocational colleges, or to universities of technology. They are also in anticipation of achieving master's or doctoral degree. Their identification with vocational education and preliminary knowledge of a certain profession prepare them for the linking higher vocational education. On this basis, schoolwork management should be improved in four aspects. Firstly, preceding academic credits, especially those in vocational skill training and outcome of practical projects, should be approved. Secondly, tertiary courses of vocational knowledge should be linked with preceding courses, neither be out of joint nor be iterated. Thirdly, in term of efficiency, some vocational training projects which have done in the preceding learning with the same project title are supposed to improve, deepen and expand some training nodes. New projects should make good use of some elements of the old ones. Fourthly, students' cultural quality should be emphatically improved by learning cultural courses in the process of whole vocational education.

### **Learners Capable of Converting between Academic and Non-academic Type**

To build a modern vocational education system is to build an "overpass" on which the road of vocational education and that of non-vocational education can be connected, where students can obtain admissions or transference between the two roads. Students are allowed either to transfer from academic type to non-academic type by alteration of major or direction, or by choosing different courses; or transfer among the similar majors at the same level. Students who have received tertiary academic training can conversely receive the secondary vocational training. As a result, stronger learning motivations will be triggered in them after alteration of training mode and employment anticipation since they are already advantageously equipped with broader cultural and scientific knowledge. On this basis, schoolwork management should be improved in the following aspects. Firstly, a modern vocational system is supposed to build up to conform to the requirements of vocational skills; the credits of vocational skills can be recognized across different educational levels, so as to form the basis for education transformation. Secondly, students should be encouraged to be trained in real workplaces as early as possible, so as to play the role of "professional man" and to experience professional rules, learn the methods, taste the happiness of creation. Thirdly, internship should be carefully managed so that students can learn alternately between school and enterprise. They are helped to acquaint themselves with enterprise culture, industrial background, management mode and means of production, etc.

## **Major-changed Learners**

Modern vocational education system is supposed to serve the upgrading of industrial structure, adapt to the mobility of labor force and fulfill their right to free choice of occupation. Laborers who have planned to enter into another specialty possess certain advantages, such as common vocational ability, high expectations and strong motivation. Therefore, analysis and evaluation should be carried out before their syllabus is made. First of all, these learners' educational background, work experience and performance should be carefully evaluated before a starting point is set for their new vocational education. Secondly, professional standards, requirements and special skills of the new specialty need to be analyzed so as to plan out the personalized courses. Thirdly, vocational training should be carried out to help learners fully understand the rules and restrictions, adapt to the new environment and conditions, and operate new equipment.

## **Learners with Upward Mobility**

Industrial upgrading, technological innovation and personal promotion require modern vocational education system to provide advanced courses for qualified laborers with upward mobility. Equipped with accumulated knowledge and skills, these learners are willing and motivated to acquire the frontier technology. They have higher expectations and requirements for their further vocational education. Therefore, the frontier technology and active thinking is the core of their training and education. Firstly, these learners' educational background, work experience and achievements should be evaluated in order to set a starting point for their professional education. Secondly, the frontiers and the trend of the specialty will be introduced to provide a global vision. Most importantly, in addition to vocational skill training, active thinking will be promoted to facilitate these learners to seize the essence of things and make innovations.

In short, Chinese modern vocational education system serves learners at all academic levels and aims to produce versatile and adaptable laborers for employers.

## **Schoolwork Standards**

The UNESCO points out that “the creation of high-quality job relies on high-quality workforce, and the cultivation of high-quality workforce is accomplished by the joint efforts of higher education and ‘technical and vocational’ education”<sup>[5]</sup>. In the Strategic Goals for Chinese Education in the 21st Century, the World Bank also declares that technology, rather than other factors, is the key to the global economic competition. Accordingly, it is beyond doubt that the technique-oriented vocational education conception guides the construction of a modern vocational education system. However, how does it function in the schoolwork management system?

