KAWANAD
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Competency Improvement Through Character Education and Utilization of Digital Technology for SMA and SMK in Bandung and Tasikmalaya (Studies at Islamic Boarding School Ulul Albab Bandung and SMAN 2 Tasikmalaya)

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ABSTRACT

In the Industrial Revolution 4. 0, the integration of automation and artificial intelligence has led to significant changes in various sectors, offering the potential for promising advances in efficiency and develop. Research on perception and prospective analysis of artificial intelligence and its impact on human resources in Indonesia's industry 4.0 highlights the central role of human resources (HR) in the adaptation process of Indonesia in today's industrial era. Even as artificial intelligence brings about significant technological advances, the fundamental role of human values promoted by HR remains an important factor in this transformation. Faced with this challenge, the role of teachers in higher education environments becomes important as change agents capable of integrating theoretical knowledge with real-world practical experiences. To cope with these changes, specific training courses have been designed to enhance the skills of students and teachers, especially in the areas of character building and the use of digital technology. This training includes the use of social media and multimedia as educational tools, as well as applying the three dharma principles of higher education through community service activities. Through this effort, we hope universities can play an active role in preparing human resources capable of adapting and responding to global changes while preserving the values and importance of people in the era of Industry 4.0.

ABSTRAK

Di Revolusi Industri 4.0, integrasi otomasi dan kecerdasan buatan telah membawa perubahan signifikan di berbagai sektor, menawarkan potensi kemajuan yang menjanjikan dalam efisiensi dan perkembangan. Studi Persepsi dan Analisis Prospektif Kecerdasan Buatan dan Dampaknya Terhadap Sumber Daya Manusia di Industri 4.0 Indonesia menyoroti peran sentral Sumber Daya Manusia (SDM) dalam proses adaptasi Indonesia terhadap era industri terkini. Meskipun kecerdasan buatan menawarkan kemajuan teknologi yang substansial, peran fundamental dari nilai-nilai kemanusiaan yang diusung oleh SDM menjadi faktor krusial dalam transformasi ini. Menanggapi tantangan ini, peran dosen dalam lingkungan perguruan tinggi menjadi penting sebagai agen perubahan yang dapat mengintegrasikan pengetahuan teoritis dengan pengalaman praktis di dunia nyata. Untuk menghadapi perubahan ini, pelatihan khusus telah dirancang untuk meningkatkan kompetensi mahasiswa dan dosen, termasuk dalam bidang Pendidikan Karakter dan Pemanfaatan Teknologi Digital. Pelatihan ini mencakup penggunaan media sosial dan multimedia sebagai instrumen pendidikan, serta penerapan prinsip-prinsip tri dharma perguruan tinggi melalui kegiatan pengabdian kepada masyarakat. Melalui upaya ini, diharapkan bahwa perguruan tinggi dapat berperan aktif dalam menyiapkan SDM yang adaptif dan responsif terhadap perubahan global, sambil tetap mempertahankan nilai-nilai kemanusiaan yang penting dalam era Industri 4.0.

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1. Introduction

The industrial revolution 4.0 has brought many developments, the era of automation has been implemented in several sectors to streamline activities and artificial intelligence as the driving force in this era, which promises many conveniences in various fields. Artificial Intelligence is no longer just a mere hope but will soon become a reality and will soon be operable on personal computers. Methods of solving problems by adopting human forms, characters, and habits in living their lives, are widely used as study material for computer experts, in the field of artificial intelligence technology (Kusumawati, 2018).

Based on the results of a study entitled "Perceptions and Prospective Analysis of Artificial Intelligence and its impact on Human Resources in the Indonesian Industry 4.0" Human Resources in Industry is a crucial variable in changing Indonesia's movement to prepare for industry 4.0. Industry 4.0 can be interpreted as an industrial era in which all entities or devices in it are made able to communicate with each other in real time at any time by utilizing internet technology, to achieve the goal of creating new value or optimizing existing value from every process in the industry (Prasetyo and Sutopo, 2018). Seeing this phenomenon, preparing the character of Human Resources from an early age is far more important in facing Industry 4.0, because it is considered that artificial intelligence cannot replace human values. Based on the results of the study it was also found that it was necessary to have subjects that applied digital technology to help them professionally by adjusting to demand for industry 4.0 and the needs of teaching staff who were not only academics, but also needed practitioners who had pedagogical, professional, and social competencies so that they were more attract students.

