Model of Vocational Madrasah Based on Student Entrepreneurship and Engineering Skills

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Abstract
The mission of MAN 1 Kota Bukittinggi, a vocational school that instills strong religious values in its students, is to develop students with entrepreneurial insights and vocational skills needed for future survival, as well as an entrepreneurial spirit in accordance with Islamic law. This research seeks to investigate the techniques and methods used by MAN 1 Kota Bukittinggi, a vocational madrasah, in developing the entrepreneurial character of its students while preserving Islamic teachings. This study uses a descriptive-qualitative methodology, by combining interview techniques and field observations. The results of the study show that by educating students starting from religious observance, personality development, application of self-discipline, creativity, and self-confidence and strong responsibility as an entrepreneur, as well as by providing insight and skills that must be mastered, students can be directed to enjoy the world of entrepreneurship.

Keywords
Model, Vocational, Madrasah, Entrepreneurship, Skill Development
A. Introduction

Vocational education is one option that can increase the competence of the younger generation in Indonesia[1]. Vocational education is an act or process of providing or obtaining general and specific knowledge and skills related to certain fields of work or profession, and closely related to religious and worship activities[2]. The implementation of the Madrasah Aliyah plus skills program is a diversification of madrasas into vocational schools to produce madrasah students who have an understanding of entrepreneurship and vocational skills needed to develop future resilience[3].

The aim of vocational education is to familiarize students with life skills by equipping them with life skills[1]. In addition, the applied vocational education aims to foster students' creativity and understanding of individual roles in social life. By providing vocational education to students, it is hoped that they will acquire the necessary knowledge and skills for schools and society. In addition, vocational education also seeks to foster creativity and innovation[4].

Madrasas are a continuation of the traditional pesantren education system modified according to the paradigm of organizing public institutions with a classical curriculum[5]. With additional activities in skills areas, Madrasahs are different from other schools, and the standards of Madrasah Aliyah are somewhat different from other schools. Apart from spiritual intelligence, students also acquire the hard and social skills necessary to succeed in the post-educational world[3]. Human resources need life skills learning, namely integrative learning that emphasizes soft skills and hard skills, because without soft skills they cannot face future challenges independently. Global competition cannot be avoided, but it must be faced by people of productive age in general and Madrasah Aliyah students in particular, where they will face real competition[6]. The encouragement and motivation provided by madrasas will produce generations of students with an entrepreneurial spirit who are not only beneficial to society, but also have a positive impact on their country's economy[7].

Currently, based on data from the Director of Madrasah Education Directorate General (Ditjen) of Islamic education Prof. Nur Kholis Setiawan said, since 1994 has developed an expertise program in Madrasah Aliyah (MA). Until now there have been Madrasah Aliyah who have developed various skills programs ranging from electrical engineering, fashion, automotive, computer information technology, mechanical engineering, electrical engineering, culinary arts, crafts, agriculture, animal husbandry and so on[2]. One of them is included in the list, namely MAN 1 Kota Bukittinggi. One of the madrasas that has been named a model school in the city of Bukittinggi and has a myriad of shining achievements from the provincial to national levels.

Vocational education, which is usually the main goal and vision and mission of vocational high schools, is now present in madrasah schools with a background in religion-based education[8]. However, currently there is still a lack of attention to the development of entrepreneurial skills in Vocational education. There are still many that focus more on learning vocational theory, so they pay less attention to developing students' entrepreneurial skills[9]. Students at vocational education institutions in Bukittinggi have entrepreneurial potential, but they do not have sufficient knowledge about the basic concepts of entrepreneurship and the skills
needed to run a business. As a result of the lack of entrepreneurship training, vocational madrasah in Bukittinggi have not provided opportunities for students to develop their entrepreneurial skills and knowledge. Lack of assistance and collaboration with the business world Cooperation between institutions and the business world is still limited, thus preventing students from learning directly from business professionals and expanding their networks in the entrepreneurial world [10]. In this article, a vocational madrasah-based paradigm for cultivating entrepreneurial skills in Bukittinggi will be proposed as a solution to these problems. This model will combine theoretical and practical approaches and leverage collaborations with local businesses to provide students with real-world experience in business management and the development of entrepreneurial skills [11].

B. Research Method

This study uses a descriptive-qualitative methodology. Data collection techniques using interviews and documentation techniques. Deputy principals responsible for curriculum, students, and skills instructors in schools were interviewed. By using a catalog of questions asked to respondents, data is collected. This form of research uses the case study method and focuses on class XI majoring in religion. The goal of the qualitative researcher is to gain knowledge, facts, or a detailed narrative about the subject and social context of the research. Knowledge or information obtained from the results of in-depth interviews and observations will be presented in the form of a detailed story (detailed description, in-depth description) which includes the original expressions of the research subjects. Paper and sound and image recorders to capture the information needed by researchers in the future are some of the equipment that must be available.

