Analysis of Company Needs and Graduate Competencies from a University in Bandung in the Banking Industry

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Abstrak

Data yang diperoleh melalui survei pengguna dan studi pelacakan menunjukkan bahwa korelasi antara kepuasan pengguna dengan variabel seperti faktor organisasi, mata kuliah yang diambil selama dan setelah masa studi, peran institusi pendidikan tinggi, serta kompetensi alumni tidak dapat diabaikan. Berdasarkan analisis, kompetensi alumni dan kontribusi institusi pendidikan tinggi menunjukkan korelasi positif tertinggi (0,8). Kemampuan bahasa asing, pengetahuan lintas disiplin, penyelesaian masalah kompleks, negosiasi, kemampuan komunikasi, manajemen diri dan orang lain, pembelajaran aktif, serta inovasi dan/atau kreativitas merupakan keterampilan keras dan lunak yang masih perlu ditingkatkan oleh alumni ketika bekerja di sektor perbankan. Menurut pengguna, institusi pendidikan tinggi masih kurang dalam membekali lulusan dengan keterampilan seperti pemecahan masalah, pembuatan materi presentasi, praktik ilmiah, komunikasi, negosiasi, keterampilan interpersonal, sikap, dan kerja sama tim.
Kata Kunci: Industri Perbankan; Studi Pelacakan; Survei Pengguna.

Abstract

Data obtained through user surveys and tracer studies indicate that the correlation between user satisfaction and variables such as organizational factors, courses taken during and after university, the role of higher education institutions, and alumni competencies cannot be overlooked. Based on the analysis, alumni competencies and the contribution of higher education institutions show the highest positive correlation (0.8). Foreign language skills, interdisciplinary knowledge, complex problem-solving, negotiation, communication abilities, self and people management, active learning, and innovation and/or creativity are hard and soft skills that alumni still need to enhance when working in the banking sector. According to users, higher education institutions fall short in equipping graduates with skills such as problem-solving, creating presentation materials, scientific practice, communication, negotiation, interpersonal skills, attitude, and teamwork.
Keywords: Banking Industry; Tracer Study; User Survey.

I. INTRODUCTION

User Survey is a research method used to collect information or feedback from users, such as supervisors, regarding the performance of alumni (Budi, 2019). This survey is conducted to understand the needs of the job market and the level of user satisfaction with graduates produced by higher education institutions. Users respond to survey questions based on their experience and perspectives (Lajunen and Summala, 2013). The data obtained from this survey includes user interest and satisfaction with alumni concerning 23 future competencies, as well as information on hard skills and soft skills deemed insufficiently taught by higher education institutions to their graduates.

Tracer Study is another research method used to track and collect data about the graduates of an educational institution (Rustiadi, 2020). The objective of a tracer study is to understand educational outcomes, career achievements of graduates, and to evaluate how well higher education institutions prepare their graduates for entering the workforce or other relevant fields. This research also highlights the mismatch between the education received and the job pursued, which can affect the salary and job satisfaction of graduates (Amador & Villa, 2013; Caudra et. al., 2019). Tracer studies collect data on how higher education institutions contribute and how alumni demonstrate

competencies related to the 23 future competencies outlined by the Dunia Usaha dan Dunia Industri (DUDI), aligning these with university needs (Budi, 2019; Rustiadi and Dinan, 2020). They also gather information on the number of organizations alumni joined during university, their GPA, and the courses they took during or after their studies.

According to Tren Asia, as cited by Read Nigeria Network, the financial industry was the largest industry in the world in 2022, with a market value of US$22.5 trillion (Zahara, 2022). This industry plays a crucial role in the global economy as it encompasses various financial sectors. Referring to the Financial Services Authority (OJK) (Tim Penulis, 2019), banking is a part of the financial industry that functions as a financial intermediary. This industry bridges parties with surplus funds and those in need of funds (Tim Penulis, 2019). Data collected from tracer studies over three consecutive years, from 2020 to 2022, indicates that the finance and insurance sectors consistently rank among the top five industries employing alumni. Specifically, in 2020, 10% of the 2,078 working alumni were engaged in this sector, followed by 10% of the 2,282 working alumni in 2021 and 11% of the 2,132 working alumni in 2022. Given the substantial number of alumni employed in this industry, the sector presents a compelling subject for further exploration.

The gap between university education and the job market is evident in the

competencies required in the workforce compared to those predominantly taught in academia. The mismatch between a graduate's field of study and their job can also impact their workplace performance (Albina & Sumagaysay, 2020). As a result, graduates often need to adapt to the demands of the job market. A tracer study conducted at Philippine Normal University (PNU) revealed that essential competencies and skills for quickly securing employment include communication skills, human relations, leadership, and problem-solving (Gines, 2014). Similarly, at Lyceum of the Philippines, Celis, Festijo, and Cueto (2013) reported that the most needed skills for graduates are human relations and communication.

