Student Needs-Oriented E-Training Model In Society Era 5.0

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Abstract

Element's necessity profession that ssustainable must become point fundamental deep implementation Increased quality source power human attempt Increased quality employees in the ministry of religious affairs. Besides necessity Increased profession, Training official must Refers at Fulfillment necessity other deep run profession official. To know necessity deep Activities Training must do analysis necessity Participants Training. Research this Aims Analyze and Describe characteristic and implementation education and eexercise in society 5.0. Research this use Approach Qualitative. Subject research Comes from Informant key like Organizers, committee, widyaswara- instructor and Participants Education and Training. Collection data use interview Deep, Observation and documentation. Validity data with Triangulation source and method. Analysis data through Reduction data Serving data Withdrawal conclusion and verification. Result research find that to Develop knowledge, Skills, attitude Mental and personality official in order to get Implement tasks government and building with Best-Good. At the planning stage, Bureau Planning and unit related Body R&D Religion and Hall Religious discuss proposal priority

necessity Education and training every unit organization navel and area. Activities Education and training collision with use online media with the BDK Learning Center platform. Monitoring Implemented when education and Training still last. Evaluation Management education and Training that Held by Hall Education and Training Religious Semarang be Thought towards success planning, implementation and Reporting Activities appropriate with purpose that want Reached.

Introduction

The era of globalization shown towards digital technology, requires the availability of competent human resources in order to compensate. The development of digital technology can lead to the formation of primitive and isolated human resources if avoided. The fulfillment of competent human resources to follow the development of digital technology can be done through the field of education, so there needs to be good attention by a country. Human resources are one of the fundamental aspects in running the government, maintaining survival and maintaining the development of the country to achieve the predicate as a developed country. The next generation of qualified nations can be formed if the resources that carry out education master technology according to the times. The sophistication of technology utilized by education actors must certainly be supported by the quality of human resources that are qualified in carrying out their work.

Pragmatically the training program has a positive impact on both the individual and the organization. This is in accordance with (Franck, et al, 1997) which outlines the profile of individual capabilities with regard to skills acquired from training and development. Along with the literature of expertise or skills, the income received by individuals will increase. In the end, the results of the training will open opportunities for improved performance, job quality, and graduate quality. Over the past thirty years, the training and development function has evolved into a major part of business due to the need for improved human performance in the workplace to keep organizations competitive in changing markets. Training management according to (Mujiman, 2011) is the management of training programs, which concern aspects of identifying training needs, training design planning, and the determination of training methodologies, preparation of training materials, training implementation, training evaluation, and determination of training follow-up. These are the standard aspects of training management that are commonly implemented in training activities. There are various training models that exist, can be seen among them as expressed through several stages whose training cycle consists of: (1) Analysis to determine training requirements, (2) Design the training approach (design the training approach), (3) Development of training materials (develop the training materials), (4) Conduct the training implementation, and (5) Evaluation and update the training (evaluate and update the training).

Proper TNA processes or steps, which help identify the "needs" of participants and companies can improve the effectiveness of the training. Arshad et al. (2015) suggests that the way the TNA process approaches is also important in determining the accuracy of the

results. Similarly, (Conger, 2015) suggests that one of the factors that is very important to improve the success of a training program is the TNA process. Conger further emphasized that the relevant TNA process will include attentive consideration of the accuracy of these identified "needs" and the fulfillment of these "needs". Therefore, if these "needs" are correctly identified when using the correct process, then the chances of training success are high. To this end, organizations that carry out training require several steps to manage the skills training process. (Arshad, et. al, 2015) ensure that its steps begin with the identification of training needs, designing and developing appropriate training solutions, implementing skills training and evaluating the effectiveness of training programs, regarding the achievement of initial needs.

After identifying training needs, it is important to discuss the four key factors that lead to effective TNA and skills training for employment. The first factor is the analysis of individuals or persons to determine the target of individuals who need to be trained Liu and Sun, 2013) and (Siahaan, 2014) state that individual analysis helps identify trainees who need training for employment based on a lack of skills, knowledge or attitude. It is important to note that the individual analysis process requires current training needs and training development that will help him or her achieve the expected standards of performance in the workplace in accordance with organizational goals. The second key factor is the quantitative and qualitative method of data collection (Siahaan, 2014). This method may require survey questionnaires and interviews with the person being targeted.

