# Building Younger Generations' Competency in Digital Age Through Experiential Learning Programs for Higher Education

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#### Abstract

This paper aims to study about the impact of Merdeka Belajar — Kampus Merdeka for university students, a program held by the Ministry of Education and Culture of Indonesia to improve university students' competencies with experiential learning, where students are not only improving in their hard skills according to their respective field of study, but also improving in their soft skills such as communication skills, collaborative and team working skills, cultural enrichment, social awareness, and so on, through various options of learning activities. Along with the advancement of technology, Merdeka Belajar — Kampus Merdeka's learning activities have undergone numerous developments, innovations, and changes to ensure that the learning activities deliver the expected results in light of current societal conditions. The research is done with systematic literature review, by concluding the results from prior research and writings. The existence of Merdeka Belajar — Kampus Merdeka for Indonesian university students has contributed to supporting various learning ways that can be chosen by students according to their interest and capabilities.

## **Keywords**

Education, Experiential Learning, Hard Skills, Soft Skills and Digital Age.

#### 1. Introduction

In today's career environment, fresh graduates especially college graduates are expected to excel not only their hard skills according to their respective field of knowledge, but also their soft skills. Soft skill here means as skills related to one's personality, attitudes, and work ethics. Both of these skills are required in order to prepare students to enter the industry (Fadilah et al. 2021). In order to excel in both, it is important for students to experience directly to real-life problems, or also known as experiential learning. Experiential learning is a holistic model of a learning process where human learn and grow. It is a process of reconstructing knowledge through transforming one's experience (Kolb 1984). As students learned the fundamentals of their field of knowledge through learning-teaching process in their universities with their lecturers, it is important for them to also familiarize themselves on how to solve real-life problems that they are going to face once they graduate by experiencing it themselves.

One of the most common practices of experiential learning is internship. Internships have become one of the crucial components in higher education. In these past few years, many universities have established internships as a mandatory program on part of a particular number of credits that needs to be fulfilled by students on a certain academic period (Nghia and Duyen 2019). Existing studies proved that joining internships helped students to develop the required professional skills, gain networks, accustom themselves to work life, and improve the quality of employee competencies (Kapareliotis et al. 2019). Even so, there are numbers of other activities besides internships that can help students prepare their skills in many different aspects. In order to encourage experiential learning to be held and experienced by all university students across Indonesia, the Ministry of Education and Culture created a program called Merdeka Belajar — Kampus Merdeka which aims to encourage university students to excel the skills that are useful for their preparation of entering their desired career path.

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# 1.1. Objectives

This paper aims to study about Merdeka Belajar – Kampus Merdeka as an experiential learning program for Indonesian higher education students, and how the existence of Merdeka Belajar – Kampus Merdeka contributes in improving higher education learning quality in Indonesia.

#### 2. Literature Review

Indonesia's Minister of Education and Culture, Nadiem Anwar Makarim, stated that this program is expected to give flexibility upon education institutes to facilitate students to choose the field of work they are passionate at. According to Education and Culture regulations regarding Higher Education National Standards, a university are obliged to facilitate students' rights to study outside of their universities equivalent to 2 semesters' credits or study outside their program within their universities equivalent to 1 semester's credits. The scoring system within Merdeka Belajar — Kampus Merdeka are classified into 2 forms, which are: Free Form An activity for 6 months is equivalent to 20 credits without equalization to the subjects studied. The 20 credits are stated as the students' competencies obtained from undergoing the chosen activity, according to the students' desired learning outcomes. Alongside the scoring from the learning outcomes, the competencies obtained from the activity can also be written in portfolios as a diploma attachment. Structured Form The scoring can also be done according to the curriculum the students are taking in university. The 20 credits are stated equivalent to the subjects that aligns with the competencies obtained from undergoing the chosen activity. Aside from those 2 scoring methods, the scoring can also be done by combining the 2 methods above.

