

Management of Production and Services Units in Improving Students' Skills and the Absorption of Graduates: An Analysis on Welding Expertise Competency

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INFO ARTIKEL	ABSTRAK
<p>Riwayat Artikel:</p> <p>Diterima: 21-05-2022 Disetujui: 11-08-2022</p>	<p>Abstract: Research on the management of UPJ in Welding Engineering Skills Competence at SMK Sore Tulungagung and SMKN 2 Tulungagung in an effort to improve student skills and absorption of graduate students is a descriptive research method with a qualitative approach. The results showed that the POAC management model was the UPJ management model used in SMK Sore Tulungagung and SMKN 2 Tulungagung. UPJ management activities according to the POAC model consist of four activities which include planning, organizing, implementing, and supervising.</p>
<p>Kata kunci:</p> <p>Production and services unit Students' skills Welding expertise</p>	<p>Abstrak: Penelitian tentang pengelolaan UPJ di Kompetensi Keahlian Teknik Pengelasan SMK Sore Tulungagung dan SMKN 2 Tulungagung dalam upaya meningkatkan keterampilan siswa dan keterserapan tamatan siswa merupakan metode penelitian deskriptif dengan pendekatan kualitatif. Hasil penelitian menunjukkan bahwa model pengelolaan POAC adalah model pengelolaan UPJ yang digunakan di SMK Sore Tulungagung dan SMKN 2 Tulungagung. Kegiatan pengelolaan UPJ menurut model POAC ini terdiri dari empat kegiatan yang meliputi perencanaan, pengorganisasian, pelaksanaan, dan pengawasan.</p>
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INTRODUCTION

Currently the world has entered the era of the industrial revolution generation 4.0 which is marked by the increasing development of information technology and digital systems. Education as an important aspect in preparing generations to respond to the needs of the industrial revolution 4.0. This response gave rise to the idea of education 4.0 where the vision of education is to motivate students to learn knowledge and skills and identify sources of learning these knowledge and skills (Retnaningsih, 2019).

Vocational education can be one of the ideas for education 4.0 to produce a competent workforce, ready to compete globally, and able to contribute to building the Indonesian nation according to their respective skills. Viewed from the institutional aspect, vocational education in Indonesia is divided into two levels of education, namely higher education level which includes diploma education and secondary education level which includes vocational education (Law on the National Education System No. 20 of 2003).

Vocational education at the secondary education level has several meanings according to experts. Hamalik (2001:24) states that vocational education is a form of talent development, basic education skills and habits that lead to the world of work which is seen as skills training. Evans in Muliati (2007: 7) adds that vocational education is part of the education system that prepares a person to be better able to work in one work group or one field of work than in other fields of work.

Vocational education graduates in the structure of the workforce pyramid are a fairly large number of middle-level skilled workers. This is because the industrial world requires human resources who have a competitive advantage in order to be able to compete in producing quality products/services. Graduates from vocational education are expected to be able to meet the workforce needs in the development of business and the industrial world in order to improve the Indonesian economy in the future (Anggreani, Sudarmiati, Suharto, 2019).

In meeting these expectations, the Directorate of Vocational High School Development (2005) recommends that SMKs create a Production and Service Unit (UPJ) program. The Production and Service Unit (UPJ) is a vehicle for practical education and training activities that are oriented to the world of work and are able to improve knowledge, skills and work attitude formation. UPJ is also a forum to develop an entrepreneurial spirit in school residents and provide assistance with school operational costs (Anggreani, Sudarmiati, Suharto, 2019).

This recommendation from the Directorate of Vocational High Schools is supported by Government Regulation no. 29 of 1990 which states that vocational education can have and develop production units that are professionally managed and profit-oriented (profit) to produce goods or services for the general public.

The Production and Service Unit (UPJ) must be managed properly by schools that provide vocational education. Good management of UPJ will produce goods or services needed by the community and generate economic benefits for the school. Good UPJ management will also provide students with work experience in accordance with the applicable curriculum, improve students' knowledge and skills, foster student entrepreneurship, and increase the absorption of vocational education graduates in the industrial world.