## **Steeling of Skill-training Courses**

Vocational skills, ordinary or specialized, all assume an irreplaceable role in the development of industry. Practical operation skill-training, as an index, should be scientifically and globally standardized, goal-oriented, project-oriented as well as stratified in the syllabus. While academic education emphasizes independent thinking, application-oriented education attaches more importance to cooperation, standardization, professional ethics, practical abilities and work experience. Measures should be taken as follows. Firstly, the importance of skill should be publicized to attract due attention from the public. The authority of professional skill assessment cannot be overemphasized. And a system will be set up to evaluate the trainees by their practical applications. Secondly, vocational skill standard, its training system and assessment criteria should be set up nationwide. Workers, with whatever educational background and work experience, are required to undertake the standardized training and pass through the standardized assessment before involved in one specialty. Thirdly, the essence of vocational education should be employed in higher education, including undergraduate and graduate education. Most colleges and universities need to provide opportunities for students to acquire knowledge by doing and combine research

with training. Work practice helps knowledge-based education produce more versatile and skillful graduates. Most importantly, national criteria should be set for the valuation of technicians.

### **Instrumentalizing of Theoretical Courses**

Instrumentalizing of theoretical courses, in terms of learning content, refers to the study which directly targets at its application to engineering and technology as well as its procedures instead of at the process of reasoning; in terms of academic assessment, it does not call for a great memory but for the use of instruments and reference books in solving specialty-related practical problems. The problem mentioned above has been solved in secondary and higher vocational education, such as specialized college, but remains highly contentious in undergraduate and higher education. The first essential step in solving the problem is to correct one's cognition. Firstly, instrumentalizing does not equate simplification. It aims to acquire the knowledge applied to the vocation, which needs mere a choice of difficult and key points of the course. Secondly, it acknowledges the finiteness of learning objectives. Generally speaking, we learn for origin, reason or use. But with finite time and talent, every learner has to make a choice among these objectives. Thirdly, it clarifies the purpose of vocational education. Majoring in the same specialty, some can be cultivated into academic men proficient in analyzing and reasoning, and some other into applied men skilled in operation and technology. The latter one is what vocational education for.

### **Programing of Practical Courses**

“Educating via working”<sup>[6]</sup>, one of the basic characteristics of vocational education, requires the establishment of practice teaching system compatible with theoretical courses. Programing of practical courses is career-oriented. Students will gradually identify themselves as both a learner and a worker via taking part in teaching activities centered in typical products in the working environment as true to life as possible where theories and practice are closely integrated. By participating in these activities, students familiarize themselves with work environment, learn workflow, master the operation of tools and equipment, drill the ability of evaluation, analysis and innovation, know the solution to accidents, improve communication and coordination skills, establish safety and environment awareness, enhance the cognition of theoretical knowledge, and accept methodology and values education. The management of programization of practical courses is as follows: first, list the quantity of each grade and major to be completed for both educators and learner, including compulsory ones and optional ones, for ease of their mutual evaluation; second, set up the rigid standard in the assessment of the project by clarifying the minimum requirement of the learners and making detectable assessment; third, make academic records and assessment system which are interchangeable among different grades, identifiable through various learning methods and tolerable with flexible learning time.

### **Flexiblizing of General Knowledge on Culture and Science Courses**

Just as mentioned in the previous part, learning of the first three courses is specified as rigid and finite objectives, while that of cultural & science courses as flexible and infinite objectives, which can offer more open, free and democratic opportunities for schoolwork. As to “profound or simple knowledge”, the course can be designed for exploring the origin, or for providing tools of research, or for expanding the horizon; as to “listening or reading” purpose, the course can be set as intensive/extensive reading or discussion programs so as to supply more opportunities for learners to participated in exams; as to classroom learning or field studies, learners are eligible for equal acknowledgement concerning knowledge or capacities within the same category either through effective reading, researching or on-spot studies; as to learning of “arts or science”, either choice is appreciated in that it may even inspire their strengths and ignite their in-depth enthusiasm; as to “specialized learning or extensive learning”, learners who are willing to indulge more in their own majors or in a certain skill shouldn't be too much demanded; on the other hand, those who have passed the threshold of the major and strived for extensive knowledge in other fields shall be greatly encouraged as well; as to the “more or less” question, the issue does not only mean increase or reduction of learning contents, but more support and encouragement for those who are capable and

voluntary to learn more and profound knowledge. In all, the pursuit of education of cultural and science courses is constant advancement but not nonexistent standardization, guarantee of individualization but not impractical assimilation, provision of stimulus but not pressure.

