Tracer Study Report 2023

Engineering Faculty, Universitas Negeri Yogyakarta

Quality Assurance Team

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Chapter 1 Universitas Negeri Yogyakarta Tracer Study Concept

1.1 Tracer Study: Fundamental Concepts

Tracer study, as explained by the Directorate General of Higher Education, Ministry of Education and Culture, is a research method used to collect data about college alums after they graduate. The main aim of the tracer study is to assess how the transition from the world of higher education to the world of work takes place, including the waiting period to get a job and how alums apply the competencies they acquired during their education in their workplace.

This concept is also essential as an evaluation tool that helps universities understand the effectiveness of higher education curricula and teaching programs based on the results achieved by alums in the world of work. In addition, the tracer study results are also used to fulfil accreditation requirements by the National Accreditation Board for Higher Education because they provide essential insight into the relevance of higher education to the needs of the job market.

Tracer studies provide many benefits for higher education institutions, including continuously improving curriculum and teaching methods. By understanding alumni's career journey and achievements, universities can identify the strengths and weaknesses of their educational programs.

Apart from evaluating educational outcomes and alums competency output, tracer studies also play a role in assessing the educational process, including how the learning process in higher education has contributed to graduates' competency acquisition. The tracer study results are helpful for universities in designing and adapting their educational programs to suit better the needs of the continuously developing world of work (https://tracerstudy.kemdikbud.go.id/). The resulting information can be used to update and adapt curricula to align with industry and job market needs so that graduates are better prepared and competitive.

Tracer studies also play an essential role in developing higher education marketing and promotion strategies. Data and success stories from alums can be used as testimonials that strengthen the institution's reputation and image in the eyes of prospective students and industry partners. Tracer study can also build a strong alumni network, benefiting graduates and current students through mentoring, internship opportunities, and professional connections.

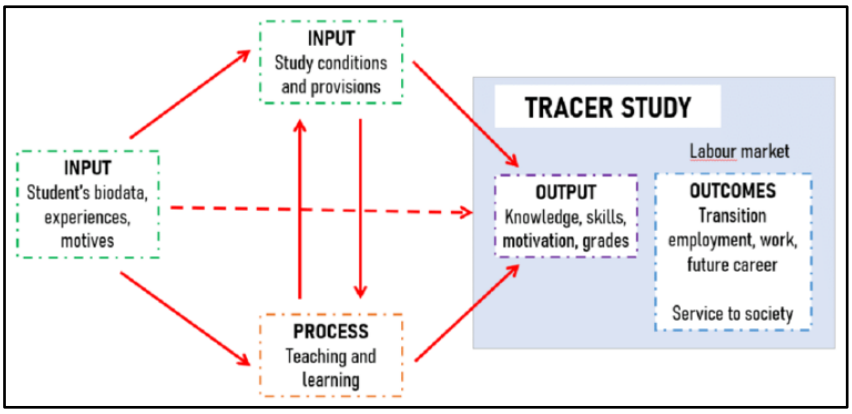

Figure 1.1.1. The Tracer Study Basic Concept (Schomburg, 2016)

A tracer study can be done to assess how effective college graduates are in adapting to the world of work according to their training. Tracer study provides an understanding of the relationship between various aspects, starting from higher education inputs such as study conditions, student data, experience and motivation, learning processes, and higher education outputs such as knowledge, skills, motivation and values, to higher education outcomes such as transition to the world of work and contribution to society (Schomburg, 2016).

In addition, Schomburg highlighted the importance of regular and systematic data collection to ensure the sustainability and effectiveness of tracer studies. By having accurate and comprehensive data, educational institutions can make better decisions in designing educational programs relevant to the job market's needs.

Schomburg also emphasized the importance of involving external stakeholders, such as entrepreneurs and industry, in the tracer study process. Collaboration with these parties can help ensure that educational programs produce graduates who meet the needs and expectations of the job market.

The implementation of tracer studies has become a routine agenda among higher education administrators in developed and developing countries. Tracer studies monitor students' journeys from the time they graduate until they start their careers, usually within 1-3 years after graduation (Budi & Dinan, 2015).

Universities view tracer study as essential to obtaining alum feedback to improve education systems and management. Through tracer studies, universities gain benefits by providing necessary information about the interaction between higher education and the world of work, evaluating the relevance of higher education, providing data to stakeholders, and fulfilling higher education accreditation requirements (Budi & Dinan, 2015).

Tracer studies can provide data regarding student profiles, experiences, motivation, learning conditions, facilities, and teaching and learning methods applied while studying at university. This information is essential for evaluating and improving the quality of the education system in higher education. Apart from that, tracer studies also reveal the knowledge, skills, motivation, final grades, and transition to the work world experienced by alums and their contributions to society. In this way, the relationship between higher education and the world of work can be assessed to evaluate the relevance of higher education, provide information for stakeholders and fulfil higher education accreditation requirements.

According to the 2014 ITB tracer study report, the tracer study should ideally be carried out twice, as shown in Figure 1.1.1. The first tracer study should be conducted on college alums within 1-2 years after graduation. This time is optimal because, within 1-2 years after graduating, alums are considered to have experience and skills relevant to work and a better understanding of the world of work. The experience and skills gained in the world of work will provide valuable feedback for universities regarding the relationship between higher education and employment. The second tracer study can be conducted on alums within 4-5 years after graduation (or three years after the first tracer study). This second tracer study focuses more on understanding the career development patterns of alums after they enter the world of work.

Therefore, it is essential for a university to continuously carry out tracer studies because alums are the primary key for universities to gain an objective understanding of the process and results of their education. Through tracer studies carried out systematically, the results can provide a valuable contribution to higher education institutions in formulating policies that can improve the institution's quality.

1.2 Tracer Study's Objective

Tracer studies attempt to review work situations, especially in the early days when a graduate enters the world of work. Information regarding transitions and work history is essential because it provides information and indicators of the efficiency of educational institutions. Tracer's study examines the relationship between transitions, higher education, and work dynamics. The importance of this is increasingly being felt by higher education administrators, the government, and the industrial world (Syafiq & Fikawati, 2014).

INCHER (International Center for Higher Education Research) initiated an international training called UNITRACE (University Tracer Study International Training), which aims to disseminate a methodology that seeks to strengthen collaboration between

universities worldwide in implementing tracer studies. According to INCHER, the big goal of the tracer study is explained in Figure 2. 1. 1.

According to Schomburg (2003), tracer studies need to be carried out to obtain valuable information for university development, which will then be used in the accreditation process, evaluating the relevance of higher education to labour market needs, as well as providing information to students, parents and administrators about matters that experienced by alums from studying at university until getting a job.

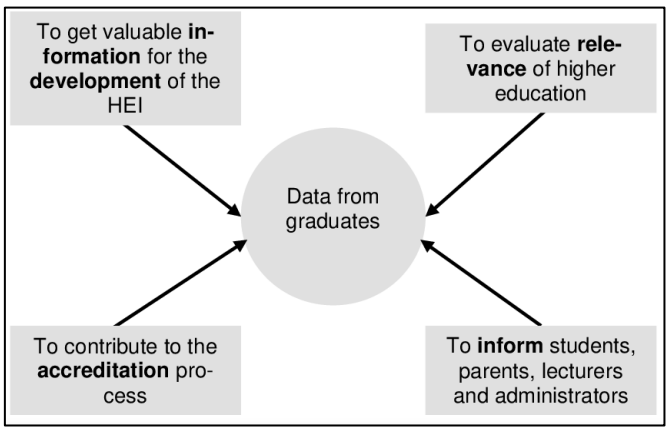

Figure 1.2.1. Tracer Study Objective (Schomburg, 2003)

In general, the big goals of tracer studies, according to INCHER (International Center for Higher Education Research), include:

1. Understanding Alumni Careers: Track and understand the career paths of graduates after they leave educational institutions. This field includes the types of jobs they get, the positions they hold, and their career development over time.
2. Educational Relevance Assessment: Assessing the extent to which the education provided by an institution is relevant to the job market's needs. This field includes evaluating the skills and knowledge acquired during education and how these are applied in the workplace.
3. Feedback for Curriculum Improvement: Provides valuable data and information for improving curricula and study programs in educational institutions. Feedback from graduates can be used to adjust the program to suit industry needs and current developments better.
4. Policy and Strategy Development: Assists in developing more effective higher education policies and strategies. Governments and educational institutions can use data from tracer studies to design policies that support the development of quality human resources.

5. Education Quality Evaluation: Becomes an evaluation tool to measure the quality of education provided by educational institutions. Tracer study results can show the strengths and weaknesses of existing educational programs.