With this background, the researcher wants to examine the management of UPJ in Welding Engineering Skills Competence at SMK Sore Tulungagung and SMKN 2 Tulungagung which includes planning for Production and Service Units (UPJ), organizing Production and Service Units (UPJ), implementing Production and Service Units (UPJ), supervision of the Production and Services Unit (UPJ), and supporting and inhibiting factors in the implementation of activities in the Production and Services Unit (UPJ) in an effort to improve student skills and the absorption of SMK graduates. The two schools were chosen because they are favorite schools that have competency in Welding Engineering expertise in Tulungagung and have UPJ Welding with complete equipment and competent Human Resources (HR) so that their products are widely known by the public in Tulungagung Regency.

METHOD

Research on the management of UPJ in Welding Engineering Skills Competence at SMK Sore Tulungagung and SMKN 2 Tulungagung which includes planning for Production and Service Units (UPJ), organizing Production and Service Units (UPJ), implementing Production and Service Units (UPJ), supervision of Production and Service Units (UPJ), and the supporting and inhibiting factors in the implementation of activities in the Production and Service Unit (UPJ) in an effort to improve student skills and absorption of graduates at SMK Sore Tulungagung and SMKN 2 Tulungagung is a descriptive research method with a qualitative approach. This research is a descriptive study with a qualitative approach because it focuses on describing the management, supporting factors, and inhibiting factors of UPJ in the two schools.

According to Sugiyono (2012), descriptive qualitative research is research that examines and describes the participant's perspective with strategies which are interactive and flexible. This research is used to understand social phenomena from the point of view of a participant. Bogdan and Biklen (1998:27-29) add that qualitative descriptive research has several characteristics, namely (1) natural settings are used as data sources, (2) data are collected in the form of words or pictures rather than numbers, and (3) data is analyzed inductively.

According to Moleong (2015: 168), qualitative research emphasizes the presence and role of researchers as key research instruments. The position of the researcher in qualitative research is as a planner,

implementer of data collection, analysis, data interpreter, and reporting of research results. Latief (2012:81) also adds that researchers in qualitative research can determine the right time when to ask, stop, continue or repeat questions to research subjects.

During the research, activities in the Production and Service Unit (UPJ) of Welding Engineering Skills at SMK Sore Tulungagung and SMKN 2 Tulungagung will be observed. Supervising teacher for UPJ Welding Engineering Skills at SMK Sore Tulungagung, UPJ supervising teachers for Welding Engineering Skills at SMKN 2 Tulungagung, head for welding engineering competency at SMK Sore Tulungagung, head for welding engineering competency at SMKN 2 Tulungagung, BKK members at SMK Sore Tulungagung, and members for BKK SMKN 2 Tulungagung will also be interviewed to find out the management of UPJ, UPJ activities, and factors supporting/inhibiting UPJ management in increasing the absorption of graduates of the Welding Engineering Expertise Program.

Research on the management of the Production and Service Unit (UPJ), UPJ activities, and supporting/inhibiting factors in the implementation of UPJ in the Welding Engineering Expertise Program will be conducted at SMK Sore Tulungagung, located at Jalan Mastrip No. 100 and SMKN 2 Tulungagung which is located in Jabalsari Village, Kedungwaru District. Both of these schools have A accreditation and are SMKs in Tulungagung Regency that have Welding Engineering Expertise Competencies.

Data sources consist of two kinds, namely human and non-human. The human data source serves as a key data source which includes the UPJ supervisory teacher in the Welding Engineering Skills competency of SMK Sore Tulungagung, the UPJ mentor teacher in the Welding Engineering Skills competency of SMKN 2 Tulungagung, the head of the welding engineering competency competency at SMK Sore Tulungagung, the head of the welding engineering competency competency at SMKN 2 Tulungagung, members of the BKK SMK Sore Tulungagung, and members of the BKK SMKN 2 Tulungagung. Sources of non-human data in the form of observations that focus on observing teaching and learning activities at UPJ Welding Engineering Expertise Program at SMK Sore Tulungagung and SMKN 2 Tulungagung.

In addition, data sources can also be divided into two types, namely primary data sources and secondary data sources (Sugiyono, 2005). Primary data sources are sources of data collected directly by researchers through data collection efforts in the field. The source of this data is always specific which is adapted to the needs of the researcher and collected solely for research purposes. In this study, the primary data source is the result of observation and interview data. Meanwhile, secondary data sources are data sources that already exist in the form of information collected by previous research institutions and organizations. In this study, secondary data sources are data obtained from literature and journals.