The preliminary that has been implemented is the findings about the implementation of training that still uses face-to-face design only and there is no pre-training and post-training stage. Hasil has been achieved in the form of model development startups through E-Training in pre-training and post-training activities, while face-to-face activities are still held as already done. The Covid-19 era requires that activities must be network-based (online) so that it needs proper planning design and training design Tulsky, 2011). The implementation of education in the era of society 5.0 must be able to adapt and competent. The era first initiated by the Japanese state with the concept of humanist life based on technology put forward the position of humans as active subjects who cooperate with "physical systems" to achieve a goal.

The era of society 5.0 is an era to watch out for so that in its implementation, education and training must be supported with adequate infrastructure; competent human resources; synchronization with industry; as well as learning activities in training that use technology (Prasetyo, E. P. Pranata, I. Meydina, Z.N. Fauzi, 2021). Aware of the challenges and developments that occur, it should be the implementation of education and training in the era of society 5.0 must be prepared carefully with regard to supporting aspects. The element of sustainable professional needs should be a fundamental point in the implementation of improving the quality of human resources efforts to improve the quality of employees in the Ministry of Religious Affairs. In addition to the needs of improving the profession, employee training should refer to meeting other needs in carrying out the employee profession. To know these needs in training activities must conduct an analysis of the needs

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of trainees. This research aims to analyze and describe the characteristics and conditions of educational and training implementation in the era of society 5.0.

Metodology

The methods used in this study are qualitative methods with descriptive approaches. The type of research method chosen is descriptive analysis, while the definition of descriptive methods analytical according to (Creswell, 2000) is a method that serves to describe or describe the objects studied through data or samples that have been collected as is without conducting analysis and making conclusions that apply to the public. The subjects in this study were trainees organized by the Semarang Religious Education and Training Center amounting to 2 organizers, 3 committees, 5 widyaswara, and 10 participants in education and training. The data retrieval stage is carried out with interview guidance instruments, observations, and documentation. Data collection in this study is done by reviewing the results of interviews, observations, and documentation in a qualitative descriptive manner. Data analysis is carried out through analytical activities consisting of three flows of activities that occur simultaneously, namely data reduction, data presentation, and conclusion withdrawal. Happening simultaneously means data reduction, data presentation, and conclusion withdrawal.

Result

Training Conditions and Needs

Hall Education and training religious Semarang is a UPT (Technical Implementation Unit) of the R&D Agency and Education and Training Ministry of Religious Affairs Republik Indonesia so that the Vision and Mission carried out in line with the Vision and Mission of the R&D Agency and Education and training Ministry of Religious Affairs Republik Indonesia. Certain functional Department Resources in this case widyasiwara owned by Hall Education and Training Religious Semarang that is 37 widyaiswara/ Instructor consisting of widyaiswara/ instructor technical personnel and widyaiswara/ instructor administrative personnel. Widyasiwara BDK Semarang is authorized with the duty, responsibility, authority to educate, teach or train employees in the Hall Education and training Religious Semarang

The condition of the Semarang Religious Education and Training Center is currently required to keep up with the times, the demands of the situation and conditions of society, it needs a new paradigm in education and training that includes systems and strategies that are able to answer various changes in situations and conditions, especially along with the development of science and technology and increasingly fierce global competition. To realize this, the Decree of the Minister of Religious Affairs of the Republic of Indonesia No. 1 of 2003 (which is often abbreviated as KMA RI No.1 Th.2003) on Guidelines for Education and Training of Civil Servants in the Ministry of Religious Affairs.

By Decree of the Minister of Religious Affairs mention that Education and Training be process maintenance learn teach deep skeleton Increase Competence official country civil at milieu Government department The religion Implemented at least 40 (four ten) hours lesson (JP) with duration each hour lesson 45 minute". With such, By KMA aforementioned get Understood that assignment base institution education and Training religious, good that Hall Education and Training Religious And Puseducation and Training Power Administration, Puseducation and Training Technical Personnel Religious and Body R&D and Education and Training Religious be Organizes Activities to education and Training an and development source power human at milieu The Ministry of Religious Affairs duration 40 hours lesson or less more 4 day at least. Less from 40 hours lesson can Implemented by institution Another Ministry of Religious Affairs.