Therefore, conducting tracer studies and user surveys is important for monitoring and evaluating university curricula. This research analyzes 23 future competencies related to user interest and the role of higher education institutions, as well as user interest and graduate competencies, using a radar chart. Additionally, a word cloud is employed to illustrate the most dominant hard and soft skills that universities insufficiently provide to their graduates. The Spearman test is also utilized to show the correlation between variables. This research aims to inform the university about the competencies alumni need when entering the workforce.

II. METHODS

This study employed a quantitative descriptive method aimed at illustrating phenomena and the relationships between variables involved in assessing user satisfaction with university graduates. This method was chosen because it can provide a clear and structured overview based on collected numerical data, enabling relevant conclusions to be drawn from existing facts (Nassaji, 2015). The analysis uses correlation tests, linear regression, and data visualization techniques such as pair plots, radar charts, and word clouds to provide insights into alumni entering the banking industry.

The data for this research was obtained from two main sources: the Tracer Study and User Survey. The tracer study was used to gather information about graduates, including alumni profiles, career achievements, and evaluations of the role of higher education institutions in preparing them for the job market. Meanwhile, the user survey involved users, such as the graduates' supervisors, who were asked to evaluate the performance and competencies of alumni based on their firsthand experience working with them. This assessment provided an important perspective on user satisfaction with graduates and the skills that were deemed lacking during their university education. The study includes valid data, specifically from alumni who have provided all the required information in the tracer study survey and whose

respective supervisors have completed the user survey.

The subjects of this study consisted of 47 alumni and users. Each user was asked to evaluate one graduate working under their supervision. The data was collected from 2020 to 2022, with 17 alumni in 2020, 13 in 2021, and 17 in 2022 meeting the research criteria. The number of alumni working in the financial and insurance industries was 206 in 2020, 234 in 2021, and 241 in 2022, with 120, 148, and 134 alumni, respectively, working in the banking sector. The fields of study of the involved alumni were diverse, covering science, social sciences, and engineering, with nine alumni from science, five from social sciences, and 33 from engineering.

The study sources data from a tracer study conducted by a university in Indonesia. The research instrument uses a Likert scale with values ranging from 1 to 5. On this scale, the ratings are as follows: "Very small" receives a score of 1, "Small" gets a score of 2, "Large" is assigned a score of 4, and "Very large" is rated with a score of 5. To promote more definitive responses, the survey excludes the value of 3, corresponding to the "Neutral" category. However, researchers include the value of 3 during data processing. Several statistics lecturers and research faculty members at the university have validated this instrument.

III. RESULT AND DISCUSSION

This study conducted correlation tests to analyze the relationships between various variables. The results of these correlations were then visualized using paired plots to depict the strength of the relationships between each competency and variable. Additionally, the distance of each variable for each competency was displayed in the form of a radar chart. A word cloud was also used to visualize user feedback, providing a clearer depiction of their perceptions and views.

A. Correlation Test

Correlation tests were applied to variables such as user satisfaction with alumni, GPA, the number of organizations joined, courses taken during university, courses taken after graduation, and alumni assessments of the university, using the average data from the research years 2020-2022. The Shapiro-Wilk test was employed to determine whether the data followed a normal distribution, with a significance level of 0.05, for datasets with fewer than 50 data points (Pozos and Estrada, 2024). The following are the hypotheses used.

Hypotheses

- H0: p-value ≥ 0.05 (data is normally distributed)
- H1: p-value < 0.05 (data is not normally distributed)

Tabel 1.
Normality Test of User Satisfaction, GPA,
Organization, Course (During), Course (After), Role
of University, and Alumni Competency

	p-value	Conclusion
User satisfaction	0.2008	Fail to reject H_0
GPA	0.5027	Fail to reject H_0
Organization	0.001757	Reject H
Course (during)	2.679e-07	Reject H
Course (after)	4.445e-08	Reject H
Role of University	0.407	Fail to reject H_0
Alumni Competency	0.422	Fail to reject H_0

Table 1 shows that three variables have non-normal data. Therefore, a non-parametric analysis using the Spearman test was conducted to measure the strength of the relationship between two variables (Wang et. al, 2019). In this test, both variables do not need to be normally distributed (Sugiyono, 2015).