Data collection techniques were used to obtain information about subject as data source. This procedure will be carried out in August 2021. In collecting research data, observations and interviews will be carried out. Observation is a data collection technique by making direct observations without the help of other standard tools for this purpose (Sugiyono, 2016). Observations will be made 4 times in each school in August 2021. This observation will focus on observing teaching and learning activities at UPJ in the Welding Engineering Expertise Program at SMK Sore Tulungagung and SMKN 2 Tulungagung. During the observation, two research instruments, namely field notes and cameras, will be used. Field notes will contain details about teacher and student activities at UPJ and cameras will be used to take pictures of the process.

Interview is a data collection technique where there are two people who exchange information and ideas through question and answer to construct meaning in a certain topic (Sugiyono, 2016). Interviews will be conducted once to the UPJ supervisor in the Welding Engineering Skills Program at SMK Sore Tulungagung, once to the UPJ supervisor at the Welding Engineering Skills competency at SMKN 2 Tulungagung, once to the head of the welding engineering competency competency at SMK Sore Tulungagung, once to the head of the welding engineering competency competency at SMKN. 2 Tulungagung, once for members of the BKK SMK Sore Tulungagung, and once for members of the BKK SMKN 2 Tulungagung. In conducting interviews, interview guidelines as research instruments will be used. The interview guide contains questions related to UPJ management, learning activities, and supporting/inhibiting factors in UPJ management in improving student skills and the absorption of graduates from the Welding Engineering Expertise Program.

The data analysis stage is the process of finding and compiling the data that has been collected systematically. The purpose of this data analysis stage is to understand and present the data to others. During data analysis, data is organized, broken down into manageable units, and synthesized to discover what is important and what should be learned (Bogdan and Biklen, 1998:145).

According to Miles and Huberman (2014: 16), the stages of data analysis in qualitative research are carried out interactively and take place continuously until complete. This stage consists of three activity flows, namely data reduction, data display, and conclusion drawing or verification.

Reduction of data (data reduction) is the first groove of qualitative research data analysis stage. Data reduction can be interpreted as a process of selecting, focusing, and simplifying data according to the research focus (Miles and Huberman, 2014: 16). Data reduction is very important because there are so many qualitative research data that need to be selected, organized, classified, and simplified. Inappropriate data will be discarded and appropriate data will be collected to form verifiable conclusions.

In this study, data reduction will be carried out after the data collection process through observation and interviews. Data that has been collected from observations and interviews will be coded, selected, organized, classified, and simplified to produce relevant data according to the research focus.

Data presentation is the second flow of the qualitative research data analysis stage. Presentation of data can be interpreted as a set of structured information that gives the possibility of drawing conclusions and taking action (Miles and Huberman, 2014: 16). The presentation of data containing this combined information is a primary means of valid qualitative analysis which includes narrative texts, brief descriptions, matrices, graphs, charts, and networks.

In this study, the presentation of the data will be done after the data is reduced. Relevant data that has been reduced will be presented by describing it in a narrative manner so that the data is easier to read and understand.

Conclusion drawing and verification is the third line of the qualitative research data analysis stage. Drawing conclusions and verification can be interpreted as concluding data and verifying them by analyzing relevant data, comparing them, and connecting them with several theories (Miles and Huberman, 2014: 16). In this study, the data that has been presented will be concluded and verified by comparing and connecting it with several theories about Production and Service Units and vocational/vocational learning. Then, data analysis will also be presented descriptively.

RESULT AND DISCUSSION

Vocational High School (SMK) aims to produce students who are able and ready to work in the industrial sector according to their respective fields of expertise. This goal makes schools prepare a place or means of practice for students with the name Production and Service Unit.

Sartono (2006) stated that the Production and Service Unit (UPJ) is a forum for entrepreneurship in schools that is managed professionally by empowering school residents. Rusnani (2012) added that UPJ is a process of business activities carried out by school residents and is business-like to obtain profits that can be used to help finance education and improve welfare for school residents. This unit has a balance between commercial aspects and academic aspects by utilizing the facilities owned by the school concerned. The same thing is explained by Saroni (2012) in Fitriana (2016). Saroni (2012) in Fitriana (2016) explains that UPJ is an activity that directly involves all school members to carry out business activities that can increase income for schools and individuals.