The implementation of education and training can be done classically (in the classroom) or non-classically by following the instructions and guidelines that have been set (Sutarto, et al, 2021). Non-Classical Education and training can be carried out in the open, Education and training in the Workplace (DDTK), Distance Education and Training (DJJ) and Assignment. The number of Participants in Classical Education and training is determined between 30 to 40 people, while the number of non-Classical Education and training participants is adjusted to the needs. The education and training programs provided by the Semarang Religious Education and Training Center in general include regular training, training in the work area, distance training, and cooperation training (Suminar, et.al, 2021). The purpose of education and training in general is to develop the knowledge, skills, mental attitudes and personalities of employees in order to carry out the tasks of government and development as well as possible. In particular, each type of education and training has its own objectives, such as the purpose of Education and Training of Level IV Leaders in addition to developing knowledge, skills and mental attitudes and also developing insight and leadership spirit. Similarly, the education and teacher training, education and supervisor training, education and training instructors, and others.

Participants in education and training at the Semarang Religious Education and Training Center are employees who in the implementation of their duties require the improvement of certain technical competencies in the education and training of Semarang Religious, the determination of prospective education and training participants. It is selective and is an explanation by taking into account the needs of the organization and the career development of employees in structural positions, functional positions and certain technical positions. Educational and training facilities and infrastructure are set according to the type of level and the number of educational and training participants who are useful to support the smooth success of the education and training process.

Planning Education and training done with Preparation priority necessity education and Training with unit organization in the region Javanese Middle and Deliver to Body R&D Religion and Education and Training Religious. Next Body Research and Devotion Religion and Education and Training Religious Held meeting consultation planning program Education and Training use pile up priority necessity education and Training

aforementioned. Then together Bureau Personnel Bureau Planning and unit related Body Research and Devotion Religion and Hall Religious discuss proposal priority necessity education and training every unit organization navel and area. Priority necessity that then become priority program education and Training and Set by the Body Research and Devotion Religion and Education and Training Religious Semarang.

A curriculum is an educational program that is planned and implemented to meet a number of specific educational goals. The education and training curriculum at the Semarang Religious Education and Training Center is structured based on job competence, educational and training output, the needs of the development of the implementation and function of the organization, the development of science and technology, as well as the name and life of religion. In establishing widyaiswara/ instructor, Semarang Religious Education and Training Center previously set instructor requirements, Semarang Religious Education and Training Center set instructor requirements among others: functional officials, this means that a instructor must already be a functional official, i.e. a high-ranking official who is functionally most responsible for the implementation of government discretion. Expert, meaning an instructor is an expert in a field of theoretical knowledge or experts either needed in education and training or experience, then coordinate with prospective instructor after that only established with the Decree of the Head of Education and Training Hall Semarang.

The implementation of education and training at the Semarang Religious Education and Training Center refers to the program plan designed by the Semarang Religious Education and training center. Each class of education and training programs is carried out within a maximum period of 10 days followed by an average of 40 participants. The implementation of education and training at the Semarang Religious Education and Training Center was carried out through stages, (1) the Committee prepared education and training participants to participate in the opening ceremony. (2) Education and training participants receive educational and training explanations from the committee. (3) The Committee conducts orientation for educational and training participants before participants participate in the education and training program. (4) Education and training participants are obliged to arrange the organization/ classroom devices and means to uphold the smooth implementation of educational and training tasks. (5) Participants must attend lectures to obtain materials through education and training from instructors. (6) Educational and training participants follow the program in accordance with a predetermined schedule. (7) Education and training participants who are considered to have good dedication and cooperation during education and training and can complete all educational and training programs are entitled to obtain certificates in accordance with applicable provisions. (8) The certificate is submitted after the closing ceremony is completed. The implementation of activities based on these stages along with the covid-19 outbreak is carried out through online via zoom metting for face-to-face meetings, while for learning activities carried out through the BDK Learning Center (https://blc.bdksemarang.net/).

Monitoring is carried out while education and training are still ongoing. Evaluation of education and training management organized by the Semarang Religious Education and Training Center is a thought on the success of planning, implementing, and reporting activities in accordance with the goals to be achieved. This evaluation is carried out to measure the success rate of the process of implementing education and training and the achievement of educational and training results. Simply put, the implementation of education and training in the Semarang Religious Education and Training Center is depicted in the following image.