2. Methodology

Based on the description above, in the first stage the team conducted a preliminary survey regarding the Target Audience to find the main problems experienced by SMA and SMK students in Tasikmalaya so that the educational process runs effectively and according to needs. Preparations made for this dedication activity include:
1) Literature studies related to character development and the use of technology to provide knowledge and understanding for the Target Audience to become superior Human Resources and be able to compete in the Digital Age.
2) Conducting focus group discussions on the implementation team to equate perceptions regarding character development and the use of technology to provide knowledge and understanding for the Target Audience to become superior Human Resources and be able to compete in the Digital Age, adjusting schedules, places and methods of implementing activities related to the Covid-19 pandemic, identify SMA/SMK or other alternatives such as Islamic boarding schools;
3) Coordinate with the Ulul Albab Islamic Boarding School, Block 71 and Talkabot as partners regarding the implementation of community service activities and agree on several matters.
4) Conduct focus group discussions on the implementing team to design an agenda for technical activities to be carried out on site or with partners.

The second stage is the stage of processing information and determining problem solving. At this stage the team determines the material based on the main problems experienced by SMA and SMK students. Activities carried out at this implementation stage include:
1) Conducting field studies in the form of:
   a. Meetings with service team representatives with partners and target audiences to convey these service programs and activities;

      b. Service team meeting discussing study program profiles;

      c. Service team meetings that specifically discuss and deepen character development and use of technology to provide knowledge and understanding for Target Audiences to become superior Human Resources and be able to compete in the Digital Age

2) Discuss the results of field studies including:

      a. Characteristics of the Target Audience

      b. Study of material design and workshop methods.

      c. Determine/provide materials, links, flyers and so on.

3) Preparation of service activity materials. At this stage, the team collects information and theory related to materials in character education, marketing through social media and multimedia and collects practical materials and case examples related to preliminary materials, character education and the use of technology through skills in multimedia activities.

The following are some of the materials presented:

Figure 1. Material Presented

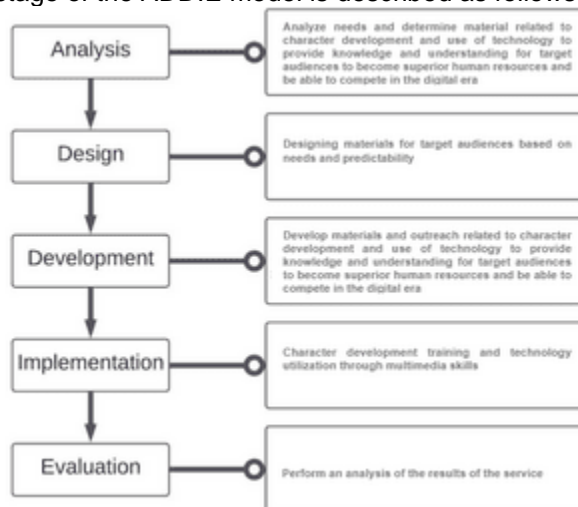The development stage of the ADDIE model is described as follows:

Figure 2. ADDIE Model

In accordance with the planned agenda, the follow-up activities of this service are as follows:
1) Socialization of Study Programs and Introduction Regarding Character Development and Utilization of Technology through Multimedia Skills.
2) Character Development and Technology Utilization Training through Multimedia Skills.
3) Accompaniment.
4) Monitoring and evaluation of service.