Hypotheses

- H0: $\rho = 0$ (the correlation value is negligible)
- H1: $\rho \neq 0$ (the correlation value cannot be ignored)

Tabel 2.
Spearman Correlation Values Between User
Satisfaction and GPA, Organization, Course
(During), Course (After), Role of University, and
Alumni Competency

	User Satisfaction (ρ)	Conclusion
GPA	0.042	Reject H_0
Organization	0.009	Reject H_0
Course (during)	0.018	Reject H
Course (after)	0.193	Reject H

	User Satisfaction (ρ)	Conclusion
Role of University	-0.171	Reject H_0
Alumni Competency	-0.018	Reject H_0

Since each variable resulted in the rejection of H0, the correlation values cannot be ignored (Dodge, 2008). The analysis revealed that the GPA, organizational activity, and courses taken during and after university positively correlated with user satisfaction. However, the university's contribution and alumni competencies negatively correlated with user satisfaction. This is likely due to the self-reported nature of the contributions of the university and alumni competencies. The analysis suggests a discrepancy between alumni's self-assessment of their competencies and the university's contribution, compared to user satisfaction with those competencies during employment.

An example is when alumni feel highly proficient in a skill, but users assess it as insufficient, or vice versa. The same issue applies to the university's contribution. The correlation for each variable can be visualized using paired plots (Emerson et al., 2011), as shown in Figure 1.
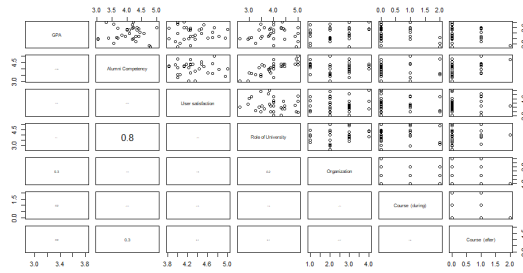
Figure 1. Paired Plots of Each Variable for the Years 2020-2022

Figure 1 illustrates the highest correlation between alumni competencies and the university's contribution, with a value of 0.8 (positive correlation). Increasing the university's role directly enhances alumni competencies. On the other hand, the correlation between user satisfaction and other variables, such as GPA or courses taken by alumni, is relatively small, indicating that these factors do not significantly influence user satisfaction.

A linear regression analysis examined the relationship between alumni competencies and user satisfaction for each major. Before the analysis, a normality test using the Shapiro-Wilk Test, with a significance level of 0.05, was carried out.

Hypotheses

- H0: p-value $\geq$ 0.05 (normally distributed)
- H1: p-value < 0.05 (not normally distributed)

Tabel 3.
Normality Test of User Satisfaction and Alumni Competencies for Each Major

Major	p-value of User Satisfaction	Conclusion	p-value of Alumni Competencies	Conclusion
Enginerring	0.0002432	Reject H_0	0.8452	Fail to reject H_0
Science	0.009495	Reject H_0	0.0002432	Reject H_0
Social	0.3276	Fail to reject H_0	0.7752	Fail to reject H_0

Based on Table 3, only the social major showed a normal distribution for both variables. A heteroscedasticity test using the Glejser method yielded a p-value of 0.7819, more significant than 0.05, indicating no heteroscedasticity issues, thus meeting the homoscedasticity assumption. The scatter plot further confirmed a linear relationship between both variables. Therefore, a regression test was conducted between user satisfaction and alumni competencies for the social major.