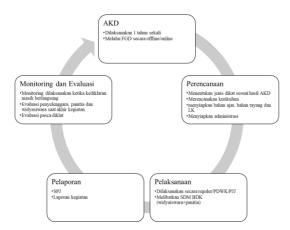


Figure 1. Chart of The Process of Implementation of Education and Training at the Religious Education and Training Center of Semarang

Semarang Religious Education and Training Center seeks to produce human resources that are able to compete globally in the era of society 5.0, Semarang Religious Education and Training Center has prepared a number of strategies in accordance with the government's mandate in realizing world class government or world-class government in 2024. Several strategies began to be launched, including SMART ASN, digital transformation, and the implementation of Electronic-Based Government Systems (SPBE), both in the central government and local governments, as has been issued presidential regulation No. 95/2018 on Electronic-Based Government Systems. With a system that is in accordance with the times in the era of society 5.0 is expected to improve the performance of the apparatus.

Design of Needs-Oriented E-Training Trainees in the Society Era 5.0

The development of e-training design oriented to the needs of trainees in the society 5.0 era refers to the role of the needs of trainees. This is seen from the goals to be achieved in educational and training activities pursued relevant to the needs of education and training participants where the recommendations of the implementation of education and training previously directed follow-up analysis of the determination of training objectives to pay attention to training need analysis. Referring to this, online-based training or e-training emphasizes more on the learning needs of education and training participants and on the other hand also emphasizes the development of the use of e-training in improving the quality of human resources as needed in the era of society 5.0. Thus, education and training participants are expected to be able to meet the needs in increasing the quality of work in

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institutions where education and training participants work which hopes to have a positive impact on the quality of the organization.

E-training is an important component in facilitating the implementation of education and training in light of the rampant cases of covid-19 spread that require all activities that can cause crowds to be avoided. The concept of e-training-based education and training is successful if the facility can accommodate all educational and training activities accordance with the planned objectives. Model E-Training in the implementation of training to improve competence has several stages consisting of (1) Structured Exercises, instructors guiding educational and training participants to work on training problems. The important role of instructors in this phase is to provide responses to the responses of education and training participants and provide reinforcement to the correct responses of education and training participants and correct the responses of educational and training participants incorrectly. (2) Guided training, instructors provide educational and training participants with the opportunity to practice concepts or skills. This guided exercise is also used by instructors to assess /assess the ability of educational and training participants in doing their work. In this phase the instructor's role is to monitor and provide guidance if needed. (3) Self-training, education and training participants carry out training activities independently, this stage can be passed by education and training participants if they have mastered the task stage 85-90% at the training guidance stage so that the training is carried out in accordance with the planned planning that has been made. (4) E-Training as a medium of learning in training provides ease in accessing materials, videos and conducting ability tests so that training runs in accordance with the field of training.

Steps in the analysis of training needs include (1) identifying optimal circumstances to determine the expected circumstances; (2) identify the actual state of performance to determine the actual circumstances; (3) identifying gaps; (4) identify the cause of the performance gap; and (5) identify recommendations for performance problems that occur. Here is the design of e-training oriented to the needs of trainees in the era of society 5.0 in the education and training of Semarang Religious.

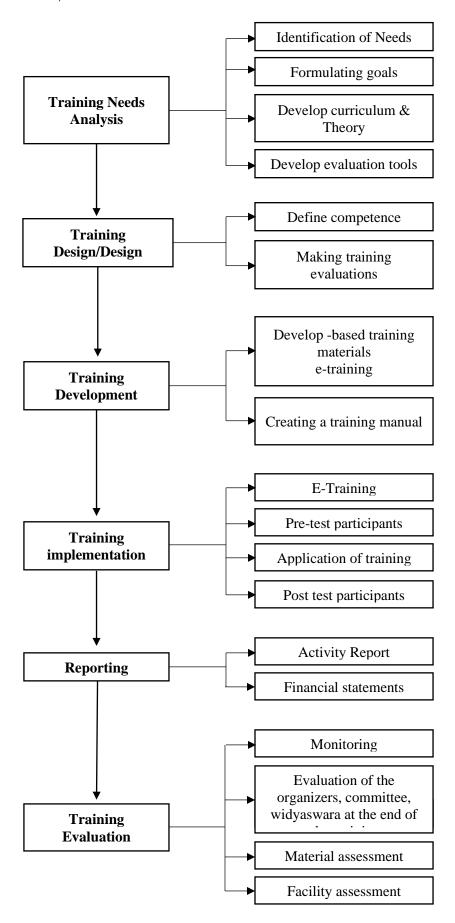


Figure 2. E-training design oriented to the needs of trainees in the era of society 5.0 at the Semarang Religious education and training center

