

Impacts of Service-Learning on Cultural Adaptation, Analytical Thinking, and Communication Skills of University Students

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Abstract: Changing trends in the workplace requires employees with different skills compared to employees in the past. Therefore, this study aims to investigate the influence of service-learning in developing cultural adaptation skills, analytical thinking skills and communication skills among university students. Questionnaires are distributed to 129 students selected through stratified random sampling. Data are analyzed using descriptive and regression analysis. The findings show a significant influence of service-learning on cultural adaptation skills, analytical thinking skills and communication skills among university students. These findings implies that service-learning is a beneficial teaching approach that can develop skills needed by the present employees' requirements. Therefore, universities should embed more service-learning projects in their curricula, increase service-learning training for course instructors and develop strong collaboration with the community to ensure students have vast opportunities for cultural adaptation, analytical thinking and communication skills development.

Keywords: Service-learning, cultural adaptation skills, analytical thinking skills, communication skills, university

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1. Introduction

Trends in the business landscape such as globalization, pandemic COVID-19, and technological advancement bring new challenges to the workplace where skilled workers play central roles in increasing competitiveness. Globalization enabled through the internet and technology has attracted many companies to operate internationally. Instead of hiring the locals, companies implement global recruitment, hiring experts in foreign countries to perform jobs previously done by permanent employees. Furthermore, more companies implemented low-cost outsourcing, i.e., transferring local production to countries with lower salaries and wages to reduce manufacturing costs. These trends significantly alter how business run their operations. Accordingly, the current workforce requires employees who are open to cultural diversity, understand different norms, values, and ethical principles, communicate effectively with people of different backgrounds and creatively solve problems related to the ever-changing business environment.

In Malaysia, 38 percent of companies prefer to hire employees with technical skills, while 28 percent prefer those with transferable skills (The Future of Talent, 2021). In contrast, only 10 percent of companies select new employees based on their academic qualifications (LinkedIn, 2021). Moreover, 67 percent of companies are willing to hire employees from another industry if their skills match the job requirements (LinkedIn, 2021). Apparently, skills matter much more important than academic qualifications from the industrial perspective.

Despite that, only 72.6 percent of the 25,446 Malaysian public university graduates were employed in 2018 (Ministry of Higher Education, 2018). Skill mismatch occurs when the level and type of skills possessed by employees do not meet the job market's needs (ILO, 2020). This skill-job mismatch should be solved immediately through huge investment in finance, time, and efforts in the education sector and training (Mohd Zuhdi, Mohd Nizam, & Ruhizan, 2017). Fresh graduates were said to lack employability skills such as inadequate relevant working skills, poor command of the English language, poor communication skills, lack of problem-solving skills, and low leadership qualities (Hossain et al., 2018).

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Malaysia Education Blueprint 2015-2025 stated that Malaysia requires graduates who can successfully address complex challenges. Thus, university graduates should possess adequate knowledge, technical experience, and necessary skills to deal with rapid changes due to globalization and technological advancement. Therefore, the Malaysia Ministry of Higher Education (MOHE) steers local universities to strengthen students' soft skills to achieve high-quality human capital to meet the country's industrial and social needs. Service-learning Malaysia-University for Society (SULAM) is a teaching and learning method that incorporates curricular and co-curricular experience to intertwine theory and practical solutions to real problems within the community by solving the local people's issues. SULAM is an initiative led by the Ministry of Education that aims to address the first stage of Malaysia Education Blueprint 2015-2025 (Higher Education), which is to develop holistic and balanced graduates. Through this initiative, universities expose the students to various situations requiring them to enhance their cultural adaptation, analytical thinking, and communication skills, which potential employers need for future growth.