According to Merdeka Belajar — Kampus Merdeka 's Guidebook, this program allows students to choose one out of eight existing options of learning activities (Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan 2020), namely:

Internship: Internships as mentioned above, has been established by many universities around the world to aid the students opportunities to experience work life and apply their knowledge in real work environment. Internship itself can be defined as career-relevant work experience for students in prior of graduating from university (Jung and Lee 2016). Internship offers a vast opportunity for students both for improving their performance in college as well as giving them higher opportunities of finding a job after they graduate. As students will enter industry after they finish their education in college, internship can help them to improve the required skills they need to have in order to get a job that may help them to be less anxious in job-seeking (Holyoak 2013). Prior research showed that internship gives positive impact on students' skill developments and improve their career readiness. Students that have work experience prior to graduating university also will be easier to be recruited as full-time employers (Zehr and Korte 2020). Alongside from that, internship doesn't only benefit the students. Internship also benefits companies in reducing recruitment and training costs since internship can help companies to seek potential full-time employers that suits the company's requirements among the interns based on their performance (Holyoak 2013).

Teaching Assistance: The education quality in Indonesia is still very low as stated by PISA 2018, Indonesia's being the bottom 7 in education quality in primary and junior high-level schools (Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan 2020). According to prior research, approximately 75 percents out of 60 teachers in Jakarta didn't prepare what they are going to teach properly. Teachers tend to prepare solely only to deliver the materials, and often forgot to aim for the students' ability upon the learning outcomes (Leonard 2015). Especially when pandemic strikes worldwide and affects almost every segment of life, including education. When almost every sectors are forced to do activities remotely, currently both students and teachers are facing difficulties in engaging in subjects while there isn't any direct interaction between them. This has emerged the awareness of the importance of basic education in Indonesia and through this activity, students are given the opportunity to teach and deliver their knowledge by being a teacher in an education institution. This activity also aims to improve the even distribution of education quality, according to today's trends (Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan 2020).

Student Exchange: Students participating in an exchange program are given the opportunity to experience living among new environment and interact with different cultures (Asiah and Saripah 2021). Merdeka Belajar — Kampus Merdeka offers 3 options of exchange models that can be done within the program, which are: (1) Exchange between different programs within the same university, (2) Exchange between different universities with the same program, (3) Exchange between different universities. Student exchange program aims to encourage

students to learn across universities within the country or abroad, living with a new family and strengthen the bonds across cultures. It also gives students the opportunity to exchange their knowledge and gain new insights from different perspectives (Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan 2020).

Research: Merdeka Belajar — Kampus Merdeka supports students who are passionate to be researchers by giving the opportunity for students to work in research institutions. By doing research, students are expected to get: (1) A quality improvement of a research. By experiencing doing research in the dedicated institutions, students will have stronger fundamentals in doing research in the future. (2) Research competencies through guidance from researchers, and (3) Improvement of the quality of research in Indonesia (Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan 2020).

Humanity Projects: Humanity is a universal habit that needs to be nurtured by every human to protect and humanize fellow human beings. Because of that, it is important for every individual to grow empathy for fellow human beings through education that directs to humanity, especially for younger generations since they are the future of their country (Matoha et al. 2015). Schools and universities, as education institutes have important roles in providing students a proper education of humanity as the foundation of their behaviors in society (Rianto 2016). Indonesia is one of the countries where natural disasters often happen, such as flood, tsunami, volcano eruptions, earthquakes, and so on. All this time, universities in Indonesia has contributed in many ways to help disaster survivors such as gathering donations, sending medical aids, and provide places for evacuation. However, these activities are mostly voluntary and lasts temporarily. Even so, there are some international foundations such as UNESCO, UNICEF, and WHO that already did further studies to realize development projects in developing countries such as Indonesia. Involving in these projects can be a good way for university students to practice humanity values and contribute to build the society. Within Merdeka Belajar — Kampus Merdeka, by joining humanity projects students get to grow social awareness and contribute in solving real-life problems that happens in society nowadays according to their respective field of study (Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan 2020).