Based on the design image above, education and training activities in the needs-oriented trainees in the society 5.0 era can be explained education and training in the Religious Education and Training Center Semarang has the concept of education and training accommodating the needs of education and training participants. to improve performance with competence in accordance with developments in the era of society 5.0. The development of education and training in the Semarang Religious Education and Training Center to meet the needs of participants is very potential because education and training activities have been carried out needs analysis, but the process of assessment of needs according to procedures in meeting needs needs to be done management in accordance with the stages in the analysis of training needs to improve performance competence in fulfillment of organizational performance, position, individual.

Analysis of educational and training needs becomes an activity to search, find, record, and process data related to what education and training participants need, which is the expectation of participants and institutions. Analysis of the needs of education and training is very important especially in the Covid-19 pandemic because the work is done online. So, the needs of participants will be more and more. The existence of analysis of educational and training needs, it will be known what needs must be met or prioritized to support the professionalism of work.

Discussion

The use of e-training plays an important role in the improvement of competence in the era of society 5.0. The use of e-training has helped organizations with several benefits such as reduced travel costs, accommodation and coaches, easy and flexible access to training content and facilitating the learning process but requires learning motivation to use etraining systems for its development. In addition, e-training is not limited to specific locations and as such, gives users better flexibility to find their own time and space to use the e-training system. The application of e-training to employee education and training can familiarize how to work using technology and motivate education and training participants to use the system and improve the knowledge and skills of trainees for better performance. This is in accordance with the research of (Hosseini, et al, 2011) examined the effectiveness of training using two different training methods (e-training and classroom training). Two separate groups of managers are faced with these different training methods; One group gets training using an e-training system and the other group gets training through a class session. The performance of both experimental groups was recorded and compared to find out the effectiveness of the training provided through different methods. The results revealed the e-training method of training delivery is more effective than in-class training sessions because it provides more flexibility of time to learners, learning can occur at the pace of trainees and is also cost-effective than traditional classroom training.

The rapid development of information and communication technology, electronic training has gained popularity in organizational settings. Due to the increasing interest in the recent adoption practices of electronic training, both in developed and developing countries, etraining has turned into a revolutionary way of learning in most organizations. Electronic learning/training is a term used when learning/training involves the use of technology to educate, be it face-to-face learning, distance learning or pure online (Kanuka, 2006). Etraining as a web-based educational system and allows trainees to use computer networks and information technology in training (Hsbollah, 2009). According to (Zainab et al, 2015) some important trends of e-training: (a). Pay great attention to content design. Online course design focuses more on the quality of content. More experts or professional bodies are involved in improving the quality of content. (b) Enrich online interaction through various activities. One of the instructional goals of e-training is to promote high-level thinking. Online interaction is necessary. Almost all e-training courses involve online activities, such as discussions, group assignments, pair-and-share, and case studies. (c) Focus on process assessment. Previous electronic training involved assessing a simple process by calculating the login duration. Currently, rubrics or checklists for discussion, reflection, and homework are heavily involved in process assessment. To carry out etraining, companies invest large amounts in building information technology infrastructure to make e-training an ongoing practice in organizations to promote sustainable learning. But before building an information technology infrastructure to implement e-training, it becomes important for organizations to investigate participants' attitudes and intentions to continue using e-training systems.