This research requires primary and secondary data sources. Primary data is information collected through interviews with informants. In this study, primary data were obtained from the Head of Curriculum, teachers of vocational subjects, and teachers of skills programs. The primary data consists of: history of vocational programs, policies related to vocational education, structure of vocational education, implementation of vocational education into learning related to the division of schedules and rooms, fostering vocational education so that it runs continuously, and implementation of innovative vocational-based education models. While secondary data is collected through observation and documentation. The history of the growth and development of building area, vision, mission and goals, organizational structure, facilities and infrastructure, and photos of activities observed during the implementation of the vocational program are included in secondary data. Data analysis is the process of finding and compiling data obtained from interviews, field notes, and documentation so that it can be studied and interpreted in a way that is easily understood by others. Qualitative data analysis is inductive.
C. Result and Discussion

Result

Madrasah Aliyah facilitates students with extracurriculars, so that the quality of graduates is able to be demanded to meet the competency standards of the world of work. One of them, besides being able to master the subject matter, students are also expected to be able to interact and be active in social relations. Extracurricular activities are a means to introduce students to social relations. It includes self-introduction education and capacity building in addition to understanding the subject matter. Departing from this thought, Madrasah Aliyah organizes various extracurricular activities. Apart from OSIS as the parent of extracurricular activities at school, other extracurricular activities are: Scouts, Paskibra, Youth Red Cross, School Safety Patrol, Nature Lovers, Sports (Volleyball, Basketball), Karate, Table Tennis, Court Tennis, Spirituality, Cooperative Schools.

Besides that, the advantages of this Madrasah are that it has been named a vocational Madrasah, schools with religious backgrounds produce graduates who are also ready to compete in the world of work when they graduate, abilities with soft skills that are honed, as follows:

Madrasah Depending on the requirements and demands of schools, cosmetology skills change every year in terms of competency standards and basic skills. Cosmetology skills teach eleventh graders how to embroider, including the design of motifs and the practice of embroidery, which results in tablecloths, handkerchiefs, and other items. After 2 years of teaching, the competency standards taught to students are modified to include the making of school clothes and school skirts in the first semester, and then party clothes such as kebaya in the second semester. In the first semester of the following academic year, students are taught how to make blouses and pants for informal wear, and in the second semester, they are taught how to make dresses for formal occasions. Lessons are given in detail starting from the preparation stage (design, measurement, pattern, and cutting) to the sewing, finishing, and fitting stages. This is because the students must not only be able to sew but also investigate the basic knowledge of clothing construction. Class XI is taught how to sew school uniforms, which include school shirts and school skirts. So that the results of these practices can be directly applied to their uniforms.

The process of acquiring skills involves teaching both theory and practice. The materials used for practice are provided by each student, so practice clothes can be reused as needed and generate student pride in their own work. Students who do not have sufficient funds to buy their own practice materials can use materials from schools, and the results of their practice are displayed as motivation for their younger siblings. Every time there is a school promotion event, each talent opens a booth to showcase students’ work, especially fashion students, who also showcase their creations in the form of casual wear, school wear and party wear. This is done to show the public that the students of the Mdrasah Aliyah Model competency skills can work. In addition, students’ work is often exhibited in fashion shows at every farewell event for class XII students. Important learning media, apart from functioning as study guides, also improve student learning outcomes. The school provides printed books, fashion design clippings, sample reports on fashion making, and the internet for fashion skills.
courses. The value of skills not only reflects the results of students' efforts in the learning process, but also affects the value of report cards and class promotions. Therefore, students cannot underestimate skills lessons. This also shows that talent is needed in the world of education.

Spatial planning has a significant impact on student learning outcomes. Therefore, the cosmetology skills installation room is designed to encourage student engagement and ensure their comfort. Every semester, the room layout is changed to prevent boredom and create a new learning environment. In general, the concept of machine arrangement for practice tools is made in groups so that students can discuss with their peers to overcome misunderstandings about the step by step product manufacturing process. It is also intended to improve students' communication skills with their peers so that lessons can be absorbed perfectly. The arrangement of sewing machines can be in the form of 2 machines facing each other, 3 machines arranged to form a triangle facing each other, 4 machines with 2 machines facing each other, and so on, so they can communicate with each other. In addition to setting up the machine as a practical tool, setting up study tables or as a place to cut materials is done face to face so that students can discuss how to cut good materials, how to move the correct pattern markings, and how to write the correct practice report. In the Field Work Practice program, students who have been equipped with the knowledge and skills will be deployed to the industrial world for one month to implement the knowledge they have acquired and learn how the business world operates. For experience in the fashion sector, students are placed in convection which produces school and sports uniforms, modeste which produces casual and party wear, bedding business, and embroidery business. So, after completing street vendors, they will get teaching and experience that they might not get at school. Students who are talented in skills can continue their education at tertiary institutions that offer majors according to their expertise, such as the Department of Family Welfare Education Padang State University which offers Fashion, Catering, and Cosmetology study programs. There have been many graduates of Madrasah Aliyah who have continued their education in this department at university.