Previous studies primarily focused on investigating the impact of service-learning on students' problem-solving skills (Ainul Marhamah Hasibuan, Sahat Saragih, Zul Amry, 2019), critical thinking skills (Yerimadesi et al., 2019), and creativity (Hardika, Nur Aisyah, & Gunawan, 2018). Despite the importance of these skills, newer skill sets are necessary to curb changes in the current workplace. Moreover, many prior service-learning studies employed observation (Firman, Baedhowi, & Murtini, 2018) and interviews (Yusof et al., 2020) in determining the impact of service-learning. Meanwhile, questionnaires, reflection questions, and evaluation rubrics (Marcus et al., 2019) were less used research instruments in determining the impact of service-learning. Accordingly, this research investigates the impact of service-learning on cultural adaptation skills, analytical thinking skills, and communication skills of university students using the quantitative approach.

2. Literature Review

2.1 Service-Learning

Service-learning is a subset of experiential learning (Amran & Ishak, 2017). It means service-learning is listed as one of the high-impact practices in transformative pedagogical learning. Service-learning aims to enhance learning, encourage transformative community engagement, and foster structured, experience-based knowledge acquisition and reflection (Azman & Abdullah, 2021). The students would be challenged to solve societal problems while increasing their soft skills. Such challenges would positively impact students, lecturers, universities, and communities by inculcating the feeling of having social responsibility and citizenship skills, such as racial tolerance, teamwork, leadership, communication skills, and their ability to initiate changes in a community (Amran et al., 2018). In this study, service-learning experience refers to four stages of service-learning, i.e., preparation, service, reflection, and celebration (Chang, Liu, & Li, 2020).

Students' experiences in the service-learning environment shape their understanding of the curriculum content, which in turn shapes their understanding of various social backgrounds and relationship characteristics of the service-learning placements. The cognitive sense generated from this process goes beyond the knowledge mastery content or independent experience service arrangement that can be obtained by any method.

Service-learning is different from internships and volunteering. Volunteer service may be a course requirement, but it is rarely provided with extra academic credit because educational value gained by participating in specific volunteer projects is not the primary concern of volunteerism. Furthermore, volunteering also occurs in the community. Volunteering, much like charity, built a relationship of giving and receiving because students will "help" those defined as in need (Marullo & Edwards, 2000). However, they are unlikely to apply existing skills while volunteering. Hironimus-Wendt & Lovell-Troy (1999) point out volunteering activities examples include giving sandwiches to the local homeless or participating in any meaningful reflection.

Internships are considered cooperative learning or field placements and are sometimes called practical. Students serve the community by linking the course content, existing skills, and professional knowledge with real-life situations, thus getting credits. However, structured reflection is usually not necessary. Students gain "hands-on" practical experience when applying abstract theories and concepts and using methods and skills in the workplace (Bingle & Hatcher, 1996). The main goal of internships is to develop students' skills and knowledge through exposure to the actual working environment, in contrast to service-learning that emphasizes balanced benefits for students and the community.

Previous studies show students do not know the strategies and do not have enough skills to apply the theoretical knowledge to the actual environment (Hudin et al., 2018). They found difficulties applying the theoretical knowledge they gained in the classroom to real situations (Yusof et al., 2020). There is a lack of association between learning outcome and the implementation of service-learning in developing students' ability, potential, and skills. Additionally, prior studies investigate generic skills such as solving problems, critical thinking skills, and creativity. In contrast, less study discusses how to best provide graduates with the soft skills they need in the constantly destructive job market (Turner & Mulholland, 2017).

2.2 Cultural Adaptation Skills

Cross-cultural adaptation is a complex process in which people can operate effectively in culture beyond the first one they were first socialized (Haslberger, 2005). In this study, cultural adaptation skills are regarded as the ability to resolve conflicts with people from various cultural backgrounds, getting to know and being comfortable with others from different backgrounds, as well as reflecting and giving feedback according to cultural view (Moely et al., 2002).