As a means of practice and business in schools, UPJ has several goals to be achieved. According to the Directorate General of Quality Improvement of Educators and Education Personnel, (2007:7), the objectives of implementing the Production and Services Unit (UPJ) are (1) production or service-based training facilities for students, (2) means of growing and developing the entrepreneurial spirit of teachers and students. SMK/MAK, (3) a means of direct productive practice for students, (4) a means to help fund maintenance, additional facilities and other educational operational costs, (5) a means to increase the spirit of togetherness, and (6) a means to develop an independent attitude and confident in the implementation of students' practical activities.

According to Government Regulation (PP) Number 29 of 1990 paragraph 2 concerning Vocational Secondary Education, the objectives of UPJ are (1) to prepare students to enter the workforce and develop professional attitudes, (2) to prepare students to choose careers, as well as develop themselves, (3) prepare middle-level workers to fill future needs, and (4) prepare graduates to become productive, adaptive, and creative citizens.

Amat Jaedun (2000) also stated another opinion about the purpose of UPJ. Amat stated that the objectives of UPJ were divided into three aspects, namely the educational aspect, the economic aspect, and the

social aspect. The educational aspects include (1) training positive attitudes and work ethic for students and carrying out education for production, (2) training to find comprehensive solutions about the meaning of a production, (3) training in balanced development of feelings related to physical, emotional, mental, attitude, aesthetic normal values, both for their own interests and the interests of society, (4) educating students to experience the phases of work related to the economic and social values of various functions, (5) Educating in forming a strong integration between theories and practice of various types of work, and (6) building children's character which includes creativity, positive motivation at work, discipline, and mental resilience in facing challenges. While the economic aspects include (1) introducing early economic aspects and content to vocational students, (2) cultivating and growing an entrepreneurial spirit for students so that after they graduate they not only act as job seekers but more than that they can create a world of independent work, (3) the development of business and business activities in the world of work can be followed by the world of education, (4) as a new effort to find entrepreneurial training facilities in schools that are oriented to the world of work, and social aspects which include (1) the implementation of production unit activities can be based on with the spirit of togetherness, mutual assistance, and exchange of opinions, (2) the realization of direct active communication between students and the community, (3) the shorter the transition period of students in reducing the gap between the educational stage and the productive work stage, (4) industrial society can knowing real conditions consciously and knowing exactly the abilities of vocational students and determine the job according to their abilities.

From the several objectives of UPJ seen from the three aspects, it can be concluded that the implementation of the production unit is very useful in educating students to become independent graduates and have skills according to their respective fields of expertise. This is evidenced by an empirical study conducted by Soeparno (2017). Soeparno conducted a study on the Production and Service Unit (UPJ) to form and improve the hard skills and soft skills of SMK students. Hard skills are technical and academic competencies according to the field of vocational students while soft skills are abilities outside of technical and academic abilities that refer to intrapersonal abilities including self awareness, self improvement, self control, and interpersonal skills. These two abilities are very important to prepare students' work competencies in their respective fields. The results of the empirical study show that the Production and Service Unit (UPJ) can form soft skills and hard skills, increase knowledge, develop entrepreneurial initiatives, increase the intensity of entrepreneurship learning, assist internship programs, and increase students' knowledge of science and technology.

Management of Production and Service Units (UPJ)

Management or management has different definitions according to some expert opinions. Sudjana (2004) states that management is an activity to plan, mobilize, utilize human resources, facilities and infrastructure efficiently and effectively to achieve goals. Meanwhile, according to Terry (2008), management or management is a process of planning, organizing, directing, and controlling which is carried out to achieve predetermined targets using human resources.

Several definitions of management or management above show how important management or management activities are in an activity. The Production and Services Unit (UPJ) as a forum for entrepreneurship in schools must of course implement good management or management.

There are several types of management models used in UPJ. The use of this model is adjusted to the SMK policy as the UPJ implementer (Hayono, 2012). The six models are the PIE model (planning, implementing, evaluating), the POAC model (planning, organizing, actuating, controlling), the P1P2P3 model (planning, mobilizing and implementing, monitoring, controlling, and evaluating), the ARRIF model (analysis, formulation, and evaluation), planning, implementation, and communication forum), the ARRIME model (analysis, formulation, planning, implementation, monitoring /supervision, and evaluating /implementation), and the ARRIMES model (analysis, formulation, planning, implementation, monitoring /supervision, evaluating /implementation, and socialization). Of the six management models mentioned by Hayono (2012), the POAC management model is the management model that is often used in SMK. UPJ management activities according to the POAC model consist of four activities which include planning, organizing, implementing, and supervising (Hayono, 2012).