In line with the tracer study objectives stated by INCHER, UNY also has the following objectives:

1. Give information to students, parents, lecturers, educational administration, and education practitioners regarding alums/college graduates.
2. Soft Skills Competency Development
    a. Identify non-technical skills that are important and needed in the world of work.
    b. Develop soft skills training and development programs based on industry needs
    c. Tracer study results are used as evaluation material to determine the relevance of higher education to work.
3. Industrial Needs Mapping:
    a. Tracer study results are used as evaluation material to determine the relevance of higher education to work.
    b. Identifying industry needs to be related to graduate competency.
    c. Adapt study and training programs to actual industry needs.
4. Placement and Employment:
    a. Helping graduates get jobs that suit their field of study.
    b. Developing more effective career guidance and job placement services.
    c. Providing empirical evidence regarding alums' work, early career, and the relevance of alums' work to higher education.
5. Alumni Network Development:
    a. Facilitate the formation of a strong alum network to support professional and personal development.
    b. We hold events and activities that bring together alums and active students to share experiences and knowledge.
6. Educational Innovation:
    a. Tracer study results are used as feedback on the learning process during the lecture period.
    b. We use tracer study data to develop innovative and relevant teaching and learning methods.
    c. Encourage the use of technology and new approaches in the learning process.

d. Tracer study results are used as feedback to guarantee the quality of higher education and determine national education policy.

7. Collaboration with Industry:
    a. Tracer study results increase collaboration between universities and industry in research, internships, and real projects.
    b. It is strengthening relationships with companies for industry-based curriculum development.
    c. Tracer study results are used to provide input and information for company HRD regarding the characteristics of alums and the characteristics of the university itself.
    d. It strengthens national data alignment in the workplace.
8. Development of New Study Programs:
    a. Identify the need for new study programs based on job market trends and industry needs.
    b. Open new study programs that are relevant and have good job prospects.
    c. Alumni Welfare Monitoring:
    d. Monitor alum welfare and satisfaction in their careers.
    e. Use this data to improve support for alums, such as career services and professional development.
9. Sustainable Career Planning:
    a. Assist alums in planning their long-term careers.
    b. Tracer study results provide information and resources for continued career development.
10. Strengthening International Relations:
    a. We use tracer study data to establish international collaboration with educational institutions and global industry.
    b. It is increasing academic and professional mobility through international exchange and collaboration programs.
11. Accreditation Requirements

    Assist universities in the accreditation process at national and international levels.

1.3 Tracer Study Benefit

Tracer studies are functional internally for Universitas Negeri Yogyakarta and become a bridge between the University and stakeholders. Tracer studies can provide in-depth and detailed information about work compatibility between various fields of knowledge and

various levels of education. With specific data regarding the condition of graduates, it is hoped that companies can establish cooperation with universities to prepare prospective graduates to work according to company expectations and help overcome the problem of inequality of employment opportunities and efforts to improve it. In addition, for the University itself, the results of the Tracer Study can be used as material for study programs to revise and improve the curriculum according to the current situation. In detail, the benefits obtained by UNY with a tracer study carried out professionally are:

1. The tracer study report is the latest alum database.
2. Become an entry point for study programs to establish cooperation with related companies through their graduates.
3. Become an entry point for study programs to conduct stakeholder satisfaction surveys of their graduates.
4. The tracer study report is input material for universities and study programs in making curriculum improvements.
5. The tracer study report is the material for building alum networks.
6. As primary data, look for the employer contact list.
7. According to the Ministry of Education and Culture, the data could be used for the clusterization of higher education.
8. The role of tracer study is becoming increasingly important because it is a prerequisite for the “Independent Campus/Kampus Merdeka.”

Chapter 2 Tracer Study Iplementation at Engineering Fakultas, UNY

2.1 Tracer Study Implementation at Engineering Faculty UNY 2023

1. The target respondents are students who graduate throughout 2021 or TS (current year)-2, following the Ministry of Education and Culture policies.
2. Question items refer to the minimum questions on the website https://tracerstudy.kemdikbud.go.id/ as the basis for ranking higher education institutions, as well as the UNY tracer study website, which can be accessed at the link http://tracer.uny.ac.id/
3. Universities, faculties and study programs play an important role in inviting graduates to complete tracer studies via the link: http://tracer.uny.ac.id/
4. The type of data collected is primary data obtained directly from alumni and graduate users through a structured questionnaire, which is analyzed using descriptive percentage analysis techniques.

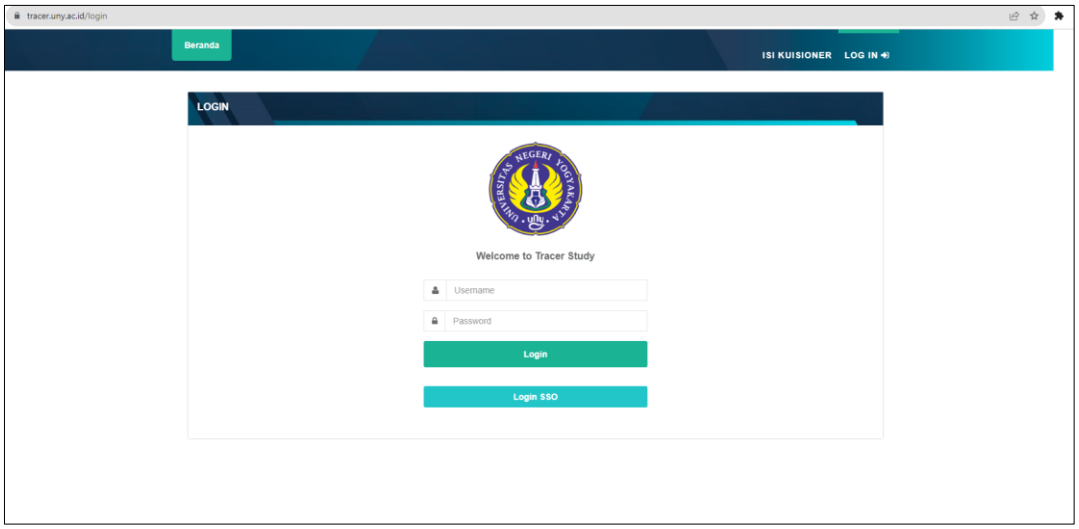

Figure 2.1.1. The interface of UNY's Tracer Study Web

UNY's web tracer study was first introduced in 2015 with the address http://tracer2.uny.ac.id. After three years, in 2018, a renewal process was carried out to adapt to Dikti's web tracer. In 2020, another update was carried out in the form of additional workplaces and workplace locations with the address http://tracer.uny.ac.id. In February 2022, Yogyakarta State University involved a team of surveyors (lecturers, staff and students) in helping contact graduates who had not filled out the UNY Web Tracer Study, namely by sending a link to fill in the UNY Web Tracer Study via email to respondents and via WhatsApp personally to graduates who have not filled out the UNY Web Tracer Study.

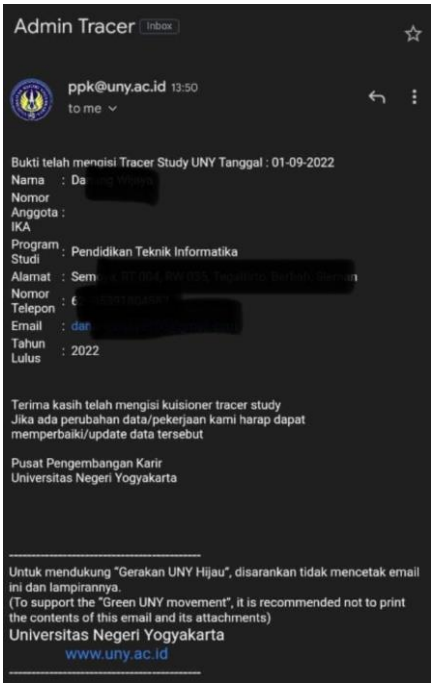

Figure 2.1.1.2. The email received by graduates who filled out the UNY's Tracer Study Web with the email blasting feature

2.2 Web Tracer Study UNY Instrument

1. Tracer study respondents
2. College financing
3. Average monthly salary
4. Completeness of the questionnaire
5. Time to look for work
6. Classification of waiting times
7. The company being applied for
8. Companies that respond
9. The company invites an interview
10. Job information
11. Type of work agency
12. Take a job that does not match the alum's education
13. Education over experience
14. Competency assessment
15. Assessment of UNY's contribution to graduate competency at work
16. Comparison of alum assessment of competency upon graduation and alums' assessment of UNY's contribution to graduate competency at work
17. Analysis of GPA and company category

18. Analysis of company categories and average salaries
19. GPA analysis and job search period

2.3 Web Tracer Kemdikbud (Ministry of Education, Culture, Research, and Technology) Instrument

1. Current alum status?
2. Have you found a job <= 6 months/including work before graduating?
3. In how many months do alums get jobs?
4. What is the alums' average income per month? (take-home pay)
5. Where is the alums' work location? Province/District
6. What type of company/agency/institution do the alums work now?
7. What is the name of the company/office where the alums work?
8. What level is the alums' workplace?
9. Further study questions: source of fees, college, study program, entry date.
10. Source of funds for financing college during S1 or D3
11. Close relationship between field of study and work.
12. The most appropriate level of education for the current job.
13. Competencies most mastered by graduates: ethics, skills based on scientific fields, English, use of information technology, communication, teamwork, and self-development.
14. Competencies required for work: ethics, skills based on scientific fields, English, use of information technology, communication, teamwork, and self-development.
15. How much emphasis is placed on learning methods in the alums' study program: lectures, demonstrations, participation in research projects, internships, practicums, fieldwork, discussions
16. When did the alums start looking for work?
17. How did the alums find the job? (advertising, direct companies, job fairs, internet, contacted by companies, Ministry of Manpower and Transmigration, employment agents, information from university career development offices, alum relations, networking during college, relations between lecturers/siblings/friends/parents, building your own business, job placements /internship, working at a workplace while studying)
18. How many agencies/companies/institutions have the alums' applied?
19. How many agencies/companies/institutions responded to the alums' application?