Cultural adaptation has been conceptualized as a change to a protocol “compatible with the cultural patterns, meaning and values of the customer” (Bernal et al. 2009, p. 362). Since the economy and financial system are becoming complex due to globalization and technological change, this phenomenon has been compounded by rising global volatility and the challenges of low economic growth in established economies. Globalization is expanding to the development of new international markets, which leads those who have the creativity and cultural awareness to create products that can adapt to these new markets (Rhisiart, Glover, & Beck, 2014)

The cultural diversity of Malaysia is consists of people with different religious backgrounds and ethnic such as Malay, Chinese, Indian, and aborigines. On that account, Malaysia comprises many different customers and employees that lead to unique challenges. For example, the social behavior of employees becomes a challenge for the managers to unify employees of different cultural backgrounds. It is because every ethnicity has different beliefs, thinking, norms, and values that could affect decision-making. For example, the Chinese will expect monetary rewards and do their best to fulfill the needs of their family. On the other hand, cohesiveness, unity, tolerance, and harmonious relationship with employees and managers are central to the Malay culture that motivates them at work (Abdullah et al., 2019). These diverse motivations challenge the policy and goal of the organization to lead all the employees with different ethnicities (Ahmad, 2001).

Different measurements of cultural adaptation skills have been used previously. For example, Kohlbry & Daugherty (2015) measured it based on cultural communication, cultural confidence, and cultural surprise. These measurements were used to develop cultural awareness, knowledge, and skills among students involved in a one-day international service-learning project. Besides, Dang & Chou (2019) stated that external motivators, employer trust, workplace learning, and self-efficacy are indicators to measure the cross-cultural adaption of foreign workers. Extrinsic motivators like money, bonus, and job security can enhance adaptation to cultures of a specific country. Besides that, knowledge sharing and social interaction between colleagues help foreign laborers understand their working environments, organizational culture, and individual (Brown & Duguid, 1991). Foreign laborers believe the bosses will be more willing to adjust their behavior and work hard to complete the tasks (Chen & Lin, 2018; Sholihin, Pike, & Mangena, 2011). As a result, these foreign laborers better interact and learn with coworkers in an unfamiliar working environment (Chen & Lin, 2018; Kacmar et al., 2012). People with high self-efficacy become more confident and positive in interacting with their host culture. Thus, this increases their adaptability in the new environment. Chen (2019) argued the content of cross-cultural competency is divided into abilities such as interpersonal skills, professional knowledge, cross-cultural communication, and professional skill. These measurement has been established and widely accepted among scholars (Chen, 2019). Therefore, this study adopts Chen’s (2019) measurements to identify the impact of service-learning on cultural adaptation skills.

There is yet a study investigating the impact of service-learning on cultural adaptation skills to the authors’ knowledge. Environmental factors such as social norms and eating habits affect cross-cultural adaptation significantly (Zhong et al., 2020). However, in a study exploring international students’ cultural adaptation challenges, engaging with a different culture reduces identity tension and increases the sense of belonging (Gong et al., 2021). In further support, Luo & Zhang (2021) elaborated that applying the integration strategy, which enables one to keep the original culture and learn a new culture, can reduce cross-cultural pressure. Therefore, providing opportunities for university students to mingle with students and communities of different cultures through service-learning is hypothesized to increase their cultural adaptation skills.

H1: There is a significant impact of service-learning on the cultural adaption skills of university students.

2.3 Analytical Thinking Skills

Analytical thinking is a kind of ability to identify and classify different aspects, which can be objects, stories, or events, and find out the relationships among these aspects (Art-in & Sitthipon, 2012). Meanwhile, Chonkaew, Sukhummek, & Faikhamta (2016) state that students with analytical thinking skills can express their own concepts, understand, and implement their own knowledge. Analytical thinking skills are a process of mental formation used to decide the solution to a problem (Anwar & Mumthas, 2014). Furthermore, the indicators for analytical thinking skills explained by Ramirez & Ganaden (2008) are differentiating, organizing, and attributing. An analytical thinking skill is considered to be the extension of understanding of phenomena and the prelude of evaluating or creating. This thinking ability enables the students to break the things (situations, practices, problems, statements, ideas, theory, arguments) into parts and establish how each part are related to each other and an overall structure or objective (Anderson & Krathwohl, 2001; Thaneerananon, Triampo, & Nokkaew, 2016). In this study, analytical thinking skills are measured by the ability to

characterize and categorize things or concepts, organize ideas, compare things or concepts, express opinions, and identify possible solutions.