Only in this way, can modern vocational education system eventually surmount the obstacles of exam-oriented education, bypass (not leap over or decrease) the barriers of academic education and explore brand-new paths for learners to fulfill their schoolwork.

### **Schoolwork Planning**

Schoolwork planning, the core component in schoolwork administration, the landmark of education type and a significant part in the success or failure in education, not only concerns people's growth in their golden period, but also provides lifelong guidance for learners. So, what kind of planning should vocational education provide for learners?

#### **Solid Pagoda**

Traditionally professional education follows the pattern of "elementary courses", specialized basic courses, specialized courses and finally practice courses. Even if an engineer is accordingly cultivated, he is merely a "hollow pagoda". For students with keen learning abilities, strong learning motivation, persistent endurance, they can effectively integrate what they have learned and realize the final cultivation objectives via comprehensive and practical capacities. Thus, vocational education should be forged into a "solid pagoda", which means, it should advance their roles of specific practitioners, help cultivate post awareness earlier, and set up specific and finite learning objectives from low to high levels in scaled development with guidance of occupational abilities. In different stages, learning contents, objectives and requirements will be further specified and classified with ability cultivation categorized in different teaching programs as the standards for curriculum provision and assessment. In different periods, one or two education levels can be coordinated with one or two workings posts, such as all-round labor to elementary and secondary vocational education with ordinary post, technicians to secondary vocational education or high technical and vocational education with posts of technicians or foremen, technologists to Higher Vocational Undergraduate Education or high technical and vocational education with posts of craftsmen or middle management and technical engineer to the level of postgraduates or doctors with posts of advanced technical management or technological research and development, etc. Learners can fulfill schoolwork in different stages and then go for equivalent posts or for further studies.

#### **Encourage Excellent Personnel**

Modern vocational education, to a great extent, is targeted at ordinary people, but it should also do its utmost to encourage excellent personnel. The common requirements for students are ability-oriented, which is the first choice of vocational education to ensure that the vast majority of people may lead to success; this is a limited goal, but not the final goal. In helping learners to develop their academic plans, the education providers should try to help them achieve academic achievements beyond the general standard requirements, according to their personalities and choices, so as to reserve energy for their future excellence. The students should be required to have a "better" pursuit to get more professional skills, such as more accurate skilled operation process, better quality products, more efficient, safer and more resources-economical production process; they are also required to have a "deeper" pursuit to make deeper research on theory and principle, explore the mechanism of dialysis, make creative invention, and recover regularities in professional learning; besides, they are required to have a "wider" pursuit to acquire more complex professionalism such as the abilities beyond their specialty, e.g., multi-occupational ability and multi-disciplinary knowledge, and to have a "higher" pursuit to display their potentiality in technology leadership, academic research, administrative leadership and management. Last but not

least, they are expected to have a "stronger" pursuit in coordination, professionalism, social morality, culture and other aspects of performance.