20. How would the alums describe the alums' current situation? (studying/married/busy with family/looking for work)

Chapter 3 Tracer Study Result

3.1 Tracer Study UNY 2023 Respondent

The target respondents for the UNY Faculty of Engineering tracer study 2023 are alumni of the UNY Faculty of Engineering who graduated in 2021, namely 573 people. The following is the total number of respondents after carrying out all stages of the tracer study at the Faculty of Engineering, UNY, in 2023. Based on data from tracer study graduates from the Faculty of Engineering in 2023, 433 alumni filled out the questionnaire, and 140 alums did not fill out the questionnaire.

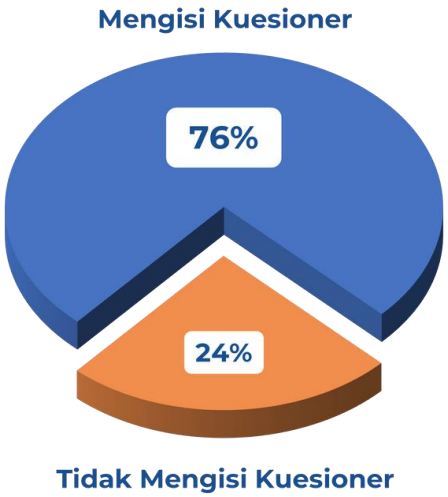

Figure 3.1.1. Gross Response Rate
(Note: Mengisi Kuesioner (graduates who filled out the questionnaire), Tidak Mengisi Kuesioner (graduates who did not fill out the questionnaire))

3.2 Number of Respondents

If we look at the study program, the Bachelor of Civil Engineering and Planning Education Study Program achieved the highest number of respondents, with 53 respondents, followed by Bachelor of Fashion Engineering Education, with 48 respondents and Bachelor of Automotive Engineering Education, with 41 respondents.

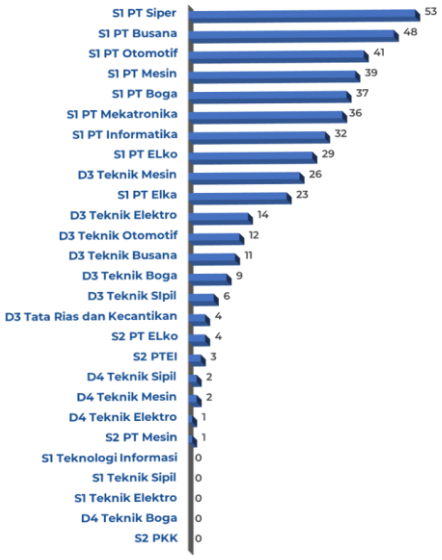

Figure 3.2.1. Number of Respondents

3.3 Questionnaire Completeness

Questionnaire completeness is an indicator that describes questionnaire fillers compared to the number of graduates. The highest percentage was achieved by the culinary engineering education study program, namely 73%, followed by the mechanical engineering education study program, 71%. Then, in third place, 66% of the population is occupied by the fashion engineering education study program.

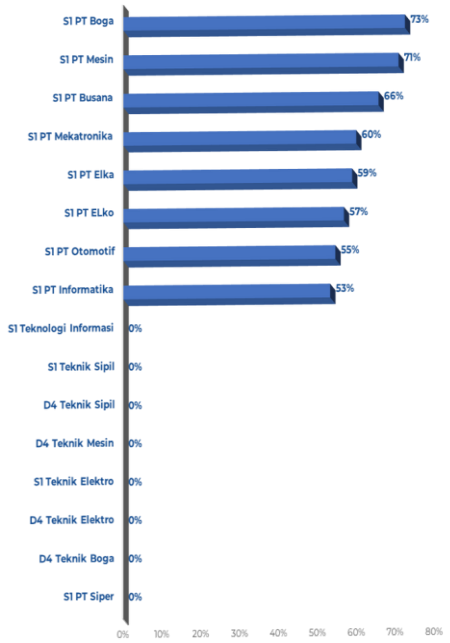

Figure 3.3.1. Questionnaire Completeness

3.4 Funding Sources During College

There are seven categories of funding sources used by respondents with the main funding being dominated by personal/family costs for 316 students (73%), then 89 students received Bidikmisi Scholarships (20.6%), followed by Company/Private Scholarships for 16 students (3.7%), then the PPA and Other Scholarships for five students (1.2%) and the Affirmation Scholarship for two students (0.5), and the Adik Scholarship for 0 students.

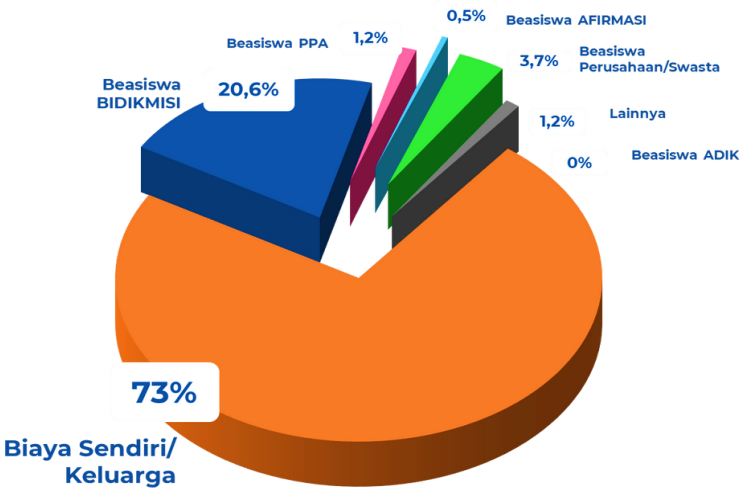

Figure 3.4.1. Funding Sources

The following diagram outlines financing details based on the study program.

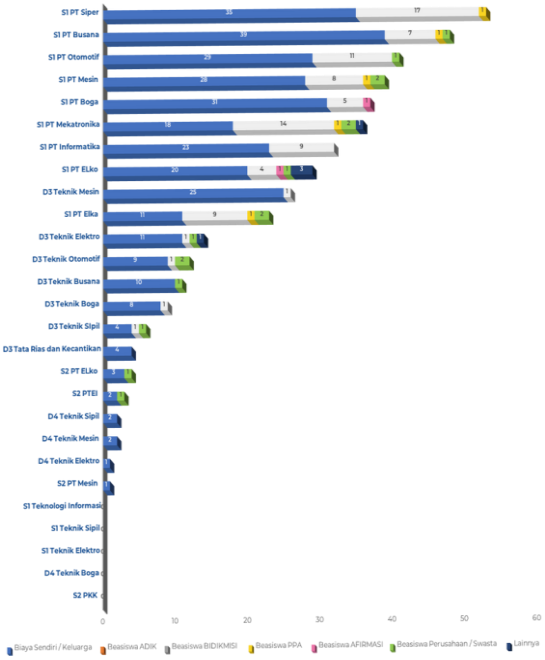

Figure 3.4.2. Funding Sources Based on Study Program

3.5 Job Search Period

In the job search period category, there are four groups: before, after, not looking for work, and others. From Figure 3.4.1, the data is dominated by respondents looking for work after graduating, namely 39%, followed by 34% looking for work before graduating. Furthermore, it was 22% for other categories, and not looking for work was 5%.

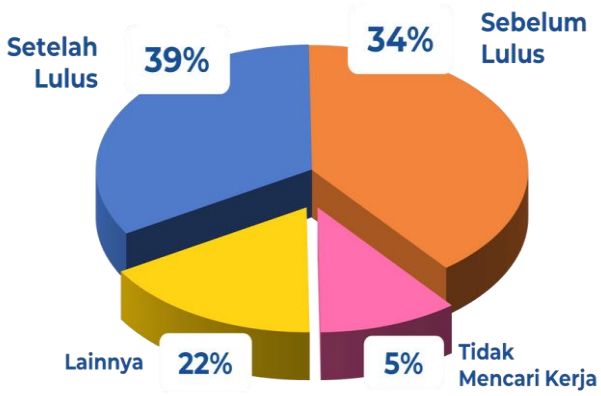

Figure 3.5.1. Job Search Period

3.6 Classification of Waiting Times

Respondents' waiting time to obtain work was dominated in the range of 6-12 months (53.8%), followed by a time range of >6 months (36.5%) and continued with a time range of 19 to 24 months (5.1%). Graduates who waited >24 months were 3.2%, and 13 to 18 months were 1.3%. For graduates who got a job before graduating, there were 0 respondents.