Analytical thinking skills are very important in the workplace. It is essential for gathering data, solving complex problems, making reasonable decisions, and summarizing data to investigate a problem and find the ideal solution quickly. The era of ICT has stimulated the adoption of big data to make accurate decisions. Artificial Intelligence is increasingly automating processes and services, and robots and intelligent machines have replaced many daily tasks. These changing technologies reduce the demand for routine professional skills such as drafting contracts, accounting, financial consulting, etc. However, technology has promoted the changes of job requirements, such as increased demand for analytical, research, and design skills. Furthermore, the business environment nowadays is increasingly loaded with uncertainty and amounts of data. Therefore, the ability to manage complexity and risks, analyze and translate vast amounts of data to inform decision-making is required (Rhisart et al., 2014).

According to Basma, Gibbons, & Kronick (2020), analytical skills include identifying problems, applying concepts to the problems, and solving the problem. Service-learning commonly requires students to help the community by applying their knowledge. For example, accounting students can help local business people overcome the problem of preparing balance sheets using their accounting knowledge. Besides, business students can assist businesses in rural areas set up a marketing campaign to boost their sales. However, solving community problems means the students should be able to understand the root problems faced by the community and plan for actions by applying theories they learned in universities. Therefore, the following hypothesis is developed.

H2: There is a significant impact of service-learning on the analytical thinking skills of university students.

2.4 Communication Skills

Communication is a two-way process of transferring ideas from one medium or group to another entity. Communication skills can be realized by using verbal, written communication by using printed or digital media such as books, magazines, websites, or emails. Visual communication is logos, maps, charts, or figures, and finally, non-verbal communication is body language, gestures, and the pitch and tone of voice (Sreena & Ilankumaran, 2018). In this study, communication skills are defined as listening and respecting people's opinions and values. Furthermore, it refers to the ability to evaluate different positions, opinions, and preferences, encourage team members to stay focused, inspire and support ideas (Molderez & Fonseca, 2018).

Employees should have adequate skills to communicate in the workplace. Employers look for soft skills such as problem-solving and strategic thinking, but communication skills are also needed to gain a more holistic understanding of the organization, giving directions, and reporting. Communication is the process that occurs between two or more people to deliver and receive a message with other parties. Communication skills are related to one's ability in speaking, listening, writing, reading, etc. In addition, a lack of effective communication in the organizations may lead to negative results, such as missing deadlines, confusion, and poor understanding of the company's goals.

Chang et al. (2020) used social interaction scales to measure the degree of contact with other people. In addition, Molderez & Fonseca (2018) measure communication skills based on negotiating, collaborating, and leadership abilities. Srivastava (2018) conversely considered active listening abilities, communication-building strategies, and written communication as the main constructs of communication skills. This study adopts the communication skills measurement proposed by Schartel Dunn & Lane (2019). It measures report writing skills, PowerPoint skills, oral presentation skills, listening skills, interviewing skills, interpersonal skills with external customers, colleagues, and management that align with the skill-job mismatch issue.

Chang et al. (2020) stated that students could talk with local residents and the students' committee to accomplish the service-learning. It provides opportunities to interact with people from different races, cultural backgrounds, and countries. Additionally, they could develop international communication skills such as foreign languages to interact and engage with others different from themselves. In a study on service-learning projects at a liberal arts college, students showed high self-confidence in effective oral and written communication while raising funds Blewitt, Parsons, & Shane (2018). Moreover, service-learning in a South African university has been instrumental in supporting and developing students' communication skills (Mtawa, Fongwa, & Wilson-Strydom, 2021). Through the service-learning, students learned to communicate with people with different socio-economic and cultural identities and conversed with younger, less educated, and less-privileged individuals. Based on these arguments, this study proposed the following hypothesis.

H3: There is a significant impact of service-learning on the communication skills of university students.