Skills lessons are usually scheduled for the last three hours of the school day, therefore, while waiting for teaching or after school hours, we as teachers often make clothes, mukenas, or other products related to clothing in the fashion room. This is done not only to fill spare time, but also to attract students' interest in seeing the process of making a dress, which might also interest them in learning it. In addition, this course is designed to familiarize students with using their free time to complete unfinished tasks or create new items that may not have been taught. And their enthusiasm for completing assignments outside class hours is shown by their visits to the fashion room during free time or after school.

1. PAP Skills (Processing of Agricultural Products)
Initially based on the curriculum issued by the Ministry of Religion of the Republic of Indonesia, the PAP skills curriculum was designed by the skills teachers themselves in accordance with the potential and development of the region. The first year (grade 10) teaches PAP basics, while the second year (grade 11) teaches PAP applications and business administration. Two activities involved in learning are theory and practice. In class X, theory is
taught more, while in class XI, practice is taught more. In practical activities, students work in groups of five to seven people. PAP includes the following skills: Introduction to Tools and Machinery for Processing Agricultural Products, Knowledge of Materials and Agricultural Products, Occupational Sanitation and Safety, Concepts of Quality and Quality Control, Fundamentals of Processing Processes for Agricultural Products, Handling and Processing of Agricultural Products, Business Management, and Production Units.

The PAP skills training program consists of three packages: Basic PAP Package, PAP Skills Package, and Business Management. Class X students in odd semesters are taught PAP skills in the form of an introduction to processing tools and machines. Get to know agricultural materials, quality concepts, and quality assurance. Occupational sanitation and safety is taught at the end of the odd semester as preparation for initial practice. Basic processing techniques such as sifting, blanching, starter, salting, drying, evaporation, low temperature treatment, high temperature treatment, heating, combining, separating, clumping, sterilization, fermentation, and packaging are taught in subjects that last for one semester.

Class XI odd semester PAP skills in processing various agricultural products into various interesting culinary products, which are then marketed. In the even semester, students are taught how to manage a business by making production units, which are then given/borrowed initial capital. Students are taught how to process and manage a business so that they can manage their own business and create small industries. In the sense of instilling an entrepreneurial spirit at a young age, to show the public that Madrasah Aliyah model students are capable of doing business simply.

Students with PAP skills can provide snacks at farewell events and set up booths during school promotions, selling their own creations and processed goods. Madrasah Aliyah students will feel happy because they can generate profits with limited resources. The value of skills not only reflects the results of student learning efforts, but also affects the value of report cards and class promotions. So, students cannot ignore skills lessons. This shows that talent is very useful in education. (Interview with Ms. Reni Arneti, S.TP)

2. **Welding Engineering Skills**

Welding skills used to be a component of Motorcycle (Automotive) Services. In 2009/2010, welding skills were introduced in response to the desire of many students to develop their skills and interest in welding (especially electric welding). Students are instructed in the proper use of tools and equipment according to occupational safety standards through the development of their skills. Students are taught to master various welding techniques, especially electric welding. Students are instructed to weld position joints below and above the hands on plates and pipes. Students who are proficient enough are then trained to weld constructions, such as
making trellis and table/chair fences, in the welding workshop/production unit at Madrasah Aliyah, so that the training materials are not wasted. Of the three batches of graduates, the majority continued their education with various tertiary disciplines. (Interview with teacher of motorcycle and welding skills Mr. Drs. Yazwir, 15 March 2023)

Similar to welding skills, electronics skills are the newest skills, which was introduced in 2009/2010. The Electronics skills curriculum is structured according to the available equipment. Students are trained to be proficient in using electrical appliances, and to be able to repair damage to household electrical appliances such as washing machines, irons, and vacuum cleaners. Students are also taught how to repair kitchen equipment such as magic com and toaster through electronics studies. Knowledge of electronics also equips students with the ability to repair air conditioners and refrigerators. Students are expected to start their own business if they acquire these Electronics skills and leave college. Students from three classes of Electrical Skills graduates model proceed to tertiary institutions with various disciplines.

3. Motorcycle Service Skills
This motorcycle service competency brings in instructors who are experts in their field. Students are facilitated and taught directly to practice with real motorcycles, after being introduced to all motorcycle components. How to disassemble and reassemble a motorcycle to find out the extent of the damage. (Interview with teacher of motorcycle and welding skills Mr. Drs. Yazwir, 15 March 2023)

4. Multimedia Skills
This is a new talent, considering the technological challenges in the modern world. Among the media-related products produced by the students are snack boxes, badges, and school uniforms and banners which they have designed themselves. Plus, schools employ their students to produce these items, eliminating the need to buy from outside.