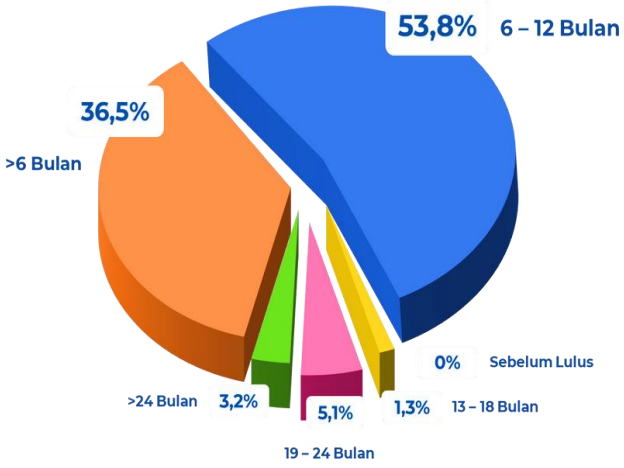

Figure 3.6.1. Classification of Waiting Times

The following diagram outlines financing details based on the study program.

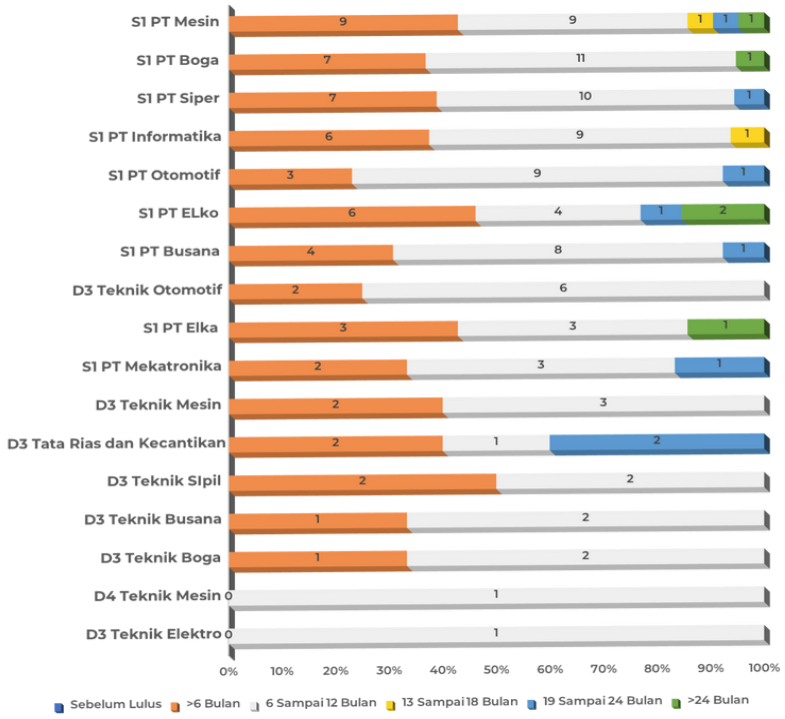

Figure 3.6.2. Classification of Waiting Times Based on Study Program

3.7 Number of Companies Applying

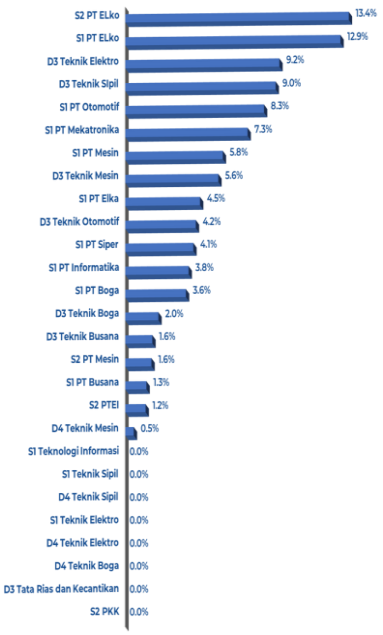

Figure 3.7.1. Average Number of Companies to Apply to Before Getting The First Job

The information obtained in this category is the average number of companies applied to before getting the first job per each study program. The Electronics Engineering Education master study program was ranked first with an average percentage of

respondents, 13.4%, followed by the Bachelor of Electronics Engineering Education study program at 12.9%. Then, in third place is the D3 Electrical Engineering study program with a figure of 9.2%.

3.8 Number of Companies Responding

From the results of applications sent by respondents, the average percentage of companies that responded to applications was achieved by the Master of Electronics Engineering Education study program, namely 19.6%. Then, in second place is the Associate Degree of Civil Engineering study program, with a 10.5% achievement. Next in third place is the Associate Degree of Mechanical Engineering study program, with an average percentage of companies responding of 7.9%.

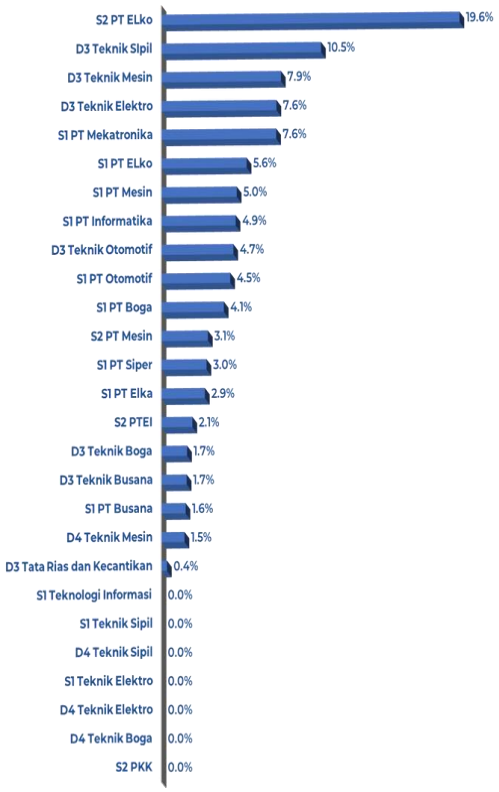

Figure 3.8.1. Average Number of Companies Responding to Applications

3.9 Number of Companies Inviting to Interview

After the company responds, the next stage is the interview process. The highest average percentage of companies inviting candidates for interviews was achieved by the Associate Degree in Civil Engineering program at 13.1%, followed closely by the Master's in Electronics Engineering Education program at 12.9%. The Associate Degree in Mechanical Engineering program ranked third with an average percentage of 7.4%.

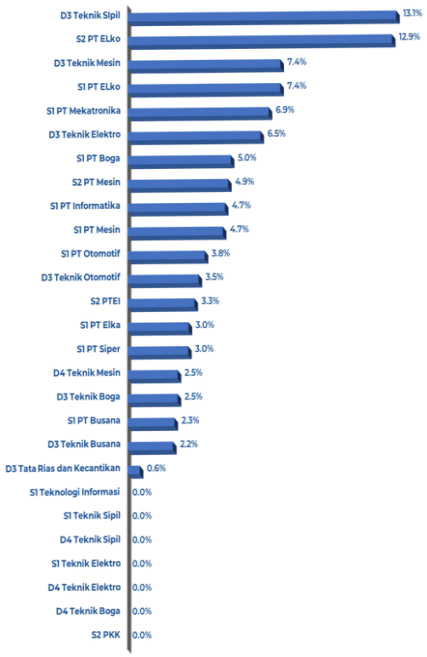

Figure 3.9.1. Average Number of Companies Inviting to Interview

3.10 Occupation Infomation

Figure 3.10.1. How to Get Job Information

There are 14 methods for respondents to obtain information about work. The most frequently used method was contacting the student affairs/alums relations office, with 213 respondents utilizing this approach. Ranked second, 163 respondents built a network while still in college, followed by 76 respondents who chose to build their own business.

3.11 Type of Company

The majority of respondents, specifically 163, selected other options in the category of work agency type. Additionally, 57 respondents reported working for local/regional

private companies, followed by 39 respondents who indicated employment with national private companies.