2.5 Kolb's Experiential Learning Theory

The experiential learning theory is the works of Dewey, Lewin, and Piaget, which are of intellectual origin. Experiential learning theory is an overall comprehensive view of learning, combined experience, perception, cognition, and behavior. Since experience plays an important role in the learning process, it also emphasizes students' direct

thinking about what they are doing, greatly increasing their knowledge and skills in the experience gained (Kolb, 1984). Students who participate in service-learning undergo many positive changes, for example, in their behavior concerning activities with the community (Gerholz, Liszt & Klingsieck, 2018).

Apart from this, Kolb’s Experiential Learning Theory proposed four elements in the learning cycle: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Concrete experience is sensory and emotional engagement in their new experiences, while reflective observation is the learner watching, listening, discussing, and elaborating on the experience. In addition, abstract conceptualization gives the reflection or idea by integrating theories and concepts in the learning process. Active experimentation happens when learners apply their ideas to the world around them and reconstruct or confirm their understanding.

Developing cultural adaption skills, analytical thinking skills, and communication skills require learners’ exposure to open responses to have diverse experiences adapting, communicating, and analyzing different situations. In such a case, service-learning experience provides the platform for learners to master predetermined skills based on various exposures obtained from the projects. Therefore, Fig. 1 depicts the present research framework that links service-learning with three predetermined skills that students should develop through the service-learning. Service-learning is expected to provide dynamic and unique scenarios that will foster the development of cultural adaptation skills, analytical thinking skills, and communication skills.

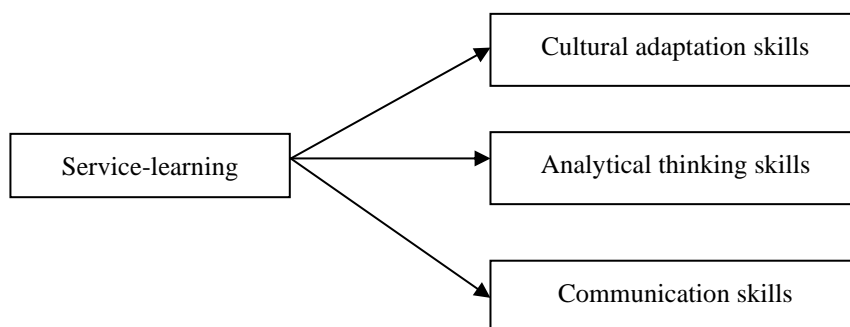


Fig. 1: Research framework

3. Methodology

3.1 Research Design

A causal research design is adopted in this study, where quantitative research is carried out to identify the impact of service-learning on cultural adaptation skills, analytical thinking skills, and communication skills. Cavana, Delahaye, & Sekaran (2001) argued that researchers should develop a planned procedure for gathering and interpreting data to obtain a valid finding of the relationship between variables. Therefore, the deductive approach was employed to test the research hypotheses.

3.2 Population and Sample

The study population consisted of undergraduate students in a public university in Malaysia. The study used probability sampling that involved random selection in making strong statistical inferences about the whole group. Thus, the sampling method used in this study is stratified sampling. Stratified sampling divided the target population into different groups or strata where within each stratum, the elements are homogenous with respect to the selection characteristics important to the study (Parson, 2014)

The population size of students who participated in service-learning at the selected university in Feb 2021 is 190 students. Based on Krejcie & Morgan (1970), the corresponding sample size is 169 students if the population is 190 students. In this study, the strata refer to the nine faculties at the university. Thus, samples were drawn from each faculty randomly.

3.3 Research Instrument

The researchers collected data on the students’ demographic information, cultural adaption skills, analytical thinking skills, communication skills, and participation in service-learning using questionnaires. Students were asked to rate their responses to the closed-ended questions based on the 5-point Likert scale used in the questionnaire, ranging from 1-strongly disagree to 5-strongly agree. Two experts from the education field validated the questionnaire. The experts examined the questionnaire in terms of the content and wording. Based on the review, items were improved by inserting more items to measure the variables comprehensively, and spelling mistakes were corrected accordingly. The final questionnaire consisted of 40 items.

3.4 Pilot Study

A pilot study was carried out to determine the reliability of the research instrument. The reliability test is the statistical tool used to measure the consistency and stability of the variables analyzed to determine their reliability (Sekaran, 2003). Items reliability had been measured using Cronbach's alpha. Questionnaires were distributed to 33 students involved with service-learning at the university, and all 33 questionnaires were returned for the analysis.