Hypotheses

- H0: p-value > 0.05 (alumni competencies do not significantly affect user satisfaction)
- H1: p-value < 0.05 (alumni competencies significantly affect user satisfaction)

```
Call:
lm(formula = R_SO$`Kepuasan User` ~ R_SO$`Kompetensi Alumni`)

Residuals:
      1       2       3       4       5
-0.1705  0.8705 -1.5232  0.3586  0.4645

Coefficients:
                            Estimate Std. Error t value Pr(>|t|)
(Intercept)                   4.2484     7.0897   0.599    0.591
R_SO$`Kompetensi Alumni`     -0.0282     1.6912  -0.017    0.988

Residual standard error: 1.073 on 3 degrees of freedom
Multiple R-squared:  9.265e-05,  Adjusted R-squared:  -0.3332
F-statistic: 0.000278 on 1 and 3 DF,  p-value: 0.9877
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Figure 2. Linear Regression for Social Major

Based on Figure 2, the calculated F-value is 0.000278, and the p-value is 0.9877, more significant than 0.05, so we fail to reject H0. This indicates that alumni competencies do not significantly affect user satisfaction for the social major. The linear regression equation is

$$Y = 4.2484 - 0.009X + \epsilon.$$

The regression equation suggests an inverse relationship. This outcome mirrors the correlation test results, where alumni assess their competencies. The data is visualized using a radar chart to provide a clearer picture.

B. Radar Chart

This study explores 23 competencies grouped into eight hard skills and fifteen soft skills. Hard skills refer to abilities related to scientific knowledge, professionalism, and technical expertise (Laker & Powell, 2011). These include complex problem solving, knowledge and application of fields/disciplines, interdisciplinary knowledge, data analysis and interpretation, administrative skills, writing reports/documents/research or work outcomes, IT skills, designing or developing a component, system or process, and foreign language proficiency.

Meanwhile, soft skills are a set of traits, behaviors, and interpersonal skills that support teamwork and interactions in the workplace (Fojcik et. al., 2023). In this study, the analyzed soft skills include critical thinking, innovation and/or creativity, self and people management, teamwork, individual work, emotional intelligence, judgment and decision making, negotiation, cognitive flexibility, active learning, adaptability, honesty, loyalty and integrity, working under pressure, professional ethics and responsibility, and communication abilities.

To better understand the gaps between university contributions and user interests, alumni competencies and user interests, as well as user satisfaction and user interests, this study presents a radar chart. The radar chart visually depicts the comparison between user satisfaction with alumni and relevant competencies for each year and for each field of study. This analysis aims to provide deeper insights into the job market's needs and expectations of graduates and to evaluate the effectiveness of the curriculum implemented by the university.
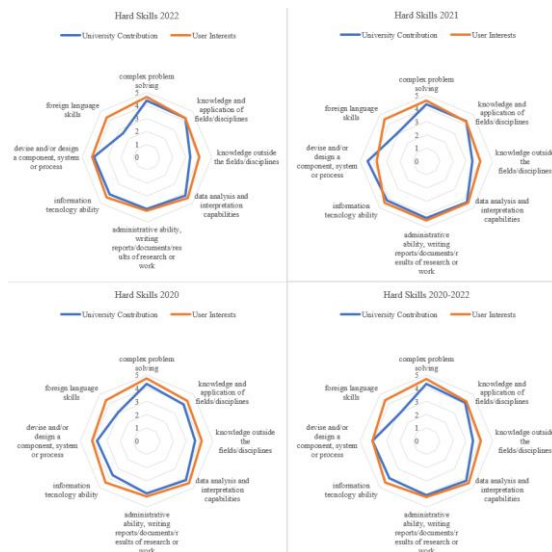
Figure 3. Radar Chart of University (PT) Contributions and User Interests for Hard Skills in 2020-2022

The largest gap identified in 2022, 2021, and 2020 focused on foreign language skills. Users indicated a high level of importance for this competency; however, alumni assessed the contribution of the university to the development of foreign language skills as very minimal. This highlights a mismatch between user expectations and the reality experienced by alumni, reflecting challenges in delivering the skills demanded by the job market.

In 2021, another significant gap was noted related to the competency of devising and/or designing a component, system, or process. Alumni perceived that the university contributed highly to this skill, even exceeding the importance felt by users. This situation may suggest that the curriculum successfully emphasizes

this skill, although user interests may not align with the level of mastery produced.

Figure 3 shows that foreign language skills and knowledge outside the fields/disciplines are the two competencies with the largest gaps during the 2020-2022 period. This misalignment between market needs and the skills provided by universities needs to be addressed to enhance the relevance of education to job market demands. By analyzing these gaps, universities can better understand which areas need improvement so that their graduates can meet user expectations more effectively.
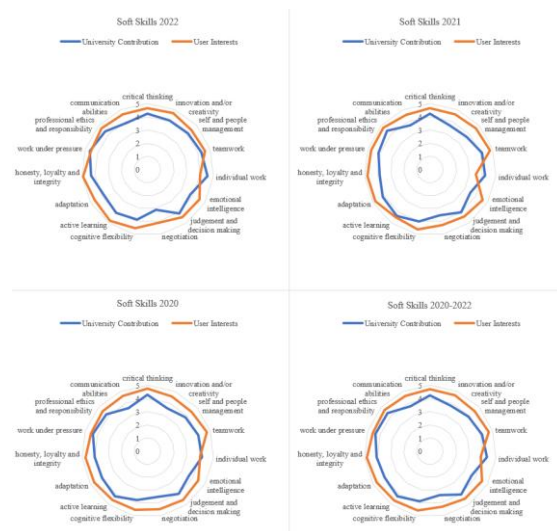

Figure 4. Radar Chart of University (PT) Contributions and User interests for Soft Skills in 2020-2022

The largest gaps in the development of soft skills during 2020-2022 were identified in the competencies of negotiation, communication abilities, and self and people management. Although communication abilities are among the