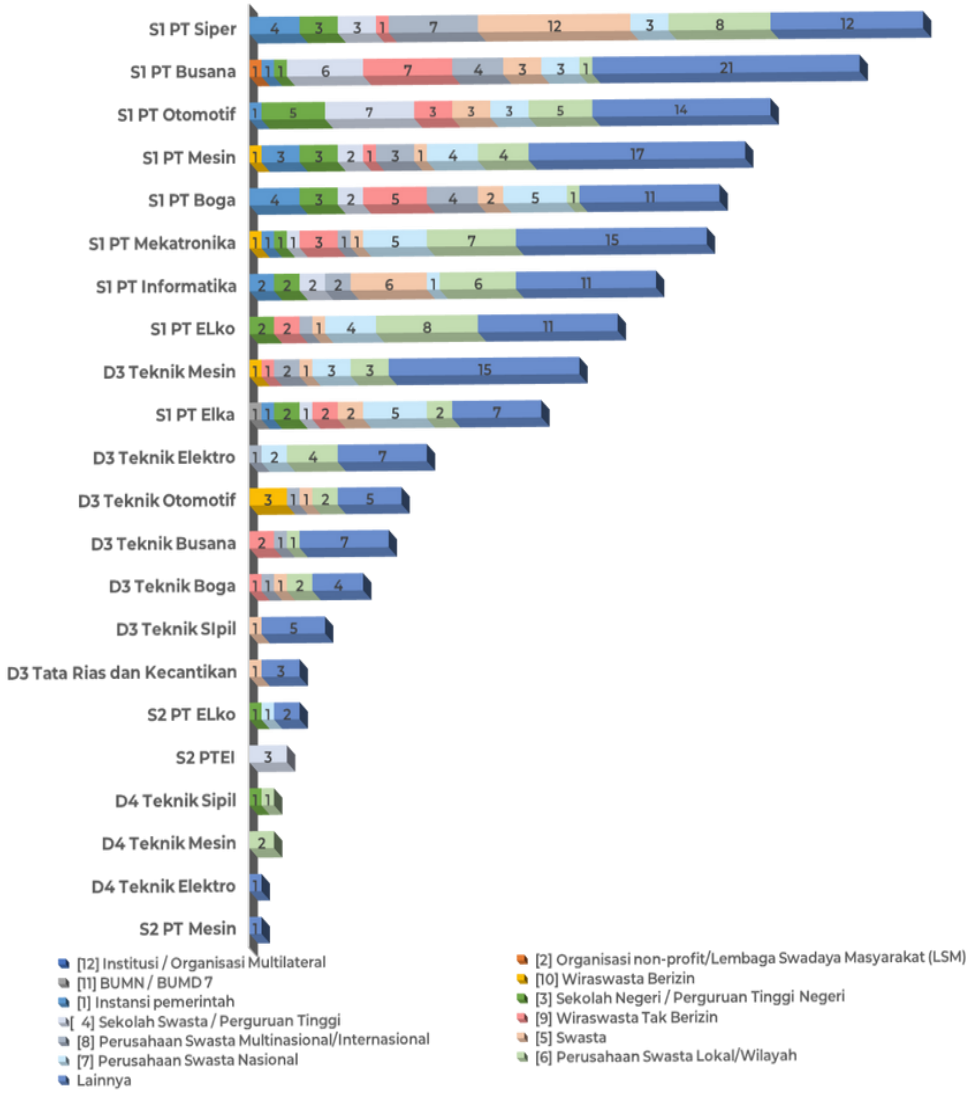

Figure 3.11.1. Type of Company

3.12 Average Monthly Income

The average monthly income reported by respondents ranges from IDR 833,333 to IDR 6,500,000. Graduates of a applied bachelor Mechanical Engineering program at IDR 6,500,000 earn the highest average income. The applied bachelor Civil Engineering program follows in second place with an average income of IDR 4,000,000, and the Bachelor of Arts in Catering Engineering Education program ranks third with an average income of IDR 3,616,216.

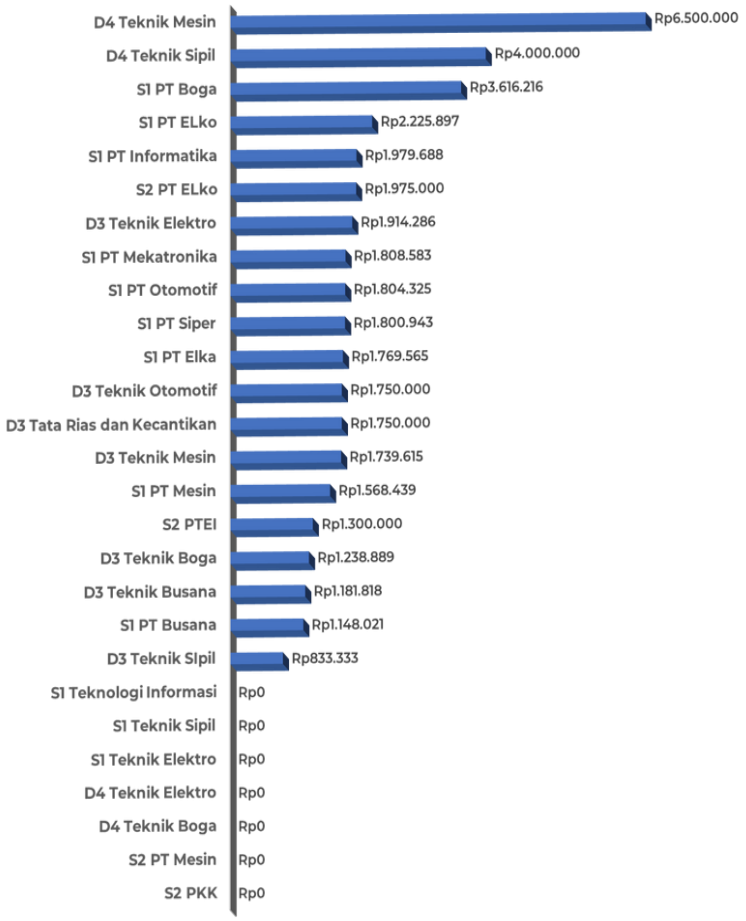

Figure 3.12.1. Chart of Average Monthly Income from Main Job

3.13 Reasons for Taking Unsuitable Work

A total of 119 respondents (29.75%) felt that their work was aligned with their education. In second place, 48 respondents (12%) indicated that the primary reason for accepting jobs not related to their field of study was the inability to find a more suitable job. Additionally, 38 respondents (9.5%) chose their current job because it was closer to home.

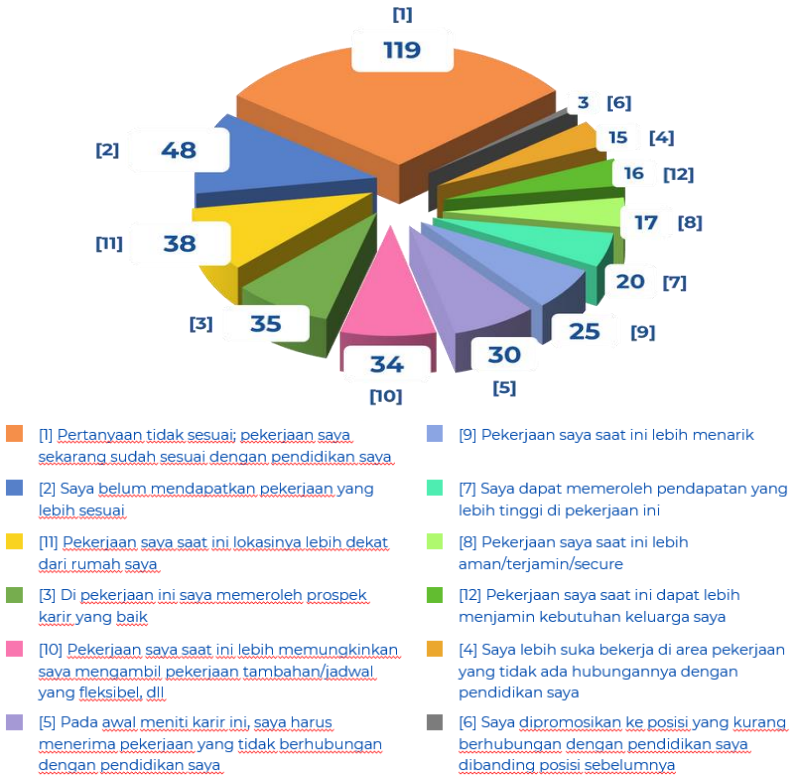

Figure 3.13.1. Reason for Taking Unsuitable Work

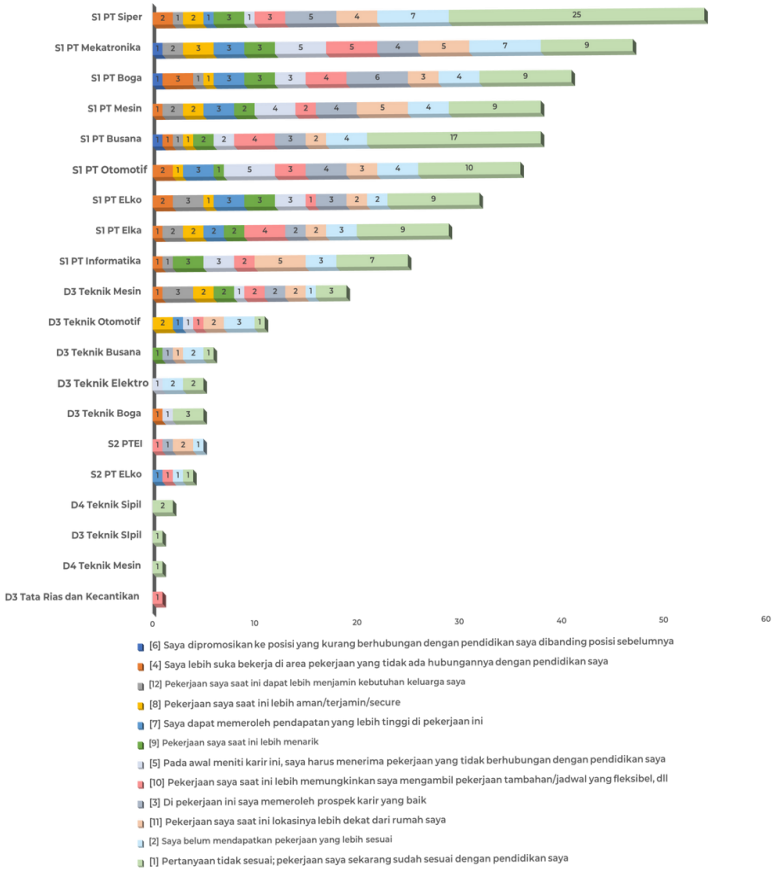

Figure 3.13.2. Taking Unsuitable Work Based on Study Program

3.14 Alumni Assessment of Education and Learning Experiences

In the category of alum assessment of their education and learning experiences, 36.4% of respondents felt their experience was very suitable, followed by 35.8% who rated it as appropriate. Additionally, 22.1% of respondents chose sufficient as their assessment.