This needs-based training emphasizes the process of identifying training needs based on task analysis, which has inherent weaknesses in its inability to identify the broader skills needed to perform the job effectively. Trainees and widyaswara/instruktur must clearly determine the training material with the duration, and training requirements, thus describing the basic elements that must be in place for the assessment procedure to be carried out properly. The training program should be carefully designed, keeping in mind learning methods such as motivation, active engagement, individual approach, sequence and structure, feedback and transfer to be combined in training. The whole process results in the fulfillment of training objectives. Fixing the gaps identified leads to individual development, thereby increasing organizational productivity. As Privadarshini & Dave (2012) states, pra-training refers to the assessment stage of training needs. It is the most critical and basic activity for the entire training and development process. It is a means of knowing who needs training, what kind of training is needed, when and where training is needed and so on. The need for training is the gap between what is happening now and what to do. This is the gap between the current level of performance and the standard level of job performance.

It emphasizes that an organization cannot commit to developing itself unless training and development is based on a strategic management paradigm based on three important assumptions: training is seen as an investment opportunity, a mechanism for distributing resources for strategic planning and a means to bind the interests of individuals and

organizations (Sutartto, et. al, 2021). In conventional training models, emphasis is placed on a mechanistic approach to adult learning that identifies training needs based on task analysis, which has inherent weaknesses in its inability to identify the broader skills needed to perform the job effectively.

According to (Priyadarshini and Dave, 2012). the model is recommended for assessing training needs using competency mapping methodologies. The study suggests the application of Organizational-Job-Person (OJP) analysis in assessing training needs includes (a) Organizational Analysis. Training as a sub-function of an organization should essentially draw input from the organization and deliver results to the organization. If the results of a function should be significant, a thorough analysis should be conducted to understand the strategic perspective of the organization, its priorities, and its key outcome areas. This analysis will present a range of training needs required at the organizational, group and individual levels. Sources of organizational analysis can be the organization's mission and vision, organizational goals and objectives, labor plans, skill sets that exist within the organization, technological change, reflections of the organizational climate, new strategic initiatives, employee surveys, and stakeholder feedback. In addition to obtaining information about organizational requirements, (b) Job analysis. Job analysis identifies the important tasks and responsibilities needed to perform the work. In addition to identifying performance standards for a job, it also determines what kind of conditions employees should face to work, and whether these conditions can accommodate a person. Job descriptions, job specifications, performance standards, job observations, and job sampling can convey a number of insights into job analysis. (c) People analysis. People analysis is an important component in training needs analysis, which identifies an individual's level of performance across components of knowledge, skills, and attitudes to perform well in the job. In this case, the competency framework helps in identifying various KSA in terms of behavioral manifestations, which need to be demonstrated in a particular role in a particular context. The technical and behavioral competencies identified from the competency dictionary and the actual level of behavior exhibited by employees in their current work situation can be compared to map out a clear picture of training needs.

Conclusion

Educational Activities and Training in Hall Education and Training Religious Semarang to Develop knowledge, Skills, attitude Mental and personality official in order to get Implement tasks government and building with as good as possible. In special every kind education and Training have purpose each for example purpose Education and Training Leader Level IV besides develop knowledge, skills and attitude Mental as well. Develop insight and soul Leadership. Such also as well as with Education and Training Teacher, Education and Training Supervisor, Education and Training Extension, and others. At the planning stage Bureau Planning and unit related Body R&D Religion and Hall Religious discuss proposal priority necessity education and training every unit organization navel and area. Activities Education and training Held using online media with platform BDK Learning Center. Monitoring Implemented when to education and training a still last.

Evaluation Management education and Training that Held by Hall Education and Training Religious Semarang be Thought towards success planning, implementation and Reporting Activities appropriate with purpose that want Reached. Study research Suggest that content Education and Training be wrong one that Paramount that affect Satisfaction user. Component main from content Education and Training be Reliability and quality content. By because that, Developer content Education and Training necessary update content from time to time so that user receive information that Reliable and Current that Increase Satisfaction user and intention they to continue use e-training as media Training and development. Besides thing at above, Finding's research this get give insight to Developer to understand factors what just that get affect Satisfaction user and intention they to continue use system e-training. This maybe also inclined Increase Coverage research time front where Researchers get Validate effect e-training on intention Sustainable at Various sector.