Entrepreneurship: Entrepreneurship has emerged as a trend in today's world economy. According to the Opinion Research Council, 54 percent of 18- to 24-year-olds are highly interested in starting a business, compared with 36 percent of 35- to 64-year-olds. Most universities also has included entrepreneurship courses since universities and schools have discovered that entrepreneurship programs may raise students' awareness of business creations, promoting students' innovations and channel fresh ideas that may potentially create new job opportunities (Dollinger 2008). According to BPS (Badan Pusat Statistik), as per August 2021, there are 9,1 million of Indonesians are unemployed (Uly 2022). Departing from this issue, entrepreneurship opportunities within Merdeka Belajar — Kampus Merdeka are held to facilitate students who are interested in growing their own business wider and equips students who are passionate in building their own business with proper knowledge according to their capabilities, also contributing in creating new job opportunities (Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan 2020).

Independent Study/Project: There are numbers of university students that have innovative ideas and as we know, there are already lots of competitions held by various education institutions across the countries that gives the chance for university students to unleash their creativity and express their ideas that may be useful for today's society. There are so many possibilities through independent study or projects that can be explored. As we experienced doing activities remotely due to Covid-19 outbreaks since early 2020, including attending lectures and university activities via online meetings, we've seen ourselves that learning can be done anytime, anywhere, and with anyone even across our field of study (Bahodirovna 2021). From that, Merdeka Belajar — Kampus Merdeka's mission of carrying independent study or project opportunities are to realize students' ideas to create innovative products as the outcome and paved Indonesian students' path to both national and international competitions (Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan 2020).

Rural Area Development: Students competencies aren't always formed with activities that relates with their fields of study; it can also be formed by their direct contributions in society (Hilabi 2021). University students in Indonesia are mostly familiar with Kuliah Kerja Nyata, or usually just mentioned as KKN. KKN itself is an activity done by university students to serve in the society to improve one or more of the life quality aspects in rural areas, such as in economics, education, health, environment, and social (Idris et al. 2021). In some universities, KKN are still a mandatory for university students, especially for students in their final year of study. By doing KKN, students are given the opportunity to hone their soft skills to work within new environments, cooperate with different people, and

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invent new ideas to help improving the quality of life in rural areas (Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan 2020). Any chosen options of learning activities above will be guided by a lecturer. The university, the partners as well as the students have responsibilities upon this program in order of this program's success.

### 3. Methods

The method used to synthesize the research findings is with systematic literature review. This method is commonly used to synthesize research findings in a systematic, transparent, and reproducible way through studies of two or more prior research and writings regarding the topic. Systematic literature review aims to identify all empirical evidence that corresponds with the criteria to answer a research question or to prove a hypothesis (Snyder 2019). A Systematic Literature review consists of 3 main processes: planning the review, conducting the review, and reporting the review. However, the process can be generalized into 8 steps: (1) Formulating the research problem, (2) Developing and validating the review protocol, (3) Searching the literature, (4) Screening for inclusion, (5) Assessing quality, (6) Extracting data, (7) Analyzing and synthesizing data, (8) Reporting the findings (Xiao and Watson 2019).

To conclude the impact given by Merdeka Belajar — Kampus Merdeka to university students, the research is done by collecting and analyzing data from related research, interviews and writings regarding each of the activities mentioned above, also regarding Merdeka Belajar — Kampus Merdeka itself. The result is obtained by concluding the relations, patterns, and similar arguments between the research and writings we used (Snyder 2019).

## 4. Results and Discussions

Merdeka Belajar — Kampus Merdeka itself are held to give opportunities for university students in Indonesia to gain experience from various types of learning activities, such as the ones mentioned above. The learning activities supported within the program aims to realize a student-cantered learning, where students experience the practical learning process by themselves and directly contribute to create innovations for society. If planned and executed thoroughly, participating in the program will build students' skills that will help them prepare themselves to proceed into their desired career paths once they graduate.