most essential soft skills in the job market (Timm, 2005; John, 2009; Poláková et. al., 2023), the data indicates that university contributions to developing this competency remain insufficient.

An interesting observation in Figure 4 is the comparison between the competencies of teamwork and individual work. Although users indicated higher importance for teamwork, the contribution provided by universities was greater for individual work. This condition reflects a misalignment between user needs and the educational focus provided.

In an era of increasingly complex digital transformation, teamwork skills are becoming more critical (Mullan and Wajcman, 2017; Poláková et. al., 2023). Managerial tasks and team collaborations face greater challenges, making the ability to work in teams essential for achieving organizational goals. Therefore, greater attention from universities to developing teamwork competencies will better prepare graduates to face the continuously evolving demands of the job market.
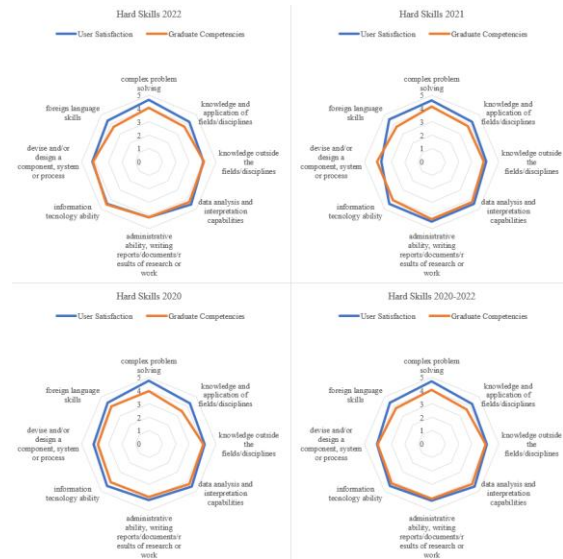

Figure 5. Radar Chart of Alumni Competencies and User interests for Hard Skills in 2020-2022

Complex problem solving, foreign language skills, and knowledge and application of fields/disciplines are the competencies showing the largest gaps between user expectations and alumni capabilities during the 2020-2022 period. Users placed high importance on these three competencies, but alumni capabilities still fell short of these expectations. Interestingly, in 2021, alumni competencies in devising and/or designing a component, system, or process were higher than user expectations. This suggests that alumni may feel more confident in this competency compared to what users expect. Furthermore, the competency knowledge outside the fields/disciplines in Figure 3 shows a larger gap compared to Figure 5. This indicates that there may be factors outside of university contributions that allow alumni to master this

competency. Conversely, for the competency knowledge and application of fields/disciplines, Figure 5 shows a larger gap than Figure 3, suggesting that university contributions may have a significant impact on alumni mastery of this competency. The mismatch between user expectations and alumni competencies should be a point of attention for universities in designing more relevant curricula and development programs that align with current job market needs.

intelligence. Meanwhile, in 2020, negotiation and innovation and/or creativity also recorded the largest gaps.

It is noteworthy that in each year, alumni capabilities in individual work were consistently higher than user interests. Conversely, for the competency teamwork, user interests were greater than alumni capabilities. This highlights a mismatch between the needs of the job market and what universities have been teaching.

These findings are consistent with the results shown in Figure 4, which illustrate the differences between user interests and alumni capabilities. This condition indicates the need for universities to focus on developing more relevant skills, especially in teamwork, to meet user expectations and the continuously evolving demands of the job market.
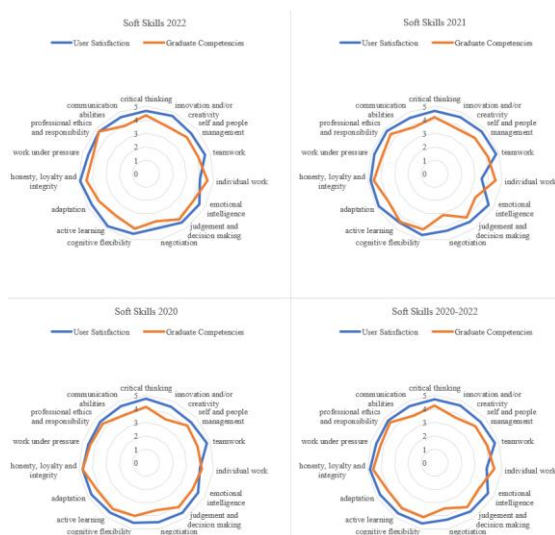

Figure 6. Radar Chart of Alumni Competencies and User Interests for Soft Skills in 2020-2022

Active learning and innovation and/or creativity were the two competencies that showed the largest gap between user interests and alumni capabilities in 2022. In the previous year, 2021, the competencies with the most significant gap between user expectations and alumni abilities were negotiation and emotional

Figure 7. Radar Chart of User Satisfaction and User Interests in Hard Skills by Field of Study

Based on the displayed figure, it can be seen that for the Science and Engineering fields, complex problem solving is the hard skill with the largest gap between alumni satisfaction and user interests during the 2020-2022 period. This indicates that although users have high expectations for this competency, the contributions from alumni have not yet met those expectations.

Meanwhile, for the Social Sciences field, the competency with the most significant gap is data analysis and interpretation capabilities. This shows that although users value the importance of data analysis and interpretation skills, alumni from this field feel that they are not fully equipped to meet those needs in the job market. These findings highlight the need for improvements in university curricula and teaching to better align with user expectations in each field of study.