Table 1 displays Cronbach's alpha obtained for all variables, i.e., service learning, cultural adaption skill, analytical thinking skill, and communication skill. The consistency of the data was interpreted as the degree of the independent measurement of an item. Reliability test also applied as a measurement tool of the goodness of data. It is designed to evaluate the consistency of the items used in each variable are free from error (Sekaran, 2003). The Cronbach's alpha ranged from 0.725 to 0.821, indicating good inter-item consistency for each factor.

Table 1: Result of Reliability Test

Variables	No. of Item	Cronbach Alpha	Interpretation
Service-learning	18	0.913	Excellent
Cultural adaption skill	5	0.725	Acceptable
Analytical Thinking skill	5	0.874	Good
Communication skill	5	0.821	Good

3.5 Data Collection

During the data collection phase, the researchers contacted the respective faculties to gain data collection consent. Then, the researchers contacted class representatives and explained to them the objectives of the study after data collection consent was obtained. Moreover, the researchers ensured the confidentiality and anonymity of the respondents. They could participate or withdraw from the study at their liberty. The online survey is much more efficient to collect data as it can save up the cost of printing questionnaires and is less time-consuming to key in the data. Therefore, this research surveyed the samples using an online platform. The respondents took 5-10 minutes to answer the questionnaire given. Altogether, 169 questionnaires were returned.

3.6 Data Analysis

This study utilized Statistical Package for Social Science (SPSS) version 26 for data analysis. Since the objective of the study is to determine the impact of service-learning on cultural adaptation skills, analytical thinking skills, and communication skills, the simple linear regression was deemed appropriate. Simple linear regression analysis predicts an independent variable's impact on one dependent variable. However, the respondents' demographic information was analyzed using descriptive statistics to understand the profiles of the study samples. This analysis was used to obtain the total number of respondents based on each of the background categories of study respondents.

4. Findings and Data Analysis

4.1 Descriptive Analysis of Samples

Table 2 illustrates the respondents' demographic characteristics, which consisted of gender, age, ethnic, faculty, semester, educational level, and students' previous service-learning. Among the 169 respondents, female respondents showed a larger proportion than male respondents. 77.5 percent of the respondents were female, and the rest 22.5 were male.

In terms of ethnicity, most of the respondents were Malay (81.7 percent), while Chinese and Indian were 7.1 percent and 5.9 percent, respectively. Malay, Chinese, and Indian students' proportion in the study samples were expected for a public university in Malaysia because Malay is the majority ethnic in Malaysia. The three highest percentages of the respondents contributed based on the semester were semester 8 (27.2 percent) followed by semester 7 (19.5 percent) and semester 5 (18.3 percent). Only a small number of respondents were in semester 3 (13.6 percent), semester 2 (4.7 percent), and semester 4 (2.4 percent). All respondents who filled the questionnaires were pursuing bachelor's degree programs. Additionally, 96.9 percent of the respondents had less than 12 months of service-learning.

Table 2: Respondents' demographic information

Demographic Factors	n	%	Demographic Factors	n	%
Gender			Age		
Female	131	77.5	18-20	1	0.6
Male	38	22.5	21-23	111	65.7
			Above 24	57	33.7

Ethnic	Semester				
Malay	138	81.7	1	0	0
Chinese	12	7.1	2	8	4.7
India	10	5.9	3	23	13.6
Others	9	5.3	4	4	2.4
			5	31	18.3
Previous SL (month)			6	24	14.2
< 12months	164	96.9	7	33	19.5
≥ 12 months	5	3.1	8	46	27.2

4.2 Descriptive Analysis

Table 3 presents means and standard deviations for all the study variables. Scores for the variables of interest was computed by calculating the mean responses for each variable. The possible range of scores was 1 to 5. For service learning, scores ranged from 2.00 to 5.00 (M= 4.0208, SD = 0.57170). For cultural adaption skills, the scores ranged from 2.00 to 5.00 (M= 3.9929, SD= 0.58834). For analytical thinking skills, the scores ranged from 2.00 to 5.00 (M= 4.0296, SD= 0.57390). For communication skills, the scores ranged from 2.20 to 5.00 (M= 4.0781, SD= 0.55554). Mean responses for the variables ranged from 3.9929 to 4.0781.