The 8 types of learning activities supported within Merdeka Belajar — Kampus Merdeka, as mentioned above, each contributes to improve students' skills in many ways and affects in many different aspects:

Internship has been commonly known and became an important part of higher education (Kapareliotis et al. 2019). Starting from vocational high schools to universities, internships has been included in the syllabus that students mostly are obliged to participate. Internship is a great way to prepare students with real-life industry experience so they have a clear vision on what they will be doing in the future as they started working as a full-time employee by experiencing on solving problems within the industry themselves, with guidance from both supervisor in company as well as supervising lecturer (Zehr and Korte 2020). From research conducted by Zhao and Liden in 2011, students who participated in internship programs are more likely to be offered as full-time employee in the company they worked at prior to their graduation from university. Also, according to Varghese (2012), participating in internship programs also helps students to make clear decision about their interest and how will they choose their desired career path (Kapareliotis et al. 2019). From an interview with some of information technology graduates, participating in an internship program in prior of their graduation has given them several benefits to help them survive in the real career life, such as communication skills, collaboration skills, and logical thinking skills. However, there are several critics risen regarding internships. Siebert and Wilson's research in UK found that internships can lead to exploitation of workers, one of it especially may potentially violate the minimum wage laws. The quality of internship programs may also degrade when the respective universities or schools can't provide sufficient support or supervisions for their students, leading to misdirection of the purpose of the internship that serves as additional learning activity, when internship itself should be a whole form of learning (Jung and Lee, 2016). But on top of it all, internships in most countries serves the same purpose and with adequate support and infrastructure from the internship provider itself, students will gain the ideal experience that will give positive impact for their future endeavours.

Teaching assistance, as one of the learning activities that can be chosen within Merdeka Belajar — Kampus Merdeka, teaching assistance has been one of most common activities done by students, mostly as volunteers. Teaching assistance is also one of the activities that can be done with no boundaries, especially during pandemic like we are currently at where everything is done remotely via online meetings. In USA, most large universities employ

Mathematics undergraduates as graders and tutors. As fellow students are the part of teaching and learning activity itself, there are numbers of benefits that students can get by signing up as a teaching assistant. Students can understand the material better after they taught the materials to the mentees. Students may also gain insights for their future career plans as they are working as teaching assistant. Besides that, they might develop better relationship with faculty members from the respective institution they are working at (Goff and Lahme 2003). From a research of the outcome of teaching assistant experience conducted at Mayo Medical School at Minnesota, USA in 2003, majority of students stated that they gained skill improvement in communication, lecture effectiveness, and one-on-one teaching (Ocel et al. 2003) From an interview with a primary teacher education graduate, participating in teaching assistance helps them not only to know how to deliver a lesson, but also get to know the students better and that way, they can deliver the lessons in a way that is suitable for different kinds of students.

Student exchange is an activity where students can study in another institution of the same degree, within the country or abroad. Students participating in student exchange receives numbers of benefits. Students are exposed in different cultures, different ideas through new perspectives, and familiarize themselves in a new environment that contributes in building their social skills and resilience in facing new challenges that they might not experience in the place they are studying or where they grew up at. Participating in student exchange also added valuable experience that can help students to seek for a job after they graduate (Marciniak and Winnicki 2019). However, there are several drawbacks that might be experienced in some exchange programs. New environments can lead to some students' difficulties to adapt themselves in due to cultural shock and language barriers for foreign exchange programs (Steinfield and Wyche 2017). High living costs in some countries also became one of the drawbacks of a student exchange program, specifically for foreign exchange programs (Périco and Gonçalves 2018).

Research is undoubtedly contributed to the development of education and knowledge for a country. Research also encourages people to develop critical thinking, which is an important trait to have in every field of study (Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan 2020). By doing research in dedicated institutes, students can experience the steps and the methods that they have studied in university and applying it in real research. With more and more experience in doing real research, students are encouraged to study deeper in order to follow up their prior research with another research (Chandra et al. 2004).

Participating in humanity projects contributes to students' social conscience and skills. Students can develop their conscience in humanity by helping the others in need. Students are also encouraged to be decisive and fair in treating fellow human beings and respect all human beings from every role (Rianto 2016).

Entrepreneurship program gives students opportunity to generate fresh ideas as a new or innovative business prospect (Sholeh and Yusuf, 2020). It also encourages students to grow entrepreneurial mindset and introduces basic management skills for those who are eager to build their own business, or simply to prepare them to enter their desired career path once they graduate (Siswoyo n.d.). Having an entrepreneurial knowledge can help student in many ways. Starting a business, tackling a managerial activity within a company, seek career opportunities, or even contribute to minimize employment issues, which are one of the biggest issues in developing countries, including Indonesia (Sholeh and Yusuf 2020).