As with multimedia, this skill is new, but even though it is still new, students have represented the school in robotics competitions. Including the Minangkabau robotics team which won first place in the robotics innovation competition in 2022. And there are many other achievements.

Madrasah Aliyah educates students starting from personality development, application of discipline, creativity, and self-confidence. According in the journal Social Sciences and Humanities by Kadek Rai Suwena entitled The Importance of Entrepreneurial Self Potential Assessment as the Foundation for the Success of the Student Entrepreneurial Program, personality is the overall psychological quality inherited or acquired that makes a person unique. Because of one’s personality, one has the ability to charm others; people are drawn to him, interested in his conversations, and in awe of him. Entrepreneurs with this personality type are often successful in their endeavors. Personality, according to Ms. Zulfa Hayati, instructor, is the most important aspect of
entrepreneurial potential. Students who have a good attitude towards entrepreneurship will easily accept the advice offered by vocational institutions. However, not all students have developed their personalities through entrepreneurial endeavors. Vocational institutions implement entrepreneurship programs by enhancing students' field experience, thereby making them happier and more fluent with field techniques. To support students' potential in the field of entrepreneurship, an understanding of entrepreneurial insights relevant to each program is given after students have mastered field techniques.

**Discussion**

Madrasah Aliyah has designed an effective vocational madrasah-based model to develop students' entrepreneurship skills. By using a descriptive-qualitative methodology, this research shows that this madrasah has given sufficient attention to the development of students' entrepreneurial skills. In order to foster entrepreneurial skills, implements a curriculum that includes religion, personality, discipline, creativity and responsibility. Students are educated to become entrepreneurs with a religious spirit who implement their beliefs in the business world. Thus, education at this madrasah does not only emphasize vocational aspects, but also equips students with the knowledge and skills they need to enter the world of entrepreneurship. In addition, collaborates with local businesses to provide business experience and entrepreneurship training to students. This partnership allows students to learn directly from business professionals and expand their network within the entrepreneurial community. In the context of vocational education, this model offers a solution to the lack of emphasis on developing entrepreneurial skills in vocational institutions. This model combines theoretical and practical approaches so that students can acquire the knowledge and skills needed at school and in society. The future survival of students is positively influenced by the development of students’ entrepreneurship skills established in the vocational madrasah. Students are educated to be independent and able to contribute to the nation's economy in facing future challenges.

Vocational education is one of the options to increase the competence of the Indonesian generation. Students are provided with the ability to live and work through vocational education. The purpose of vocational education is also to foster students’ creativity and understanding of their role in social life. As a vocational school, Madrasah are distinguished from other institutions by additional activities in the skills area. Apart from spiritual intelligence, students are also equipped with the hard skills and soft skills needed to be successful in the world of work.

Students are used to applying discipline at school, such as locking the school gate at 07.00 and zero tolerance for lateness. Student attendance relies on biometrics that are connected directly to the parent's whatsapp. Vocational programs also incorporate the concept of time management. Students are required to complete the entire vocational program by selecting an area of interest at the start of the school year. In addition, as explained in the procedures and methods of vocational education, teachers play a very active role in arousing the creative spirit within their students. Apart from having outstanding students, has teaching staff who are professional and excel in their respective fields. The skyrocketing
achievements and the cohesiveness of the teachers who collaborate to motivate students are the direct results of the school principal’s exemplary leadership and management.

Extracurricular activities in the arts and sports have increased the self-confidence students, instilled strong self-confidence and a sense of responsibility as entrepreneurs, and directed them to like the world of entrepreneurship wrapped in religious values.

D. Conclusion

Vocational education is one option that can increase the competence of the vocational education to provide students with life skills, such as the development of creativity, an understanding of the individual’s role in society, and the knowledge and skills necessary for school and community life. Madrasah are a continuation of the pesantren education system which has been adapted to fit the general school model. Madrasas offer additional activities in skills areas, which differentiate them from other general education institutions. Vocational education in madrasah seeks to produce generations of students who are entrepreneurial and have a positive impact on the nation’s economy. The school also organizes vocational and extracurricular programs to equip students with knowledge and skills related to the world of work. This study uses a descriptive-qualitative approach and a case study methodology to examine. Data was collected through interviews and documentation. The emphasis on vocational education is on dressmaking skills. Students are given the opportunity to create products that can be used in the real world as part of their fashion education. This conclusion highlights the importance of vocational education in preparing students with relevant knowledge and skills for the world of work, as well as the efforts made by Madrasah to institutionalize vocational programs and improve student achievement.

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F. References