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References

- Assareh, A., & Bidokht, M. H. (2011). Barriers to e-teaching and e-learning. Procedia Computer Science, 3, 791-795.
- bin Arshad, M. A., bin Mohamad Yusof, A. N., Mahmood, A., Ahmed, A., & Akhtar, S. (2015). A study on training needs analysis (TNA) process among manufacturing companies registered with Berhad Human Resource Development (PSMB) at Bayan Lepas Area, Penang, Malaysia. Mediterranean Journal of Social Sciences, 6(4), 670.
- Bossert, S. T., Dwyer, D.C., Rowan, B., & Lee, G. V. (1982). The instructional management role of the principal. Educational administration quarterly, 18(3), 34-64. T GOAD
- Conger, S. (2015). Six sigma and business process management. In Handbook on Business Process Management 1 (pp. 127-146). Springer, Berlin, Heidelberg.
- Davis, G. F., & Marquis, C. (2005). Prospects for organization theory in the early twenty-first century: Institutional fields and mechanisms. Organization science, 16(4), 332-343.
- Franck, V.M., Hungate, B. A., Chapin, F. S., & Field, C.B. (1997). Decomposition of litter produced under elevated CO2: dependence on plant species and nutrient supply. Biogeochemistry, 36(3), 223-237.
- John, W., & Creswell, P.C. (2000). Designing and conducting mixed methods research. SAG. Kanuka, H. (2006). A Review of E-Learning in Canada: A Rough Sketch of the Evidence, Gaps and Promising Directions: A Commentary. Canadian Journal of Learning and Technology, 32(3), n3.
- LIU, X. F., ZHANG, W. W., & SUN, J.M. (2013). Methods of constructing 3-D digital cores: A review. Progress in Geophysics, 28(6), 3066-3072.

- Mohamad Hsbollah, H. (2009). E-learning adoption: the role of relative advantages, trialability and academic specialisation. Campus-Wide Information Systems, 26(1), 54-70.
- Moshfeghi, M., Tavakoli, M. A., Hosseini, E. T., Hosseini, A. T., & Hosseini, I. T. (2012). Analysis of linear measurement accuracy obtained by cone beam computed tomography (CBCT-NewTom VG). Dental research journal, 9(Suppl 1), S57.
- Mujiman, H. (2011). Self-study-based training management.
- Ramayah, T., Ahmad, N. H., & Hong, T. S. (2012). An assessment of e-training effectiveness in multinational companies in Malaysia. Journal of Educational Technology & Society, 15(2), 125-137.
- Prasetyo, B. D., Pranata, E. P., Meydina, I., Fauzi, Z. N., & Sunarsi, D. (2021). Training strategies to compete in human resources in era 5.0 in rural communities. PADMA Journal: Community Dharma Service, 1(4).
- Priyadarshini, R. R. G., & Dave, D. (2012). Competency-based training needs assessment model. Management and Labour Studies, 37(3), 195-207.
- Sabri, I. (2019). The role of arts education in the society era 5.0 for the Industrial Revolution 4.0. In Proceedings of the National Seminar of Postgraduates (PROSNAMPAS) (Vol. 2, No. 1, pp. 342-347).
- Siahaan, F. O. (2014). The effect of good corporate governance mechanism, leverage, and firm size on firm value. GSTF Journal on Business Review (GBR), 2(4).
- Suminar, T., Arbarini, M., Shofwan, I., & Setyawan, N. (2021). The Effectiveness of Production-Based Learning Models in the ICARE Approach to Entrepreneurial Literacy Ability. Journal of Nonformal Education, 7(2), 142-149.
- Sutarto, J., Suminar, T., Shofwan, I., Siswanto, Y., & Pamungkas, A. H. (2021). Development of Design and Teaching Materials Training: Orientation Needs in Improving Pedagogical Competencies.
- Sutarto, J., Mulyono, S. E., & Shofwan, I. (2021). Determining Factors That Affect the Quality of Process and Training Results of Non-formal PAUD Educators in Indonesia. Ilkogretim Online, 20(2). Taylor, H. (1991). The systematic training model: corn circles in search of a spaceship?. Management Education and Development, 22(4), 258-278.
- Tulsky, J. A., Arnold, R.M., Alexander, S.C., Olsen, M. K., Jeffreys, A. S., Rodriguez, K. L., ... Pollak, K. I. (2011). Enhancing communication between oncologists and patients with a computer-based training program: a randomized trial. Annals of internal medicine, 155(9), 593-601.
- Zainab, B., Bhatti, M. A., Pangil, F.B., & Battour, M.M. (2015). E-training adoption in the Nigerian civil service. European Journal of Training and Development.