### **Classification Cultivation**

Vocational education is faced with many problems, such as wide diversity of students, multiple learning motives and different learning capabilities, which lead to the objective requirements of teaching students in accordance with their aptitude, and thus realize the classification cultivation in modern schools. The academic planning in vocational education should adhere to the people-oriented principle, showing respect for personalities by setting free the burdens, providing the conditions, and achieving the excellence. For ordinary students, classify them with more extended guidance to help them achieve success. For students with learning difficulties, support them to help reach basic goal. The classification cultivation can be made in this way: firstly, curriculum classification: classify the students into the basic level: reduce the basic requirements of all kinds of teaching activities to allow more space for students to make improvement; advanced level: meet the requirements of the students with more learning motivation and the ability, providing them a chance to leap forward. Secondly, students' classification: for different learners, a tailor-made menu can be made providing a variety of technical skills, academic development, combined extensional works, and research innovation. The students can choose the courses which meet their needs, and develop them to their best. Thirdly, talents classification: the learners can choose to be either being specified or being extensive, being comprehensive or being expertise; if a student has some strengths, then s/he should be allowed to have some weaknesses, giving her/him enough room to develop her/his specialties, so as to improve the efficiency of personnel training. The mode of classification cultivation can provide learners with career planning guidance, the employing units with the evidence of student's capacities, and the higher education organizations with references for recruitment.

### **Lifelong Learning**

Modern vocational education system is to provide a kind of lifelong education service, and the vocational education institutions should help learners to establish the concept of lifelong learning, cultivating them to have good learning methods, and guiding them to form good learning habits; it's also necessary to help enterprises to establish lifelong education system for the staff, who will promptly update knowledge, so as to meet the requirements of technology upgrade and occupation change. The system of regular vocational skills training will continuously improve the quality of workers, so that they will neither be excluded by the industrial upgrading, nor be discouraged because of competitive disadvantages. A worker pursuing lifelong learning is inevitably a good worker, because, firstly, s/he can acquire basic professional competence, which are the standardized knowledge and capacity baseline for employee's when starting to work, changing the position, or changing profession; secondly, the compensatory learning will improve workers' professional ability by updating their knowledge, and adapting to the new rules of learning when the workers are faced with promotion, industrial upgrading, technological transformation, renewal of equipment, changes in standards, the change of management mode; thirdly, the developing learning will meet the workers' demand for enhanced cultural taste, richer knowledge, and innovative ability. The vocational education institutions should provide effective services for this lifelong learning, constructing "credit bank", extending the academic management to the enterprise, groups, communities, schools, so as to build an "education overpass".

Vocational education should provide students with professional ability giving priority to the guidance of personal choice, the release of the development space, and support for lifelong learning and academic planning.

### **Schoolwork Evaluation**

Faced with students from different backgrounds, abundant learning programs and diverse presentation forms of academic outcomes, modern vocational education system effectively connects

schooling with various vocational training, full-time education with part-time, workplaces with educational institutions, which determines the complexity of schoolwork evaluation. Therefore the introduction and innovative design of “credit bank” mechanism<sup>[7]</sup> will guarantee the scientific effectiveness in the operation of this complicated system.

### **Openness of Credit Resources**

Boosting credit resources actively and striving to promote the utilization of educational resources are the implication of credit bank system, as well as the need for building up an open and efficient vocational education system. First of all, the confirmation of learners’ credits obtained earlier. Firstly, the academic outcomes which are achieved due to learners’ gift and self-taught working practices may be “deposited” in credit bank directly; secondly, the academic outcomes which are achieved in different educational and training institutions, multi-level vocational education, various types of education may be mutually confirmed and exchanged; thirdly, the outcomes which are achieved in extracurricular training, practices, creation and inventions, competitions, etc. may be converted into credits. Next, the vigorous development of credit resources within vocational educational institutions. Firstly, school-based curricula are offered based on the learners’ demand or on the teachers’ specialties; secondly, excellent educational resources in society are introduced depending on the advantage of regions and industries; thirdly, the credits are confirmed by technical competitions, practices and training, the construction of societies and clubs, etc. Last but not least, the encouragement among more educational resources for the “production” of vocational education credits. Firstly, the mutual confirmation between schools and between various types of educational institutions takes advantage of their respective resources, decreasing the probability of repeatedly setting up and opening a courses as well as testing; secondly, the credit confirmation stimulates the participation of various institutions in vocational education and training, triggering the involvement of social forces, industries and enterprises in education case; thirdly, the higher education (postgraduate education included) is promoted to take part in vocational education, the higher education resources impelled to convert into vocational educational resources.