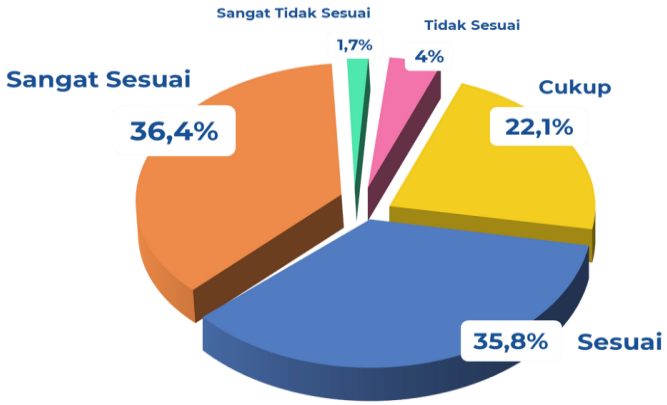

Figure 3.14.1. Alumni Assessment of Education and Learning Experiences

The following is a detailed distribution of questionnaires based on the 7 indicators asked in alum assessments of education and learning experiences.

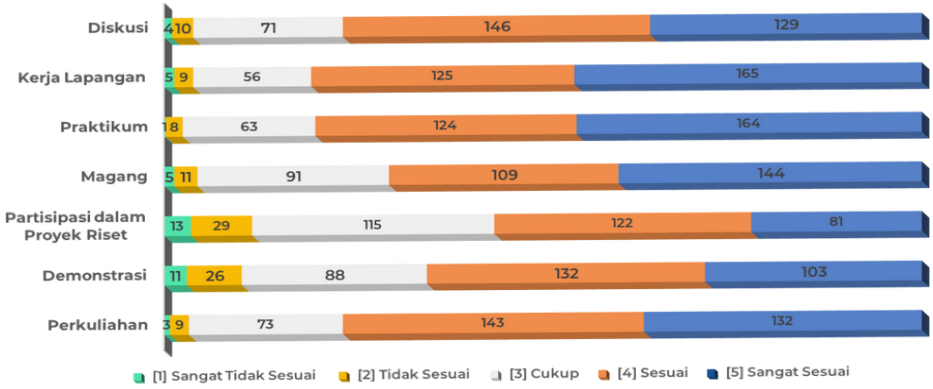

Figure 3.14.2. Alumni Assessment of Education and Learning Experiences for Each Indicator

3.15 Competency Assessment

In the competency assessment category, respondents were asked to rate 29 points related to their education and learning experiences. The data shows that a dominant 41.5% of respondents felt their education and experiences were very appropriate. This result was followed by 37.4% who rated them as appropriate and 19.9% who gave a sufficient assessment.

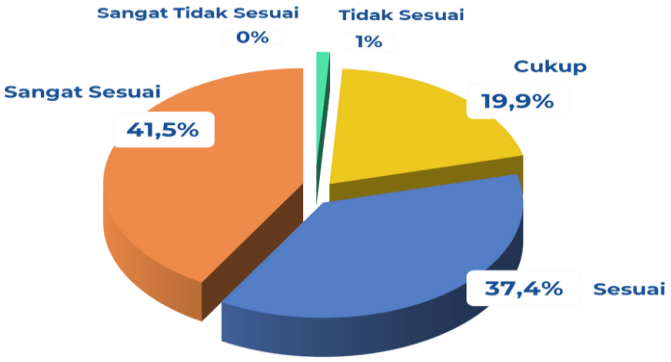

Figure 3.15.1. Competency Assessment Prosentase

From 29 questions, this chart is about the detailed distribution of competency assessments for each

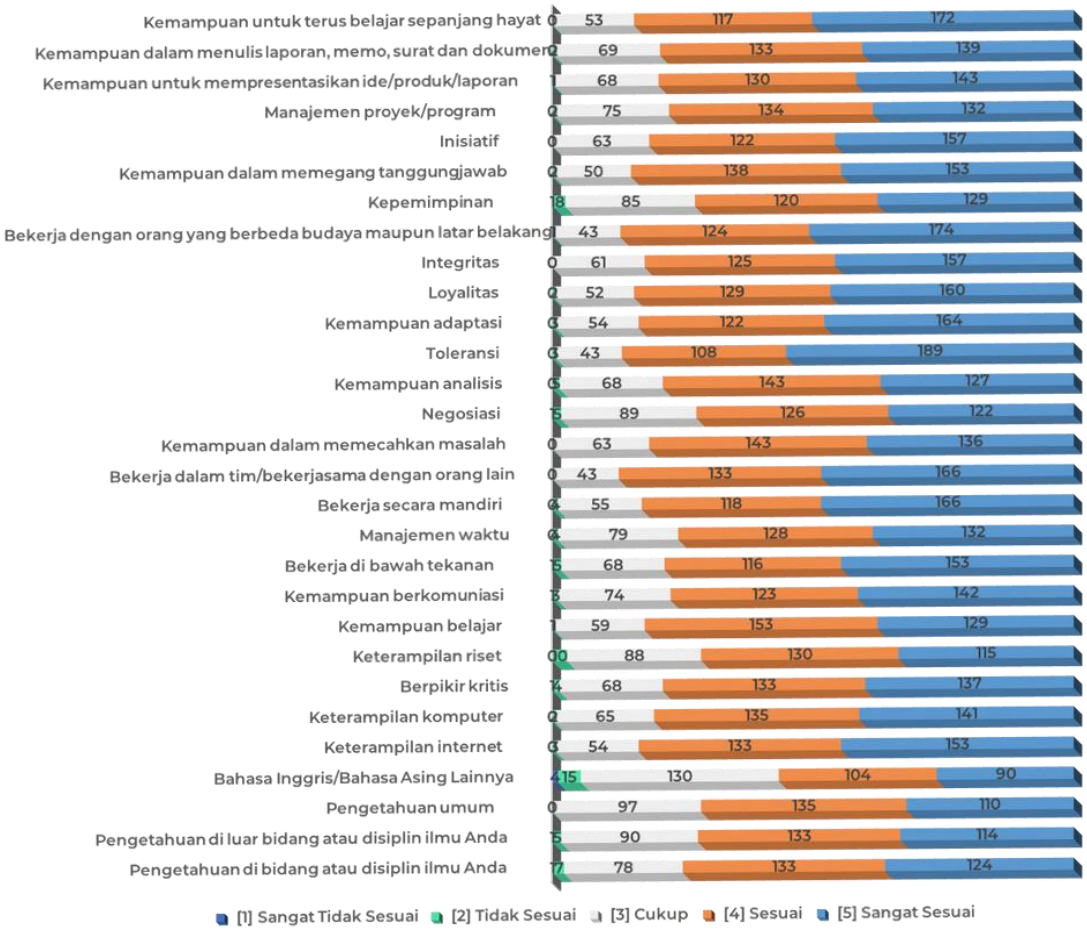

Figure 3.15.2. Detailed distribution of competency assessments for each indicators

3.16 Alumni Assessment of UNY's Contribution to Graduate Competencies at Work

In the alum assessment for contribution, respondents were asked to evaluate 29 questions regarding UNY's contribution to their competencies at work. The results showed that 40.7% of respondents felt that UNY's contribution was appropriate, followed

by 24.6% who felt it was very appropriate. The largest distribution of responses indicated sufficient contribution, with 31.2% of respondents selecting this option.

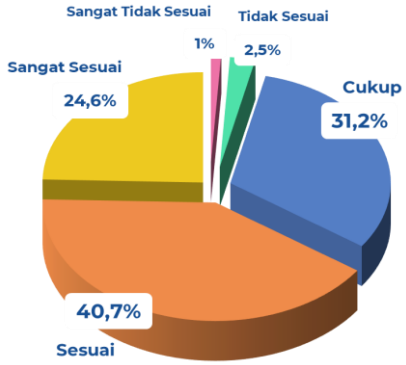

Figure 3.16.1. Alumni Assessment of UNY's Contribution to Graduate Competencies at Work

