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Building Science-Based Community Service Synergy, Specifically The Spreadsheets At Harapan Utama Vocational High School

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Abstract

Referring to Universitas Internasional Batam Higher Education, which includes education, research and community service, universities should be able to carry out this community service in a functional and integrated way. Community service as one of the pillars of higher education occupies a strategic position in community advancement and education to improve the community's quality of life. The form of coaching is considered the most what is realistic is nothing other than the provision of offerings through skills training and mentoring that are deemed useful to local community audiences. The Community Service Student Creativity Program is a means for students to fulfill the third mission of higher education, community service. The program that we propose this time has the title "Building Science-Based Community Service Synergy, Specifically the Spreadsheets at Harapan Utama Vocational High School". The form of this program is the development of students as a society in the field of science through the creation of modules or teaching materials as additional guides to the lessons. This program has the goal of creating a society that is rich in knowledge and assisting the learning process in an interesting, relevant and quality way. From the program described above, the method that will be used in achieving the goals is through various stages such as initial visits to partners in the preparatory stage, starting to study and preparing material for implementation, and finally the evaluation stage, namely finalizing teaching materials to partners.

Keywords: *synergy, community, scienc*

Introduction

Students are the top layer in the hierarchy of educational levels. The main task of the students is to develop academic activities such as studying and writing a work, be it in the form of poems, rhymes, books or academic papers (Suryana, Asep et al 2021). Therefore, the ability to write must be possessed by everyone who is engaged in education, one of them are students (Dwijayanti et al., 2017). Things students can write about can be both real and fictional ideas, research results both individually and in collaboration with fellow students or with lecturers, and can also be in the form of other writings that can be published or published in journals or letters (Aswalmi G. & Lily S. 2020). Out of the many publications worthy of publication, research results are the most appropriate object to be used as a scholarly work, since research refers to an activity in which an object found in the field is studied using different methods or rules of a specific approach and methodology is examined can support his research (Doni P. A., & Oda I. B. H. 2019).The facilitation of writing increases the quality of learning, since in addition to the more

varied learning, knowledge and skills for writing scientific papers are also imparted. Improving the quality of learning is one of the goals to be pursued by different academic circles (Kusnadi et al., 2017). Most learning problems are known to be that the learning undertaken is still focused on understanding concepts without providing students with learning experiences. Of course, this affects the low level of thinking of the students. Learning also does not involve all the senses, so students' knowledge and understanding can be recorded and last a long time. Rather, the learning process should be able to motivate and increase the learning attractiveness of the students. This condition can be achieved when the teacher is able to select learning models, strategies, and methods and package them into an attractive learning plan (Lukman et al., 2019). Therefore, higher education institutions involve student community service to support this role. Hence the program we are proposing this time, entitled "Building Science-Based Community Service Synergy, Specifically Spreadsheets, at Harapan Utama Vocational High School." The realization of this program is the development of the students as a society in the field of science through the creation of modules or teaching materials and learning guidelines (Ratih A. , et, al (2023). This program aims to create a society that is rich in knowledge and supports the learning process in an interesting, relevant and quality way (Jonathan, A. 2021)..

Methods

The method used in this research is qualitative research in the form of interviews in collecting data and information. Research in this method is research that is often used (Rachmawati, 2007). Qualitative research generally uses unstructured or semi-structured interviews (Holloway & Wheeler, 2002). The different phases that are carried out are (1) Preparation phase, carry out an initial survey to find community service and carry out initial introductions and communicate the aims and benefits of this project to the partners. Through observation and interviews, one can learn the history of the partners and also what partners expect from project implementers. Then joined several project implementation partners at Harapan Utama Vocational School along with study programs and school partners. Then conduct face-to-face meetings to discuss the process of project implementation. At the next meeting is the deadline for finding a topic and compiling community service proposals and submitting them to the accounting department and signing cooperation agreements with partners (Febria, Desty et al 2021). The next phas is implementation phas. Begin studying the standard syllabus of Harapan Utama Vocational School during the indicated month. In the month after completion, the teaching materials were prepared, the results of the teaching materials were discussed with the teachers from Harapan Utama Vocational High School, and the teaching materials were handed over and implemented by Harapan Utama Vocational School. (3) Evaluation phase, carry out the preparation of practical work reports and completion of the practical work report through the consultation process with the relevant manager and completion of the professional training report. Hardcover must be submitted to BAAK.