Production and Service Unit Planning (UPJ)

Planning is a process of thinking about and determining the activities or programs that will be carried out to achieve certain goals (Bafadal, 2004:26). Usman (2014) adds that planning is several activities that will be carried out in the future by containing elements of a strategy or method, process, and results or goals to be achieved.

Planning for Production and Service Units (UPJ) at SMK Sore Tulungagung and SMKN 2 Tulungagung includes (1) planning and preparing the UPJ schedule (identifying all planned activities, prioritizing programs, determining detailed activities, determining the length of time for implementation, determining activities that are adjusted with the budget year, and evaluate the schedule that has been prepared), (2) budget planning used to purchase tools and raw materials for production activities before being marketed to the wider community, and (3) planning and procurement of facilities and infrastructure. This is in accordance with the opinion of Ni'matul (2015) which states that planning is carried out so that all components involved in the UPJ have guidelines in planning all short-term and long-term activities.

Organization of Production and Service Units (UPJ)

Hasibuan (2007: 119) says that organizing is the process of determining, grouping, and arranging various activities needed to achieve goals, placing people in each activity, providing the necessary tools, and assigning relatively delegated authority to others. each individual who will need the activity. Handoko (1999) adds that the organizing process can be demonstrated by a three-step procedure, namely detailing all activities that must be carried out to achieve organizational goals, dividing the total workload into activities that can logically be carried out by one person. This division of labor should be neither too heavy nor too light, and the establishment and development of a mechanism to coordinate the work of the members of the organization into a unified and harmonious whole.

The organization of the Production and Service Units (UPJ) at SMK Sore Tulungagung and SMKN 2 Tulungagung is in accordance with the rules of Dikmenjur (2007:53). This description of the structure and duties will help the leader to be able to carry out supervision and control and subordinates to be able to concentrate on tasks or work because of a clear description.

The person in charge is tasked with formulating a vision and mission, establishing an organizational structure, job descriptions and work mechanisms, establishing a financial management system and distribution of work results, identifying supporting and inhibiting factors, preparing program plans, and evaluating program implementation.

The chairperson is in charge of coordinating the activities of the school production unit, supervising the activities of the school production unit, cooperating with work partners, compiling job descriptions of school production unit personnel, distributing tasks to each school production unit personnel, signing a cooperation script with work partners, giving approval for products in accordance with the results of deliberation with other personnel (head of business division), and provide approval for the production budget based on the calculation of the price that has been calculated previously.

The division head is tasked with coordinating activities in each business unit, supervising activities in each business unit, collaborating with the head of the production unit in collaboration with work partners, compiling drafts of job descriptions for personnel in business units, continuing the distribution of tasks to each existing personnel. in business units, providing recommendations for approval of products in accordance with the results of deliberations with other personnel within the scope of business units, providing recommendations for approval of production budgets for business units based on price calculations that have been calculated previously.

The secretary is in charge of recording production unit activities, scheduling and filing letters, handling general production unit administration, managing production unit activity schedules, assisting treasurers in preparing financial report administration, preparing production unit cooperation scripts with work partners, distributing letters both internally and externally , create and archive meeting minutes, document various production unit documents, and make periodic reports.

The treasurer is in charge of compiling a budget plan to obtain approval from the chairman, regulating the flow of funds in and out of and to the production unit, recording the flow of funds from the production unit, documenting evidence of expenditure and income of the production unit, calculating wages together with the production department, and compiling periodic and annual financial reports.

The production department is in charge of coordinating the work on production requests; compiling calculations of production needs which include: materials and wages, supervising the implementation of production, conducting quality control, and making samples of product innovations.

The marketing department is tasked with making promotional programs, establishing cooperation and approaching business partners, carrying out promotional activities, coordinating with the Production Section for production realization according to customer requests, and making periodic reports on promotional activities.

Production executives are tasked with carrying out production activities in accordance with the request of the production department, reporting production results to the production department, carrying out maintenance and recording of the condition of work equipment, and maintaining work safety.