Based on the displayed figure, it is evident that for Science and Engineering fields, the negotiation competency has the largest gap between alumni satisfaction and user interests during the 2020-2022 period. This indicates that although users greatly value negotiation skills, the contributions from alumni in this area have not met the existing expectations.

On the other hand, for the Social Sciences field, the most significant gap is in professional ethics and responsibility. This suggests that although users consider professional ethics and responsibility important, alumni from this field feel that they are not fully equipped to apply these principles in their work contexts. These findings underscore the need for greater emphasis on developing relevant soft skills within university curricula to ensure graduates can meet job market expectations.

The radar chart analysis shows significant gaps between user interests and the competencies possessed by alumni from various fields of study during the 2020-2022 period. In terms of hard skills, some competencies such as complex problem solving, foreign language skills, and knowledge and application of fields/disciplines stand out as areas with the largest gaps. Users indicated high interest in these competencies, but alumni felt they lacked adequate skills in these areas. These findings emphasize the need to strengthen education in these areas to
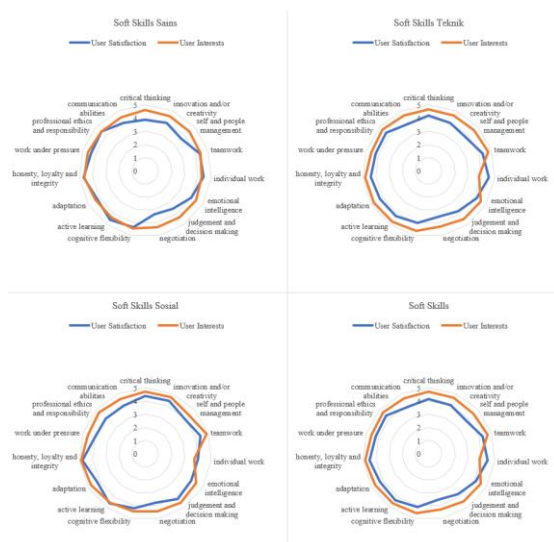

Figure 8. Radar Chart of User Satisfaction and User Interests in Soft Skills by Field of Study

better align with the evolving demands of the industry.

On the other hand, for soft skills, competencies such as negotiation and communication abilities also show significant gaps, especially in the Science and Engineering fields. Although users value these soft skills, alumni contributions in these areas are still considered insufficient. This highlights the importance of education that focuses more on developing soft skills so that graduates not only have technical knowledge but also the interpersonal skills needed in the workplace (John, 2009).

The most significant gap is observed in professional ethics and responsibility in the social sciences field. This finding underscores the need for greater emphasis on ethics in education, especially in today's era of heightened professionalism. The gap between alumni's hard and soft skills and user satisfaction is attributed to differences in the learning outcomes focus across disciplines. Not all hard and soft skills are primary learning outcomes for each program, as every department has different targets and specializations. Overall, the results from this radar chart highlight the need for universities to adjust their curricula. There is a pressing demand to enhance the development of competencies that align with market needs, ensuring that graduates are not only academically proficient but also equipped to navigate the increasingly complex job market. Therefore, fostering collaboration between universities and industries is essential to ensure graduates are prepared with academic knowledge and meet a dynamic work environment's evolving expectations and challenges.

C. Word Cloud

The next analysis will focus on the skills that universities are perceived to provide insufficiently to their alumni, based on feedback from users expressed in the open-ended survey. This data will be presented using a Word Cloud, an effective visualization tool to highlight words or phrases that appear most frequently in participant responses (Ren et. al., 2024).

The Word Cloud will illustrate the hard skills and soft skills considered important but not adequately taught or reinforced during the educational process. By examining the size and frequency of words in the Word Cloud, we can identify specific areas where users feel there is a gap in alumni competencies (Hearst et. al., 2019; Ren et. al., 2024). This provides valuable insights for universities to design more relevant curricula and aids in the development of supplementary training programs to bridge these gaps.

Presenting information through a Word Cloud enables us to easily observe and understand which skills need more attention, allowing universities to adapt and better meet user needs and job market demands.
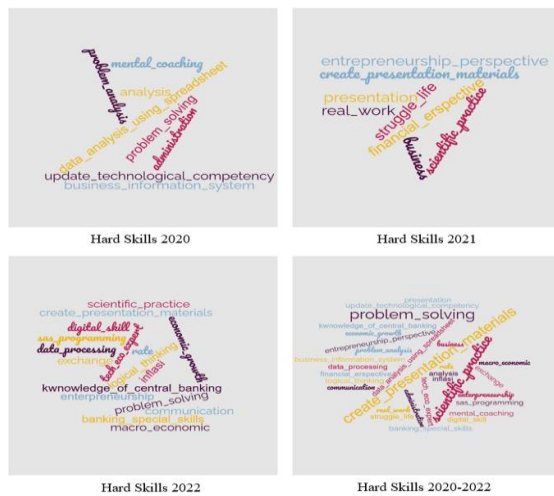
Figure 9. Hard Skills That Users Believe Universities Provide Insufficiently to Alumni by Year.

In 2020 and 2021, the analysis of hard skills perceived as insufficiently provided by universities to alumni showed significant variation. In 2020, the majority of user feedback focused on analytical skills, including the ability to interpret data and make decisions based on available information. On the other hand, in 2021, more attention was given to presentation skills, with users feeling that alumni were not adequately trained in effectively conveying ideas and information to an audience.