By doing independent study or projects, students are given the opportunity to flexibly conduct investigations based on their topic of interests. Doing independent study or projects can also be done with fellow students from different fields of study (Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan 2020). There are numerous of impacts that can be seen by doing independent study or projects. The flexibility of topic of interest can increase students' learning since students are free to choose the topic of study or project according to the topics they are immersed in. Students can also enhance their intrinsic motivation, create self-directed learners and hone their leadership, team working for group study or projects, and self-management skills. Through exploration and numerous research, students can also develop themselves as creative producers (Westberg and Leppien 2018).

Through community service program, students are given the opportunity to learn and experience real-life problems, especially in rural areas and generate ideas to improve the quality of life of the society according to their respective fields of study. From research conducted by Ika Mauli Diyawati in 2017 called "The Impact of Kuliah Kerja Nyata (KKN) to UINSA Students' Social Skills (Study of Second Batch KKN Participants of UINSA in 2016), the research proved that there is a relation between KKN and students' social skills improvement (Syardiansah, 2019). From an interview with an engineering student, they stated that by participating in community service program, they were given

a chance to discover the life outside their daily lives. Living outside their usual environment for a few months allows them to think outside the box and raise their awareness on the life in rural areas. Through community service program also, every process that will be done will contribute to students' self-development. By experiencing life in new environment, interacted with the locals, organizing development programs in the area, community service program gives students experiences that is difficult to obtain by solely depending on teaching-learning activities in university (Wulandari et al. 2020). However, with no synergy between theoretical and practical, community service program will not do much to contribute in developing rural areas. It usually causes either students' unwillingness to complete the process and no significant improvements can be seen in the related area. It may affect universities' reputation negatively since the program isn't working effectively (Syardiansah 2019).

In the era of technology, there are unimaginable changes that have affected many parts of life, including education (Escueta et al. 2017). Technology has removed the barrier of learning in many ways and has changed the way learning activities are carried out. For example, in a study conducted by (Nurdyansyah et al. 2017), technology has become an important resource of teaching-learning activities, balanced with the preparation and the understanding of educators regarding the usage of technology tools. Digital learning media such as interactive videos and digital courses has drifted the conventional in-class learning method, widening the possibilities of learning without time and place limitations (Yadav et al. 2018). Similar things also happened to the way the learning activities within Merdeka Belajar — Kampus Merdeka is done nowadays, also due to Covid-19 pandemic that strikes worldwide, amplifies the role of technology in carrying education activities despite facing lots of limitations. Internships, teaching-learning activities such as tutoring along with independent study and project, and research are possible to be done through web conferences such as Zoom, Microsoft Teams, or Google Classroom (Sazanova and Morozova 2022). Voluntary acts and rural area development programs provided by education institutions are no longer limited to the traditional interaction with the society in need, it is also possible to be done through online volunteering platforms (Trautwein et al. 2020).

#### 5. Conclusion

Merdeka Belajar — Kampus Merdeka, including all of the learning activity options within it, aims to improve university students' competencies, both in hard skills as well as in soft skills through experiential learning, according to their respective fields of study. Each of the learning activities has provided different ways to improve students' skills in various aspects to prepare them after they graduate from university. From real-life industry experiences, further study paths, to directly contributing in society development, currently the existence of Merdeka Belajar — Kampus Merdeka has supported Indonesian university students to discover a lot of learning possibilities outside their day-to-day teaching-learning activities in their classes.

As a follow up, future research might focus on observing more of the students' experience of each learning activity thoroughly to help us know better what aspects of the program can be improved to achieve the optimal learning experience for future students who will undergo an activity within Merdeka Belajar — Kampus Merdeka. In a fast-changing world like we are experiencing today and along with pandemic that still affects majority of life aspects, including in education and industry, future research will also focus on developing ideas on how technology can support Merdeka Belajar — Kampus Merdeka to open bigger possibilities in the future that can reach more university students in Indonesia.