Implementation of Production and Service Units (UPJ)

Implementation is an activity to realize plans into real actions in order to achieve effective and efficient goals. The implementation carried out in the activities of the production unit is related to the activities of organizing the production unit in its efforts to achieve the goals that have been set. The implementation of the Production and Service Unit (UPJ) at SMK Sore Tulungagung and SMKN 2 Tulungagung is in accordance with Ratimah's opinion (2016). Ratimah (2016) mentions the steps for implementing UPJ activities, namely preparation of production unit practices, development of production unit practices, and product marketing.

Preparation of the production unit practice is an activity that will be prepared before carrying out the production unit practice. The preparations carried out include the preparation of the required equipment, division of student practice groups, assignment of tasks and obligations of practical students. Coaching is an effort or action of activities carried out efficiently and effectively. Guidance in production unit practical activities aims to develop student potential optimally and provide direction to students so that they can improve their abilities and skills in entrepreneurship through production unit practice activities.

Marketing is an activity carried out to offer and sell products with the aim of getting what is needed as expected. According to the Directorate of Education Personnel (2007:121), activities in marketing include the 4Ps, namely: product (product), price (price), place (distribution), and promotion (promotion).

Supervision of Production and Service Units (UPJ)

According to Fahmi (2012: 84), supervision is a way for an organization to achieve effective and efficient performance. Another opinion was expressed by Brantas (2009). Brantas (2009: 188) defines supervision as the process of monitoring, evaluating, and reporting plans for achieving the goals that have been set for corrective actions for further improvement.

Supervision of the Production and Service Units (UPJ) at SMK Sore Tulungagung and SMKN 2 Tulungagung is carried out by monitoring or monitoring activities to determine the achievement of UPJ activities that have been targeted by the school principal. Jaedun (2000) states that the officer who is the supervisor in the production unit is the principal of the school that carries out the production unit together with the supervisory body established by the school. This supervisory body must be independent and consist of people from inside and outside the school.

Supporting and Inhibiting Factors in UPJ Management

The implementation of the Production and Service Unit (UPJ) at SMK Sore Tulungagung and SMKN 2 Tulungagung can be influenced by supporting factors and inhibiting factors. Supporting factors include adequate facilities and infrastructure, superior human resources, adequate management funds, strategic location, and clear product and market share. Meanwhile, the inhibiting factors include the limited time of the

teacher as a class teacher and as a supervisor at UPJ, the difficult product marketing power, and the people's purchasing power which is still lacking.

CONCLUSION

The Production and Service Unit (UPJ) is a forum for entrepreneurship in schools that is managed professionally by empowering school residents. The Production and Services Unit (UPJ) as a forum for entrepreneurship in schools must of course implement good management or management. The POAC management model is the UPJ management model that is often used in SMK. UPJ management activities according to the POAC model consist of four activities which include planning, organizing, implementing, and supervising.

Planning for Production and Service Units (UPJ) at SMK Sore Tulungagung and SMKN 2 Tulungagung includes (1) planning and preparing the UPJ schedule, (2) budget planning used to purchase tools and raw materials for production activities before being marketed to the wider community, and (3) planning and procurement of facilities and infrastructure. Organizing the Production and Service Units (UPJ) at SMK Sore Tulungagung and SMKN 2 Tulungagung in accordance with the Dikmenjur regulations, namely the person in charge, chairman, division head, secretary, treasurer, production department, and marketing department.

Implementation of the Production and Service Unit (UPJ) at SMK Sore Tulungagung and SMKN 2 Tulungagung, namely preparation of production unit practices, development of production unit practices, and product marketing. Supervision of the Production and Service Units (UPJ) at SMK Sore Tulungagung and SMKN 2 Tulungagung is carried out by monitoring or monitoring activities to determine the achievement of UPJ activities that have been targeted by the school principal.

The implementation of the Production and Service Unit (UPJ) at SMK Sore Tulungagung and SMKN 2 Tulungagung can be influenced by supporting factors and inhibiting factors. Supporting factors include adequate facilities and infrastructure, superior human resources, adequate management funds, strategic location, and clear product and market share. Meanwhile, the inhibiting factors include the limited time of the teacher as a class teacher and as a supervisor at UPJ, the difficult product marketing power, and the people's purchasing power which is still lacking.

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