### **Expansiveness of Credit Storage**

Credit bank not only is used in the schoolwork management of students at school, but covers the links among vocational training, lifelong study and engineering. Every vocational employee owns a credit bank card for the storage of his or her obtained credits and the demonstration of his or her professional abilities and expertise. The card may certify the learner’s degree, keeping a record of his or her learning process and the number of programs; it may indicate the learner’s abilities, reflecting his or her potentials in some filed or some type of programs; it may also record the learner’s benefits, exhibiting his or her achievements after learning. Ignoring the failures in the process of learning, the credit bank card only records the learner’s credits of achieved academic outcomes (that is, the learner has passed the examinations), ensuring its value. The implementation of “flexible credit system” changes storage from quota to excess. With the expansion credits and innovation credits, the learner is encouraged into getting more credits on the premise of assigned learning tasks.

### **Flexibility of Credit Exchange**

Credit exchange encourages students to focus on some learning contents based on their specialties or choices, or apply some suitable learning methods to ensure the openness of education system. There are four ways of credit exchange as follows. The first one is systematic exchange, which means through course classification, students’ individual needs could be met with various courses with different levels of difficulty (or different credits), so that students of different education backgrounds could make best use of the advantages and bypass the disadvantages and then each gets his due. The second is homogeneity exchange which means, on the one hand, after taking some national authoritative tests or evaluations and obtaining the related academic records or technical qualifications, students could be exempted from some courses or be released from some tests; on

the other hand, that means the academic records gained through self-study and going in for some national tests or the tests organized by some qualified departments, the course grades obtained in some other educational institutions, or the grades of some practical project courses gained in different schools could be recognized as some credits. The third is individual exchange which means for some students who have difficulty in studying their own majors, they can be guided to change their majors according to the principle that the credits of main courses in one major could be transferred to those of the main courses in another major (the courses should be homogeneous). The fourth is compensatory exchange which means that if those students with a certain “defect” can obtain some unique “high quality” credits such as the innovation credits gained in innovation and creation and academic contests, or those students have undertaken more study loads, their credits could be exchanged on the principle that the development credits could be transferred into the course credits on the ratio of 3:1; in doing so, it is expected to provide opportunities for those students with special or irregular talents.

### **Incentive of Credit Counting**

For the enrolled students, a new credit counting mechanism is needed to assess their schoolwork in one period or the whole stage. Usually the number of credits shows the schoolwork quantity, while grade points indicate the quality. On the basis of “excessive” storage and credit exchange, the weighted grade points are used to assess in a comprehensive way the quantity and quality of the schoolwork, that is, schoolwork excellence.

$$\text{Weighted grade points} = \frac{\sum (\text{course credits} \times \text{course grade points})}{\sum \text{rated credits}}$$

Course credits are composed of three parts. The first part is that students have to obtain the credits related to occupational qualifications or industrial standards, and those required by order-based training. The second part is that students have to gain the credits in one period or the whole education process including the credits of the first part, so that students could finish their schoolwork. The third part is that students who have gained the credits of the first and second parts can have some more development credits which could be acquired through taking some advanced courses, studying more courses in and out of school, taking some authoritative tests or evaluations, or making achievements in some activities, projects, and contests.

The aim of weighted grade points is to encourage students to pursue excellence (more and higher), select courses on the basis of individuality (course categories and study modes), and find a way to develop their talents (aiming at higher grade points or more development credits).

In credit bank mechanism, “bank” is the denotation, while “credit” is the connotation. The innovation of credit bank mechanism lies in the “credit”, that is, credits are identified, checked, and assessed in a more scientific way, which is a path to the innovation of schoolwork management system in modern vocational education system. In doing so, it is hoped that each schoolwork achievement of students could be observed, and that every bit of commitment of vocational educationists could be recognized.

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