By 2022, user feedback revealed a wider range of hard skills considered lacking. During this period, some of the most frequently mentioned skills that universities were perceived as not sufficiently teaching included problem solving, creating presentation materials, and scientific practice. This indicates that users expect alumni not only to master theory but also to apply it in practical situations and contribute meaningfully in the workplace.

Overall, these findings underscore the importance for universities to continuously adapt and update their curricula to better align with industry needs and user expectations (Akhtar et. al., 2024), particularly in terms of practical skills that are essential for alumni success in the field.
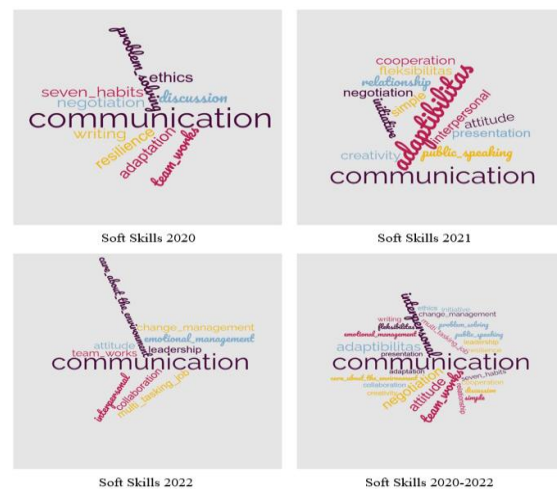

Figure 10. Soft Skills That Users Believe Universities Provide Insufficiently to Alumni by Year.

Communication skills were consistently considered one of the most underprovided soft skills by universities to alumni throughout the study period. This is significant, given that communication is a crucial skill required in the modern workplace (Mirza et. al., 2014). According to the data collected, strong communication skills can be a key differentiator in professional success, whether in team collaboration or interactions with clients and supervisors.

In addition to communication skills, the analysis also showed that there are other soft skills that alumni may not have sufficiently acquired from their university education. Skills such as negotiation, interpersonal skills, professional attitude, and teamwork were also deemed in need of improvement. Although there were changes each year in the emphasis on certain skills, the consistent assessment of lacking communication skills suggests that universities need to re-evaluate their approach to teaching these soft skills.

Therefore, to meet the evolving needs of the job market, it is important for universities to integrate the teaching of communication and other soft skills into their curricula (Wellington, 2005). This will not only enhance alumni readiness to face challenges in the field but also improve their competitiveness in the job market (Robles, 2012; Labzina et. al., 2019).

Figure 11. Hard Skills That Users Believe Universities Provide Insufficiently to Alumni by Field of Study.

Based on the analysis conducted, it is evident that graduates from each field of study have different needs regarding hard skills perceived as insufficiently provided by universities. For Science, users indicated that analytical skills are an area that needs improvement. In the Social Sciences, the focus was on knowledge of economics and banking, while Engineering graduates felt a lack of scientific practice.

To address these issues, one solution is to encourage Engineering graduates to pursue relevant certifications or training related to their professional work (Boere et. al., 2023). By participating in professional certification programs, alumni not only gain additional learning but also continuous competency development in their field (Firda, 2023).

The importance of professional competency certification cannot be overlooked, as it serves to ensure, maintain, and guarantee that certified graduates have mastered specific competencies in accordance with the Indonesian National Work Competency Standards (SKKNI). This also provides greater recognition for graduates as they advance their careers and achieve higher positions (BNSP, 2014).

By obtaining certifications, Engineering graduates can overcome existing hard skills gaps, making them more prepared and competitive in the job market. Additionally, these certifications can enhance alumni confidence in performing tasks and responsibilities at work, which in turn can contribute positively to their job performance.

Figure 12. Soft Skills That Users Believe Universities Provide Insufficiently to Alumni by Field of Study.

Communication competency is a soft skill perceived as insufficiently provided by universities to alumni in both Science and Social Sciences fields. In the Engineering field, in addition to communication, alumni also reported a lack of skills in negotiation, interpersonal skills, and adaptability.

One reason for this deficiency is the impact of the Covid-19 pandemic, which occurred during the study period from 2020 to 2022. During the pandemic, there was a significant shift in communication styles, with society transitioning to digital communication (Liang et. al., 2024). This new habit led to more frequent virtual interactions (Lieberman and Schroeder, 2020), which were often less effective compared to face-to-face interactions. Data from the tracer study and user survey conducted in 2020-2022 show a gap of 0.05 between the average user satisfaction and alumni competency in communication skills, indicating that users are not satisfied with the communication skills of the alumni. This finding aligns with the research conducted by Hapsari et al. in 2024, which states that the lack of communication skills among graduates