Table 3: Descriptive Analysis

Variables	Minimum	Maximum	Mean	Standard Deviation
Service learning	2.00	5.00	4.0208	0.57170
Cultural adaption skills	2.00	5.00	3.9929	0.58834
Analytical thinking skills	2.00	5.00	4.0296	0.57390
Communication skills	2.20	5.00	4.0781	0.55554

4.3 Linear Regression Analysis

The linear regression analysis was conducted to test whether service-learning significantly influences cultural adaptation skills. Based on Table 4, the regression model was statistically significant ($F= 354.181$, adjusted $R^2=0.678$, $p < 0.001$). It indicates that service-learning contributed 67.8 percent of the total variation in cultural adaptation skills. Additionally, service-learning has a positive regression coefficient ($\beta=0.848$, $p<0.000$), indicating that an increase in service-learning experience will increase cultural adaptation skills. Therefore, the hypothesis that stated the impact of service-learning on cultural adaptation skills was failed to be rejected.

Table 4: Impact of service-learning on cultural adaptation skills

Variable	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	0.582	0.183		3.179	0.002
Service learning	0.848	0.045	0.824	18.820	0.000

Note: Dependent variable= Cultural adaption skills * $p < 0.05$ ** $p < 0.001$; $R= 0.824$, $R^2 = 0.680$. Adjusted $R^2=0.678$; $F= 354.181$

Table 5 shows a significant impact of service-learning on analytical thinking skills. This regression model was statistically significant ($F=178.916$, adjusted $R^2= 0.517$, $p < 0.001$). It indicates that service-learning contributed 51.7 percent of the total variation in analytical thinking skills. Moreover, service-learning has a positive regression coefficient ($\beta=0.722$, $p<0.000$), indicating that an increase in service-learning experience will increase analytical thinking skills. Based on Table 5, the hypothesis that stated the impact of service-learning on analytical thinking skills was failed to be rejected.

Table 5: Impact of service-learning on analytical thinking skills

Variable	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	1.127	0.129		5.141	0.000
Service learning	0.722	0.54	0.719	3.376	0.000

Note: Dependent variable= Analytical thinking skills * $p < 0.05$ ** $p < 0.001$; $R=0.719$, $R^2 = 0.517$. Adjusted $R^2= 0.514$; $F= 178.916$

Table 6 indicates that service-learning significantly impacted communication skills. This regression model was statistically significant ($F=153.268$, adjusted $R^2= 0.479$, $p < 0.001$). It means that service-learning contributed 47.9 percent of the total variation in communication skills. Furthermore, service-learning has a positive regression coefficient ($\beta=0.672$, $p<0.000$), indicating that an increase in service-learning experience will increase communication skills. Based on Table 6, the hypothesis that stated the impact of service-learning on communication skills was failed to be rejected.

Table 6: Impact of service-learning on communication skills

Variable	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	1.375	0.221		6.237	0.000
Service learning	0.672	0.054	0.692	12.380	0.000

Note: Dependent variable= Communication skills * $p < 0.05$ ** $p < 0.001$; $R= 0.692$, $R^2= 0.479$. Adjusted $R^2= 0.40236$; $F= 153.268$

5. Discussion

This study identified the impact of service-learning on university students' cultural adaptation skills, and the results supported this hypothesis. The finding buttressed Gong et al. (2021), who discovered identity tension reduction when students were engaged in different cultures. Students have to work together with their peers and community members of different cultural backgrounds to solve a particular issue in a service-learning project. Such a situation requires them to understand others' norms, values, and beliefs that may influence decision-making and the priority of goals. For example, during the preparation phase of a service-learning, students will negotiate with the community members on the objectives they need to accomplish. Some objectives may not be feasible due to financial or time constraints; thus, they need to decline. Malays tend to use an indirect approach to refuse requests by emphasizing regrets or quoting religious terms *InshaaAllah* (if Allah wills it) (Jalis et al., 2019), which differs from the Chinese or Indian who are more direct. Service-learning also enables students to minimize cultural pressure by learning and appreciating other cultures without compromising their owns (Luo & Zhang, 2021). Therefore, service-learning involving multicultural participants can be considered a medium to develop cultural adaptation skills.