#### References

Asiah, N. and Saripah, I. Student exchange: Cultural identity of guidance and counseling students, 2021.

Bahodirovna, U. I., The essence of independent study skills activities in the teaching process of foreign languages, 3rd International Multidisciplinary Scientific Conference on Ingenious Global Thoughts Hosted from Kuala Lumpur, Malaysia, 2021.

Chandra, R., Hidayat, M. F. and Sudarma, M. Pengetahuan pengetahuan tentang penelitian dan motivasi belajar pada mahasiswa, 2004.

Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan, Buku panduan Merdeka Belajar-Kampus Merdeka, 2020.

Dollinger, M. J. Entrepreneurship: Strategies and resources, Marsh Publications, 2008.

Escueta, M., Quan, V., Nickow, A. J. and Oreopoulos, P. Education technology: An evidence-based review, *Working Paper*, 2017. http://www.nber.org/papers/w23744

- Fadilah, N., Antoni, C. and Lubis, E. M., Penguatan keterampilan nonteknis mahasiswa vokasi melalui pembelajaran luar ruangan pada mata kuliah PPKN, vol. 5, no. 2, 2021.
- Goff, C. and Lahme, B., Benefits of a comprehensive undergraduate teaching assistant program. *PRIMUS*, vol. 13, no. 1, pp. 75–84, 2003. https://doi.org/10.1080/10511970308984047
- Hilabi, S. S., Pembangunan profil desa berkelanjutan sebagai wujud Kuliah Kerja Nyata (KKN) berbasis online (Studi Kasus Desa Adiarsa Barat Karawang), 2021.
- Holyoak, L., Are all internships beneficial learning experiences? An exploratory study, *Education and Training*, vol. 55, no. 6, pp. 573–583, 2013. https://doi.org/10.1108/ET-02-2012-0024
- Idris, A., Adi, B. P. and Yuliantikasari, W., Pengembangan potensi lokal Desa Krosok Kecamatan Sendang Tulungagung melalui kuliah kerja nyata, *Cendekia : Jurnal Pengabdian Masyarakat*, vol. 3, no. 1, pp. 43, 2021. https://doi.org/10.32503/cendekia.v3i1.1659
- Jung, J. and Lee, S. J., Impact of internship on job performance among university graduates in South Korea, *International Journal of Chinese Education*, 2016.
- Kapareliotis, I., Voutsina, K. and Patsiotis, A., Internship and employability prospects: Assessing student's work readiness, *Higher Education, Skills and Work-Based Learning*, vol. 9, no. 4, pp. 538–549, 2019. https://doi.org/10.1108/HESWBL-08-2018-0086
- Leonard, Kompetensi tenaga pendidik di Indonesia: Analisis dampak rendahnya kualitas SDM guru dan solusi perbaikannya, 2015.
- Marciniak, D. and Winnicki, M., International student exchange Motives, benefits, and barriers of participation, *Scientific Papers of Silesian University of Technology. Organization and Management Series*, no. 133, pp. 93–105, 2019. https://doi.org/10.29119/1641-3466.2019.133.8
- Matoha, A., Suyahmo and Munandar, M. A., Pengembangan sikap kemanusiaan siswa dalam kegiatan PMR di SMA N 1 Demak, *Unnes Civic Education Journal*, vol. 1, no. 2, 2015.
- Nghia, T. L. H. and Duyen, N. T. M., Developing and validating a scale for evaluating internship-related learning outcomes, *Higher Education*, vol. 77, no. 1, pp. 1–18, 2019. https://doi.org/10.1007/s10734-018-0251-4
- Nurdyansyah, N., Rais, P. and Aini, Q., The role of education technology in mathematic of third grade students in MI Ma'arif, Pademonegoro Sukodono, *Madrosatuna: Journal of Islamic Elementary School*, vol. 1, no. 1, pp. 37–46, 2017. https://doi.org/10.21070/madrosatuna.v1i1.923
- Ocel, J. J., Palmer, B. A., Wittich, C. M., Carmichael, S. W. and Pawlina, W., Outcomes of the gross and developmental anatomy teaching assistant experience, *Clinical Anatomy*, vol. 16, no. 6, pp. 526–530, 2003. https://doi.org/10.1002/ca.10193