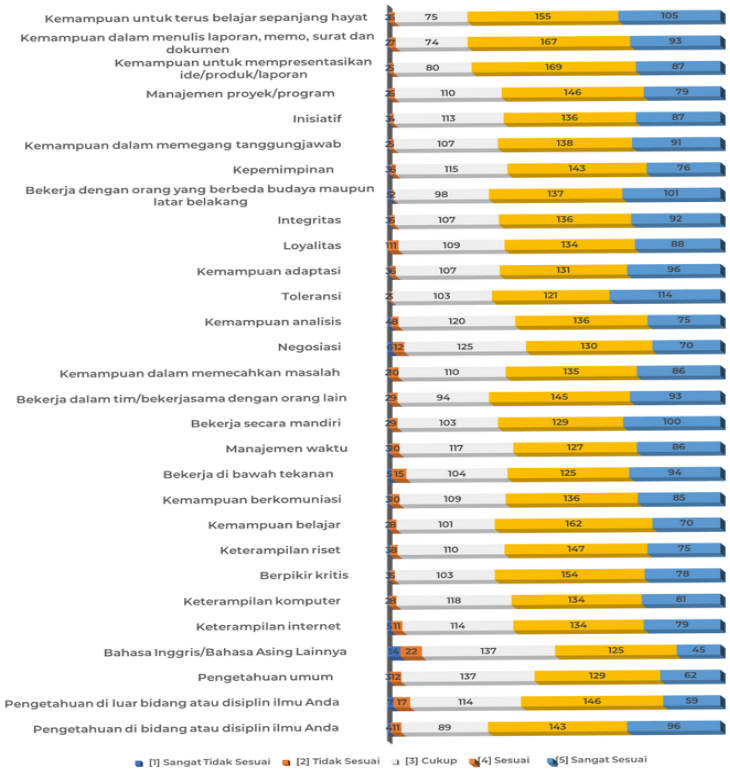

Figure 3.16.2. Detailed distribution of competency assessments for each

3.17 Combine Assesment

There are many components for alum assessment of competency upon graduation and UNY's contribution to graduate competency at work. These include knowledge in the graduate's field or discipline, knowledge outside the graduate's field or discipline, general knowledge, proficiency in English or other foreign languages, internet skills, computer skills, critical thinking, research skills, learning abilities, communication skills, ability to work under pressure, time management, ability to work independently, teamwork and

cooperation skills, problem-solving ability, negotiation skills, analytical skills, tolerance, adaptability, loyalty, integrity, ability to work with people from different cultures and backgrounds, leadership, responsibility, initiative, project/program management, ability to present ideas/products/reports, and the ability to write reports, memos, letters, and documents. Additionally, the ability to continue learning throughout life is assessed.

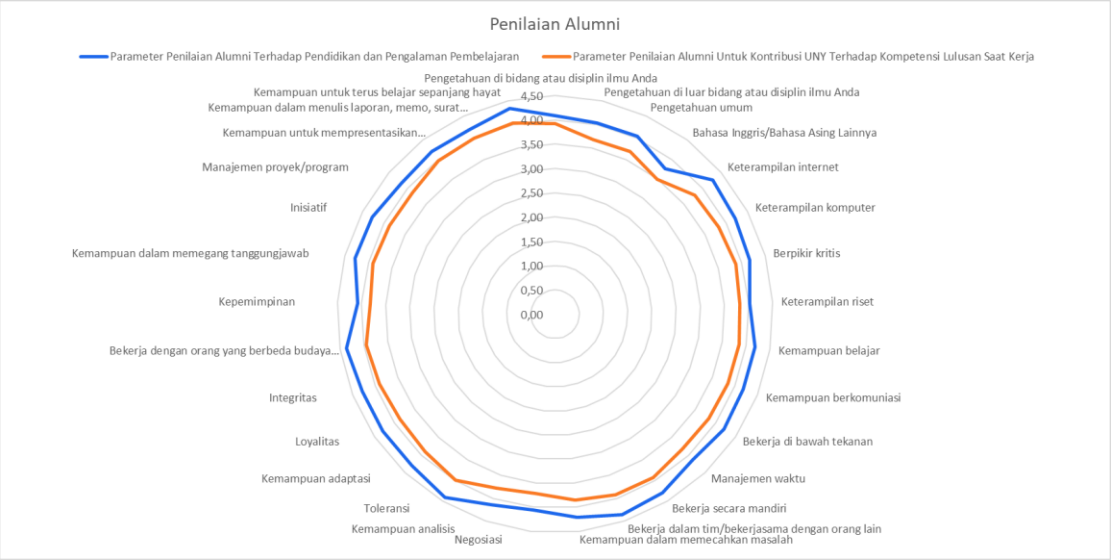

Figure 3.17.1. Combine Assesment

From the 2023 tracer study data, it is known that the competency score at graduation and UNY's contribution to graduate competency at work are directly proportional. The average competency score has met the appropriate value. UNY's contribution to UNY's competencies that need to be improved are English/foreign languages, knowledge outside the field or discipline of graduates, general knowledge and negotiation skills.

3.18 Analysis of the relationship between GPA and type of work

In the analysis of GPA and company categories, the team aimed to categorize the average GPA based on the type of job being undertaken. The data shows that respondents with the highest average GPA of 3.97 are those working in [1] Government Institutions and [12] Institutes/Multilateral Organizations, followed by respondents working in [3] State High Schools/Universities with an average GPA of 3.67. Furthermore, respondents working in [11] State-owned Enterprises (BUMN/BUMD) have an average GPA of 3.57.

From the diagram, it can be concluded that the job choices of FT UNY alums who graduated in 2021 do not depend on GPA. This is evident as each job category has relatively similar average GPAs, indicating that FT UNY alums pursue diverse careers regardless of their GPA.

This analysis demonstrates that the employment sectors of FT UNY alums are varied and not significantly influenced by GPA, reflecting a broad distribution of academic performance across different industries.

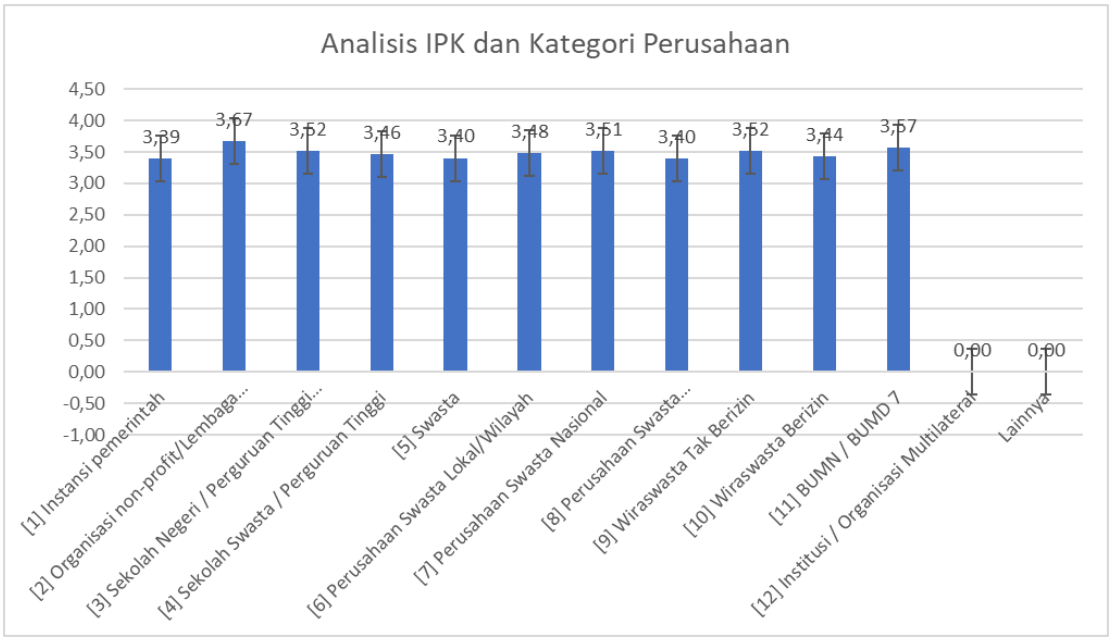

Figure 3.18.1. The Cluster of Relationship Between GPA And Type Of Work

3.19 Analysis of the Relationship between GPA and Job Search Period

The data indicates that higher academic performance (GPA of 3.47 and above) is associated with a quicker transition into employment. Alums with a lower GPA (3.40 and below) tend to experience a longer job search period.