entering the workforce is one of the consequences of the pandemic.

This shift not only affected individual communication methods but also had implications for graduates' ability to adapt to different communication dynamics. Therefore, universities need to place more emphasis on the development of soft skills, particularly communication, to ensure graduates are ready to face the challenges of an increasingly complex and digital job market. Focusing on better communication skills in the post-pandemic era will be crucial to enhancing the social and professional interaction effectiveness of alumni in the future. The communication skills are crucial for alumni entering the workforce (Angraini, Murisal, & Ardias, 2021).

Based on Word Cloud analysis, the results indicate that users felt universities provided insufficient training in certain skills to alumni during the 2020-2022 period. The technical skills (hard skills) perceived as lacking included analytical skills, presentation, problem solving, creating presentation materials, and scientific practice. These skills point to the need for relevant practical development for the job market.

In terms of soft skills, communication was most frequently mentioned as lacking, especially in the Science and Social Sciences fields. Additionally, users highlighted the importance of negotiation, interpersonal skills, attitude, and teamwork. The shift in communication

styles due to the Covid-19 pandemic, moving towards digital communication (Liang et. al., 2024), potentially impacted the effectiveness of graduates' social interactions.

Overall, this analysis underscores the need for universities to evaluate curricula and teaching approaches to improve the development of relevant hard and soft skills. This way, graduates will not only have theoretical knowledge but also the practical skills needed for a competitive job market (Robles, 2012; Labzina et. al., 2019).

IV. CONCLUSION

Based on the Spearman correlation analysis, the conclusion is that the correlation between each variable and user satisfaction cannot be overlooked. However, a negative correlation exists between the university's contribution and alumni competencies with user satisfaction. The linear regression test for user satisfaction and alumni competencies in the Social Sciences department yielded the equation

$$Y = 4.2484 - 0.0282X + \epsilon,$$

indicating an inverse relationship. Alumni's self-assessment of how well they master a particular competency significantly impacts the correlation and regression results.

Figure 1 shows that alumni competencies and university contributions have the highest positive correlation at 0.8. The radar chart reveals that the main

issues in hard skills are foreign language proficiency, knowledge outside of specific fields/disciplines, and complex problem-solving. In the field of social sciences, capabilities in data analysis and interpretation also need improvement. Meanwhile, in soft skills, competencies lacking include negotiation, communication abilities, self and people management, active learning, and innovation/creativity. The field of social sciences still requires improvements in professional ethics and responsibility.

The Word Cloud results indicate that the hard skills considered insufficiently provided by universities include problem solving, creating presentation materials, and scientific practice. For soft skills, communication, negotiation, interpersonal skills, attitude, and teamwork were also deemed lacking. Both Science and Social Sciences fields showed that communication is a competency that is underprovided, while the Engineering field indicated deficiencies in communication, negotiation, interpersonal skills, and adaptability.

Therefore, universities are expected to place more emphasis on these competencies, as they are crucial for alumni in the workforce, especially in the banking sector. Given the significant positive correlation between university contributions and alumni competencies, increasing the contribution of universities in developing these competencies is essential. In addition to identifying the

gaps, we recommend that higher education institutions integrate hybrid training into their curriculum, including work simulations involving both virtual and face-to-face communication. This training will help students enhance their flexibility and collaboration skills, which align with the needs of the post-pandemic digital era.

ACKNOWLEDGEMENTS

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