This study also verified the significant impact of service-learning on analytical thinking skills, which is in line with Basma et al. (2020). Basma et al. (2020) explained that analytical skills occur by identifying problems, applying previously learned concepts, and solving problems. Since service-learning aims to symbiotically assist students' learning and solve community issues, it provides opportunities for students to apply theoretical concepts in solving actual community problems. For example, entrepreneurship students can help women in rural areas develop ideas for cottage industries by aligning business ideas using business model canvas and identifying suitable sources for business financing. Thus, service-learning experience supported analytical thinking skills development for students.

This study confirmed the significant impact of service-learning on communication skills, thus supporting Chang et al. (2020), Mtawa et al. (2021) and Blewitt et al. (2018). Service-learning prepares students for better communication skills because, throughout the preparation, service, reflection, and celebration phases, students will communicate with their peers and community members to discuss the project's goals and brainstorm ideas to solve the community problems. These stakeholders could be people from utterly different socio-economic and demographic backgrounds than the students. On that note, the students learn how to apply appropriate communication etiquette, effectively listen, respond, inform, negotiate and argue to achieve a common goal of a service-learning project. They may encounter unfavorable events throughout the service-learning project, but these experiences are essential in skill development as suggested by Kolb's Experiential Learning Theory. Service-learning nurtures skill development meaningfully through real-world experience and provides a lasting impact (Hudin et al., 2018).

6. Conclusion

Today's business environment has tremendously changed due to globalization, technological advancement, and unavoidable risks such as the pandemic of COVID-19. Accordingly, businesses resort to different strategies, such as low-cost country outsourcing, global recruitment, and foreign direct investment, to remain competitive and resilient. Nevertheless, fresh graduates did not have adequate skills to solve problems rooted in rapid business environment changes or communication skills (Hossain et al., 2018). Moreover, d'Hombres & Schnepf (2021) found students who have higher interpersonal skills and flexibility in different cultural environments had better chances for first employment. Therefore, this study investigated the impact of service-learning on cultural adaptation, analytical thinking, and communication skills.

This study confirmed that service-learning significantly impacted students' cultural adaptation, analytical thinking, and communication skills. Thus, service-learning is not merely to fulfill universities' social responsibilities, but it is also an educational strategy to help students develop future skills relevant to industrial needs. Unlike

volunteering and internship, service-learning ensures balanced benefits for students and community. Accordingly, universities should embed service-learning as part of the curricula and increase the implementation of service-learning for education delivery. Besides, course instructors should attend service-learning training that includes designing service-learning projects according to course learning outcomes, assessing students' skill development, monitoring service-learning projects, and conducting service-learning through online platforms. Additionally, university-community collaboration is essential in determining service-learning's success and long-term impact. Service-learning can take up years to finally observe community benefits, and therefore, it should be aligned with the academic semester of students, which is shorter. Along that time, commitment and coordination of all service-learning participants and the community can be achieved through strong collaboration.

The research findings are useful for further research on enhancing graduate employability and students' soft skills development. A qualitative study involving interviews can be conducted to gain an in-depth understanding of university students' lived experiences in service-learning that increased their cultural adaptation, analytical thinking, and communication skills. Qualitative studies will provide a detailed and thick explanation of how service-learning enhanced students' skills development to future researchers. Such information is critical to developing a service-learning framework for students' cultural adaptation, analytical thinking, and communication skills development. In conclusion, service-learning is a practical and versatile approach in producing graduates who meet the industrial requirements. It is the only teaching and learning approaches that maximize the benefits obtained by students and community members so far.

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