- Périco, F. G. and Gonçalves, R. B., Academic exchange: The difficulties of adaptation and readaptation, *Educacao e Pesquisa*, 44, 2018. https://doi.org/10.1590/S1678-4634201844182699
- Rianto, H., Implementasi nilai kemanusiaan yang adil dan beradab di lingkungan sekolah, *Jurnal Pendidikan Sosial*, vol. 3, no. 1, 2016.
- Sazanova, M. and Morozova, M., Peculiarities of organization of students' online educational internship, VII International Forum on Teacher Education, pp. 1483–1495, 2022. https://doi.org/10.3897/ap.5.e1483
- Sholeh, M. and Yusuf, M., Dampak positif kegiatan program pengembangan kewirausahaan sebagai upaya meningkatkan daya minat kewirausahaan bagi mahasiswa, *Jurnal Pengabdian Kepada Masyarakat*, vol. 11, no. 2, pp. 132–138, 2020. http://journal.upgris.ac.id/index.php/e-dimas
- Siswoyo, H. B. B., Pengembangan jiwa kewirausahaan di kalangan dosen dan mahasiswa.
- Snyder, H. Literature review as a research methodology: An overview and guidelines, *Journal of Business Research*, vol. 104, pp. 333–339, 2019. https://doi.org/10.1016/j.jbusres.2019.07.039
- Steinfield, C. W. and Wyche, S., Information spillovers from extension training: The effectiveness of participatory video participatory video as an approach to smallholder farmer education in developing countries view project participatory video for training smallholder farmers in Malawi view project, 2017. https://doi.org/10.5191/jiaee.2015.22207
- Syardiansah, Peranan kuliah kerja nyata sebagai bagian dari pengembangan kompetensi mahasiswa (Studi Kasus Mahasiswa Universitas Samudra KKN tahun 2017), *JIM UPB*, vol. 7, no. 1, 2019.
- Trautwein, S., Liberatore, F., Lindenmeier, J. and Von Schnurbein, G. Satisfaction with informal volunteering during the COVID-19 crisis: An empirical study considering a Swiss online volunteering platform, *Nonprofit and Voluntary Sector Quarterly*, vol. 49, no. 6, pp. 1142–1151, 2020. https://doi.org/10.1177/0899764020964595
- Uly, A. Y. Jumlah pengangguran di Indonesia turun jadi 9,1 juta orang, Available: https://money.kompas.com/read/2021/11/05/211102226/jumlah-pengangguran-di-indonesia-turun-jadi-91-juta-orang?page=all, Accessed on January 6, 2022.

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- Westberg, K. L. and Leppien, J. H., Student independent investigations for authentic learning, *Gifted Child Today*, vol. 41, no. 1, pp. 13–18, 2018. https://doi.org/10.1177/1076217517735354
- Wulandari, C. E. P., Sugiatno, S. and Siswanto, S. Dampak kuliah kerja nyata dalam pengembangan keagamaan bagi remaja, *FOKUS Jurnal Kajian Keislaman dan Kemasyarakatan*, vol. 5, no. 2, pp. 221, 2020. https://doi.org/10.29240/jf.v5i2.1830
- Xiao, Y. and Watson, M., Guidance on conducting a systematic literature review, *Journal of Planning Education and Research*, vol. 39, no. 1, pp. 93–112, 2019. https://doi.org/10.1177/0739456X17723971
- Yadav, N., Gupta, K. and Khetrapal, V. Next education: Technology transforming education, *South Asian Journal of Business and Management Cases*, vol. 7, no. 1, pp. 68–77, 2018, https://doi.org/10.1177/2277977918754443
- Zehr, S. M. and Korte, R., Student internship experiences: Learning about the workplace, *Education and Training*, vol. 62, no. 3, pp. 311–324, 2020. https://doi.org/10.1108/ET-11-2018-0236

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