Result and Discussion

Preparation Phase

At this point, a survey of partners and cooperation partners of this civilian service was carried out, namely the Harapan Utama Vocational School. The results of the survey began with an initial introduction and communication of the importance of the related topic, namely spreadsheets, to the partners for today's life as well as for the real world of work. As for the goals and benefits conveyed, based on survey results, this non-profit collaborative activity is very well received and running smoothly. Implementation Phase At this stage, instructions on standard curriculum material, namely Syllabus, in the hope that the provision of the material would be sufficiently updated to follow the evolution of current standards for spreadsheet-related instructional materials. Then, the preparation of the teaching materials was completed and the delivery of the materials was carried out, and the results obtained were that the partners were very satisfied with the provided teaching materials based on the expressions shown when receiving the teaching materials and received a warm welcome. In the preparation of teaching materials there are 4 chapters to be the subject of discussion. Chapter 1 explains how to prepare and operate a spreadsheet then in chapter 2 the topic is raised about analyzing and processing data based on cell characters. Furthermore, chapter 3 deals with data processing with several functions such as math, statistical functions, financial functions, date and time functions, semi-absolute and absolute formulas, logical functions, text functions, also processing data using lookup and presenting data graphically. The last one is chapter 4 which explains the application of spreadsheets to the accounting cycle in making general journals, ledgers, balance sheets, reports, and others.



Picture 1. Material Module Source: Processed Teaching Materials (2022)



Picture 2. Presentation Source: Processed Teaching Materials (2022)



Picture 3. Powerpoint (1) source: Process Teaching Material (2022)



Picture 4. Powerpoint (1a) source: Process Teaching Material (2022)



Picture 5. Powerpoint (2) source: Process Teaching Material (2022)



Picture 6. Powerpoint (2a) source: Process Teaching Material (2022)



Picture 7. Powerpoint (3) source: Process Teaching Material (2022)



Picture 8. Powerpoint (3a) source: Process Teaching Material (2022)



Picture 9. Powerpoint (4) source: Process Teaching Material (2022)



Picture 10. Powerpoint (4a) source: Process Teaching Material (2022)



Picture 11. Solution Bank source: Processed Teaching Material (2022)

Evaluation Phase

In the evaluation phase, the author completed the report on community service and reflected with coordinating teachers to describe the importance of spreadsheets for today's life, which need to be studied more carefully during school days so that they can be further applied in the world of work. This evaluation phase is also carried out through an interview process with the relevant teachers and suggestions on how to implement the training, in addition to providing a questionnaire to the teachers regarding suggestions and inputs on how to implement the training so that it can be corrected for the next training. This training activity is a series of faculty service activities in collaboration with students. The purpose of this training is to improve teachers' competence in managing active learning, to promote the literacy movement in schools, and to develop students' critical thinking skill. As for the results obtained from the enthusiasm that has been applied by the teacher to students based on teaching materials that have been designed to build more student creativity, activeness in learning, interesting material presented triggers student enthusiasm in learning the material provided.

Conclusions

The implementation of this community service is a good first step for students to get involved and contribute to the wider community. The support from government, community leaders and coaches gives great hope that in the future they can be better prepared to serve the community and provide wider benefits. When it comes to the implementation of community service at Harapan Utama Vocational High School, it can be said that the enthusiasm for this implementation was very satisfactory. In this case, it is also remembered that the many changes in the environment in today's modern era require students to be able to adjust their skills and qualities before going into the field. As for several types of community service that can be applied in the future such as conducting direct material exposure training, direct interaction with students and others.

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