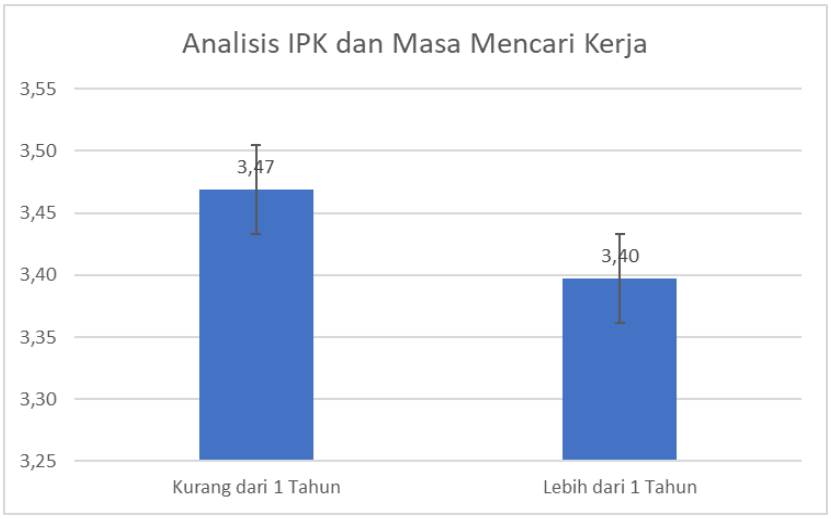

Figure 3.19.1. The Cluster of Relationship between GPA and Job Search Period

3.20 Analysis of the Relationship between Company Categories and Income

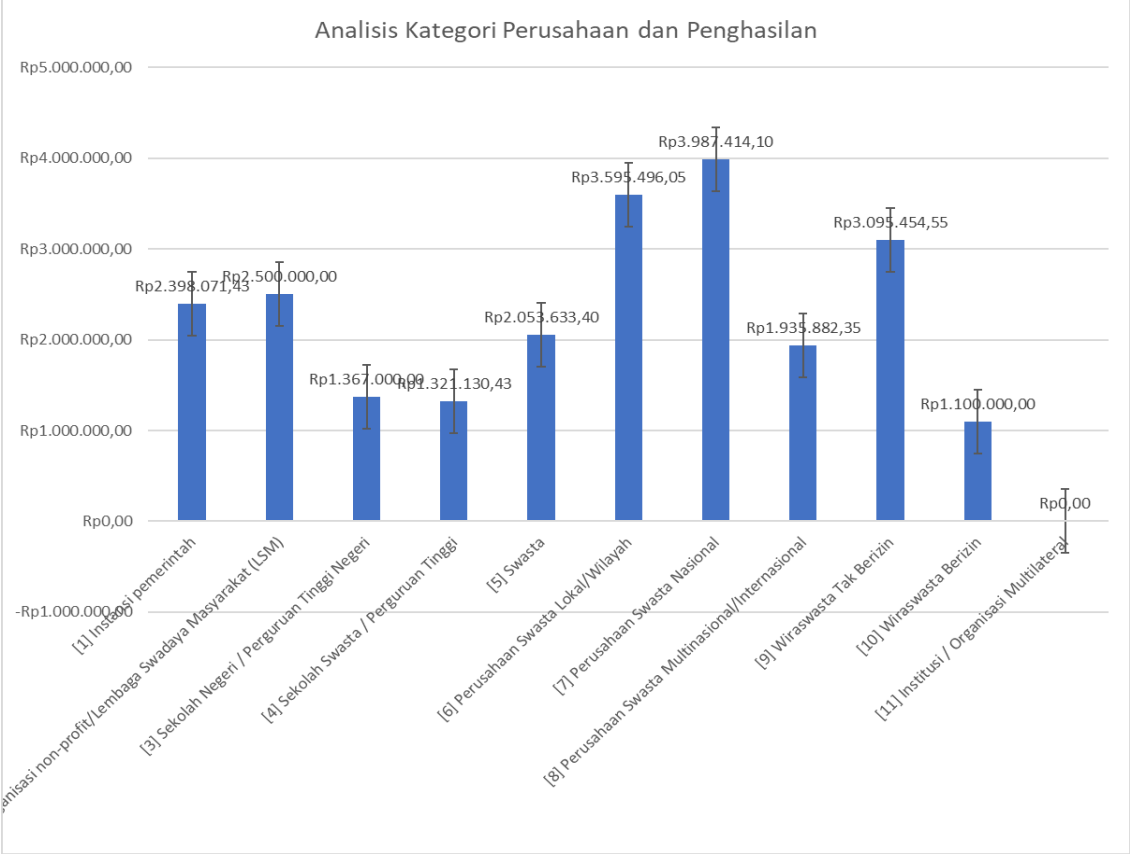

Figure 3.20.1. The Cluster of Relationship between Company Categories and Income

The analysis provides valuable insights into the relationship between company categories and income levels for graduates. It highlights the sectors that offer higher financial rewards and can guide future graduates in their career planning and job search strategies. From the 2023 tracer study data, it is known that the highest salaries for FT alums are the salaries of alums who work in national private companies.

Chapter 4. Conclusions, Constraint, and Recommendations

2.1 Conclusions

Through carrying out this tracer study, the team identified various key information regarding the situation of graduates of the Faculty of Engineering, UNY, in 2021. These findings have great potential in formulating steps for development and improvement for the Faculty of Engineering, UNY.

1. The target respondents for the tracer study at the UNY Faculty of Engineering in 2023 are 573 people from the class of 2021, with 433 alumni completing the questionnaire (75%).
2. If studied deeply, the highest percentage of completed questionnaires was achieved by the culinary engineering education study program, namely 73%, and the mechanical engineering education study program at 71%, and fashion engineering education at 66%.
3. In terms of funding sources used by respondents, personal/family fees dominate the main funding for 316 students (73%), then Bidikmisi, scholarships for 89 students (20.6%), followed by company/private scholarships for 16 students (3.7%)
4. In the Job Search Period category, as many as 39% looked for work after graduating. As many as 34% looked for work before graduating. Followed by other categories, namely 22%, and looking for work less than 5%.
5. The waiting time for respondents to get a job is predominantly in the range of 6-12 months (53.8%). Next, the time range is > six months (36.5%) then the time range is 19 to 24 months (5.1%).
6. The Electronics Engineering Education Masters study program was ranked first in the category of average number of companies applied for with a percentage of 13.4%. The undergraduate study program in Electronics Engineering Education was 12.9%. Then, the D3 Electrical Engineering study program had a figure of 9.2%.
7. The average percentage of companies that responded to applications was achieved by the Electronics Engineering Education Masters study program, namely 19.6%. Then, the D3 Civil Engineering study program achieved 10.5%. Furthermore, the D3 Mechanical Engineering study program was 7.9%.
8. The average percentage of companies that invited the most interviews was 13.1% in the D3 Civil Engineering study program. Furthermore, 12.9% were in the Masters in

Electronics Engineering Education study program. Then, the D3 Mechanical Engineering study program had an average percentage of 7.4%.

9. The method most frequently used by respondents to obtain company information is (9) Contacting the student affairs/alums relations office with a total of 213 respondents. (10) Building a network since they were still in college with 163 respondents. (12) 76 respondents built their own business.
10. Other categories, namely 163 respondents, dominate the type of respondent's work agency. Then, the type of agency (6) Local/Regional Private Companies with 57 respondents, and (7) National Private Companies with 39 respondents
11. Average income is in the range of IDR 833,333 to IDR 6,500,000. The largest average income obtained from graduates of the D4 Mechanical Engineering study program is IDR 6,500,000. Then there is the D4 Civil Engineering study program with an average of IDR 4,000,000, and the Bachelor of Arts Engineering Education study program with an average of IDR 3,616,216.
12. Regarding respondents who took unsuitable jobs, 119 respondents felt that the jobs they took were appropriate to their education (29.75%). A total of 48 respondents indicated that the biggest reason why respondents took jobs that were not in accordance with their study program was because they had yet to find a more suitable job (12%). Furthermore, 38 respondents felt that their current job was closer to home, so they chose that job (9.5%).
13. In the category of alum assessment of education and learning experience, data shows that as many as 36.4% of respondents felt that their experience was very suitable, followed by 35.8% of respondents giving an appropriate assessment. Then, 22.1% of respondents chose sufficient indicators.
14. In the competency assessment category, the majority of respondents (41.5%) chose that the education and experience they had taken were very appropriate. Then, it continued with 37.4% of respondents giving an appropriate assessment and 19.9% of respondents giving a sufficient assessment.
15. In the alum assessment for contribution, as many as 40.7% of respondents felt that UNY's contribution was appropriate, followed by 24.6% of respondents who felt that it was very appropriate. This was followed by a sufficient indicator, namely 31.2% of respondents.
16. The competency score at graduation and UNY's contribution to graduate competency at work are directly proportional; what needs to be improved is English/foreign

language, knowledge outside the graduate's field or discipline, general knowledge and negotiation skills.

17. Every job pursued by FT alums who graduate in 2021 varies with relatively the same GPA.
18. Alumni who have an average GPA of 3.47 and above have less waiting time to get a job compared to alums who have a GPA of 3.4 and below.
19. The highest salaries achieved by FT alums who graduate in 2021 are those who work in private companies and have an average income of 3.9 million per month.

2.2 Constraints

In implementing activities, there are always obstacles and problems that can later be used as evaluations to be corrected in the coming year. During the 2023 tracer study process, several obstacles and problems were encountered, from which recommendations for improvement were formulated for the coming year.

1. The number of postgraduate student respondents is still very small.
2. many alums do not fill out the instrument completely; there are many instruments where the answers are not included.
3. Alumni changed their cellphone numbers and email addresses that had previously been used, so the survey team had difficulty contacting alums.
4. Alumni are busy, so the survey team must contact alums who have not filled out the 2023 Tracer Study Questionnaire and remind them four times so that alums are willing to fill it out.
5. The results of the TS-5 tracer study cannot yet be reported to determine the pattern of alum employment development. Because in 2017, no integrated tracer study system was available.

2.3 Recommendation

1. A special post-graduate tracer study team was formed so that reports and analysis results could be made more informative.
2. Every question on the web tracer study should be made mandatory to answer.
3. Require alums to fill in alternative emails that are still active and cellphone numbers or social media accounts both when debriefing prospective graduates and when registering for graduation because today's students often change their cellphone numbers. However, their social media accounts remain the same.

4. Study programs should be more active as spearheads in exploring alum tracer study information.
5. Alumni who work as civil servants are asked a follow-up question: to become educators or professionals. Because the study programs at the engineering faculty consist of education and pure science study programs.
6. Ideally, the tracer study should be carried out 2 (two) times. The first tracer study is carried out on college alums 1-2 years after graduation. This condition is considered ideal because 1-2 years after graduating, alums are considered to have experience and competence in work as well as knowledge of the world of work. This experience and competence in the world of work will then become alum feedback for universities regarding the relationship between higher education and work. The second tracer study can be carried out 4-5 years after graduation (or three years after the first tracer study). The focus of the second tracer study is on finding patterns in alum employment development.