3. Results

A series of community service activities were carried out at the Ulul Albab Bojongkoneng Islamic Boarding School, Bandung on November 6, 2021, and SMAN 2 Tasikmalaya on November 13 2021, both offline and online.
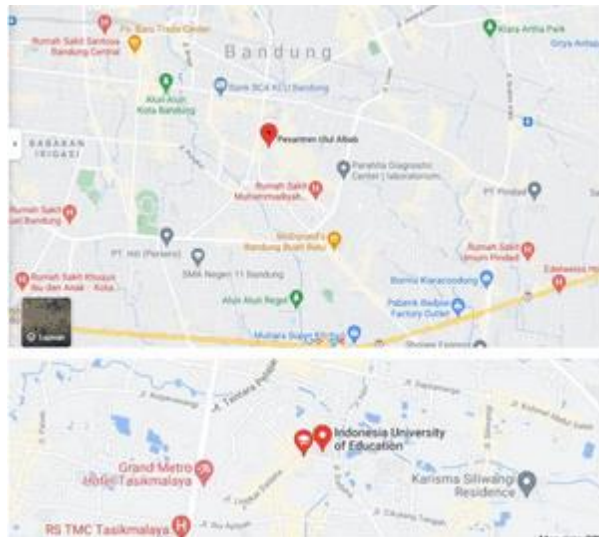

Figure 3. Activity Area Map

3.1 Training on Perceptions and Prospective Analysis of Artificial Intelligence and its impact on Human Resources in the Indonesian Industry 4.0

Understanding of Artificial Intelligence, current industrial terms, or use of technology at the Ulul Albab Bojongkoneng Islamic Boarding School, Bandung, is very minimal. Good knowledge of the importance of character development and use of technology in the Digital Age. In contrast to SMAN 2 Bandung who are familiar with several terms and understand the importance of these things but are still not equipped with sufficient understanding or skills. Given the problems mentioned above, training and mentoring was held as an initial presentation in the form of introduction to concepts and motivation on the importance of character education and the use of technology in the Industrial Age 4.0 as superior and competitive human resources. Even though during the training and mentoring we carried out offline and online methods, this did not dampen the enthusiasm of the students in carrying out this activity.

Figure 4. Perceptions and Prospective Analysis of Artificial Intelligence and its impact on Human Resources in the Indonesian Industry 4.0.

3.2 Training on Digital Ethics for Youth as Part of Digital Competence in Digital Era

Their ignorance of ethics in the digital era, especially in the use of social media, led to training activities in a persuasive presentation that participants could easily understand in a good and systematic manner. In this training they are taught about digital literacy, internet ethics and etiquette, participation in building social relations on digital platforms. It is hoped that after this training, participants will be able to manage their social media for more useful things. The training was well received by the participants because the participants really needed this activity. All of this was shown by the participants when participating in this training activity from start to finish and they asked lots of questions, especially regarding the importance of their role as a society that would become human resources in the future.

Figure 5. ning on Digital Ethics for Youth as Part of Digital Competence in Digital Era

3.3 Training on Digital Content

Apart from providing training and mentoring in the form of basic concepts and digital ethics in this activity, the service team also provides how to create positive digital content with Canva as a tool that participants can use. It is hoped that the training will also improve the skills of the participants. Participants are also given merchandise for learning and can motivate participants to become superior and competent human resources in the digital era.

Figure 6. Training on Digital Content

4. Discussion

In this activity, we also invited Thian Agus Akbar as a Key Opinion Leader in a Sharing Session with Key Opinion Leaders. In this activity, Thian as a young person who after graduating from high school can run and divide his time between studying while working as a 48 Street Manager provides training and mentoring on how as a young person can contribute to this Digital Age through good character and good use of technology on social media and in creating positive content.

5. Conclusion

1) The implementation of community service has been carried out well and received a positive response from the Target Audience, so it is expected to have a positive impact on increasing awareness and motivation for the target audience regarding the opportunities and challenges in the Industrial Revolution 4.0 era as human resources. Efforts to increase knowledge and understanding of the importance of Character Education and Utilization of Digital Technology must be carried out on an ongoing basis so that this positive knowledge can encourage appropriate behavior and activities to advance competent human resources in the Era of the Industrial Revolution 4.0.

2) In this activity, pilots have been implemented to help in the form of learning facilities and modules as a source of information about Character Education and Utilization of Digital Technology. It is hoped that it will become a means that can be accessed by the Target Audience to increase knowledge and understanding regarding Character Education and Utilization of Digital Technology.

3) This pilot is encouraged to be realized, so support is needed from the government, academics, and practitioners in carrying out sustainable community empowerment programs to increase public awareness regarding Character Education and Utilization of Digital Technology in Efforts to Produce Competent Human Resources in the Digital Age.

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